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Why students withdraw or continue their educational careers: a closer look at differences in study approaches and personal reasons

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The central goal of this study is to gain insight into students' study approach, their personal reasons and the relations between them regarding students who continue or withdraw from the educational system within one year. Results of our questionnaire study show that students who continue their educational careers show higher scores on a meaningful integrative study approach when entering higher education, than students who withdraw. Our questionnaire on personal reasons for withdrawal revealed three scales: (1) perception and experience of educational and organisational aspects, (2) pragmatic and personal circumstances, and (3) loss of interest in the future occupations. Personal reasons for continuing also produced three scales: (1) perception and experience of learning environment quality, (2) pragmatic and personal orientation, and (3) future occupational identity. Withdrawing students' scores on meaningful integrative study approach are negatively related to perception and experience of educational and organisational aspects, whereas the superficial study approach positively correlates with pragmatic and personal circumstances. With regard to students who continue, high scores on the meaningful integrative study approach relate positively to all three reasons: future occupational identity, perception and experience of learning environment quality and pragmatic and personal orientation.

Keywords: study approach; personal reasons; study continuance; withdrawal; educational career

Introduction

Higher education (HE) in the Netherlands is represented by two distinctive institutions: (1) universities of applied sciences, and (2) research universities. There are two ways to enter Dutch universities of applied sciences (UAS): (1) through senior secondary vocational education (SSVE) and (2) through senior general secondary education (SGSE). The SSVE route is a newly recognised way to gain access to UAS (Nieuwenhuis 2006; Van Asselt 2005), in addition to the general 'secondary route' through SGSE. An increase of students from SSVE is necessary because of the demands facing the Dutch knowledge economy. Enrolment in UAS is growing in the Netherlands (HBO-raad 2009b): in the second half of the twentieth century more SSVE-students entered UAS (see Table 1) but at the same time more students also withdrew. In 2006 overall UAS withdrawal after the first year of study was 16% (12,723 full-time students).

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Table 1. Withdrawal of female and male students within one year after the start of their study (Central Bureau for Statistics, 2008).

	Enrolment			Withdrawal		
Year	female		male	female		male
2003		72.630 total			9.442 (13%)	
	37.800 (52%)		34.830 (48%)	4.536 (12%)		5.225 (15%)
2004		76.160 total			10.662 (14%)	
	39.460 (52%)		36.700 (48%)	4.735 (12%)		5.505 (15%)
2005		76.860 total			10.760 (14%)	
	40.110 (52%)		36.760 (48%)	4.813 (12%)		5.514 (15%)
2006		79.520 total			12.723 (16%)	
	41.870 (53%)		37.650 (47%)	6.281 (15%)		6.777 (18%)

One of the priorities resulting from the Conference of European Ministers responsible for HE (Leuven and Louvain-la-Neuve, April 2009) is that UAS have a key role in the economic recovery and development of European society (HBO-raad 2009a). Table 1 shows an increase in terms of enrolment, which matches the need of the knowledge economy. On the other hand society is confronted with an increasing number of students who switch courses or drop out. Withdrawal has economic and psychological consequences for the student, the educational institutes and society in general (Bruinsma 2003; Van den Berg and Hofman 2005). Society invests in the education of students and withdrawal means a loss of money. Furthermore, the increasing number of withdrawals counteracts the desire and the potential of HE to meet the demands facing the Dutch knowledge economy. Essentially, the unnecessary withdrawal of HE students is seen as a waste of human capital. For this reason more attention is paid to factors which may influence students' study outcome in terms of withdrawal or continuation.

The mainstream academic research on withdrawal focuses on students' study approach. Study career guidance often departs from the view that the study approach (together with for instance personality, goal orientation and motivation) determines to a large extend whether students make sufficient progress and finally obtain a degree or not. Also in the perception of many counselors the quality of students' study approach is the factor that most determines study success. Another research stream has been inspired by so-called interaction models (Spady 1970; Tinto 1975). These models are based on the idea that the quality of the interaction between student and school determines whether the student decides to withdraw or not (Bruinsma 2004). This approach still inspires researchers today (Meeuwisse, Severiens, and Born 2009). In order to conduct powerful interventions, study career coaches need to gain insight into possible relevant factors of influence and how these may be related.

The central goal of this study is to gain insight into students' study approach, their personal reasons for continuing or withdrawing and the relations between the two. The focus of this study is not only on students who withdraw but also on students who continue their education. A closer look at students' reasons for withdrawal is obviously of interest, but cognition of successful students' reasons for staying is also considered to be beneficial. Not only the withdrawal profile, but also a so-called successful student profile might be useful as a benchmark for study career coaches.

Conceptual framework

The literature essentially indicates that there is a wide acceptance of the concept of learning styles. There is, however, some uncertainty over learning style theory. It is even said that most learning style models lack sufficient empirical evidence to support their claims of effectiveness (Coffield et al. 2004). This has led some researchers to conclude that learning style theory as a whole has little cohesion, limited direction and minimal relevance to the classroom (Coffield et al. 2004; Raynor 2007). Peterson, Rayner and Armstrong (2009) found considerable agreement over the value and future direction of style research, yet little resolve to address criticisms and concern regarding for instance terminology and measurement.

Learning styles may well be a classification in themselves. As a consequence, the underlying concepts, of which the learning style typologies are the result, no longer receive much specific attention. The term 'style' is often associated with unchangeability, an invariant attribute of students, deeply rooted in personality (Vermunt 2005), whereas it was originally seen as the result of the temporal interplay between personal and contextual influences (Vermunt 1996). For this reason a new name for the same phenomenon emerged. Vermunt (2005) replaced 'learning style' with 'learning pattern'. This was done to focus on the changeability of the interplay of the four underlying concepts, and to release the idea of stable styles. It will therefore be interesting to take another look at the four underlying concepts. By doing so we do not reject learning patterns: we would like to contribute to the development of a second generation of conceptualisations focusing on learning conceptions, motivational orientations, regulation strategies, cognitive processing theories and their relationships (e.g., Vermunt and Vermetten 2004). Overseeing the learning styles, i.e., the learning patterns debate, we conclude there may be other learning patterns based upon underlying theoretical concepts which are extra to the body of knowledge on the way students learn. These new patterns could shed more light on factors influencing study outcome of students within UAS. One of these patterns is the students' study approach.

Study approach

The underlying idea of a study approach is that the quality of learning processes and study outcome depends on the quality of students' study approach (Vermunt and Verloop 1999). Based on Vermunt's framework (1992, 1998) four related components regarding students' study approach are distinguished: learning conceptions, learning orientations, regulation strategies and cognitive information-processing activities. Study approach is defined within the scope of information-processing activities which refer to thinking and learning activities directly leading to learning results, which may take the form of increased knowledge, understanding and skills. Five different information-processing activities are distinguished (1) relating and structuring; (2) critical processing; (3) memorising; (4) analysing; and (5) concrete processing (Vermunt 1992). Van Bragt et al. (2007) reveal that these five aspects are related, and are clustered in two broader components regarding study approach: (1) meaningful integrative approach (MIA), containing relating and structuring, critical processing and concrete processing; and (2) superficial approach (SUA), referring to memorising and analysing. These findings (see Table 2) are similar to results within other educational settings and some consensus has been reached on how to describe learning activities i.e. deep approach and surface approach (see also Kaldeway 2006; Marton and Säljö 1976; Slaats, Lodewijks, and Van der Sanden 1999).

Table 2. Loadings of MIA and SUA (including number of items/scales and reliabilities) on Varimax rotated components for five different information-processing activities (Van Bragt et al., 2007).

Scale	MIA n = 11 α = .84	SUA n = 16 α = .87
Relating and structuring	.82	.19
Critical processing	.82	.09
Memorising	−.08	.88
Analysing	.28	.80
Concrete processing	.78	−.03

Study approach or approach to learning is a primary topic in educational student learning literature (Duff and McKinstry 2007; Entwistle and Ramsden 1983; Marton and Säljö 1976; Marton 1981). Much of this research stems from the work of Marton and Säljö (1976), who studied students' learning conceptions in a specific learning situation and introduced two contrasting concepts: (1) a surface conception, and (2) a deep conception. These learning conceptions pave the way for how students approach their study. This way of interpreting learning conceptions gave rise to the deep-surface approach to the learning dichotomy. A deep study approach is associated with students who construct and understand the meaning of the content to be learned: students look for the meaning of that which is studied and relate it to other experiences and ideas in a critical way. The surface study approach on the other hand refers to students who learn by memorising and reproducing the factual content (Gijbels et al. 2005). These students avoid understanding a subject and instead focus on memorisation (rote learning). Furthermore, they isolate their existing ideas from the things they learn which eschews comprehension and consequently is an ineffective tool for mastering any complex subject.

There are differences in achievement which can be explained by qualitative activities in study approaches (Kaldeway 2006). Diseth (2003) found for example that academic achievement is predicted positively by deep learning conceptions which influence deep learning activities. In general the use of a deep approach is thought to lead to greater academic success and higher-quality learning outcomes than studying from a superficial learning conception (Snelgrove and Slater 2003; Zeegers 2001). We consider creating possibilities for change and enhancing consciousness about oneself for positive personal growth, one's own constructive processes and self-awareness to be crucial in the student's further development and see the study approach as important in research on reducing withdrawal and enhancing study success. A great part of the variance however can probably still not be explained by the study approach perspective per se. Apart from the study approach, we are interested in what else could cause students to withdraw or continue.

Students' reasons for continuing and reasons for withdrawing

To shed light onto students' personal reasons for withdrawing or continuing we wanted to see if there are differences or similarities between the two groups, in terms of their reasons for ending or continuing their study. After several qualitative interview studies at our UAS in which we studied the opinions and perceptions of, for

instance, policy-makers and career counselors and students' answers to open questions in various exit interviews, a number of reasons emerged (Van Bragt 2004). The interviews were inspired by several theoretical findings. Lewin (1936) stated for instance that behaviour is a function of a person and the environment: an individual relies on his/her inner urges (like wishes and expectations) as well as on the pressure of the surroundings (for instance wishes and expectations of others). The learning environment is thus presented roughly as a subjective whole composed by the goals of both. Murray (1938) elaborated on this model by presenting the Need and Press Model, in which personal needs are determined by personality characteristics regarding certain goals and learning environment characteristics which determine specific goals by social pressure. The way students see a learning environment and experience it within the momentary situation might help us to understand students' behaviour and their reasons for withdrawal or continuation. Seen from the perspective of the attribution theory of motivation (Weiner 1974), which describes how the individual's explanation, justification, and excuses about self or others influence motivation, interesting questions about students' reasons for withdrawing or continuing arise. Weiner (1974, 1992) was one of the first psychologists who focused on relating the attribution theory to education. Three dimensions that characterise success or failure can be traced: (1) locus of control (internal vs. external); (2) stability (do causes change over time or not?); and (3) controllability (causes one can control such as skills vs. causes one cannot control such as luck, others' actions, etc.). For example, the internal/external locus of control seems to be related to feelings of self-esteem, stability relates to future expectations and controllability is connected with emotions such as anger, pity, or shame. Weiner (1992) states that all causes of success or failure can be categorised within these three dimensions in some way. With regard to the reasons for withdrawing or continuing as seen in this study the locus may be interesting: there could be differences in the reasons between the two groups. The locus of control indicates to what extent students seek the causes of whatever takes place within or outside themselves. Two ends of a continuum (not an 'either/or' typology) can roughly be distinguished: internality and externality (Lefcourt 1966). Rotter (1975) concluded that internals tend to attribute outcome to their own control, they believe that their grades are achieved through their own efforts and abilities, they feel responsible for their success or failure and their results are attributed to their own behaviour, character and good or bad qualities. Externals on the other hand tend to attribute outcomes to external circumstances such as the learning environment, a higher source, good or bad luck, social position, other people, etc. Therefore externals are less likely to expect that their own efforts will result in success and are therefore less likely to work hard for high grades (Kormanik and Rocco 2009).

Our qualitative interview studies (Van Bragt 2004) revealed no clear contours at first: 'reasons' varied from personal circumstances such as psychological problems, to the number of working hours excluding studying, relationship issues and making the wrong choice. If we take a closer look at these widespread reasons we may discover constructs from which we can learn more about students' motivations.

The perception of issues related to the organisation by or within the school itself can be a reason for students continuing or withdrawing from a course; for instance, whether the didactical skills of teachers or study career counseling are sufficient. Reasons related to personal perceptions of the profession like 'the future profession is not interesting any more' and reasons related to changes in terms of job prospects might also cluster together (Borghans et al. 2008). In UAS this is especially important because they prepare

students for a specific profession. When the demands in term of future occupational identity are not in line with the expectations or even the personal development of the student him/herself, it might cause turnover or withdrawal. On the other hand, one can imagine that when the future occupational identity is in line with expectations and development for it might even be strengthened and thus constitute a reason to continue.

More pragmatic reasons are modifying such as 'it is located too far from home', 'I have to travel a lot' or 'I have to live on my own and it takes a lot of effort'. Other studies searched for withdrawal reasons in general (Lacante et al. 2001). Wartenbergh and Van den Broek (2008) found that the most important reason for withdrawal was personal circumstances, secondly a lack of motivation and thirdly a wrong study choice and difficulty experienced with the way education was offered. Meeuwisse and colleagues (2009) recently performed a study of reasons for withdrawal from higher vocational education and compared ethnic minority and majority non-completers. They found six factors representing these reasons: home situation, future job, quality of education, ability, culture and finally content of education. A longitudinal study of young people in further education by Hodkinson and Bloomer (2001) showed that the causes of withdrawal can best be explained in the context of an individual's learning career, which involves a complex combination of social and economic factors, individual preferences and beliefs, and contingency.

Educational career: withdraw or continue

Most studies on academic achievement use an overall indicator of achievement as a measure: Grade Point Average (GPA) is the criterion most frequently used. Duff and McKinstry (2007) and O'Connor and Paunonen (2007) recommend decomposing the broad criterion variable 'academic achievement' into specific components.

In this study we operationalise study success as study continuance on the one hand and withdrawal on the other hand. Students who withdraw are those students who decide at a certain moment during the year to quit the study they started with. Whether they continue the following year in another or the same study at the same level of HE, continue at a lower level of education or completely withdraw from the educational system is not the subject of this study. In this study all these students are assigned as withdrawals. Students who withdraw but continue with a study at a higher level of HE are added to those who continue their educational career because this group of students uses UAS as a stepping-stone to a higher level and therefore this specific group of students cannot count as 'regular' withdrawals. For the purposes of the present study, the general concept of withdrawal – meaning in a quite general sense students who terminate their studies abruptly, before graduating – has thus been operationalised as 'all students who start a study within UAS and end the study within fourteen months of enrolment'.

Research questions

The following three research questions guide the present study:

(1) Are there any differences regarding study approach between students who withdraw and students who continue their education after one study year?
(2) What are students' personal reasons for withdrawing or continuing their study?
(3) What is the relationship between students' study approach and their reasons for withdrawing or continuing?

Method

Design

This study is part of a larger survey study. The study was set up according to a longitudinal, within- and inter-subjects design in order to identify intra-individual as well as inter-individual changes.

The first measurement (study approach) was administered in the fifth study week by staff. The second questionnaire on reasons for continuing or withdrawing is administered approximately one year later. After one year of study in HE, the study results of all participants were retrieved from the school system and added to the data.

Participants

Data for students who continue were collected after one year of study in HE. In total, 1176 second-year students who continued a full-time bachelor's study filled in their forms (54% female). The response rate for this group was 47%. Students who withdrew were questioned during the intermediate year. The response rate for this group was 31%. Of all the students who stopped 288 filled in their forms (47% female).

Data collection

All students received the questionnaires on study approaches and reasons for continuing or withdrawing as one complete set and did not receive any feedback. After one year in HE the students' obtained credits and their status (whether they withdrew or were still studying) were withdrawn from the system of student registration. The questionnaires were administered by email to students who dropped out, as soon as possible, when they had to arrange their paperwork. All students involved completed the questionnaires voluntarily.

Instruments

Measuring study approach

The questionnaire used in this study is part of Vermunt's learning style inventory for HE (1998). It has shown its validity and consistency in various (educational) settings (e.g., Zeegers 2001; Busato et al. 1998, 2000; Slaats et al. 1999). We used the original Vermunt scales. Earlier research showed that it is possible to reduce these to two components: (1) meaningful integrative approach (MIA), and (2) superficial approach (SUA). These two components have proven to be reliable (for details see Van Bragt et al. 2007). A five-point Likert scale is used, varying from (1) 'I hardly ever do this' to (5) 'I almost always do this'.

Measuring reasons

The various items considering reasons to withdraw and reasons to continue were identified in the literature (Lacante et al. 2001; Wartenbergh and Van den Broek 2008) and reasons to withdraw from HE gathered in UAS qualitative research (Van Bragt 2004). On this basis, we constructed two retrospective questionnaires using a five-point Likert scale, varying from (1) 'I completely disagree with this' to (5) 'I completely agree with this'. The items of both questionnaires were formulated in opposite ways:

the questionnaire measuring reasons to withdraw consisted of 28 items, and the one measuring reasons to continue consisted of 32 items. The four additional questions for students who continued were a result of findings throughout the year. Examples of items from both questionnaires[1] can be found in Tables 4 and 5.

Data analyses

For the first research question t-tests for both MIA and SUA were conducted. In order to answer the second research question a principal component analysis (PCA) was carried out to investigate the construct validity of the factors. Cronbach's alpha (α) was used to test the reliability of the factors. A correlation matrix was carried out in order to answer the third research question. Only datasets from students with complete answers on all relevant variables were included in the statistical analyses.

Results

To answer the first research question ('Are there any differences regarding study approach between students who withdraw and students who continue their education after one study year?') mean differences between the two groups were assessed by t-tests (see Table 3). The sample size was N = 2114 for MIA with 1584 continuing students and 530 withdrawing students. For SUA the sample size was N = 2109 with 1580 continuing students and 529 withdrawing students.

A significant difference between the groups is found on MIA when students enter HE ($t = 2.9$, $df = 2112$, $p = 0.004$). Students who continue their educational career score higher when entering HE on the meaningful integrative approach (MIA). The SUA component shows no significant difference between the two groups.

To answer the second research question ('What are students' personal reasons for withdrawing or continuing their study?') factor analyses (FA) for (1) students' reasons for withdrawal and (2) students' reasons for continuing[2] were carried out on the items in the questionnaire for students who dropped out and for students who continued.

Considering reasons for withdrawal

Results of the FA (N = 288) with oblimin rotation (because of coherence between the factors) on 28 items showed three factors. This solution explained 47% of the total variance. Four items were not included in the reliability analyses because the absolute value of loading was below 0.4 or items had high loadings on more than one factor. Hence, the factors found were studied with respect to logical content meaning. The next three labels fitted the factors: (1) perception and experience of educational and organisational aspects; (2) pragmatic and personal circumstances; and (3) loss of

Table 3. Results for Meaningful Integrative Approach (MIA) and Superficial Approach (SUA).

	N		Mean		SD	
	MIA	SUA	MIA	SUA	MIA	SUA
Students who withdraw	530	529	3.00	3.11	.51	.51
Students who continue	1.584	1.580	3.08	3.13	.50	.54

Table 4. Reasons for withdrawal with item example: Reliability (Cronbach's alpha), Number of items, Mean and Standard Deviation (N = 288).

	Reasons for withdrawal	Reliability	Number of items	Mean	SD
Factor 1	Perception and experience of educational and organizational aspects *Item example: I had the feeling the institute's main concern was not with the students*	$\alpha = 0.84$	9	2.6	0.8
Factor 2	Pragmatic and personal circumstances *Item example: I had a hard time to combine work and studying*	$\alpha = 0.71$	10	2.1	0.6
Factor 3	Loss of interest in future occupation *Item example: The future profession is not interesting*	$\alpha = 0.78$	5	2.9	1.0

interest in future occupation. Reliability (Cronbach's α) of the factors yielded respectively 0.84, 0.71 and 0.78, as can be seen in Table 4. From this point on, students' reasons to withdraw denoted as the three factors mentioned above were used. It should be noted that the response rates were on the low side. This could be because those not responding might have different characteristics from those who did respond in respect of the core constructs.

Considering reasons for continuing

The second FA considering students' reasons to continue (34 items) was carried out similarly. Results of this FA (N = 1.176) with oblimin rotation (correlated factors) also showed three factors. This solution explained 44% of the total variance. Six items were not included in the reliability analyses because the absolute value of loading was below 0.4 or items had high loadings on more than one factor. The three factors found were labelled as follows: (1) Future occupational identity; 2) Perception and experience of learning environment quality; and (3) Pragmatic and personal orientation. The reliability (Cronbach's α) yielded respectively 0.91, 0.84 and 0.53 (see Table 5). From

Table 5. Reasons for continuing with item example: Reliability (Cronbach's alpha), Number of items, Mean and Standard Deviation (N = 1.176).

	Reasons for continuing	Reliability	Number of items	Mean	SD
Factor 1	Future occupational identity *Item example: The future profession is interesting*	$\alpha = 0.91$	11	3.9	0.5
Factor 2	Perception and experience of learning environment quality *Item example: I had the feeling the institute's main concern was with the students*	$\alpha = 0.84$	8	3.2	0.6
Factor 3	Pragmatic and pesonal orientation *Item example: Combining work and studying went well*	$\alpha = 0.53$	6	3.2	0.5

this point, students' reasons to continue were denoted as the three factors mentioned above. Results concerning the third factor, pragmatic and personal orientation, should be interpreted with caution because the reliability is considered to be rather low.

In order to answer the third research question ('What is the relationship between students' study approach and their reasons for withdrawing or continuing?') relations were investigated by means of Pearson correlation coefficients, resulting in two correlation matrices. Table 6 reveals that the MIA and SUA are related in both groups (r = 0.19).

If we look at the *withdrawing group* we see that two of the three reasons to withdraw are related: pragmatic and personal circumstances and perception and experience of educational and organisational aspects (r = 0.30). With regard to study approach and reasons to withdraw two significant correlations were found. MIA correlates negatively with perception and experience of educational and organisational aspects (r = –0.23) and SUA correlates positively with pragmatic and personal circumstances (r = 0.33). Students who withdrew and had higher scores on MIA had lower scores on reasons related to educational and organisational aspects. Students who withdrew and had higher scores on SUA had higher scores on reasons related to pragmatic and personal circumstances.

Table 6. Correlations between students' study approaches (MIA = Meaningful Integrative Approach and SUA = Superficial Approach) and reasons for withdrawal and correlations between students' study approaches (MIA and SUA) and reasons for continuing.

	Reasons for withdrawal N = 288			
	MIA	SUA	Perception and experience of educational and organizational aspects	Pragmatic and personal circumstances
SUA	.19**			
Perception and experience of educational and organizational aspects	–.23*	.08		
Pragmatic and personal circumstances	–.01	.33*	.30*	
Loss of interest in future occupation	.11	.05	.13	.09
	Reasons for continuing N = 1.176			
	MIA	SUA	Future occupational identity	Perception and experience of learning environment quality
SUA	.19**			
Future occupational identity	.17**	.07		
Perception and experience of learning environment quality	.13**	.03	.37**	
Pragmatic and personal orientation	.11**	.07	.25**	.42**

**Correlation is significant at the 0.01 level (2-tailed); * Correlation is significant at the 0.05 level (2-tailed).

If we look at the *continuing group* Table 6 reveals that MIA is positively related to all three reasons to continue: future occupational identity (r = 0.17), perception and experience of learning environment quality (r = 0.13) and pragmatic and personal orientation (r = 0.11). No correlations were found between SUA and reasons to continue.

The correlations between the reasons are all significant for the continuing group (respectively r = 0.37, r = 0.25 and r = 0.42). This is not the case for the withdrawing group. Regarding the reasons the correlation patterns differ qualitatively between both groups.

Conclusions and discussion

The central goal of this study was to gain insight into students' study approach, their personal reasons and the relations between the two for students who continue or withdraw from the educational system within one year.

Conclusions

Heikkilä and Lonka (2006) found that, amongst other aspects, approaches to learning are related to study success. Diseth's findings (2003) show that approaches to learning predict academic achievement. This fits our findings, showing that students who continue their educational career after one year of study score higher on the meaningful integrative approach (MIA) when entering HE. We consider this meaningful integrative approach valuable for learning because students discover and experience different kinds of relations, connect these with their tacit occupational and work-specific experiences and develop a long-lasting idiosyncratic knowledge structure. The fact that students with high scores on the MIA approach continue their education after one year more than students with low MIA scores supports this idea. This study approach might help students to be better equipped in future circumstances and is the most productive study orientation in terms of study success (e.g., Lonka and Lindblom-Ylänne 1996).

Two comparable questionnaires were developed: one for students who dropped out and one for students who continued their educational career. Three corresponding main reasons were found for both groups of students: (1) reasons related to future occupations; (2) pragmatic and personal reasons; and (3) perceptions and experiences with issues related to education, organisation and the learning environment. This similarity in reasons for both groups is understandable. Pragmatic and personal orientation is something of an exception: students who continue have fewer reasons related to their personal circumstances which they believe are a reason to continue, which is obvious. HE students who withdraw, however, often encounter study choice problems because of personal problems (Kunnen, Holwerda, and Bosma 2008). As can be expected, the continuing students show lower scores on this scale, whereas the withdrawing students more frequently report pragmatic and personal circumstances. Mäkinen, Olkinuora, and Lonka (2004) concluded that non-committed students are most likely to abandon or prolong their studies owing to a low interest in their current study, possibly also in their future profession, and a lack of personal relevance. This is in line with our findings.

Weiner's attribution theory (1992) can explain some of our findings regarding the reasons students cite for leaving or continuing their study. In brief, Weiner states:

when students succeed, they often attribute internally ('my own skill'). When a rival succeeds, some students tend to credit externally ('the other has more luck'). When students fail or make mistakes themselves, they are more likely to use external attribution, attributing causes to situational factors rather than blaming themselves; for instance, they cite reasons related to the learning environment. When others fail or make mistakes, internal attribution is often used, students saying it is owed to their internal personality factors (Weiner 1992). The students attribute one way or another but in essence all reasons point in the same three directions. This suggests that the same reasons say something about students who withdraw and also about those who continue, and the difference depends on the direction of attribution by the student.

Some interesting relations appeared between students' study approach and their reasons to quit or to stay. High scores on our preferred study approach, the meaningful integrative approach (MIA), relate positively to all three reasons to continue studying. Next to this, considering the group of withdrawing students, MIA is negatively related to the withdrawal reason 'perception and experience of educational and organisational aspects'. This implies that withdrawing students with high scores on MIA, do not withdraw because of the education or the organisational aspects. These students end their education for other reasons, like not wanting the profession to which they originally aspired. Indeed, these findings imply that MIA is of value when we need to combine several predictors in a profile of successful students. It is also important, however, to measure the superficial approach (SUA). This study approach relates to pragmatic and personal circumstances which are an important reason for withdrawal. We have not proven that students who show very high scores on SUA and very low scores on MIA withdraw, but our findings do show that these students might need some extra attention during their study career and some guidance regarding issues related to practical and personal problems. It should be recognised that, under many other pressures, SUA might be a necessary means of survival and MIA a luxury that cannot be afforded. A study career coach can keep an extra eye on students with a SUA when this is signaled at an early stage, in order to avoid unnecessary withdrawal.

Discussion

The relationship between students' approaches to learning and their academic performance was one of the central questions in a cross-cultural meta-analysis performed by Watkins (2001) although in the expected direction the results were rather disappointing (-0.11 for surface and 0.16 for deep approaches). Does it help students if we put effort into changing their study approach or is it merely a supplement to the body of knowledge which helps us detect students at risk so we can be of better assistance? Our results show that study approach is related to reasons to withdraw or to continue. This insight might be useful when intake assessments for potential students are designed.

The identification of those who are successful can help us to characterise future successful students, and probably also students at risk. Potential students interested in entering HE can be assessed in their process towards a deliberate choice to study in HE. Students with scores comparable to scores of those who continue might be stimulated to enter HE. Students who score highly on variables predicting withdrawal can also be detected at an early stage to be monitored and guided more intensively when they enter HE. Reducing withdrawal is not only a matter of acting when withdrawal occurs, it is also the openness and the will to learn more about factors of influence to

prevent withdrawal and guide students towards success at an early stage. In an intake assessment this knowledge can be used to enhance better flow-through in HE for students in general, not only for the sake of the institute and society in the light of the increasing withdrawal rates and consequences for the knowledge economy but also for students themselves in a broad perspective.

Professional development is essential in UAS. Results show that students' shifts in terms of future occupations are a main reason to withdraw and on the other hand a reason to continue. Students who withdraw report they lost interest in their future profession, or they did not have the right ideas about their future profession from the start on. Students continuing their educational career realised that their future profession fits them well. During periods of traineeships this awareness arises or grows stronger. Awareness of this particular aspect will cause students to choose their study on a more realistic basis, thus reducing unnecessary withdrawal and enhancing study success. Realistic job previews (RJPs) are used in the early stages of personnel selection to provide potential applicants with information on both positive and negative aspects of the job (Premack and Wanous 1985; Roth and Roth 1995). RJP is a set of activities all directed towards the same end: providing a more realistic view of a future job which is under consideration. This way of thinking used in an educational context might provide the new student with a realistic picture of both their study and their future profession. Overly attractive pictures might create unrealistic expectations and diminish the credibility of the school once it becomes clear that the student has been misled or simply 'recruited'. RJP and similar ways of helping students to choose a study in UAS might help to meet their future job and study expectations more accurately and reduce withdrawal or switching behaviour.

Our findings can be brought together with findings from other studies on withdrawal and success factors (e.g., Bloomer and Hodkinson 1997; Borghans et al. 2008; Hodkinson and Bloomer 2001; Kuijpers and Meijers 2008, 2009; Lacante et al. 2001; Loyens, Rikers, and Schmidt 2007; Parker et al. 2006; Robbins et al. 2004; Van Bragt et al. 2011; Wartenbergh and Van den Broek 2008; Zepke, Leach, and Prebble 2006; Zepke and Leach 2007).

All predictors studied can be used to obtain separate profiles of (1) students who are at risk, and (2) successful students. Such profiles scanned when students enter HE might be helpful in detecting students at risk and helping them at an early stage with student counseling and study guidance during the first year of study. These kinds of intake-assessments may help educationalists to design and hence conduct relevant interventions in order to help students at risk with their learning. By enforcing specific interventions study career coaches may consequently bring about change. Insights from sustainable educating and developing (SED) can add extra value. SED is a constructive way of thinking and working which uses insights and strategies on the basis of ecological insights ('linkedness') and high intentions and values such as well-being and involvement, by which the quality of interactions can be improved (Laevers and Verboven 2000; Van Herpen 2008). Kuijpers and Meijers (2008) concluded that the time available for study guidance is very limited and that the time spent by coaches is with students who are at risk and tend to withdraw. High-potential students or students who have been at risk but have decided to continue (with success) can for instance help study career coaches by tutoring others. These students are accessible, available and can talk from their own experience. We can learn from these students why they are successful and use this knowledge to help other students who are at risk.

We are aware of some limitations of our study. The first one is related to the newly developed questionnaires on reasons for withdrawing or continuing. They still have to prove their validity and reliability in other empirical studies. The second one is related to the learning environment as a specific factor of influence. This was not specifically taken into account in this research. Gijbels and colleagues (2005) performed a study on relations between powerful learning environments and changes in learning and concluded that even when the learning environment becomes more challenging the students keep on learning in the same way. They recommend interventions for student characteristics rather than the learning environment. Kappe, Boekholt, and Den Rooyen (2008) conclude that offering students a variety of learning environments which give them the chance to develop different ways of learning does not dramatically change the latter. From a social economic perspective our research group is homogeneous and mostly consists of Dutch-speaking indigenous students. Meeuwisse and colleagues (2009) compared ethnic minority and majority non-completers but found no main effect for ethnic background of non-completers but only interaction effects for type of withdrawal (withdrawal versus switching course or institution) and time of withdrawal (early or late).

The predictive value of psychological differences or preferences as well as theories assuming that careers are determined by a succession of choices based upon an objective knowledge of both self and the options available have both shown its merits (Bloomer and Hodkinson 1997). The subjective foundations of personal knowledge and cultural, political moral, economic and other contexts with which it is inextricably connected should, however, not be ignored (Bloomer and Hodkinson 1997). Therefore, alternative approaches like the integration of SED within guidance and career counseling might be helpful.

Having students keep up with a study they prefer, preventing needless withdrawal and even obtaining good results are not just a matter of numbers, specific measurements and instruments utilisation at one specific moment only (e.g., Meeuwisse et al. 2009); it is a matter of individual and flexible combination of all aspects and predictors involved before the start of and after entry to HE. Creating individual possibilities for change by detecting and conveying opportunities for personal growth and awareness enhances and stimulates students' consciousness of self by constructive learning processes and study approaches within scaffold guidance and career counseling throughout the first year of study: we consider all of this to be crucial if students are to become successful learners and fully develop one's self.

Notes

1. Both complete questionnaires are available by contacting the first author.
2. Complete output of both factor analyses can be requested from the first author.

References

Bloomer, M., and P. Hodkinson. 1997. *Moving into FE: The voice of the learner.* London: FEDA.

Borghans, L., J. Coenen, B. Golsteyn, T. Huijgen, and I. Sieben. 2008. *Voorlichting en begeleiding van studie en beroepskeuze en de rol van de arbeidsmarktinformatie* [Informing and guiding of study and profession choices and the role of professional information]. Maastricht: Researchcentrum voor Onderwijs en Arbeidsmarkt (ROA).

Bruinsma, M. 2003. Effectiveness of higher education: Factors that determine outcomes of university education. PhD diss., Rijksuniversiteit Groningen (RUG).

Bruinsma, M. 2004. Motivation, cognitive processing and achievement in higher education. *Learning and Instruction* 14: 549–68.
Busato, V.V., F.J. Prins, J.J. Elshout, and C. Hamaker. 1998. The relation between learning styles, the Big Five personality traits and achievement motivation in higher education. *Personality and Individual Differences* 26, no. 1: 129–40.
Busato, V.V., F.J. Prins, J.J. Elshout, and C.C. Hamaker. 2000. Intellectual ability, learning style, personality, achievement motivation and academic success of psychology students in higher education. *Personality and Individual Differences* 29, no. 6: 1057–68.
Central Bureau for Statistics. 2008. *Yearly report* [Jaaroverzicht]. The Hague: Central Bureau for Statistics.
Coffield, F., D. Mosely, E. Hall, and K. Ecclestone. 2004. *Learning styles and pedagogy in post-16 learning. A systematic and critical review.* London: LSRC.
Diseth, A. 2003. Personality and approaches to learning as predictors of academic achievement. *European Journal of Personality* 17, no. 2: 143–55.
Duff, A., and S. McKinstry. 2007. Students' approaches to learning. *Issues in Accounting Education* 22, no. 2: 183–214.
Entwistle, N., and R. Ramsden. 1983. *Understanding student learning.* London: Croom Helm.
Gijbels, D., G. Van de Watering, F. Dochy, and P. Van den Bossche. 2005. The relationship between students' approaches to learning and the assessment of learning outcomes. *European Journal of Psychology of Education* 20, no. 4: 327–41.
HBO-raad. 2009a. *Green Paper. Naar een nieuwe verenigingsagenda* [Green Paper. Towards a new associations agenda]. The Hague: HBO-raad.
HBO-raad. 2009b. *Feiten en cijfers. Studentenaantallen in het Hoger Beroepsonderwijs* [Facts and figures. Student numbers in higher vocational education]. The Hague: HBO-raad.
Heikkilä, A., and K. Lonka. 2006. Studying in higher education: Students' approaches to learning, self-regulation, and cognitive strategies. *Studies in Higher Education* 31, no. 1: 99–117.
Hodkinson, P., and M. Bloomer. 2001. Dropping out of further education: Complex causes and simplistic policy assumption. *Research Papers in Education* 16, no. 2: 117–40.
Kaldeway, J. 2006. Diepte- en oppervlakte leren [Deep and surface learning]. *VELON Tijdschrift voor lerarenopleiders* 27, no. 1: 23–9.
Kappe, F.R., L. Boekholt, and C. Den Rooyen. 2008. Does matching and mismatching using learning styles have an effect on learning and learning outcomes? Paper presented at the EARLI PBPR Conference, in Bergen, Norway.
Kormanik, M.B., and T.S. Rocco. 2009. Internal versus external control of reinforcement: A review of the locus of control construct. *Human Resource Development Review* 8, no. 4: 463–83.
Kuijpers, M., and F. Meijers. 2008. *Loopbaanleren en –begeleiden in het hbo* [Learning career and learning career guidance in universities of applied sciences]. The Hague: De Haagse Hogeschool.
Kuijpers, M., and F. Meijers. 2009. *Studieloopbaanbegeleiding in het HBO: Mogelijkheden en grenzen* [Study career guidance in universities of applied sciences: Possibilities and boundaries]. The Hague: De Haagse Hogeschool.
Kunnen, S., N. Holwerda, and H.A. Bosma. 2008. Studiekeuze bij adolescenten en jongvolwassenen [Study choice of adolescents and young adults]. *De Psycholoog* 43: 6–11.
Lacante, M., W. Lens, M. De Metsenaere, R. Van Esbroeck, K. De Jaeger, and T. De Coninck. 2001. *Drop-out in Hoger Onderwijs. Onderzoek naar de achtergronden en motieven van drop-out in het eerste jaar hoger onderwijs* [Drop-out in higher education. Research on the backgrounds and motives of drop-out in the first year of higher education]. (Project OBPWO 98.11). Research Report. Brussels/Leuven: Vrije Universiteit Brussel/Katholieke Universiteit Leuven.
Laevers, F., and L. Verboven. 2000. Gender related role patterns in pre-school settings. Can 'experiential education' make the difference? *European Early Childhood Education Research Journal* 8, no. 1: 25–42.
Lefcourt, H.M. 1966. Internal versus external control of reinforcement: A review. *Psychological Bulletin* 65, no. 4: 206–20.
Lewin, K. 1936. *Principles of topological psychology.* New York, NY: McGraw-Hill.

Lonka, K., and S. Lindblom-Ylänne. 1996. Epistemologies, conceptions of learning, and study practices in medicine and psychology. *Higher Education* 31, no. 1: 5–24.
Loyens, S.M.M., R.M.J.P. Rikers, and H.G. Schmidt. 2007. The impact of students' conceptions of constructivist assumptions on academic achievement and withdrawal. *Studies in Higher Education* 32, no. 5: 581–602.
Mäkinen, J., E. Olkinuora, and K. Lonka. 2004. Students at risk: Students' general study orientations and abandoning/prolonging the course of studies. *Higher Education* 48, no. 2: 173–88.
Marton, F. 1981. Phenomenography – describing conceptions of the world around us. *Instructional Science* 10, no. 2: 177–200.
Marton, F., and R. Säljö. 1976. On qualitative differences in learning: Outcome as a function of the learner's conception of the task. *British Journal of Educational Psychology* 46, no. 2: 115–27.
Meeuwisse, M., S.E. Severiens, and M. Born. 2009. Reasons for withdrawal from higher vocational education. A comparison of ethnic minority and majority non-completers. *Studies in Higher Education* 35, no. 1: 93–111.
Murray, H.A. 1938. *Explorations in personality.* New York: Oxford University Press.
Nieuwenhuis, L.F.M. 2006. Vernieuwend vakmanschap. Een drieluik over beroepsonderwijs en innovatie. [Renewing expertise. A three hatch on vocational training and innovation]. Inaugural rede, University of Twente, The Netherlands.
O'Connor, M.C., and S.V. Paunonen. 2007. Big Five personality predictors of post-secondary academic performance. *Personality and Individual Differences* 43, no. 5: 971–90.
Parker, J.D.A., M.J. Hogan, J.M. Eastbrook, A. Oke, and L.M. Wood. 2006. Emotional intelligence and student retention: Predicting the successful transition from high school to university. *Personality and Individual Differences* 41, no. 7: 1329–36.
Peterson, E.R., S.G. Rayner, and S.J. Armstrong. 2009. Researching the psychology of cognitive style and learning style: Is there really a future? *Learning and Individual Differences* 19: 518–23.
Premack, S.L., and J.P. Wanous. 1985. A meta-analysis of realistic job preview experiments. *Journal of Applied Psychology* 70, no. 4: 706–19.
Raynor, S. 2007. Learning styles and sense: A teaching elixir, learning chimera or just fools gold? Do learning styles matter? *Support for Learning* 22, no. 1: 24–30.
Robbins, S.B., K. Lauver, H. Le, D. Davis, R. Langley, and A. Carlstrom. 2004. Do psychological and study skill factors predict college outcomes? A meta-analysis. *Psychological Bulletin* 130, no. 2: 261–88.
Roth, P.G., and P.L. Roth. 1995. Reduce turnover with realistic job previews. *The CPA Journal* 65, no. 9: 68–90.
Rotter, J.B. 1975. Some problems and misconceptions related to the construct of internal versus external control of reinforcement. *Journal of Consulting and Clinical Psychology* 43: 56–67.
Slaats, A., H.G.L.C. Lodewijks, and J.M.M. Van der Sanden. 1999. Learning styles in secondary education: Disciplinary differences. *Learning and Instruction* 9, no. 5: 475–92.
Snelgrove, S., and J. Slater. 2003. Approaches to learning: Psychometric testing of a study process questionnaire. *Journal of Advanced Nursing* 43, no. 5: 496–505.
Spady, W. 1970. Drop-outs from higher education: An interdisciplinary review and synthesis. *Interchange* 1: 64–85.
Tinto, V. 1975. Withdrawal from higher education: A theoretical synthesis of recent research. *Review of Educational Research* 45, no. 1: 89–125.
Van Asselt, R. 2005. *Vergroting van de onderwijsdeelname HBO* [Enlarging educational participation in higher education]. Amsterdam: LICA.
Van Bragt, C.A.C. 2004. *Inzicht in uitval* [Understanding withdrawal]. Research report, Centre for Education innovation and Research. Eindhoven: Fontys UAS.
Van Bragt, C.A.C., A.W.E.A. Bakx, T.C.M. Bergen, and M.A. Croon. 2011. Looking for students' personal characteristics predicting study outcome. *Higher Education* 61, no. 1: 59–75.
Van Bragt, C.A.C., A.W.E.A. Bakx, J.M.M. Van der Sanden, and M.A. Croon. 2007. Students' approaches to learning when entering higher education: Differences between

students with senior general secondary and senior secondary educational backgrounds. *Learning and Individual Differences* 17, no. 1: 83–96.
Van den Berg, M.N., and W.H.A. Hofman. 2005. Student success in university education; A multi-measurement study of the impact of student and faculty factors on study progress. *Higher Education* 50, no. 3: 413–46.
Van Herpen, M. 2008. *Sustainable educating and developing.* Antwerp and Apeldoorn: Garant.
Vermunt, J.D. 1992. *Leerstijlen en sturen van leerprocessen in het hoger onderwijs Naar procesgerichte instructie in zelfstandig denken* [Learning styles and regulation of learning in higher education – towards process-oriented instruction in autonomous thinking]. Amsterdam: Swets and Zeitlinger.
Vermunt, J.D. 1996. Metacognitive, cognitive and affective aspects of learning styles and strategies: A phenomenographic analysis. *Higher Education* 31, no. 1: 25–50.
Vermunt, J.D. 1998. The regulation of constructive learning processes. *British Journal of Educational Psychology* 68, no. 2: 149–71.
Vermunt, J.D. 2005. Relations between student learning patterns and personal and contextual factors and academic performance. *Higher Education* 49, no. 3: 205–34.
Vermunt, J.D., and N. Verloop. 1999. Congruence and friction between learning and teaching. *Learning and Instruction* 9, no. 3: 257–80.
Vermunt, J.D., and Y.J. Vermetten. 2004. Patterns in student learning: Relationships between learning strategies, conceptions of learning, and learning orientations. *Educational Psychology Review* 16, no. 4: 359–84.
Wartenbergh, F., and A. Van den Broek. 2008. *Studieuitval in het hoger onderwijs: Achtergrond en oorzaken* [Study withdrawal in Higher Education: backgrounds and causes]. Nijmegen: ResearchNed.
Watkins, D. 2001. Correlates of approaches to learning: A cross-cultural meta-analysis. In *Perspectives on thinking, learning and cognitive styles,* ed. R.J. Sternberg, and L. Zhang, 165–96. London: Lawrence Erlbaum Associates.
Weiner, B. 1974. *Achievement motivation and attribution theory.* Morristown, NJ: General Learning Press.
Weiner, B. 1992. *Human motivation: Metaphors, theories, and research.* Newbury Park, CA: Sage.
Zeegers, P. 2001. Approaches to learning in science: A longitudinal study. *British Journal of Educational Psychology* 71, no. 1: 115–32.
Zepke, N., and L. Leach. 2007. Improving student outcomes in higher education: New Zealand teachers' views on teaching students from diverse backgrounds. *Teaching in Higher Education* 12, nos. 5–6: 655–68.
Zepke, N., L. Leach, and T. Prebble. 2006. Being learner centred: One way to improve student retention? *Studies in Higher Education* 31, no. 5: 587–600.