

# Achievement goal orientations and subjective well-being: A person-centred analysis

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## Abstract

This study examined whether students with different achievement goal orientation profiles differ in terms of subjective well-being (i.e., self-esteem, depressive symptoms, school-related burnout, and educational goal appraisals). Six groups of students with unique motivational profiles were identified. Observed differences in subjective well-being indicated that goals related to self-improvement and growth were positively associated with various indices of well-being, whereas avoidance tendencies and concerns with validating or demonstrating one's competence were linked with different types of adjustment problems. Findings demonstrate the importance of including measures of well-being when evaluating the role of achievement goal orientations in learning and achievement.

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## 1. Introduction

Much of the individual variation in achievement behaviour can be explained by the different goals students hold or adopt in achievement situations (Urdan, 1997). Although a large body of research has examined how such goals relate to various types of achievement-related outcomes (Pintrich, 2000b), less is known about how achievement goals relate to students' subjective well-being. This is quite surprising considering the fact that already the seminal work on achievement goals explicitly suggested that the endorsement of certain goals is likely to be associated with different patterns of coping and emotion (Dweck & Elliott, 1983; Nicholls, 1984). The general assumption was that some students have a stronger need to validate their competence than others and that this tendency makes them more vulnerable to situations which potentially imply incompetence or otherwise pose a threat to one's self-esteem.

A series of studies by Elliott and Dweck (1988) revealed two general types of coping patterns among young children in achievement situations. Helpless children were characterized by challenge avoidance, low persistence in the face of difficulty, and negative affect and negative self-cognitions when confronting obstacles, whereas an opposite

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pattern characterized mastery-oriented children. Consistent with the assumptions, helpless children were more driven by performance goals (i.e., wanting to demonstrate competence) whereas mastery-oriented children were striving for learning goals (i.e., wanting to gain competence). Kaplan and Maehr (1999) extended this work by looking at the role achievement goals may play in facilitating the well-being of young students. They found that the pursuit of mastery goals was positively associated with general indices of well-being, such as emotional tone, peer relationship, and impulse control, and with school-related affect. In contrast, pursuing performance goals was negatively related to emotional tone and impulse control, and with affect at school. Kaplan and Maehr (1999) concluded that achievement goals are linked with emotions and cognitions that not only contribute to effective learning but also relate to well-being more generally. This view was also confirmed by Roeser, Strobel, and Quihuis (2002), who found further support for the above scheme in a more general context, linking goals and motivational tendencies to general socio-emotional functioning. Their results showed that, compared to mastery-oriented students, helpless students had lower self-esteem and higher levels of anger and sadness, and they were less engaged and reported more withdrawal behaviour in school. Similarly, based on Dweck's work, Dykman (1998) proposed a goal-orientation model for explaining and predicting depression. The model predicted that compared to growth-seeking (i.e., mastery-oriented) people, validation-seeking (i.e., performance-focused) people would show greater anxiety in anticipation of a stressful event and greater self-esteem loss, task disengagement, and depression after a negative event. Again, support for these predictions was found in several studies (see also Sideridis, 2005).

Together, these studies suggest that individuals' subjective well-being is associated with the kinds of goals and outcomes they seek to attain. More specifically, it appears that goals related to self-improvement and growth are related to better socio-emotional functioning and more positive self-evaluations, whereas the tendency to validate and demonstrate one's personal qualities is more linked with adjustment problems and socio-emotional vulnerability. In this study, we extended this prior work by focusing on a broader set of achievement goal orientations, employing a person-centred approach to the study of individual differences (see Niemivirta, 2002a; Roeser et al., 2002), and including additional domain-specific indices of well-being that are directly linked with school and education.

Following Boekaerts and Niemivirta (2000), we assumed that students' motivational tendencies influence the way they appraise school-related events. Whether the focus is on increasing resources (e.g., gaining knowledge, learning new skills) or maintaining emotional well-being (e.g., trying to not fail or look incompetent) depends on how the events are appraised and how these appraisals relate to the person's available resources (see Boekaerts, 1993). The personal relevance or importance of any event is evaluated in relation to the person's goals and the possible implications of the outcomes of the event. This view suggests that individuals' tendencies to select certain goals or favour certain outcomes (i.e., their achievement goal orientations) create an interpretative framework for evaluating not only current but also anticipated future events. More specifically, we assumed that students' appraisals of the properties of and progress with their future educational goals vary as a function of their achievement goal orientation profiles and that these differences parallel differences in other related indices of general and school-related well-being.

### *1.1. Achievement goal orientations*

Although initially two main achievement goal orientations were identified, later research has expanded the dichotomous scheme of mastery vs. performance goals by describing other goals related to achievement behaviour. Based on the observation that not all students in the classroom strive for competence, Nicholls, Patashnick, and Nolen (1985) introduced work avoidance goals. Students pursuing a work avoidance goal aim at effort reduction by avoiding challenging tasks, putting forth as little effort as possible and trying to get away with it. Elliot and Harackiewicz (1996; see also Middleton & Midgley, 1997) argued that the nature and function of performance goals would be more accurately understood if they were partitioned into separate approach and avoidance components. This distinction maintained that the adoption of performance-approach goals (i.e., the aim of demonstrating competence) and performance-avoidance goals (i.e., the aim of avoiding judgments of incompetence) would have different correlates and behavioural consequences.

The more recent and so far less studied advancements have focused on the different nuances of mastery and performance (Elliot & McGregor, 2001; Pintrich, 2000a). Suggesting that not all students who aim at mastery use identical criteria for the attainment of mastery, Niemivirta (2002b) distinguished between mastery-intrinsic and mastery-extrinsic goal orientations. That is, despite the same general goal (to gain competence), some students use intrinsic criteria (e.g., the phenomenological feeling of knowing and understanding) for evaluating whether they

have achieved mastery or not, whereas some others lean on extrinsic criteria (e.g., grades and formal feedback). This, in turn, leads to different foci in what the students seek to attain. Similar differentiation was also put forward by Grant and Dweck (2003), although they labelled the latter goal as outcome goal. The initial findings regarding mastery-extrinsic or outcome goals suggest that they not only relate to mastery-focused tendencies (e.g., active coping and effort expenditure) but also to performance-related concerns (e.g., fear of failure and rumination).

Regarding the relationships between goals and achievement behaviour, research provides both consistent and inconsistent results. In general, current findings suggest that the endorsement of mastery goals is associated with positive and adaptive patterns of coping and behaviour. For example, studies have systematically shown positive relationships between mastery goals and interest, depth of information processing, effort and persistence, use of effective learning strategies, self-efficacy, and positive emotions (Harackiewicz, Barron, Tauer, Carter, & Elliot, 2000; McGregor & Elliot, 2002; Niemivirta, 2002b; Nolen, 1988; Pajares, Britner, & Valiante, 2000; Pekrun, Elliot, & Maier, 2006). Also the relationships between performance-avoidance and avoidance goals and indices of achievement, motivation, and affect have shown to be rather systematic. Performance-avoidance goals have been found to be linked with negative outcomes and indices of maladaptive adjustment, such as anxiety, hopelessness, superficial and disorganized study strategies, lower performance, self-concept and self-efficacy, and self-handicapping (McGregor & Elliot, 2002; Niemivirta, 2002b; Pekrun et al., 2006; Urdan, 2004), whereas avoidance goals have been found to be associated with lower performance, interest, and enjoyment, low or superficial strategy use, alienation and cynical attitudes toward school, negative affects, and external attributional patterns (Harackiewicz et al., 2000; Nicholls et al., 1985; Niemivirta, 1998; Nolen, 1988; Seifert, 2004). The relations between performance-approach goals and other outcomes are less clear. Some studies have evidenced negative effects (McGregor & Elliot, 2002; Niemivirta, 2002b), whereas others have shown positive effects (Elliot & Harackiewicz, 1996; Harackiewicz et al., 2000; Middleton & Midgley, 1997). In essence, the various findings suggest that performance-approach goals may have a positive effect on effort, persistence, and graded performance or achievement, but the pursuit of such goals may also be associated with anxiety, surface processing, and stress. According to Midgley, Kaplan, and Middleton (2001), these discrepancies may partially be explained by variation in age, sampling, and design.

Much of the research on achievement goals has focused on how specific goals are related to specific outcomes. Less attention has been paid to the possibility that people may strive for multiple goals or seek to attain a single outcome for multiple reasons, or, that the pursuit of certain goals may serve multiple functions (Malka & Covington, 2005; Niemivirta, 2002b; Pintrich, 2000a). For example, people may seek to get good grades both because a good grade serves as a standard for mastery and because it is of important instrumental value as such. In line with this, we maintain that all students identify and share similar goals, but the relative emphasis on one or more of them is what makes the difference. Thus, instead of looking at the bivariate relationships between sets of variables, our study focused on the patterns of goal orientations and their relations to subjective well-being. We believe that students' generalized motivational tendencies are best captured by classifying students into homogenous groups with similar goal orientation profiles (see Niemivirta, 2002a), and that such an approach is useful in revealing the complex associations between motivational strivings and indices of well-being.

## 1.2. Subjective well-being

The indices of well-being included in the study reflect both general well-being and well-being linked to a specific context. Thus, in addition to common indices of positive and negative aspects of subjective general well-being (self-esteem and depressive symptoms), we also focused on domain-specific indicators of it directly associated with school and education, such as school-related burnout, which, to our knowledge, has never been studied in relation to achievement goals, and personal goal appraisals.

### 1.2.1. General well-being

The maintenance of positive self-esteem is seen as a powerful motive guiding perception and behaviour (Dunning, 2001). While trying to attain something of personal importance, we continuously compare our progress to a goal or a standard, and the outcome of that comparison results in self-related affective reactions. In this process, the extant level of self-esteem may serve as an input in the sense that it influences what sort of events we consider to be motivationally congruent or incongruent (threatening) in the first place. Then again, self-esteem may also serve as an outcome in the sense that the perceived success of our self-regulatory efforts (whether self- or task-focused) is an

important determinant of how we feel about ourselves in given situations (e.g., fluctuations in self-esteem; Kernis & Waschull, 1995). According to prior research, self-protection is more common among people with low self-esteem, whereas self-enhancement is more typical of people with high self-esteem.

In the academic domain, self-esteem can be seen as a buffer against the negative influence of study-related setbacks and disappointments. Depressive symptoms, instead, may be taken to reflect the psychological consequences of prolonged failures to meet one's own standards or perceived expectations (Dykman, 1998; Sideridis, 2005). In the school context, the pursuit of study-related goals and educational aspirations provide both meaning and direction to the students, and if these goals are not met, the student may begin to feel inadequate and inapt as a person. As we assume that differences in students' achievement goal orientations partly reflect differences in the students' experienced need to protect their self-esteem, we expected to find differences in self-esteem as a function of students' motivational profiles. Moreover, since students with different achievement goal orientations also differ in terms of how they experience setbacks and how concerned they are about failures and the consequences of those failures (Boekaerts & Niemivirta, 2000), we expected to find parallel differences in depressive symptomatology.

### *1.2.2. School-related burnout*

Burnout is generally regarded as a work-related disorder, but it may be considered relevant in the school context as well (Kiuru, Aunola, Nurmi, Leskinen, & Salmela-Aro, *in press*). After all, school is a context in which the students work; they attend classes and complete assignments in order to pass exams and to acquire a degree. As in the work context, high perceived demands and lack of perceived resources form the breeding ground for burnout (cf. Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Accordingly, school-related burnout is defined as consisting of three conceptually distinct but empirically related dimensions: emotional exhaustion due to school demands, cynical and detached attitude towards school, and feelings of inadequacy as a student (Salmela-Aro & Näätänen, 2005).

### *1.2.3. Education-related personal goal appraisals*

Several theorists have argued that people's personal goals and how those goals are appraised play an important role in the development and maintenance of individuals' subjective well-being (Little, 1983; Little, Salmela-Aro, & Phillips, 2007). This view conceptualizes goals as personal projects, which constitute individualized and cognitively elaborated representations of what a person wants to achieve in his or her current life situation (Little, 1983). Personal goals are typically examined by asking individuals to generate a list of goals and to rate each goal according to appraisal dimensions, such as importance, progress, stress, accomplishment, and attainability (Little, 1983). These nomothetic dimensions that link goals to subjective well-being permit comparisons across persons even though they possess idiographic sets of personal goals. Personal goals that are appraised as stressful and difficult to achieve have been found to be associated with depressive symptoms (Salmela-Aro & Nurmi, 1996). Similarly, being highly committed to many work-related goals has been found to correlate with work burnout (Salmela-Aro & Nurmi, 2004). As our core assumption was that the personal relevance or importance of any current or future event is evaluated in relation to one's goals and perceived resources (Boekaerts & Niemivirta, 2000), we expected to find differences in students' goal appraisals that varied as a function of the valence (approach vs. avoidance) and foci (validating vs. gaining competence) of the students' motivational tendencies.

## *1.3. Hypotheses*

Based on prior work (Niemivirta, 1998, 2002b; Roeser et al., 2002; Tuominen, Salmela-Aro, Niemivirta, & Vuori, 2004), we expected to find several groups of students with different motivational profiles. In line with the literature, we anticipated groups with a dominant tendency towards mastery, performance, and avoidance. We further expected that students emphasizing goals and outcomes related to performance and achievement would fall into two or more groups, some with a focus on success or relative ability (approach), and some with a focus on self-protection (avoidance). Consequently, we expected to reveal several motivational profiles, each with an emphasis on either a single goal orientation or a combination of goal orientations (Hypothesis 1).

As to the overall differences in well-being, we mainly draw on the results from Dykman (1998), Roeser et al. (2002), and Sideridis (2005). Differences in the experienced need to self-protect — as reflected in different types of goal orientation profiles — were presumed to be associated with differences in subjective well-being. In line with Dykman's work, we hypothesized that students with a concern of validating their competence

(i.e., performance-focused students) would show less adaptive patterns of subjective well-being than their growth-seeking peers (i.e., mastery-oriented students). However, following Sideridis (2005), we expected that the negative outcomes would be more accentuated among students emphasizing performance-avoidance tendencies. More specifically, we expected that students with an emphasis on mastery or performance (either success or relative ability) would show equal levels of self-esteem and depressive symptoms, but because performance-focused students' self-worth is contingent on their achievements (Crocker & Wolfe, 2001), they would be more likely to report emotional exhaustion and stress with respect to their educational goals (Hypothesis 2). Furthermore, as students with performance-avoidance-focused motivational strivings appear to be most concerned about failure, and their self-worth is likely to be contingent on their academic success (Boekaerts & Niemivirta, 2000; Elliot & Church, 1997), we expected that they would report lower self-esteem and higher levels of depressive symptoms compared to the others (cf. Sideridis, 2005) (Hypothesis 3).

Finally, we anticipated that avoidance-oriented students would display highest levels of cynicism and lack of effort and commitment to their educational goals (Hypothesis 4). However, since general (work) avoidance tendencies may also be likely among students who are either alienated from school, lack interest, or simply do not value school-related achievement and academic competence (see Roesser et al., 2002; Seifert, 2004), we acknowledged the possibility that some of these students might in fact exhibit less general distress and stress with their future aspirations than their more committed peers (Hypothesis 5).

## 2. Method

### 2.1. Participants – Procedure

The data for this study were collected from one city in Eastern Finland.<sup>1</sup> The participants were a total of 1321 adolescents; 707 lower secondary school students (332 girls, 367 boys, 8 did not report gender) and 614 upper secondary school students (376 girls, 237 boys, 1 did not report gender). Hence, all the 9th-graders from all the lower secondary schools (9 schools, 49 classes) and all the 11th-graders from all the upper secondary schools (6 schools, 28 classes) in this city – present in school during the data collection – participated in the study. These 15- and 17-year-old participants ( $M = 15.97$ ,  $SD = 1.05$ ) completed a self-report questionnaire on motivation and subjective well-being in school during one 45-min class session.

### 2.2. Measures

#### 2.2.1. Achievement goal orientations

The instrument by Niemivirta (2002b) was chosen for assessing achievement goal orientations because of its wide range of scales. The scale for *mastery-intrinsic orientation* comprised three items assessing students' focus on learning, understanding and gaining competence (e.g., "To acquire new knowledge is an important goal for me in school"). The scale for *mastery-extrinsic orientation* comprised three items assessing students' aspiration on getting good grades and succeeding in school (e.g., "My goal is to succeed in school"). The scale for *performance-approach orientation* comprised three items assessing students' focus on relative ability and judgments of competence (e.g., "An important goal for me in school is to do better than other students"). The scale for *performance-avoidance orientation* comprised three items assessing the avoidance of demonstrating normative incompetence (e.g., "I try to avoid situations in which I might fail or make a mistake"). Finally, the scale for *avoidance orientation* comprised three items reflecting students' desire to avoid achievement situations and to minimize the effort and time spent on studying (e.g., "I try to get away with as little effort as possible in my school work"). Students rated all items using a 7-point Likert-type scale ranging from 1 (=not true at all) to 7 (=very true).

<sup>1</sup> In Finland, the comprehensive school is a nine-year compulsory general schooling for all children aged 7–16. It comprises primary school (Grades 1–6) and lower secondary school (Grades 7–9). After completing compulsory schooling, young Finns face an important choice: whether to continue in general education, that is, upper secondary school (academic track) or to apply for vocational education (vocational track). More than 90% of comprehensive school-leavers continue at the upper secondary level in the same year; about 53% opt for the general upper secondary school and 39% for the vocational school.

### 2.2.2. General well-being

Both positive and negative aspects of students' general well-being were assessed. *Self-esteem* was assessed using a short version of the Rosenberg (1965) self-esteem scale. The scale comprised five items with statements reflecting general self-acceptance, self-respect, and an overall attitude towards oneself. Responses were given on a 7-point Likert-type scale ranging from 1 (=I totally disagree) to 7 (=I totally agree).

The frequency of experienced *depressive symptoms* was assessed with a 10-item Depression Scale by Salokangas, Poutanen, and Stengård (1995). Responses were given on a 4-point scale ranging from 0 (=not at all) to 3 (=extremely).

### 2.2.3. School-related burnout

For measuring school-related burnout, three subscales were used (Salmela-Aro & Näätänen, 2005): *emotional exhaustion* (e.g., "I feel that I am drowning in schoolwork"), *cynicism* (e.g., "I constantly doubt the significance of my studies"), and *inadequacy* (e.g., "I often feel myself inadequate in school"). Each subscale comprised three items, which were assessed using a 6-point Likert-type scale ranging from 1 (=I totally disagree) to 6 (=I totally agree).

### 2.2.4. Education-related personal goal appraisals

Personal goals were assessed using a revised version of Little's (1983) Personal Project Analysis inventory with an emphasis on goal appraisals. The participants were first asked to produce one personal goal related to education, after which they appraised this goal according to *commitment* (two items; e.g., "How committed are you to this goal"), *effort* (two items; e.g., "How much time and effort do you expend to this goal"), *stress* (two items; e.g., "How stressful do you find your goal"), and *progress* (three items; e.g., "How capable are you to realize your goal"). All items were rated using a 7-point Likert-type scale ranging from 1 (=very little) to 7 (=very much). One score was used for each appraisal.

### 2.2.5. Academic achievement

Because no register data were available, we used students' self-reported grade point average (GPA) as a measure of their academic achievement. Four months following the actual data collection (after the students had finished their 9th and 11th grades, respectively), the students were asked to report their GPA from the preceding term. These estimates were then used as indices for the students' final school performance of the year of data collection. The categorized scale for GPA ranged from 1 (=lowest) to 8 (=highest).

## 2.3. Data analyses

Preliminary analyses concerning structural validity were first conducted using confirmatory factor analysis (CFA). A model was specified in which all items for each scale were allowed to load on the corresponding factor only. Following the two-index presentation strategy suggested by Hu and Bentler (1999), we used the root mean square error of approximation (RMSEA) with a cutoff value of  $<.06$  and the standardized root mean square residual (SRMR) with a cutoff value of  $<.09$  to evaluate model fit. The analysis was performed using the *Mplus* statistical package (Muthén & Muthén, 2004), and all solutions were generated using maximum likelihood (ML) estimation.

Regarding motivational profiles, students with similar patterns of achievement goal orientation were identified through latent profile analysis. Latent profile analysis is a probabilistic or model-based variant of traditional cluster analysis (Vermunt & Magidson, 2002), and seeks to identify the smallest number of latent classes (groups) that adequately describe the associations among observed continuous variables (achievement goal orientations). Bayesian Information Criterion (BIC) and the Vuong–Lo–Mendell–Rubin likelihood ratio test (VLMR), as implemented in the *Mplus* statistical program, were used as the statistical criteria for choosing the best-fitting model. The model with lower BIC value is considered to provide a better fit to the data, and a low *p*-value for VLMR suggests that the model with one less class should be rejected in favour of the estimated model.

After having established the different achievement goal orientation groups, we conducted ANOVAs in order to examine group differences.<sup>2</sup>

<sup>2</sup> Due to space limitations, differences across gender and school level are not reported here. Information concerning these effects is available upon request from the authors.

### 3. Results

#### 3.1. Preliminary results

The initial CFA on achievement goal orientations and subjective well-being fit the data rather well,  $\chi^2(989, N = 1011) = 3493.17, p < 0.001, RMSEA = .050, SRMR = .057$ . However, an examination of modification indices suggested a few minor changes to the model. One item for progress had a strong secondary loading on effort, and hence, was excluded from further analyses. Furthermore, error covariances between three pairs of similarly worded items were freed. Consequently, the modified model provided better fit,  $\chi^2(940, N = 1016) = 2775.62, p < 0.001, RMSEA = .044, SRMR = .056; \Delta\chi^2(49) = 717.55, p < 0.001$ . As the correlation between cynicism and inadequacy was very high (.97), we also estimated an alternative model in which the items for cynicism and inadequacy were set to load on a single factor. However, the fit of this alternative model was inferior,  $\chi^2(953, N = 1016) = 2929.79, p < 0.001, RMSEA = .045, SRMR = .059; \Delta\chi^2(13) = 154.17, p < 0.001$ . In conclusion, the hypothesized model fitted to the data, albeit after eliminating one unsound item and allowing three pairs of errors to correlate. Latent factor correlations, descriptive statistics, and Cronbach's alphas are presented in Table 1 and factor loadings in Appendix A. The mean scores of the items loading on each factor were used for subsequent analyses.

The correlational results provided support for convergent and discriminant validity; the correlations within achievement goal orientations and within indices of subjective well-being as well as between orientations and well-being measures were in agreement with our expectations. Most importantly, the different patterns of associations for mastery-intrinsic and mastery-extrinsic orientations on one hand, and for mastery-extrinsic and performance-approach orientations on the other hand, were informative. For example, mastery-intrinsic and mastery-extrinsic orientations were similarly related to self-esteem, commitment, and effort, but differently related to emotional exhaustion and stress, whereas mastery-extrinsic and performance-approach orientations were similarly related to emotional exhaustion and stress, but differently related to depression, cynicism, and inadequacy. These differences indicate that the pursuit of mastery-extrinsic orientation clearly incorporates elements of both internal and external incentives.

Table 1  
Latent factor correlations, descriptive statistics, and internal consistencies

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Mastery-intrinsic orientation	—													
2	Mastery-extrinsic orientation	.66**	—												
3	Performance-approach orientation	.28**	.55**	—											
4	Performance-avoidance orientation	.03	.22**	.54**	—										
5	Avoidance orientation	-.43**	-.27**	.10	.28**	—									
6	Self-esteem	.28**	.19**	.06	-.25**	-.09	—								
7	Depressive symptoms	-.12**	-.09	.09	.27**	.12*	-.61**	—							
8	Emotional exhaustion	.09	.21**	.23**	.29**	-.12*	-.30**	.50**	—						
9	Cynicism	-.45**	-.46**	-.07	.18**	.52**	-.41**	.51**	.47**	—					
10	Inadequacy	-.32**	-.29**	.04	.30**	.40**	-.53**	.62**	.73**	.97**	—				
11	Commitment	.41**	.41**	.18**	-.01	-.28**	.26**	-.10*	.08	-.34**	-.29**	—			
12	Effort	.37**	.31**	.09	-.04	-.38**	.22**	-.07	.17**	-.27**	-.20**	.65**	—		
13	Stress	.04	.20**	.19**	.24**	-.01	-.18**	.23**	.50**	.16**	.30**	.11**	.24**	—	
14	Progress	.33**	.32**	.16**	-.11*	-.14**	.45**	-.25**	-.17**	-.32**	-.38**	.63**	.43**	-.06	—
Raw means	M	5.09	5.34	3.68	3.79	4.37	4.73	.61	2.88	2.34	2.59	5.73	4.54	4.36	5.50
	SD	1.21	1.21	1.30	1.45	1.36	1.09	.56	1.00	1.11	1.04	.88	1.26	1.53	1.03
	Cronbach's alpha	.87	.86	.71	.82	.74	.75	.91	.61	.83	.74	.70	.86	.84	.76

\* $p < 0.01$ . \*\* $p < 0.001$ .

### 3.2. Achievement goal orientation profiles

The results from a series of latent profile analyses (LPA) showed that the six-class solution fit the data best (see Table 2 for fit indices). The average individual posterior probabilities for being assigned to a specific latent class were 0.80, 0.84, 0.82, 0.81, 0.77, and 0.81, which indicate that the six-class model provided a clear classification. The six groups were labelled, according to the score mean profiles, as (1) *indifferent*, (2) *mastery-oriented*, (3) *success-oriented*, (4) *performance-oriented*, (5) *disengaged*, and (6) *avoidance-oriented* (see Fig. 1).

As Fig. 1 illustrates, *indifferent* students (30%) had scores close to the scale mean on all orientations (see Table 3 for pairwise comparisons on raw mean values). With their joint (yet weak) emphasis on both mastery and success and avoidance, they represented a prototypical student in the sample. *Mastery-oriented* students (22%) emphasized both mastery-intrinsic and mastery-extrinsic orientations but had relatively low scores on all other orientations. *Success-oriented* students (9%) expressed high levels of mastery-intrinsic, mastery-extrinsic, and performance-approach orientations. *Performance-oriented* students (17%) scored relatively high on performance-approach and performance-avoidance orientations, and they also had rather high scores on avoidance orientation. *Disengaged* students (9%) scored quite low on all orientations, especially on both performance-approach and performance-avoidance orientations. *Avoidance-oriented* students (6%) scored clearly the highest on avoidance orientation and relatively low on mastery-extrinsic and especially on mastery-intrinsic orientations.

### 3.3. Differences in self-esteem and depressive symptoms

First, we examined how students with different achievement goal orientation profiles differed with respect to general well-being. A one-way ANOVA was carried out with goal orientation group as independent variable and self-esteem and depressive symptoms as dependent variables. All effects and the mean differences between goal orientation groups are summarized in Table 4. The results showed that goal orientation groups differed significantly in self-esteem,  $F(5, 1164) = 10.01, p < 0.001, \eta^2 = .04$ . The pairwise comparisons of means revealed that avoidance-oriented students displayed lower self-esteem than mastery-oriented, performance-oriented, and disengaged students. Also, with respect to depressive symptoms, the effect of goal orientation group was significant,  $F(5, 1131) = 10.01, p < 0.001, \eta^2 = .04$ . Mastery-oriented students experienced less depressive symptoms compared to the other students with the exception of disengaged students.

### 3.4. Differences in school-related burnout

Next, we investigated how students with different achievement goal orientation profiles differed with respect to school-related burnout (see Table 4). A one-way ANOVA showed that goal orientation group had a significant effect on emotional exhaustion,  $F(5, 1164) = 9.85, p < 0.001, \eta^2 = .04$ . Success-oriented students scored higher on emotional exhaustion than all the other students except for performance-oriented students. Disengaged students, instead, were the least emotionally exhausted, and they differed significantly from all the other students except for avoidance-oriented students. Goal orientation groups also differed significantly in cynicism,  $F(5, 1148) = 52.47, p < 0.001, \eta^2 = .19$ . Avoidance-oriented students expressed significantly more cynicism compared to the other students. Mastery-oriented students scored lower on cynicism than all the other students except for success-oriented students.

Table 2  
Information criteria values for different class solutions

Number of classes	BIC	$p_{VLMR}$
1	20,370.553	—
2	19,654.989	0.0000
3	19,378.921	0.0817
4	19,249.068	0.0004
5	19,178.389	0.0068
6	19,136.140	0.0462
7	19,175.712	0.7771

BIC = Bayesian Information Criterion;  $p_{VLMR}$  = Vuong–Lo–Mendell–Rubin likelihood ratio test.

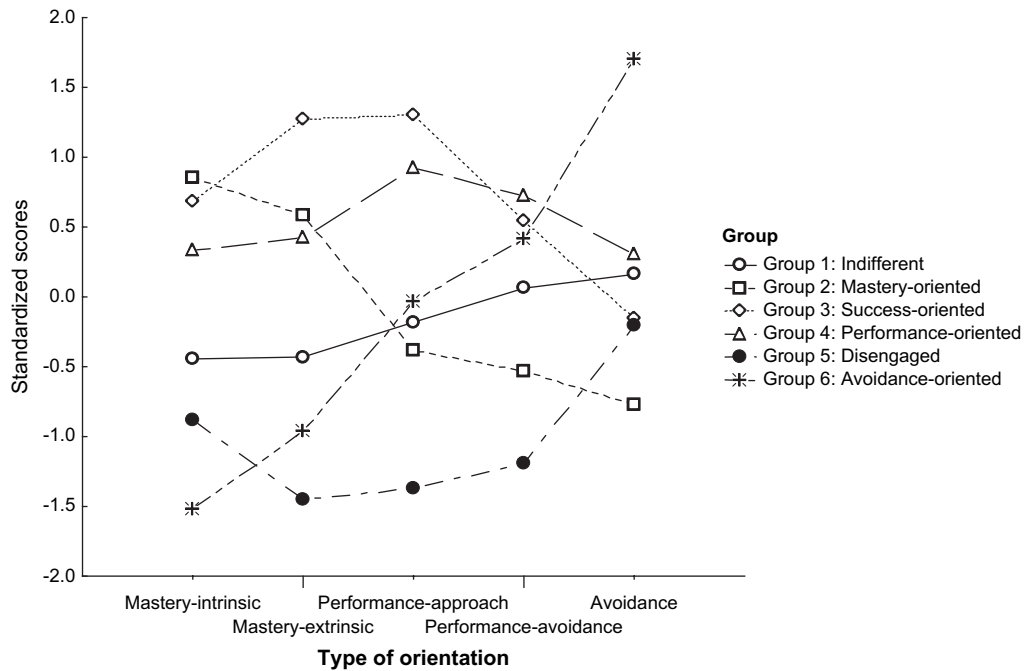


Fig. 1. Students' standardized mean scores on achievement goal orientation scales as a function of group membership.

With respect to inadequacy, the effect of goal orientation group was significant,  $F(5, 1128) = 19.42, p < 0.001, \eta^2 = .08$ . Avoidance-oriented students scored highest on inadequacy. Mastery-oriented students' score was lower than the scores of other students except for disengaged students.

### 3.5. Differences in education-related personal goal appraisals

Furthermore, we examined how students with different achievement goal orientation profiles differed with respect to education-related personal goal appraisals (see Table 4). The results showed that goal orientation groups differed significantly in commitment,  $F(5, 1176) = 37.27, p < 0.001, \eta^2 = .14$ . Pairwise comparisons of means showed that avoidance-oriented, disengaged, and indifferent students were the least committed to their educational goal, whereas success-oriented and mastery-oriented students were the most committed. The results showed further that goal

Table 3  
Mean differences in achievement goal orientations between goal orientation groups

Variable	Indifferent		Mastery-oriented		Success-oriented		Performance-oriented		Disengaged		Avoidance-oriented		$F(5, 1199)$	$p$	$\eta^2$
	$N = 394$		$N = 285$		$N = 118$		$N = 222$		$N = 113$		$N = 73$				
	$M$	$SD$	$M$	$SD$	$M$	$SD$	$M$	$SD$	$M$	$SD$	$M$	$SD$			
Achievement goal orientations															
Mastery-intrinsic	4.54	.81	6.11 <sub>a</sub>	.57	5.90 <sub>a</sub>	1.01	5.48	.57	4.01	1.45	3.24	1.12	251.46	<0.001	.51
Mastery-extrinsic	4.81	.79	6.04	.56	6.89	.16	5.85	.48	3.57 <sub>a</sub>	1.29	4.17 <sub>a</sub>	1.44	344.01	<0.001	.59
Performance-approach	3.42 <sub>a</sub>	.87	3.16	1.09	5.36	.87	4.87	.63	1.86	.58	3.62 <sub>a</sub>	.98	293.80	<0.001	.55
Performance-avoidance	3.89 <sub>a</sub>	1.17	3.02	1.16	4.59 <sub>b</sub>	1.55	4.85 <sub>b</sub>	1.01	2.05	.90	4.40 <sub>ab</sub>	1.51	123.91	<0.001	.34
Avoidance	4.59 <sub>b</sub>	.91	3.34	1.16	4.16 <sub>a</sub>	1.49	4.78 <sub>b</sub>	.95	4.10 <sub>a</sub>	1.58	6.66	.35	124.41	<0.001	.34

Means within a row sharing the same subscripts are not significantly different at the  $p < 0.05$  level (with Games–Howell correction).

Table 4  
Mean differences in subjective well-being and GPA between goal orientation groups

Variable	Indifferent		Mastery-oriented		Success-oriented		Performance-oriented		Disengaged		Avoidance-oriented	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
General well-being												
Self-esteem	4.58 <sub>ab</sub>	1.03	5.07 <sub>c</sub>	1.05	4.70 <sub>abc</sub>	1.24	4.74 <sub>b</sub>	1.04	4.75 <sub>bc</sub>	1.11	4.23 <sub>a</sub>	1.09
Depressive symptoms	.62 <sub>bc</sub>	.53	.47 <sub>a</sub>	.45	.78 <sub>c</sub>	.64	.62 <sub>bc</sub>	.53	.53 <sub>ab</sub>	.60	.91 <sub>c</sub>	.79
School-related burnout												
Emotional exhaustion <sup>1</sup>	2.83 <sub>b</sub>	.93	2.90 <sub>b</sub>	.94	3.28 <sub>c</sub>	1.10	3.03 <sub>bc</sub>	.96	2.47 <sub>a</sub>	1.11	2.63 <sub>ab</sub>	.99
Cynicism	2.53 <sub>c</sub>	.96	1.75 <sub>a</sub>	.77	2.01 <sub>ab</sub>	.98	2.32 <sub>bc</sub>	1.02	2.68 <sub>c</sub>	1.37	3.72 <sub>d</sub>	1.36
Inadequacy	2.73 <sub>b</sub>	.92	2.17 <sub>a</sub>	.90	2.67 <sub>b</sub>	1.13	2.68 <sub>b</sub>	1.00	2.50 <sub>ab</sub>	1.22	3.35 <sub>c</sub>	1.19
Personal goal appraisals												
Commitment	5.50 <sub>a</sub>	.81	6.11 <sub>c</sub>	.61	6.21 <sub>c</sub>	.84	5.79 <sub>b</sub>	.72	5.27 <sub>a</sub>	1.24	5.28 <sub>a</sub>	1.05
Effort	4.31 <sub>bc</sub>	1.13	5.08 <sub>e</sub>	1.01	4.96 <sub>de</sub>	1.25	4.56 <sub>cd</sub>	1.16	4.04 <sub>ab</sub>	1.47	3.59 <sub>a</sub>	1.55
Stress	4.25 <sub>ab</sub>	1.37	4.31 <sub>ab</sub>	1.49	4.93 <sub>c</sub>	1.58	4.60 <sub>bc</sub>	1.49	3.88 <sub>a</sub>	1.82	4.26 <sub>ac</sub>	1.70
Progress	5.25 <sub>a</sub>	1.00	5.86 <sub>b</sub>	.76	5.63 <sub>b</sub>	1.02	5.72 <sub>b</sub>	.87	5.15 <sub>a</sub>	1.35	5.06 <sub>a</sub>	1.38
GPA <sup>1</sup>	4.34 <sub>a</sub>	1.50	5.19 <sub>b</sub>	1.42	5.82 <sub>c</sub>	1.36	4.91 <sub>b</sub>	1.38	3.91 <sub>a</sub>	1.55	3.88 <sub>a</sub>	1.42

Means within a row with different letters are significantly different at the  $p < 0.05$  level (with Games–Howell correction, <sup>1</sup>with Bonferroni correction).

orientation groups differed according to effort,  $F(5, 1172) = 30.45$ ,  $p < 0.001$ ,  $\eta^2 = .12$ . Mastery-oriented students reported putting more effort into striving for their educational goal than other students except for success-oriented students. Also, with respect to stress, a significant effect for goal orientation group was detected,  $F(5, 1176) = 7.12$ ,  $p < 0.001$ ,  $\eta^2 = .03$ . Success-oriented students experienced more stress compared to disengaged, indifferent, and mastery-oriented students. Finally, goal orientation group had a significant effect on progress,  $F(5, 1172) = 20.34$ ,  $p < 0.001$ ,  $\eta^2 = .08$ . Mastery-oriented, performance-oriented, and success-oriented students reported more progress with their goal pursuit than avoidance-oriented, disengaged, and indifferent students.

### 3.6. Differences in academic achievement

Finally, the one-way ANOVA revealed that academic achievement differed significantly as a function of goal orientation group,  $F(5, 1043) = 32.37$ ,  $p < 0.001$ ,  $\eta^2 = .13$ . Success-oriented students had highest GPA, followed by mastery- and performance-oriented students, whereas avoidance-oriented, disengaged, and indifferent students were equally low in school achievement (see Table 4).

## 4. Discussion

The aim of this study was to explore differences in subjective well-being between students with different profiles of achievement goal orientations. As we expected (Hypothesis 1), several profiles with different configurations of achievement goal orientations were identified. The best-fitting model included six groups of students: indifferent, mastery-oriented, success-oriented, performance-oriented, disengaged, and avoidance-oriented. In the following section, these groups are described separately and discussed in light of previous research.

The goal orientation profile of the *indifferent* students (30%) was close to the scale mean values on all orientation variables, with a slight emphasis on both mastery and avoidance orientations. They had average scores on general well-being and school-related burnout, but regarding commitment and progress in relation to their educational goal, they scored as low as the disengaged and avoidance-oriented students. The fact that this was the largest group, suggests that a typical secondary school student in Finland does acknowledge the goal of mastering school subjects and the importance of grades, but is somewhat reluctant to invest in the attainment of those goals. On the other hand, based on their subjective well-being, these students did not seem to undergo serious psychological distress from the kind of passivity and lack of engagement they expressed. Although the number of students in this group appears to be relatively high, the result concurs with our prior studies on a nationally representative sample of 9th-graders (Niemi-virta, 2000).

For *mastery-oriented* students (22%), an important goal in school was to learn and understand as much as possible, yet they also stressed the importance of getting good grades. Relatively high self-esteem and low levels of depressive symptoms combined with rather high levels of commitment, effort, and progress, and low levels of cynicism (i.e., lack of meaning) and inadequacy characterized this group. This finding suggests that striving towards self-improvement and growth is indeed associated with an adaptive pattern of subjective well-being. Mastery-oriented students also had relatively high academic achievement. This group with multiple strengths (Roeser et al., 2002) demonstrates that perceiving schoolwork as meaningful, having positive self-evaluations, and committing oneself to future goals are all supportive of intentional learning goal pursuit and long-term educational aspirations (cf. Seifert, 2004).

*Success-oriented* students (9%) were mainly characterized by their striving for absolute (i.e., getting good grades) and relative (i.e., outperforming others) success, although they considered the goal of learning and understanding important as well. Whether academic success for these students serves as an indicator for mastery or is of instrumental value as such (cf. Grant & Dweck, 2003; Niemivirta, 2002b), the presence of such preferences nevertheless seems to entail some degree of psychological distress. As hypothesized (Hypothesis 2), students with a concern of validating their competence were more likely than their growth-seeking peers to report emotional exhaustion and stress with respect to their educational goals; compared to mastery-oriented students, success-oriented students experienced more emotional exhaustion, stress, and also inadequacy. These groups did not differ in terms of self-esteem but, contrary to our assumptions, success-oriented students experienced more depressive symptoms than mastery-oriented students did. Yet, success-oriented students reported as high levels of commitment, effort, and progress as did mastery-oriented students, and, their academic achievement was even higher. In other words, success-oriented students were committed to studying and to their educational goals, but they were somewhat stressed and emotionally exhausted. This pattern of motivation and well-being is in line with findings linking stress, perceived study demands, and the pursuit of success (e.g., Smith, Sinclair, & Chapman, 2002), and provides support for the assumption that self-worth based on external contingencies represents relatively controlled motivation, and is thus associated with feelings of pressure and stress (Ryan & Deci, 2000). Consequently, if prolonged, this pattern of motivation may put these students at risk of exhaustion.

*Performance-oriented* students' (17%) focus was on getting better grades than other students and on trying to avoid situations in which they may fail, make mistakes, or appear incompetent. In line with our hypothesis (Hypothesis 3), these students reported lower self-esteem and higher levels of depressive symptoms, as well as higher levels of cynicism and inadequacy than mastery-oriented students did. Also, performance-oriented students were less committed to and displayed less effort in their educational goal. Compared to success-oriented students, performance-oriented students were somewhat less committed, and their academic achievement was lower. In our view, these students resemble the performance-oriented students identified by Niemivirta (2002b), who, in terms of situational appraisals, did not differ from their mastery-oriented classmates under a neutral task-condition, but exhibited far stronger tendencies of self-protection under an ego-involving situation. These students might be the ones most likely to follow the well-being route in the classroom (Boekaerts & Niemivirta, 2000), and thus be more vulnerable to potential failures and setbacks in their studies than their mastery-focused or success-driven classmates.

*Disengaged* students (9%) scored relatively low on all achievement goal orientations. Hence, they did not emphasize learning or performance, nor did they seek to avoid achievement situations. Whilst disengaged students scored as low as avoidance-oriented students (see below) on commitment, effort, stress, and progress, they displayed higher self-esteem and reported lower levels of depressive symptoms, cynicism, and inadequacy. Supporting our assumptions (Hypothesis 5), these students displayed less general distress and stress with their future aspirations than most of their more committed peers, despite their less adaptive motivational profile. This pattern resembles the one Roeser et al. (2002) identified as poor academic value, a pattern characteristic of a group of students reporting relatively positive academic efficacy and mental health, but low academic value. It thus seems that these students are, to some extent, psychologically detached from school, and that their well-being is more influenced by experiences other than the school-related ones. Since these students' academic achievement was relatively low, it would be interesting to know whether this particular group represents the kinds of students Seifert (2004) labelled as "bright but bored". This interesting pattern of ability, motivation, and achievement has in fact been identified in our prior work as well (Niemivirta, 2000), which suggests that the separation of potential and actualized competencies might help to gain new insights into the complex interplay between motivation and various outcomes.

Finally, *avoidance-oriented* students' (6%) main goals were to minimize the effort and time spent on studying, and to avoid situations in which they might fail. As expected (Hypothesis 4), avoidance-oriented students displayed rather

low self-esteem and high levels of depressive symptoms and cynicism, and they scored relatively low on commitment, effort, and progress. Overall, these students showed the most maladaptive pattern of motivation and well-being. As evidenced by their accentuated cynicism and experiences of inadequacy, it is likely that these students have lost not only the meaning and interest in their schoolwork but also the sense that they are capable of mastering the school task (Seifert, 2004). In a stark contrast to mastery-oriented students with multiple strengths, these students represent an unfortunate group of adolescents with multiple risks (cf. Roeser et al., 2002).

#### 4.1. Conclusions

This study contributes to current research on achievement goals in several respects. First, concerning the assessment and analysis of achievement goal orientations, our findings clearly show that the inclusion of avoidance tendencies (not just related to performance goals) in the measurement is crucial if one is to grasp a comprehensive view on the various tendencies students exhibit in the classroom. Restricting the types of orientations assessed to those that imply achievement strivings, that is, assuming that all students either seek to gain or demonstrate competence, includes a risk of disregarding a number of students who either repress such strivings, devalue the kind of competence such strivings imply, or simply lack any interest in school achievement. In the present study, the proportion of students with a relative emphasis on avoidance tendencies was 15% (i.e., disengaged and avoidance-oriented students) in addition to that one third of students who seemed to combine such tendencies with strivings for mastery and success (i.e., indifferent students). This, clearly, is something that should not be ignored.

The above finding became more observable through the analytical approach employed in the study. Although the patterning of correlations between avoidance tendencies and other variables was unique, suggesting that the inclusion of such tendencies adds to our understanding of the dynamics between motivation, achievement, and well-being, a more pronounced view on such associations was possible through person-centred analyses. Consequently, we were not only able to validly extract groups of students sharing similar tendencies, but also managed to demonstrate important differences between these students in terms of well-being. This approach provides a way of looking at the relative emphasis of different motivational tendencies, and thus offers a promising alternative view on the issue of multiple goals and their effects on important outcomes. The explicit focus on groups of individuals with similar tendencies (instead of mere variable relationships) also allows us to consider the relative importance of goal preferences and thus to take a different view on the debate on which orientation is good for what. Our findings demonstrate how specific variation in goal preferences may be associated with no differences in some outcomes, yet important differences in others. Naturally, the applicability of the typology obtained in this study with Finnish adolescents should be tested in other cultures as well.

Essentially related to the above is also the importance of including a variety of personal outcomes when evaluating the role of achievement goals in learning and achievement. As our results show, the consideration of academic outcomes alone would be seriously limited. In our study, we identified two major classes of students with different achievement levels. Better achieving students included success-, mastery-, and performance-oriented students, whereas indifferent, disengaged and avoidance-oriented students comprised the less achieving students. Only by including indices of well-being were we able to make inferences about the broader implications of different motivational profiles. As the results showed, there were important differences in well-being among equally well achieving students, and there were similarly illustrative, yet dissimilar variations among the less achieving students. For example, depending on differences in goal orientation profiles, high achievement may or may not be associated with emotional exhaustion and stress (i.e., success-oriented vs. mastery-oriented students), just as low achievement may or may not be associated with a broad range of psychological distress (i.e., avoidance-oriented vs. disengaged students).

These findings also importantly contribute to the debate on the advantages of holding mastery vs. performance-approach goals; our results unambiguously demonstrate how the possible benefits of performance-approach tendencies do not necessarily come without unfavourable concomitants. Compared to equally achieving students *without* strong performance tendencies (i.e., mastery-oriented students), students holding such tendencies (i.e., success- and performance-oriented students) displayed less adaptive profiles of subjective well-being. For these students, high achievement was coupled with lower self-esteem and higher levels of depressive symptoms, stronger indications of school-related burnout (e.g., emotional exhaustion and inadequacy), and higher levels of stress associated with their future aspirations. These patterns of results clearly suggest that the argument for the benefits of adopting performance-approach tendencies is short-sighted and needs to be reconsidered in light of a broader range of consequences.

Despite the thought-provoking findings of our study, it must be emphasized that the relations identified here were based on cross-sectional data, which precludes us from drawing any conclusions about the developmental dynamics between motivation and well-being. As it is likely that such relationships develop in a complex reciprocal manner, longitudinal data are needed in order to better understand the etiology of different motivational profiles and their influence on the different aspects of well-being. Future work should also focus on situations and conditions under which the consequences of holding certain tendencies become most salient. Only then would we truly be able to evaluate the tenability of the predictions we drew from Boekaerts and Niemivirta's (2000) work. In this context, the possible moderating role of the school context should also be considered, and, as to the sources of different achievement goal orientation profiles, more emphasis should be placed upon studying younger children and their first experiences with school. Additional issues that need to be addressed in future work include the possible moderating role of gender and school level, and the replicability of our typology in other cultures or nationalities. Also, actual instead of self-reported GPA should be used in order to avoid possible bias in the estimates.

From a practical point of view, the most important implications of our study relate to the acknowledgment of different types of students. Recognizing and accepting the fact that students view their schoolwork and educational aspirations with quite different motivational mindsets is essential in order to effectively consider alternative ways of confronting the students' varying needs. It is crucial to understand that lack of motivation is but one of the numerous motivational and affective hindrances to effective studying. For example, concerns about failure, cynicism, emotional exhaustion, boredom, and alienation are all different but significant symptoms of maladjustment to either one's own or the environment's expectations and demands. As a response to these challenges, we should learn to pay special attention to groups of students with different types of problems and risks, and, consequently, to support their adjustment to the school by creating learning settings that more appropriately meet the different students' needs and goals. In light of the present findings, it would seem that classroom environments that promote ability concerns and rely on social comparison and competition are also likely to promote ill-being, especially among those whose focus is on validating their competence (Kaplan & Maehr, 1999; Wolters, 2004). In contrast, an emphasis on personal progress and self-improvement (e.g., by means of temporal instead of normative evaluation practices), coupled with supportive collaborative activities, might prove to be more successful in terms of enhancing task commitment, efficacy beliefs, and intrinsic motivation, even among the more avoidance-focused students (e.g., Butler, 2006; Meece & Miller, 1999). However, as we know that students with different motivational tendencies might prefer somewhat different instructional practices (Tapola & Niemivirta, *in press*), future work should also look at how the perceived or actual environment interacts with personal dispositions in shaping students' well-being.

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## Appendix A. Standardized factor loadings, and residual variances for the chosen measurement model

Item	Factor loading														Residual variances
	MI	ME	PAP	PAV	AV	SE	DE	EE	CY	IN	CO	EF	ST	PR	
MI1	.797														.365
MI2	.854														.271
MI3	.852														.273
ME4		.788													.379
ME5		.798													.364
ME6		.872													.240
PAP7			.638												.592
PAP8			.596												.645
PAP9			.771												.406

(continued on next page)

## Appendix (continued)

Item	Factor loading														Residual variances
	MI	ME	PAP	PAV	AV	SE	DE	EE	CY	IN	CO	EF	ST	PR	
PAV10				.791											.375
PAV11				.792											.373
PAV12				.735											.460
AV13					.636										.595
AV14					.843										.289
AV15					.647										.582
SE1 <sup>1</sup>						.599									.641
SE2 <sup>2</sup>						.514									.736
SE3 <sup>1</sup>						.809									.345
SE4 <sup>2</sup>						.331									.890
SE5						.829									.313
DE1							.368								.865
DE2							.713								.491
DE3 <sup>3</sup>							.599								.642
DE4 <sup>3</sup>							.674								.545
DE5							.734								.462
DE6							.729								.468
DE7							.801								.358
DE8							.855								.270
DE9							.832								.307
DE10							.712								.493
EE1								.621							.614
EE2								.632							.601
EE3								.551							.696
CY4									.764						.417
CY5									.832						.308
CY6									.772						.404
IN7										.689					.525
IN8										.789					.378
IN9										.610					.628
CO1											.617				.619
CO2											.868				.246
EF3												.878			.229
EF4												.875			.235
ST5													.759		.424
ST6													.953		.091
PR7														.724	.476
PR8														.850	.277

MI = Mastery-intrinsic, ME = Mastery-extrinsic, PAP = Performance-approach, PAV = Performance-avoidance, AV = Avoidance, SE = Self-esteem, DE = Depressive symptoms, EE = Emotional exhaustion, CY = Cynicism, IN = Inadequacy, CO = Commitment, EF = Effort, ST = Stress, PR = Progress.

Error covariances between three pairs of similarly worded items were freed: <sup>1</sup> = Items 1 (“I believe I have many good qualities”) and 3 (“I have a positive image of myself”); <sup>2</sup> = Items 2 (“Every now and then I think I am good for nothing”) and 4 (“I wish I could respect myself more”); <sup>3</sup> = Items 3 (“During the last month, I have felt everything was an effort”) and 4 (“During the last month, I have felt low in energy or slowed down”).

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