

Addressees of Performance Goals

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As performance goals aim to both procure acknowledgment of one's abilities and to avoid revealing a lack of one's abilities, the authors hypothesized that students hold specific performance goals for different addressees and that there are specific correlational patterns with other motivational constructs. They analyzed a data set of 2,675 pupils (1,248 boys and 1,426 girls) attending Grades 8 and 9 (mean age = 15.0, $SD = 0.97$). The students completed a questionnaire consisting of 12 items measuring performance approach goals and 12 items measuring performance avoidance goals. In each subset, 4 groups of addressees were differentiated: parents, teachers, peers, and the acting individual him/herself. Additionally, several external criteria were measured. The authors concurrently tested theory-driven, structural equation models. Incorporating all 24 items, the best-fitting model was a multitrait-multimethod model, which posited 2 factors for approach and avoidance goals and 4 addressee factors. While performance goals addressing parents showed relationships to maladaptive motivational and learning patterns, performance goals addressing classmates and self showed relationships to adaptive motivational and learning patterns. The relationships between performance goals addressing teachers and external criteria were rather weak and unsystematic.

Keywords: motivation, achievement goals, addressees of performance goals, approach and avoidance performance goals

There is a general consensus that in scholastic contexts, achievement goals have a decisive influence on achievement behavior (cf. Pintrich & Schunk, 2002). In the research literature, two distinctions have been made to categorize the different goals students hold (e.g., Elliot & McGregor, 2001; Pintrich, 2000). The primary distinction differentiates between mastery goals (sometimes referred to as *learning goals*) and performance goals (Ames, 1992; Dweck, 1986; Maehr & Midgley, 1991). Students who focus on making progress in learning and developing their knowledge, competences, or abilities seek mastery goals. Students who aim to accumulate acknowledgment of their performances or attempt to avoid having others perceive their lack of abilities are committed to performance goals. Empirical studies indicate that mastery goals and performance goals have different types of effects on learning and achievement behavior. For instance, differential correlations with academic self-concept (Skaalvik, 1997; Vrugt, Oort, & Zeeberg, 2002), effort expenditure (Meece, Blumenfeld, & Hoyle, 1988; Wolters, 1998), depth of learning processes (Ames & Archer, 1988; Meece et al., 1998; Wolters, 2004), task value (Bong,

2001), text anxiety (Linnenbrink, 2005; Middleton & Midgley, 1997), and achievement (Elliot & McGregor, 2001; Harackiewicz, Barron, Tauer, Carter, & Elliot, 2000) could be confirmed. Whereas mastery goals have proven to be adaptive in just about all studies, the findings on performance goals were somewhat less distinct. Some studies showed negative relationships between performance goals and the aspects of student learning mentioned above; other empirical studies found no relationships or even positive relationships (see Elliot, 1999, for an overview). In order to explain these ambiguities associated with performance goals, a second distinction was introduced. It considers the positive versus negative valence of the state or situation the goal setting process focuses on (Elliot, 1999; Elliot & Harackiewicz, 1996; Elliot & Sheldon, 1997; Middleton & Midgley, 1997). This distinction differentiates between an approach component—in the sense of an approach toward desirable states or situations—and an avoidance component—in the sense of an avoidance of undesirable states or situations. Within the past decade, this distinction has been established for performance goals, whereby it could be shown that approach goals and avoidance goals are positively correlated, but nonetheless separate components (Elliot & Harackiewicz, 1996; Elliot & Sheldon, 1997; Middleton & Midgley, 1997). Research on the consequences of performance approach goals and performance avoidance goals showed that the above-described negative effects of performance goals can primarily be ascribed to the avoidance component. It is negatively related to scholastic performance, academic self-concept, task value, and effort expenditure as well as positively related to test anxiety, maladaptive attributional style, and surface processing (e.g., Dresel, 2001; Elliot & Church, 1997; Elliot & McGregor, 2001; Elliot & Sheldon, 1997; Middleton & Midgley, 1997; Pintrich, 2000). The findings pertaining to the approach component were, in contrast, less consistent (for an

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overview, see Midgley, Kaplan, & Middleton, 2001). Although positive correlations could be confirmed with achievement and academic self-concept, findings regarding task value, effort expenditure, and depth of learning processes varied between null and moderately positive correlations (Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002; Kaplan & Middleton, 2002; Midgley et al., 2001).

Recently, researchers also made a distinction between an approach and an avoidance component within mastery goals, resulting in a full 2×2 framework of achievement goals (Elliot & McGregor, 2001; Pintrich, 2000). It can be argued that students may also focus on the undesirable state of misunderstanding and not mastering a task and therefore adapt their learning in accordance with avoidance goals. Research has provided some evidence that mastery avoidance goals are associated with a more negative motivational set than mastery approach goals and a more positive motivational set than performance avoidance goals (Elliot & McGregor, 2001).

In the present work, we focus on performance approach and performance avoidance goals. More specifically, our aim was to test whether the structures and the relationships of performance goals depend on the various social referents to which they are addressed. Our work is anchored in the two-component definition of performance goals advanced by Elliot (1999)—namely social comparison and appearance—and we are particularly interested in the significance of the appearance component. As stated above, performance goals focus on the demonstration of competence or, in the case of the avoidance component, the attempt to avoid having others perceive a lack of competence. One can presume that an important role is played by who these “others” are. Furthermore, we hypothesized that addressee-specific performance approach and avoidance goals may be related to other constructs in a specific manner, reflecting the relevance of the specific social instance on which the current goal is focused. We hold the view that a systematic consideration of the various addressees of performance approach goals and performance avoidance goals may lead to a deeper understanding of the goals that students hold in the social context of scholastic learning as well as the consequences of goal setting processes.

Addressee-Specific (Interpersonal) Performance Goals

In the context of scholastic learning, there are three major groups of important others: teachers, classmates, and parents. Teachers define most of the learning tasks, provide help, bring about formal and informal performance situations (such as tests or oral classroom questions), define the major standards for evaluation of performances, provide students with verbal (public, face-to-face) or written feedback, and often react to students' performances with different emotions. In other words, they are typically the most salient persons in the classroom setting. Classmates are typically copresent in all performance situations but are absent in face-to-face conversations with the teacher. They define a second bundle of standards (e.g., “being good in school is uncool”) and reward or punish students with verbal statements and with emotions such as sympathy or antipathy. Parents are commonly absent in all classroom learning and performance situations. However, they provide students with a learning environment at home, occasionally undertake learning activities together with their child,

codefine standards for the evaluation of school performances, often reward good performances and punish bad performances, and react in emotional terms. To summarize this list of characteristics (for an overview, see Wentzel, 1998, 1999), these groups of important others share different situations with the student, provide different standards of performance evaluation, bring up rewards and punishments based on presumably different standards, and place different expectations on the student.

Based on the assumption that students are aware of these differing standards, reward systems, and expectations, it is plausible that the salience of one's competence or competence deficits are weighted differently for different groups of important others. As the aim to either have one's competences acknowledged or avoid having others perceive a lack of one's competences builds the core concept of performance goals, this assumption implies that students probably differ in their performance goal setting process among different groups of important others. In other words, different performance goals may be directed to different addressees. For instance, a student may be concerned about the perceptions of his or her parents, but he or she may not care about the perceptions of his or her classmates.

The significance of addressees for learning and the goal setting process has also been investigated by other authors and has resulted in some degree of empirical validation (Harris, 1995; Wentzel, 1998, 1999); nevertheless, to this point a systematic evaluation has not yet been attempted. This is also reflected in the measuring instruments that have been used to assess performance goals. Although some measuring instruments explicitly include teachers or pupils as addressees of learning and achievement behavior (e.g., Midgley et al., 1996; Miller, Greene, Montalvo, Ravindran, & Nichols, 1996), no systematic examination on the influence of the individual addressees was ever undertaken. In some cases, only classmates (e.g., DeBacker Roedel, Schraw, & Plake, 1994) or teachers and classmates (e.g., Midgley et al., 1996) were included in the items as addressees, but not parents.

Empirical indications for addressee-specific goals have been supplied by Urdan and Mestas (2006) with their qualitative study. In structured interviews, they questioned pupils about their individual reasons for pursuing performance approach goals (e.g., “I want to do better than other students in this class”) and performance avoidance goals (e.g., “It is important to me not to do worse than other students in this class”). An analysis of the answers disclosed a variety of purposes behind students' goal pursuits. Included here were purposes that were directed toward specific addressees, such as wanting to please parents or to silence naysaying peers. These were categorized by the authors as interpersonal performance goals (see also Wentzel, 1998, 1999). Additional support for addressee-specific goal setting processes are inherent in findings that show that individual goals depend on classroom goal structures, general instructional formats, parents' goals, and peer group standards (e.g., Church, Elliot, & Gable, 2001; Grusec & Goodnow, 1994; Kinderman, 1993).

Intrapersonal Performance Goals: The Individual Him/Herself as an Addressee

In addition to important others, we assume that the acting individual may him/herself be an addressee of performance goals. In our opinion, intrapersonal or self-addressed performance goals

are goals that imply a normative standard of competence definition (resulting from the performances of others), but—in contrast to performance goals that are directed to external addressees—they do not associate a positive appearance to others with a desirable state or a negative appearance to others with an undesirable state. Examples for intrapersonal performance goals could be wanting to be satisfied with oneself for attaining good grades, wanting to be happy about one's performances, or wanting to avoid dissatisfaction with bad performances (see Urdan & Mestas, 2006, for a similar conceptualization of intrapersonal performance goals and preliminary qualitative evidence for their existence).

In contrast to interpersonal performance goals, which are assumed to trigger the use of techniques to control the appearance component (such as selective communication or the utilization of excuses), intrapersonal performance goals may result in the application of self-enhancement processes with self-confidence as an anticipated state. The anticipated state is also the decisive characteristic that differentiates intrapersonal performance goals from mastery goals: While the former focus on the consummate magnitude of one's competence and its appreciation, the latter focus on the growth or development of one's competences (see Dweck, 1999). As a consequence, intrapersonal or self-addressed performance goals should act as a guide in the procurement of information to protect self-confidence and self-worth, while mastery goals should act as a guide in the search for realistic information to enable optimal learning (see Dweck & Elliott, 1983). Nevertheless, we expect that self-addressed performance goals are more closely related to mastery goals than externally addressed performance goals. This is because self-addressed performance goals, plausibly, not only underlie a normative standard but also an absolute standard of competence evaluation (resulting from the task requirements), similar to mastery goals for which an intrapersonal standard (resulting from one's past performances) and/or an absolute standard is applied (see Ames, 1992; Dweck, 1999; Maehr, 1989; Elliot & McGregor, 2001; cf. Pintrich & Schunk, 2002).

Research Questions and Hypotheses

The main purpose of the present study was to test whether performance approach and avoidance goals can be specified for four addressee groups (parents, teachers, classmates, and the student him/herself) in the context of scholastic learning. To validate this distinction, we analyzed the associations between addressee-specific performance goals and other motivational and emotional facets of the learning process, namely mastery goals, academic self-concept, achievement, effort expenditure, depth of learning processes, task value, and test anxiety.

Four major hypotheses were tested: (1) Performance goals are differentiated for different addressee groups within both performance approach goals and performance avoidance goals. (2) Performance goals are divided in performance approach goals and performance avoidance goals within each addressee group. (3) The simultaneous incorporation of the distinction between an approach and an avoidance component as well as the distinction among different addressees results in a better representation of performance goals than the exclusive incorporation of only one of the two distinctions. (4) Different addressee-specific goals show different relationships to mastery goals and other aspects of the learning process.

Method

Participants

Analyses of the present study are based on a sample that is part of the calibration sample for a new measuring instrument, the Ulm Motivational Test Battery (Ziegler, Dresel, Schober, & Stoeger, 2005). Our analyses included all eighth graders and ninth graders in the calibration sample for which a complete data set was amassed (1,354 eighth graders and 1,321 ninth graders). The 2,675 students were attending one of the three major types of German public schools: Hauptschule (lowest achievement level; 34.7%), Realschule (average achievement level; 33.5%) and Gymnasium (highest achievement level; 31.8%).¹ Students participated voluntarily in the investigation and had obtained permission from their parents. The investigation was conducted as a paper-and-pencil test during regular classroom instruction, and took about 45 min to complete. The mean age of the students came to 15.0 years ($SD = 0.97$), 53.3% of whom were girls.

Measuring Instruments

Performance goals. To assess the performance approach goals and performance avoidance goals specifically being addressed to various members of the learning environment or the acting individual him/herself, we used a previously developed questionnaire. Research (Schober, Ziegler, & Dresel, 2001; see also Ziegler & Stoeger, 2002) confirmed that this measuring instrument is consistent with prevailing quality criteria such as internal consistency and criterion validity. The 24-item questionnaire systematically crosses the two performance goal components (approach and avoidance component), with the four major addressee groups relevant in the scholastic context. These addressee groups are the parents of the students, their teachers, their classmates, and the acting individual him/herself. Crossing the two components with the four addressee group results in eight combinations. For each of these combinations, the questionnaire contains three items that focus on different anticipated reactions of addressees (e.g., taking notice of the competences of the student, evaluating these competences, reacting in an emotional manner). All items were measured with a 6-point Likert-type scale, ranging from 1 (*I disagree completely*) to 6 (*I agree completely*). All 24 items are listed in Table 1, accompanied by their respective goal component and addressee group.

External criteria. To examine whether addressee-specific performance goals are associated with other constructs in a specific manner, we measured seven external criteria that are known to be related to performance goals. Unless specified otherwise in the following, all items on the respective measurements were presented along a 6-point Likert-type scale, ranging from 1 (*I disagree completely*) to 6 (*I agree completely*). To assess mastery goals, we

¹ In the German public school system following the fourth grade, pupils are allocated to one of the three school types named above on the basis of academic achievement. The curriculum in a Hauptschule lasts for a period of 5 years, the curriculum in a Realschule lasts 6 years, and in a Gymnasium—depending on federal state—students study for 8 or 9 years. The first two school types train students for future occupations (apprenticeship); the third serves as preparation for university studies.

Table 1
Descriptive Statistics and Item Texts for the 24 Items Assessing Performance Goals

Addressee and item	Item text ("In school ...")	<i>M</i>	<i>SD</i>
Approach component			
Parents			
Ap-P1	... I want my parents to notice how good I am.	4.13	1.23
Ap-P2	... I want my parents to be proud of me because I am good.	4.67	1.16
Ap-P3	... I want my parents to praise me because I am good.	4.51	1.18
Teacher			
Ap-T1	... I want my teacher to notice how good I am.	4.18	1.26
Ap-T2	... I want my teacher to like me because I am good.	3.24	1.42
Ap-T3	... I want my teacher to praise me because I am good.	3.87	1.33
Classmates			
Ap-C1	... I want my classmates to notice how good I am.	3.35	1.31
Ap-C2	... I want my classmates to like me because I am good.	2.96	1.38
Ap-C3	... I want my classmates to admire me because I am good.	2.83	1.37
Self			
Ap-S1	... I want to get a good grade.	5.07	0.95
Ap-S2	... I want to be able to be happy about a good grade.	5.39	0.80
Ap-S3	... I want to be satisfied with myself, because I got a good grade.	5.35	0.83
Avoidance component			
Parents			
Av-P1	... I do not want my parents to notice that that I can't do something.	2.82	1.35
Av-P2	... I want to avoid disappointing my parents because I am bad.	4.20	1.39
Av-P3	... I do not want my parents to reproach me because I am bad.	4.23	1.53
Teacher			
Av-T1	... I do not want my teacher to notice that I can't do something.	3.04	1.36
Av-T2	... I want to avoid having my teacher not like me because I am bad.	3.31	1.58
Av-T3	... I do not want my teacher to reproach me because I am bad.	4.06	1.58
Classmates			
Av-C1	... I do not want my classmates to notice that I can't do something.	2.86	1.27
Av-C2	... I want to avoid having my classmates not like me anymore because I am bad.	3.26	1.67
Av-C3	... I do not want my classmates to laugh at me because I am bad.	3.87	1.70
Self			
Av-S1	... I do not want to get a bad grade.	4.02	1.39
Av-S2	... I do not want to be sad about a bad grade.	4.21	1.32
Av-S3	... I want to avoid being dissatisfied with myself for getting a bad grade.	5.18	0.97

Note. *N* = 2,675. Scale range for all items: 1–6.

used the 6-item scale that is also included in the questionnaire for the assessment of the goals stated above (Schober et al., 2001). In this scale, mastery goals are exclusively operationalized as approach goals (sample item: "In school I want to learn as much as possible"). Academic self-concept was assessed with the scale "Confidence in one's own competence" (Dweck & Henderson, 1988). This scale consists of four item pairs containing two statements corresponding to a positive self-evaluation and a negative self-evaluation. The two poles of a 6-point answer scale are formulated as statements (e.g., "I am not sure that I am good enough to be successful in school" and "I am sure that I am good enough to be successful in school"). Achievement was operationalized by averaging report card grades obtained in the subjects German (native language), English (foreign language), and mathematics on the previous year's report cards. The German grading scale ranges from 1 (very good) to 6 (unsatisfactory). The resulting scale was recoded, so that a higher score represented better achievement. Effort expenditure was measured with a 12-item scale (Ziegler et al., 2005). The scale offers insight into the amount of effort students apply to their learning (sample item: "I spend a lot of time at home doing school exercises"). Depth of learning processes was operationalized with a scale developed by Gold and Souvignier

(2004) and was assessed with seven items (sample item: "While studying I try to find examples to match the material"). Task value was measured with a scale consisting of three items that were drawn from Ziegler et al. (2005). This scale primarily measures the utility of learning (sample item: "The things you learn in school are useful later on"). Test anxiety was measured with a six-item scale, which had been evaluated in earlier studies (Schober et al., 2001; Ziegler et al., 2005). Similar to the performance goal measures, test anxiety items were associated with specific addressees (sample item: "When I think about school, I am afraid that my teacher will notice that I can't do something").

Analyses

To test several concurrent hypotheses concerning the differentiation of performance goals among addressee groups and their relation to external criteria, we performed confirmatory factor analyses using LISREL 8.51 (Jöreskog & Sörbom, 2001). The analyses were based on covariance matrices and used maximum-likelihood estimation. In each set of analyses, several theory driven models were compared against one another using chi-square tests

Table 2
Item Consistencies, Descriptive Statistics, and Zero-Order Correlations for the External Criteria

External criterion	α	M	SD	1	2	3	4	5	6	7
1. Mastery goals	.80	4.52	0.80	—						
2. Academic self-concept	.74	4.12	0.92	.26	—					
3. Achievement	.69	4.10	0.68	.12	.41	—				
4. Effort expenditure	.90	3.74	0.82	.55	.21	.21	—			
5. Depth of learning processes	.86	3.23	0.96	.37	.21	.07	.36	—		
6. Task value	.82	4.29	0.90	.59	.22	.10	.50	.31	—	
7. Test anxiety	.86	2.60	1.00	.00	-.32	-.19	-.01	.10	-.05	—

Note. $N = 2,675$. All $r_s > .06$, $p_s < .001$.

(e.g., Byrne, 1998). Hypothesized and alternative models are described in the Results section.

Results

Descriptive Statistics

Table 1 contains means and standard deviations for all 24 performance goal items. Scale consistencies, descriptive statistics, and zero-order correlations for the external criteria examined are presented in Table 2.

Model Tests Regarding Approach and Avoidance Components

The first confirmatory factor analysis set was performed to test whether a differentiation among the four addressee groups could be confirmed in the performance approach component, in the performance avoidance component, or in both (Hypothesis 1). We conducted two separate sets of analyses, each including the 12 respective, component specific items (see Table 1). Figure 1 depicts the three models that were tested for each component: (a) total rating factor, in which all 12 items load on one latent variable; (b) others–self, in which the three self-addressed items load on one latent variable and the remaining nine items that address others load on a second latent variable; (c) four addressee groups, in which the parents, teacher, classmates, and self-items load on their respective latent variables, resulting in four correlated, addressee-specific factors. This is the hypothesized model.

As displayed in Table 3, the results indicate clear support for a distinction among several addressees regarding performance approach goals. In contrast to the two alternative models, the hypothesized four addressee groups' model revealed a good fit to the performance approach item data.² Model comparisons indicated that the hypothesized model provided a better fit than the other two models. Moderate to large factor correlations were observed among the three latent factors concerning other persons (see Table 4). For self-addressed performance approach goals, we found small to moderate correlations with externally addressed performance approach goals, whereby the highest correlation was observed with the parent factor.

Results concerning the performance avoidance component revealed a somewhat different pattern: Although model comparisons disclosed significant advantages for the hypothesized four addressee groups model, the model fit differences among the three models were smaller than those found for performance approach

goals. Additionally, none of the three models revealed an adequate fit to the data. Finally, correlations calculated for the latent factors of the hypothesized model were generally larger for performance avoidance goals than those for performance approach goals. In one case, a correlation greater than 1 was even calculated, resulting in a latent factor correlation matrix, which was not positive definite (see Table 4).

Inspection of the modification indices of the performance avoidance models revealed strong evidence for substantial correlated errors between two item pairs (modification indices > 200), which focus on identical anticipated reactions of addressees (Items Av-P3 and Av-T3 are both focusing on reproaching; Items Av-P1 and Av-T1 are both focusing on taking notice of deficient competences; see Table 1). Within an exploratory framework, we repeated the analyses with setting the two error correlations free. Significant correlated errors for the two item pairs were estimated for all three models ($\delta_s = .22-.24$ and $\delta_s = .25-.26$, respectively). Results indicated an acceptable model fit for the four addressee groups model and slightly worse model fits for the alternative models (see Table 3). The hypothesized differences between the models respecting data fit remained significant. The latent factor correlation matrix of the four addressee group model was now positive definite and consisted of slightly lower values than in the model without correlated errors (see Table 4). Nevertheless, latent correlations among the four addressee factors respecting avoidance goals were still substantially larger than those respecting performance approach goals.

Model Tests Regarding Addressee Groups

To additionally test whether the approach–avoidance distinction is also valid for specific addressees (Hypothesis 2), we conducted modeling within the four addressee groups. For each addressee group, we tested two models with the respective three approach and three avoidance items: total rating factor, in which all six items load on one latent variable, and approach–avoidance, in which the approach items load on one latent variable and the avoidance items load on another. This is the hypothesized model.

For parents, teachers, and classmates as addressees of performance goals, results clearly indicate that a distinction between approach and avoidance goals holds true. For all three groups, the

² Because the sample size is very large, in this and all subsequent analyses significant chi-square tests are not unexpected and should not be interpreted as an indicator of bad model fit (see Byrne, 1998).

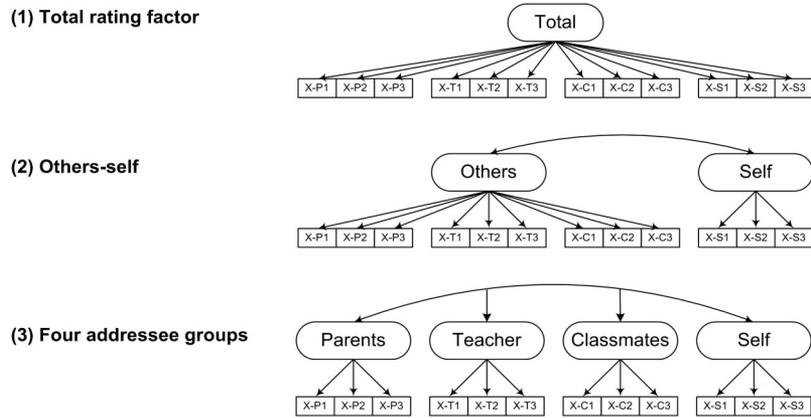


Figure 1. Hypothesized models for both performance approach and performance avoidance components. For reasons of clarity, uniquenesses are not included in the figure. First set of analyses (1): X = performance approach item. Second set of analyses (2): X = performance avoidance item. P = parents item; T = teacher item; C = classmates item; S = self-item.

approach–avoidance model revealed sufficient fit indices for the most part (parents: comparative fit index [CFI] = .99, Tucker–Lewis index [TLI] = .99; teacher: CFI = .92, TLI = .85; classmates: CFI = .94, TLI = .89), whereas the total rating factor model resulted in lower fit indices (parents: CFI = .94, TLI = .91; teacher: CFI = .89, TLI = .82; classmates: CFI = .86, TLI = .76). Model comparisons revealed for all three addressee groups that the two component model fits the sample data significantly better than the model featuring a total rating factor, $\chi^2(1) > 136.7, ps < .001$. As expected, the modeling revealed moderate to high latent correlations between performance approach goals and performance avoidance goals. The correlations between the two latent factors were $\phi = .70$ for parent-related goals, $\phi = .79$ for teacher-related goals, and $\phi = .66$ for goals that are directed toward classmates. In contrast to these three external addressee groups, results regarding goals that are directed to the acting person him/herself are somewhat different: Both hypothesized models fit the data in a comparable manner (total rating factor model: CFI = .94, TLI = .90; approach–avoidance model: CFI = .94, TLI = .89). The differences between the fit indices were not significant, $\chi^2(1) =$

0.4, $p = .52$. Moreover, the latent correlation between the two components in the approach–avoidance model was very high ($\phi = .92$). Obviously, the approach–avoidance distinction is less evident for self-addressed performance goals than for externally addressed performance goals.

Model Tests Incorporating All Facets

In the next step, we tested a series of models that incorporated all 24 items (Hypothesis 3; see Figure 2): approach–avoidance, in which the 12 approach items load on one latent variable and the 12 avoidance items load on another; four addressee groups, in which the parents, teacher, classmates, and self-items (six items in each case) load on their respective latent variables, resulting in four correlated addressee-specific factors; approach–avoidance by four addressee groups, in which eight component and addressee-specific factors were defined, each having three items; and approach–avoidance and four addressee groups, in which the 12 approach items and the 12 avoidance items load on their respective latent variables and additionally in which the parents, teacher,

Table 3
Results From Confirmatory Factor Analyses for Approach Goals and for Avoidance Goals

Model	df or Δdf	Approach goals				Avoidance goals			
		χ^2 or $\Delta\chi^2$	RMSEA	CFI	TLI	χ^2 or $\Delta\chi^2$	RMSEA	CFI	TLI
Model fit									
1. Total rating factor	54 (52)	4656.3*	.18	.74	.69	1237.1* (688.2*)	.09 (.07)	.84 (.91)	.80 (.88)
2. Others–self	53 (51)	3046.3*	.15	.83	.79	1197.7* (646.7*)	.09 (.07)	.84 (.91)	.80 (.89)
3. Four addressee groups	48 (46)	815.5*	.08	.95	.93	1102.1* (539.0*)	.09 (.06)	.86 (.93)	.80 (.90)
Model comparison									
Model 3 vs. Model 1	6 (6)	3840.8*				135.0* (149.2*)			
Model 3 vs. Model 2	5 (5)	2230.8*				95.7* (107.7*)			

Note. $N = 2,675$. Analyses for avoidance goals were repeated with setting free the correlated errors between two item pairs each focusing identical reactions of addressees. Results are presented in parentheses. RMSEA = root-mean-square error of approximation; CFI = comparative fit index; TLI = Tucker–Lewis index.
* $p < .001$.

Table 4
Latent Factor Correlations in the Four Addressee Groups Models for Approach Goals (Above the Diagonal) and for Avoidance Goals (Below the Diagonal)

Addressee of goals	1	2	3	4
1. Parents	—	.82	.57	.62
2. Teacher	1.03 (.86)	—	.81	.45
3. Classmates	.82 (.79)	.96 (.94)	—	.25
4. Self	.77 (.75)	.75 (.75)	.64 (.65)	—

Note. $N = 2,675$. Analyses for avoidance goals were repeated with setting free the correlated errors between two item pairs each focusing identical reactions of addressees. Results are presented in parentheses.

classmates, and self-items load on their respective four addressee factors. This is the multitrait–multimethod model (MTMM model), which posits two loadings for each item on a component factor and on an addressee factor (refer to Byrne, 1998).

The fit indices for the four models are presented in Table 5. In line with our expectations, models that exclusively posit approach and avoidance components or the four addressee groups do not fit the data nearly as well as models that incorporate the influences of both performance goal components and addressee groups. The model crossing approach and avoidance components with addressee groups (resulting in eight latent variables) fits substantially better, but the model with the best fit is the MTMM model, which simultaneously posits two component factors and four addressee factors. CFI and TLI values above .90 also indicate that the approach–avoidance and four addressee groups model is the only model with an adequate fit to the data.³

Latent factor correlations for the MTMM model are displayed in Table 6. These correlations specify the relationship between the approach and avoidance components controlled for several addressee groups and vice versa. Results reveal that the approach component and the avoidance component correlate high positive, when the addressee groups of performance goals are controlled for. On the other hand, moderate to high latent correlations between performance goals addressing differential social referents emerged when the distinction between approach goals and avoidance goals was controlled for. The latent correlation between parent-addressed goals and teacher-addressed goals was particularly high. However, latent correlations incorporating the acting individual him/herself as the addressee of performance goals were substantially lower, especially for associations with teacher- and classmate-directed goals.

Relationships With External Criteria

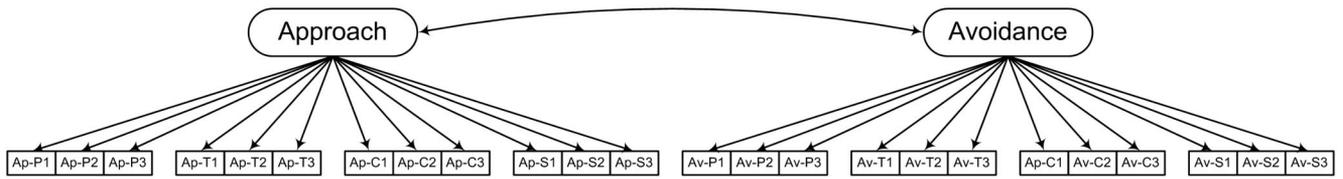
To examine relationships between addressee-specific performance goals and the external criteria observed (Hypothesis 4), we expanded the model with the best fit (approach–avoidance and four addressee groups) to a regression model with free regression paths from both component factors as well as from each addressee group factor to one latent endogenous variable. We ran the analysis separately for each of the seven external criteria as an endogenous variable. Central to our hypotheses are the regression coefficients of the structural model, which are displayed in Table 7.

While systematic influences of several addressees were controlled in these models, the prediction of the seven external criteria from performance approach goals and performance avoidance goals provided highly valid estimations of associations with other motivational variables. Here, a distinct pattern occurred for approach and avoidance goals. Performance approach goals predicted mastery goals, academic self-concept, effort expenditure, depth of learning processes, and task value in a positive sense. In contrast, performance avoidance goals demonstrated weak to moderately negative relationships with mastery goals, academic self-concept, achievement, effort expenditure, and task value. Additionally, performance avoidance goals showed a clearly positive relationship to test anxiety, while performance approach goals could not predict this significantly.

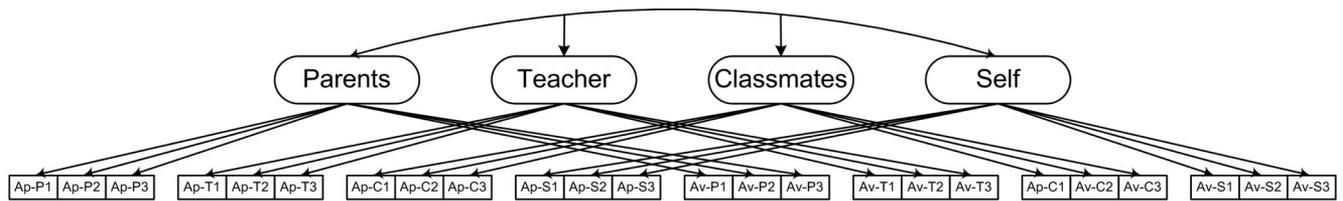
The regression coefficients of the four factors corresponding to the four addressee groups are relevant for our hypothesis that addressee specific relationships with external criteria do exist. Since the model structure incorporates a control for approach and avoidance components, these are estimates of the unique effects of each of the four addressee groups, in that they partial out the above described global effects of the two goal components. As hypothesized, results indicate different relationships, contingent on the addressees of performance goals for all external criteria. Of particular interest for the achievement goal literature may be the regression coefficients associated with mastery goals. Here, our results reveal a negative association with parent-addressed performance goals and positive associations with classmate-addressed and self-addressed performance goals, whereby the latter was especially high. Similar relationships occurred for task value—a supplemental negative effect was, admittedly, observed for teacher-directed performance goals. With respect to academic self-concept and achievement, self-addressed performance goals again served as a significant positive predictor. Academic self-concept was additionally predicted by parent-directed performance goals in a negative sense. While predicting effort expenditure, goals that were addressed to classmates or to the student him/herself turned out to be positive predictors, while regression coefficients for parent- and teacher-addressed goals were insignificant. The regression of depth of learning processes again displayed a differential importance for several of the addressees: While parent- and classmate-addressed goals did not predict the extent of deep learning processes, teacher- and self-addressed goals predicted it positively. Finally, a differential pattern also appeared for test anxiety: It was positively associated with performance goals, which are directed toward parents, and negatively associated with performance goals aimed at one's self. While the respective regression coefficient was relatively low for the individual him/herself as an addressee of performance goals, a substantially higher coefficient was observed for parents as addressees of performance goals.

³ Analogous to the models in the avoidance component, large modification indices respecting correlated errors between the above named items were observed (modification indices > 126.7). Since the fit of the MTMM model was satisfactory before the correlated uniquenesses was set free, and the fit of the remaining models would not improve substantially through such exploratory framed specifications (CFIs < .89, TLIs < .88), we did not include them in the models.

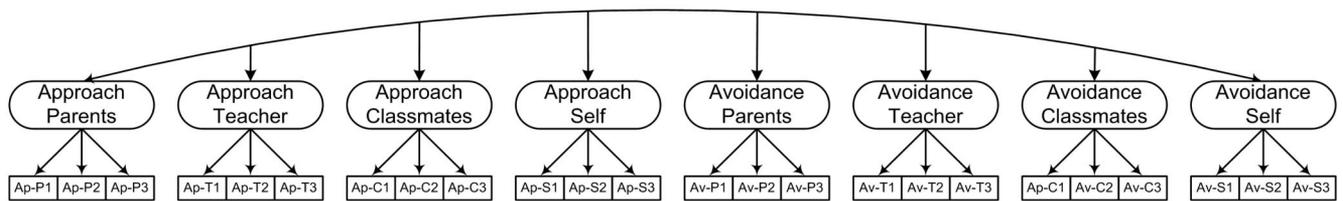
(1) Approach-avoidance



(2) Four addressee groups



(3) Approach-avoidance by four addressee groups



(4) Approach-avoidance and four addressee groups

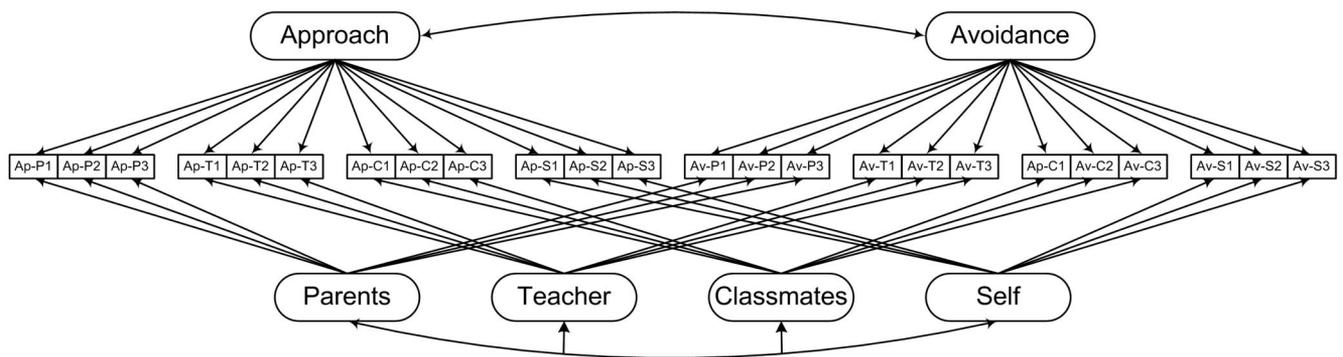


Figure 2. Hypothesized models incorporating all facets of performance goals. For reasons of clarity, uniquenesses are not included in the figure. Ap = approach; Av = avoidance; P = parents; S = self; T = teacher; C = classmates.

Table 5
Model Fit and Model Comparison Results From Confirmatory Factor Analyses With all Facets of Performance Goals

Model	<i>df</i> or Δdf	χ^2 or $\Delta\chi^2$	RMSEA	CFI	TLI
Model fit					
1. Approach–avoidance	251	9159.1*	.12	.73	.71
2. Four addressee groups	246	6532.5*	.10	.80	.77
3. Approach–avoidance by four addressee groups	224	3427.1*	.07	.88	.86
4. Approach–avoidance and four addressee groups	221	2011.4*	.06	.93	.91
Model comparison					
Model 3 vs. Model 1	27	5732.0*			
Model 3 vs. Model 2	22	3105.4*			
Model 4 vs. Model 1	30	7147.7*			
Model 4 vs. Model 2	25	4521.1*			
Model 4 vs. Model 3	3	1415.7*			

Note. $N = 2,675$. RMSEA = root-mean-square error of approximation; CFI = comparative fit index; TLI = Tucker–Lewis index.

* $p < .001$.

Discussion

The work at hand pursued the central idea that performance goals could be addressee specific. This idea is based on the differing situations, standards, reward systems, expectations, and emotional reactions relating to various groups of important others, whereby in the context of scholastic learning, parents, teachers, and classmates are of prime relevance (Wentzel, 1998, 1999). Moreover, we assumed that the individual him/herself could be an addressee of performance goals (refer also to Urda & Mestas, 2006). The study aimed to clarify whether the differentiation among these four addressee groups holds true for performance approach and performance avoidance goals and to test whether an additional and systematic consideration of addressee groups results in a better representation and understanding of performance goal processes (including associations with other motivational and emotional facets of learning) than the exclusive incorporation of the approach–avoidance distinction.

With respect to our first hypothesis, it was shown that different addressee groups comprise separate factors for performance goals. This was clearly valid for performance approach goals and to a somewhat lesser degree also for performance avoidance goals. For both components, a four-addressee-group model offers a significantly better model fit than either a total-rating-factor model or a model that differentiates between interpersonal and intrapersonal

performance goals (see Urda & Mestas, 2006). One can conclude that pupils differentiate among various addressees while building up performance goals. Thus, they distinguish to whom they want to appear to be competent or not to appear to be incompetent. Moreover, they often hold a separate class of performance goals, which do not target how they appear to other persons, but are exclusively intrapersonal in nature. Noteworthy is that, for performance avoidance goals, the four addressee factors were more closely associated with each other than those for performance approach goals. Moreover, differences between the hypothesized model and the alternative models were less substantive for performance avoidance goals. This could be an indication that the anticipation of positive states (which is inherent in approach goals) is more specifically focused on certain positive outcomes (e.g., the impression given to a specific person that one is competent) than the anticipation of negative states (a constituent of avoidance goals), which apparently is focused more generally on the negative appearance of student competences.

The results concerning our second hypothesis revealed that the distinction between an approach and an avoidance component holds true for all external addressee groups of performance goals. For intrapersonal performance goals, the validity of the approach–avoidance distinction did not hold. One can infer that the approach–avoidance distinction is definitely relevant when students aim to be viewed by others as competent or aim to avoid being viewed as incompetent, but this distinction is less striking when the appearance component is absent, in other words when students pursue the intrapersonal goal of being confident or not being confident about their competences (cf. Elliot, 1999).

Testing models with all facets of performance goals resulted in clear indications that simultaneous incorporation of the distinction between an approach and an avoidance component as well as the distinction among different addressees result in a better fit to sample data than the exclusive application of only one of the two distinctions. According to these results, taking different addressees into account provides researchers with a better understanding of goal setting processes. A particularly good fit resulted for the MTMM model, which independently posits two component factors

Table 6
Latent Factor Correlations in the Multitrait–Multimethod Model Approach–Avoidance and Four Addressee Groups

Variable	1	2	3	4	5	6
1. Approach component	—					
2. Avoidance component	.67	—				
3. Parents			—			
4. Teacher			.76	—		
5. Classmates			.59	.67	—	
6. Self			.64	.48	.38	—

Note. $N = 2,675$.

Table 7
Standardized Coefficients of the Regression of External Criteria on Approach and Avoidance Components as well as on the Four Addressee Groups

External criterion	Goal component		Addressees of goals			
	Approach	Avoidance	Parents	Teacher	Classmates	Self
Mastery goals	.34	-.09	-.16	.10 ^a	.26	.55
Academic self-concept	.35	-.38	-.11	.06 ^a	.02 ^a	.19
Achievement	.05 ^a	-.14	-.01 ^a	.01 ^a	.00 ^a	.15
Effort expenditure	.29	-.14	.03 ^a	-.01 ^a	.25	.28
Depth of learning processes	.22	-.07 ^a	-.08 ^a	.15	.03 ^a	.20
Task value	.40	-.11	-.13	-.16	.30	.36
Test anxiety	.02 ^a	.45	.31	.07 ^a	.08 ^a	-.13

Note. $N = 2675$. Regression coefficients were estimated by expending the multitrait-multimethod model approach-avoidance and four addressee groups with one external criterion as an endogenous variable.

^a not significant.

and four addressee factors. These findings imply that addressee specification could be a distinction, similar in importance to the approach-avoidance distinction, while being relatively independent from it. Accordingly, results clearly revealed that the differentiation among various addressees can hardly replace the approach-avoidance distinction in achievement goal theory. Addressee specification could, rather, provide a justifiable supplement and refinement of the existing theoretical framework. For instance, when researchers are interested in associations between performance goals and other motivational and emotional facets of learning, these should be systematically controlled for several addressees. In fact, a contribution to the existing literature on achievement goal theory may be provided by the results compiled on the associations of performance approach goals and performance avoidance goals with external criteria under systematic control for addressee-specific influences. Our addressee-controlled results may help to clarify the contrary association patterns regarding performance approach and performance avoidance goals with various aspects of adaptive and maladaptive learning (for an overview, see Midgley et al., 2001).

With our forth hypotheses, we focused on addressee-specific associations of performance goals with the above designated external criteria. As expected, different addressee groups of performance goals were of different importance with respect to relationships with mastery goals and other aspects of the learning process. For external-addressed performance goals, small to moderate regression coefficients were observed, indicating a differential pattern with respect to the different addressee groups. Similar to performance avoidance goals (Ames & Archer, 1988; Wolters, 2004), parent-addressed goals correlated negatively with mastery goals, academic self-concept and task value, and positively with test anxiety. With respect to the population here under investigation, eighth and ninth graders, it appears as though performance goals that are oriented on appearances vis-à-vis one's parents are less adaptive. Although the significance of parents in scholastic learning processes is common knowledge, this finding demonstrates that their relevance to goal setting processes is widely underexplored. This is also reflected in existing measurement instruments for the assessment of achievement goals, which only seldom incorporate parent-addressed goals. One implication of the present study is that measurements of goals should increasingly

focus on parents as a relevant social factor for performance goals. A more adaptive pattern resulted in conjunction with performance goals addressing classmates: These were positively associated with several facets of an adaptive learning process, namely mastery goals, effort expenditure, and task value. In contrast to performance goals addressing parents and classmates, teacher-directed goals were associated more weakly, and in a contradictory manner, according to the criteria assessed in our study. A positive association with depth of learning processes and a negative association with task value were the only significant effects, but were, with respect to direction, inconsistent with one another. One reason for this pattern might be that although teachers define learning tasks and evaluation standards, their rewards and punishments may often be of less relevance for the average 15-year-old than standards defined by peers or parental rewards and punishments (Harris, 1995).

In terms of relationships with external criteria, self-addressed goals may define a separate class of performance goals: In comparison to other addressee-specific goals, especially parent-addressed goals, a contrary pattern of regression coefficients emerged. Self-addressed performance goals were positively associated with all aspects of adaptive learning and were negatively related with our indicator of maladaptive learning, namely test anxiety. A further examination of self-directed performance goals would be an interesting task for future research. Good cause for this is provided not only by the results mentioned above but also by a remarkably high positive association with mastery goals. Here one would want to clarify whether self-addressed performance goals build up, as assumed in the present work, a separate class of performance goals or alternatively whether they combine aspects of performance goals and mastery goals, for example concerning the underlying normative and absolute standards of evaluation.

As the present study was conducted in Germany, it would be desirable to replicate the results in other countries in order to examine possible cultural differences. However, when doing so readers should be aware that the items in the questionnaire may be interpreted differently by an Anglo/American population. For example, pretests showed that different wordings used to refer to academic performance such as "I am good" and "I get a good grade" are not interpreted as being different by German students but might be understood to have disparate meanings by students in

other countries. A more serious limitation of the present study is that no disclosures could be made on the genesis of the addressee specification of performance goals. The population from which we derived our sample was made up of pupils in the eighth and ninth grades of German public schools and therefore represented a relatively narrow age range. We assumed that persons in this age group have already completed the developmental process of differentiation among performance goals concerning important others. Nevertheless, very little is known about this developmental process. Although initial findings support the assumption that, with increasing age, performance goals are increasingly differentiated with respect to different addressees (Stoeger, 2002), further research to enlighten this developmental process is clearly needed.

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