Chapter 8
Specificity in Personality Measurement:
Summary and General Discussion
Personality tests are frequently used in selection situations. It is therefore important for researchers to explore and examine factors that influence the predictive validity of personality tests. This dissertation focused on one characteristic that may positively influence the predictive validity of personality, namely *specificity in personality measurement*. Three kinds of specificity were examined: (1) trait specificity, i.e., using narrow rather than broad personality traits (e.g., Ashton, 1998); (2) contextual specificity, i.e., the specificity of the situational context to which respondents refer when filling out a personality inventory, such as the home, school, or work context (e.g., Liewens, De Corte, & Schollaert, 2008) and (3) referent specificity, which refers to the specificity of the comparison other in self-reported personality, such as an in-group or out-group comparison other (e.g., Heine, Lehman, Peng, & Greenholtz, 2002). Several empirical studies were conducted to investigate the nature of trait, contextual, and referent specificity, as well as their relative effects on the prediction of relevant academic and work outcomes. As the past decades have seen significant increases in the numbers of ethnic minorities in Western societies, this dissertation also focused on another important issue in personality assessment, namely *ethnicity* effects. Specificity in personality measurements may shed new light on this. For instance, in the case of trait specificity, previous studies have shown that the summation of facet scores to obtain a broad trait wrongly masked substantial ethnic group variation in facet scores (e.g., Van Iddekinge, Taylor, & Eidson, 2005).

First, we will provide a summary of the methodology and main findings of the empirical studies, than we will proceed to discuss our results’ theoretical implications and contribution to previous research, followed by some limitations, suggestions for future research, and practical implications.

**Summary of main findings**

The following outlines the methodology and main findings of six empirical studies in order to answer eight research questions presented in the introduction. These eight research questions respectively relate to (1) personality in academic contexts; (2) ethnic majority and minority students; (3) personality in work contexts; (4) Dutch majority and Turkish-Dutch minority employees; (5) trait specificity in an academic and work context; (6) ethnic score differences in an educational and organizational setting; (7) contextual specificity in a work context and (8) referent specificity among Turkish-Dutch minority members.

1. **Personality in academic contexts**

Chapter 2 focused on the first research question, namely whether Conscientiousness and Honesty-Humility are positively related to academic performance and/or negatively related to counterproductive academic behavior (CAB). To this purpose, two separate
empirical studies, using different personality questionnaires and different samples, were presented.

In the first study, undergraduate students \( N = 226 \) from a large School for Higher Education in The Netherlands filled out the HEXACO Personality Inventory Revised (HEXACO-PI-R; Ashton & Lee, 2007; De Vries, Ashton, & Lee, 2009; Lee & Ashton, 2006, 2008) and the Inventory of Counterproductive Behavior (ICB; Hakstian, Farrell, & Tweed, 2002), which measures the display of counterproductive behaviors at school. At the end of the academic year the participants’ grade point average (GPA) was acquired from the School’s official records.

The data for the second study were partly obtained as part of a student mentoring and study skills enhancement project at the same School for Higher Education. During this project, students \( N = 1262 \) completed the Multicultural Personality Test - Big Six (MPT-BS; NOA, 2009). Again, after one-year participants’ GPA was acquired from official records. Participants in this second study were additionally asked to voluntarily fill out the ICB. All in all, 183 students filled out the MPT-BS as well as the ICB.

Both studies indicate that Conscientiousness and Honesty-Humility/Integrity\(^1\) are positively related to academic performance and negatively related to CAB. These results to our knowledge provide the first empirical evidence that Honesty-Humility/Integrity is, after Conscientiousness, the second-best predictor of academic performance. Specifically, our findings show that the Conscientiousness and Honesty-Humility/Integrity facets Diligence, Achievement Motivation, Need for Rules and Certainty, Greed Avoidance, and Modesty display the strongest relations to academic performance. This means that students who work hard, set goals, have a preference for structure, are modest, and are uninterested in having a high social status, are more successful academically.

Furthermore, while little is known yet about personality factors relevant for the prediction of CABs (such as showing up late for class and plagiarism on assignments), our results show that the Conscientiousness and Honesty-Humility/Integrity facets Fairness, Need for Rules and Certainty, and Diligence were most strongly and negatively related to CAB. These findings seem to suggest that students who take advantage of other people, do not want to live according to certain rules, have little self-discipline and are not strongly motivated to achieve, show relatively more counterproductive behaviors at school than others.

2. Ethnic majority and minority students

Having shown in Chapter 2 that Conscientiousness and Integrity are positive predictors of academic performance, Chapter 3 investigated whether these relations between personality and academic performance are similar across ethnic majority and minority

\(^1\) Since in the MPT-BS the sixth personality dimension is labeled Integrity (instead of Honesty-Humility), we will refer to it as both Honesty-Humility and Integrity.
students (Research question 2). Part of the data used in Chapter 2 was used for the study described in Chapter 3. First, a separate ethnic majority (N = 1052) and ethnic minority sample (N = 184) was conducted. The latter consisted of non-Western ethnic minorities with a Turkish, Moroccan, Surinamese, or Antillean background, thus including the four largest ethnic minority groups currently residing in The Netherlands. Second, participants with another ethnic background, such as an Indonesian background, were excluded because there were only few of them.

In line with previous studies (e.g., Roth & Bobko, 2000), the results show that ethnic background was significantly related to GPA, i.e., ethnic minorities showed on average lower levels of academic performance than majority participants. In addition, the findings also reveal that among ethnic minorities Conscientiousness displays a relatively limited predictive validity for academic performance in comparison to ethnic majority students. Vice versa, Integrity, in particular its facet Sincerity, was found to be a stronger predictor of academic performance for ethnic minorities than for ethnic majorities.

3. Personality in work contexts
Research question 3 focused on the importance of personality factors in a professional context. This question was subdivided into three separate questions. First, we investigated whether Conscientiousness and Honesty-Humility are positively related to job performance. The second question focused on whether Conscientiousness, Agreeableness, Extraversion, and Honesty-Humility are positively related to organizational citizenship behavior (OCB). The third question concerned whether Conscientiousness and Honesty-Humility are negatively related to counterproductive work behavior (CWB).

In Chapter 4, we presented two separate studies that sought to answer Research question 3, using different personality questionnaires and different samples. For the first study we employed a snowball technique in order to approach employees working in a broad variety of occupations and work sectors. Participants (N = 238) were asked to fill out a questionnaire consisting of the HEXACO-PI-R and questions measuring self-reported OCB and CWB. In order to measure the job performance of the employees, their supervisors were asked to complete several questions. In the second study (N = 254) we took a similar approach but chose a different personality questionnaire: the MPT-BS. For both studies, three experts categorized the range of occupations into six general types (see Holland, 1997, for these occupational types).

Both studies revealed that Conscientiousness is significantly and positively related to supervisor-rated job performance, which is in line with the findings of earlier research in this area (Barrick & Mount, 1991; Hurtz & Donovan, 2000; Salgado, 1997; Tett, Jackson, & Rothstein, 1991). At the facet-level, the results show that the facets Diligence, Perfectionism, and Achievement Motivation are among the strongest predictors of job performance. This finding suggests that hard-working employees with attention for detail and a drive to deliver the best possible performance an average receive higher supervisor
job performance ratings than less conscientious employees. One of the further aims of these two studies was to examine whether Honesty-Humility is related to job performance across different kinds of occupational groups. To date, no prior research of personality measures has looked into this issue. Contrary to our expectations, we found in both studies that Honesty-Humility/Integrity and its facets were not significantly related to job performance. Moreover, we did not find interaction effects between Honesty-Humility/Integrity and occupational type in relation to job performance.

In addition to job performance, the studies presented in Chapter 4 also examined the prediction of OCB. As expected, the results suggest that Conscientiousness, Agreeableness, and Extraversion are relevant indicators for the display of OCBs. Yet, we did not find the expected positive relation between Honesty-Humility/Integrity and OCB. However, instead of Honesty-Humility/Integrity, Openness to Experience showed a significant and positive relation with OCB. Specifically, hard-working, highly motivated employees who are confident in social situations, who have a preference for innovation, forgive others easily, like to help others out and remain calm, show relatively more OCBs.

With respect to the last work outcome to be predicted, we found that Conscientiousness and Honesty-Humility/Integrity displayed significant and negative correlations with CWB. According to the most predictive facets of Conscientiousness and Honesty-Humility/Integrity, among employees who live according to certain rules, adopt a structured style of work, inhibit their impulses and are honest towards others, CWBs are less likely to occur. Interestingly, with regard to some predictive facets of Openness to Experience and Extraversion, those workers who seek excitement, express themselves creatively, prefer to be in the spotlight, and are receptive to seemingly strange or radical ideas are generally more likely to show CWBs.

4. Dutch majority and Turkish-Dutch minority employees

Having shown in Chapter 4 that several personality traits are significant predictors of work outcomes, Chapter 5 focused on the question whether the relations between personality and work outcomes are similar among Dutch majority and Turkish-Dutch minority employees (Research question 4). For this purpose, we re-used the data on Dutch employees (N = 211) from the second study described in Chapter 4. To these data we added data from ethnic minority participants (N = 81), i.e., employees from a Turkish-Dutch minority background. Since most Turkish-Dutch employees were unwilling to cooperate as respondent if their supervisors were asked for job performance ratings, we decided not to collect supervisor-rated job performance in this case. Instead, we used only self-reported job performance. In this study, personality was found to predict job performance, OCB, and CWB to the same degree among Dutch and Turkish-Dutch employees.
5. Trait specificity
Christiansen and Robie (2011) recently have emphasized the importance of studies focusing on narrow personality traits, noting that “since 2003, there have been more than 200 studies published in the *Journal of Applied Psychology* and *Personnel Psychology* that used the FFM, and only 10 (< 5%) have considered more narrow traits in any way; very few used scales that even provide scoring instructions at the facet level” (p. 183). One aim of this dissertation therefore was to examine whether the prediction of academic and work outcomes benefits from the use of narrow traits (Research question 5). Against the view of those scholars who argue that broad traits are better predictors of broad and complex criteria (e.g., Ones & Viswesvaran, 1996), the studies conducted and presented in Chapter 2 and 4 (as summarized above) and in Chapter 6 show that, even in the case of predicting broad criteria such as work and academic performance or complex criteria such as OCB, CAB and CWB, narrow traits were able to explain more variance than the broad traits.

6. Ethnic score differences
Research question 6 focused on the relation between ethnic background and score differences on broad versus narrow personality traits and was stated as follows: Do narrow facet traits show larger ethnic score differences than the respective broad factor traits? This question was answered in both Chapters 3 and 5.

The study presented in Chapter 3 (as described above) focused at least in part on ethnic score differences between majority and minority students. The results suggest that the use of broad personality traits, in this case Conscientiousness and Integrity, may partially conceal ethnic score differences, since the narrow traits showed larger ethnic score differences. In line with De Meijer, Born, Terlouw, and Van der Molen (2006), we found that ethnic minorities scored significantly higher on Conscientiousness than did ethnic majorities. It was especially on the Conscientiousness facets Orderliness and Need for Rules and Certainty that ethnic minorities scored higher than ethnic majorities; the differences between means on these facets were larger than on the Conscientiousness factor scale. An interesting further finding is that the facets of Integrity not only showed larger ethnic score differences than did the broad Integrity factor, but also opposing ethnic score differences: Ethnic minorities scored significantly higher on Honesty and Sincerity, but significantly lower on Greed Avoidance than ethnic majorities.

The study presented in Chapter 5 (as described above) focused in part on ethnic score differences between Dutch majority and Turkish-Dutch minority employees. With respect to ethnic score differences on the broad factors, Turkish-Dutch minority employees scored significantly higher on Conscientiousness than did ethnic majority employees. Looking at the narrow facet scales, we found that the Turkish-Dutch minority scored significantly higher than the Dutch majority on the facets Need for Rules and
Certainty (C), Orderliness (C), Attentiveness (A), Eagerness to Learn (O), and Honesty (I). Finally, compared to the Dutch majority, the Turkish-Dutch minority scored significantly lower on the facets Emotional Control (ES), Confidence in Others (A), Need for Excitement (O), and Greed Avoidance (I). These results indicate that the broad factors seem to mask ethnic score differences. Particularly in the case of Agreeableness, Openness, and Integrity, the Turkish-Dutch minority scored significantly lower than the majority on one facet, and significantly higher on another facet, while both facets belong to the same broad factor. The corresponding factors did not display ethnic score differences, which suggest that combining facets to obtain a broad trait may have the effect of wrongly masking ethnic score differences on several facets.

7. Contextual specificity
The seventh research question concerns whether work-specific personality scales are more strongly related to job performance, OCB, and CWB than are non-contextualized and (conceptually irrelevant) home-specific personality scales. In addition, we examined whether home-specific personality scales show a weaker relationship with job performance, OCB, and CWB than the corresponding non-contextualized personality scales.

Chapter 6 was devoted to answering these questions through one empirical study. We used a snowball procedure to approach employees working at a broad range of occupations and work sectors. A within-subject design was employed in such a way that all participants (N = 289) completed non-contextualized items as well as work-specific and home-specific items. With respect to the non-contextualized items, participants received the standard instructions and were asked to indicate the extent to which a number of statements applied to them. For the work-specific and home-specific personality scales, we added either the tag “at work” or the tag “at home” to all items. One week later, participants filled out a second questionnaire, this time measuring three important work criteria: self-reported job performance, OCB, and CWB.

The findings strongly suggest that adding a relevant context to personality items leads to a higher validity of work outcomes. Specifically, we found that the work-specific Conscientiousness and Integrity scales together have a stronger relation with work outcomes than the non-contextualized and (conceptually irrelevant) home-specific scales of Conscientiousness and Integrity. Finally, our study also indicates that the combined home-specific scales of Conscientiousness and Integrity display a weaker relation with work criteria than the corresponding non-contextualized personality scales.

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2 C = facet of Conscientiousness; A = facet of Agreeableness; O = facet of Openness; I = facet of Integrity; and ES = facet of Emotional Stability
8. Referent specificity

The final empirical study focuses on the question to what extent members of an ethnic minority group are influenced by perceptions of comparison others when filling out a personality test (Research question 8). The study described in Chapter 7 examined the following issues: (1) whether personality differences between Turkish-Dutch minorities and Dutch majorities were masked when Turkish-Dutch compared themselves with people from their own ethnic group (in-group comparison), and (2) whether personality differences between Turkish-Dutch minorities and Dutch majorities could be found when Turkish-Dutch minorities compared themselves with a Dutch majority out-group. In the latter case, we expected that Turkish-Dutch minorities would show lower scores on Conscientiousness, Openness, and Honesty-Humility, and higher scores on Neuroticism, than Dutch majority members. This expectation was based on findings of Terracciano et al. (2005) on perceived national character (PNC). From these results, it may be deduced that there are PNC-differences on Conscientiousness, Neuroticism, Openness to Experience, and Honesty-Humility between The Netherlands and Turkey.

In order to test our eighth and final research question, Turkish-Dutch minorities (N = 95) were first asked to complete a personality test with standard instructions (no reference-group). Then, one week later, they received the same personality questionnaire, but now with the specific instruction to compare themselves with people from the Dutch majority group (out-group comparison). Finally, again one week later, we asked the participants to complete the personality test with the instruction to compare themselves with people from their own Turkish-Dutch minority group (in-group comparison). The final sample that completed every version consisted of 34 Turkish-Dutch minority members. The Dutch majority participants (N = 74) filled out the personality test once only, with standard instructions (no reference-group).

Our results showed no score differences between the Dutch majority and the Turkish-Dutch minority in the no reference-group conditions. This finding is consistent with the idea that reference-group effects confound ethnic comparisons (Heine et al., 2002). We also found no score differences between Dutch majorities and Turkish-Dutch minorities when the latter compared themselves with people from their own Turkish-Dutch minority group. This indeed was what we had expected: When people compare themselves with similar others, in this case people from their own ethnic group (in-group comparison), true personality differences between ethnic groups may be masked. In contrast, when the Turkish-Dutch minorities reflected on their behavior in comparison to the Dutch majority group (out-group comparison), they tended to perceive themselves as less honest and humble than the Dutch majority. Finally, when the Turkish-Dutch used an out-group comparison other, they saw themselves as more emotional as well as less agreeable and less open for new experiences than when they used an in-group comparison other. The findings do suggest that Turkish-Dutch members are influenced by perceptions of comparison others when filling out a personality test.
General discussion

Having summarized the methodology and main findings of our empirical studies in the first section of this chapter, we shall now proceed to discuss our results’ theoretical implications and contribution to previous research. Subsequently, the following will discuss several potential weaknesses of our empirical studies, provide a number of suggestions for further research, and shed light on various practical implications of the present studies.

Theoretical implications and contribution to previous research

*Personality in relation to academic and work outcomes*

Although previous studies have shown that Honesty-Humility explains significant validity in various important criteria, such as antisocial behaviors directed at organizations (Lee, Ashton, & Shin, 2005) and workplace delinquency (Lee, Ashton, & De Vries, 2005), as of yet no one had tested whether Honesty-Humility also explains validity in the prediction of the specific criterion of *academic performance*. The results of the study described in Chapter 2, however, indicate that Honesty-Humility/Integrity, after Conscientiousness, is the second-best predictor of academic performance. This raises the theoretical question of *why* exactly Honesty-Humility/Integrity should be a positive predictor of academic performance. Focusing on the narrow traits of Honesty-Humility/Integrity, we found that Greed Avoidance showed the strongest relation with academic performance. This might be accounted for by the hypothesis that students who score low on Greed Avoidance may attach great importance to living in luxury. In order to avoid the relative poverty of one’s live as a student, they may prefer to have a job on the side so as to be able to afford luxury goods. As a result, these students may be spending less time studying and doing homework, which consequently may lead to lower academic performance. This final line of thought is underscored by recent research showing a significant and negative relation between students’ time spent on a job and their academic performance (Butler, 2007).

Furthermore, students low on Greed Avoidance may also consider power and social status in addition to wealth to be very important factors in their life. This could mean that those students may be spending more time taking care of their social reputation, for example among friends at school, than actually working on their study. Indeed, previous research has indicated that extracurricular social temptations may hamper study performance (Schouwenburg & Groenewoud, 2001).

Moreover, a recent study by De Vries, Van den Berg, Born, and De Vries (2011) suggests that Integrity may be able to influence academic performance through the mediating effect of extrinsic motivation. In an educational setting, extrinsic motivation finds expression in the manner in which students are motivated by factors which are not directly related to the content of their study (Deci & Ryan, 1985; Ryan & Deci, 2000). For instance, factors like higher chances to find a well-paying job, acquiring an advanced degree, or the approval of others may motivate students to perform well. Various studies
have found that students who had extrinsic motives for studying were less successful academically in terms of their study duration (Van den Berg, De Boom, & Hofman, 2001) and mean course grades (Lin, McKeachie, & Kim, 2003). Furthermore, it seems logical that students who have a stronger need for luxury goods and a high status (low on Greed Avoidance) may consequently pursue education in order to supply their needs and therefore have higher levels of extrinsic motivation. The results of De Vries, Van den Berg et al. (2011) showed that extrinsic motivation mediates the relation between Integrity and academic performance. In other words, students low on Integrity were in general more extrinsically motivated, which in turn had a negative effect on academic performance.

One of the explicit aims of the studies described in Chapter 4 was to investigate whether Honesty-Humility/Integrity is related to job performance across various kinds of occupational groups. To date, no prior research of personality measures had looked into this issue, although previous studies suggest that integrity tests are among the best predictors of overall job performance (Ones, Viswesvaran, & Schmidt, 1993; Schmidt & Hunter, 1998). However, the findings of these previous studies were based on either overt or covert integrity tests, which both conceptualize integrity in a different way than the HEXACO personality model. Overt integrity tests directly measure attitudes and past behaviors of the employee regarding counterproductive work behaviors such as drug usage and criminality (e.g., Berry, Sackett, & Wiemann, 2007). Covert integrity tests are personality-based and measure several personality traits, such as trustworthiness and sociability, which have been found to be associated with counterproductive behaviors (Sackett, Burris, & Callahan, 1989). The Big Five dimensions Conscientiousness, Agreeableness, and Extraversion have been found to correlate with covert personality-based integrity (e.g. Schmidt & Hunter, 1998), while other studies have shown that Honesty–Humility was strongly associated with overt integrity and less with covert personality-based integrity (Lee, Ashton, & De Vries, 2005; Marcus, Lee, & Ashton, 2007). Since overt integrity tests are related to Honesty-Humility and to job performance, we expected that Honesty-Humility correlates with job performance as well. However, contrary to our expectations, our findings did not support the hypothesis that Honesty-Humility/Integrity and its facets are significantly related to job performance.

On the other hand, recent work by Johnson, Rowatt, and Petrini (2011) did find a significant relation between Honesty-Humility and job performance, concluding that the more honest and humble an employee is, the higher his/her performance on the job. It should be noted, however, that Johnson et al. used as participants employees working in positions providing health care for special clients. It maybe that honest and humble employees do well in occupations and organizations that require special attention and care for other people. Johnson et al. also argued, on the other hand, that employees lacking in humility probably perform better at jobs requiring self-promotion, such as sales functions. Hence it seems likely that the influence of Honesty-Humility/Integrity on job performance is conditioned by factors such as the specific characteristics of different job
types. The two studies in Chapter 4 used as participants employees working at a variety of organizations and occupations which were categorized into six model types, namely realistic, investigative, artistic, social, enterprising, and conventional (Holland, 1997). Yet both studies did not show any signs of interaction between Honesty-Humility/Integrity and the occupational type in relation to job performance. We therefore conclude that scholars would be wise to be careful before concluding that Honesty-Humility and Integrity are important predictors of job performance; more research in the area is warranted to draw conclusions.

To conclude, although our results indicate that Honesty-Humility and Integrity are significant predictors of academic performance, our findings also reveal that these both traits are not significantly related to job performance across different types of occupations. An explanation for this contrasting finding may be that every student, regardless of the academic discipline, has the same tasks, such as attending classes, doing homework, and taking exams. Specific Conscientiousness and Honesty-Humility/Integrity traits, such as working hard, setting goals, having a preference for structure, being modest, and being uninterested in having a high social status, may be relevant for every student in order to perform these same tasks and consequently to reach adequate levels of performance. In contrast, the tasks of an employee depend on the type of occupation. For instance, some employees may have to show special care for patients, while other employees may have to sale as many products as possible. As employees have different core tasks, it seems likely that being humble and honest may not have to be relevant for every employee in order to perform his or her tasks adequately.

Besides predicting academic performance, prior research has shown that the HEXACO model of personality, through its incorporation of Honesty-Humility, is able to offer incremental validity in the prediction of important antisocial behaviors that seem to be neglected by the Big Five model. Due to the dimension of Honesty-Humility, the HEXACO model has been found to better predict antisocial behaviors directed at organizations, workplace delinquency, unethical business decisions, and more general antisocial behaviors such as Machiavellianism, Psychopathy, Narcissism, Egoism, and Social Adroitness than the Big Five model (Ashton & Lee, 2008; Ashton, Lee, & Son, 2000; De Vries, De Vries, De Hoogh, & Feij, 2009; De Vries, Lee, & Ashton, 2008; Lee & Ashton, 2005; Lee, Ashton, & De Vries, 2005; Lee, Ashton, & Shin, 2005). Our results in Chapter 2, 4, and 6 support these earlier findings and show that Honesty-Humility and Integrity indeed are important predictors of self-reported counterproductive behaviors at work and at school: behaviors such as theft, unsafe work behavior, absenteeism, poor quality of work, alcohol and drug abuse, cheating, and plagiarism.

**Personality as predictor among ethnic majority and minority members**

The findings presented in Chapter 3 reveal that for ethnic minorities in comparison to ethnic majorities, Conscientiousness has a relatively weak predictive validity for academic
performance. This diminished predictive validity of Conscientiousness among ethnic minorities may be the result of their relatively high score on Conscientiousness. Such a relatively higher mean score – and consequently a restriction of range – implies that the specific relation between Conscientiousness and academic performance may be less significant. Another explanation for the diminished predictive validity of Conscientiousness among ethnic minorities may be found in the situational strength theory, which claims that situational pressure can make people act in a way mainly dictated by the situation rather than by their personality (Mischel, 1977). In other words, in cases of highly charged situations, the relation between personality and behavior is weakened. In line with this theory, it may be that there are certain situations, for instance a demanding home situation, that make it more difficult for conscientious ethnic minority students to perform at school. Within most Dutch minority families, girls and women perform the largest share of domestic work. Furthermore, these ethnic minorities prefer informal care to professional help to a greater extent than the Dutch majority group and also show a greater willingness to provide this care (Van den Broek & Keuzenkamp, 2008). Therefore, it seems possible that when conscientious ethnic minority students have to combine the demands of their family life with the demands of the study they follow, it will be more difficult to successfully perform at school.

Also, for ethnic minorities rather than majorities, Integrity, and its facet Sincerity in particular, seems to be a stronger predictor of academic performance. Sincerity measures the extent to which someone shows who he/she truly is. The question remains why being sincere has a stronger positive influence on academic performance among ethnic minority students than among ethnic majority students. A possible but speculative explanation may lie in cultural differences in terms of an opposition between individualism and collectivism, which indicates the degree to which individuals are integrated into groups (Hofstede, 1980, 2001). In individualistic cultures (including the Dutch culture, see Hofstede, 2001), the focus is on individualistic attitudes and communal ties are relatively loose. In contrast, collectivistic cultures (such as the Turkish, Moroccan, Surinamese, and Antillean cultures, see Arends-Tóth & Van de Vijver, 2008) emphasize the interdependence of all individuals in a group and the priority of group goals over individual goals. Hofstede (2001) found that honesty and trust are important values in individualistic cultures, while collectivistic cultures value harmony more than honesty. It may be that ethnic minority students who tend to speak and act the truth better fit in with the Dutch educational system, and therefore perform better than ethnic minority students who present themselves in a less truthful but more harmonious manner.

With regard to the prediction of several work outcomes among Dutch majority and Turkish-Dutch employees, the results in Chapter 5 show that personality in general predicts job performance, OCB, and CWB to the same degree among Dutch and Turkish-Dutch employees. This finding is in line with De Meijer, Born, Terlouw, and Van der Molen (2008), who did not find evidence for differential prediction for personality on several
criteria. However, as mentioned before, among ethnic majority and minority students we did find differences in the relations between personality and academic performance. There may be several explanations for this contrasting finding. First, the study among ethnic minority students did not focus on one homogeneous ethnic group such as the study among Turkish-Dutch minority employees did, but looked at ethnic minorities with a Turkish, Moroccan, Surinamese, and Antillean background. Second, the sample size of the ethnic minority students was larger (N = 184) than the sample size of the Turkish-Dutch minority employees (N = 81). Due to the relatively smaller sample size of the latter, the probability of finding significant differences decreases. Third, another explanation may be that the ethnic majority and minority students were not selected, while the Dutch majority and Turkish-Dutch employees of our study were previously recruited and hired by the organization for which they worked. Consequently, in contrast to the minority students, the Turkish-Dutch employees may perhaps to some extent be more integrated in the Dutch culture as they contribute to the Dutch economy. Therefore, it may be that in an organizational context the same personality traits are important for work success among ethnic majority and minority members and that in an educational context different traits are important for academic success for one ethnic group compared to another ethnic group.

**Trait specificity**

As mentioned before, Christiansen and Robie (2011) have recently emphasized the importance of studies focusing on narrow personality traits, given that only a few studies have used narrow traits in the prediction of academic and work outcomes. Our results suggest that the prediction of academic and work outcomes indeed benefits from the use of narrow traits (see Chapter 2, 4, and 6). A reason for the higher predictive validity among narrow traits compared to broad traits may be that the broad personality factors are less useful for predicting criteria due to the heterogeneity of the underlying facets. Several facets may display strong positive correlations with a criterion whereas others perhaps are barely or negatively related. This would reduce the predictive validity of the entire factor. For instance, in the second study described in Chapter 4, we saw that Openness was not significantly related to CWB. In contrast, its facet Initiative was significantly and negatively related to CWB while its facet Need for Excitement showed a significant but positive correlation with CWB. This finding suggests that the use of broad personality factors implies a loss of detailed information, that is, the use of broad traits may mask significant relations between narrow traits and outcomes. Hence, the use of narrow facets may reveal deeper insights into an individual's personality, and consequently, provide more understanding of the relations between personality on the one hand and academic and work outcomes on the other.

Relatively little is as of yet known about possible ethnic score differences on the narrow personality traits. The results described in Chapter 3 and 5 suggest that the use of
Broad personality traits may partially conceal ethnic score differences since the narrow traits showed larger ethnic score differences. There are several possible explanations for these ethnic score differences. Firstly, ethnic score differences in personality may reflect real differences in average personality. In Chapter 3, ethnic minority students scored significantly lower on Greed Avoidance. For many Turkish, Moroccan, Surinamese, and Antillean ethnic families the decision to emigrate to The Netherlands was made primarily for economic reasons. It is hence possible that they attach considerable value to money and material possessions. Furthermore, achieving a higher socioeconomic status, for example through educational investment, may be more important for ethnic minority students than for ethnic majority students. This might explain the minorities’ relatively low score on Greed Avoidance. An explanation for the relatively high score among Turkish-Dutch minorities on the Conscientiousness facet Need for Rules and Certainty may lie within the cultural dimensions theory, which is a systematic framework for assessing and differentiating national cultures proposed by Hofstede (1980, 2001). One dimension of Hofstede’s framework is ‘Uncertainty Avoidance’ which deals with feeling uncomfortable versus comfortable in unstructured situations. In contrast to the Dutch culture, the Turkish culture scores relatively high on this dimension, which indicates that they may feel relatively uncomfortable in unstructured situations. This cultural difference therefore may be an explanation for the relatively high score on Need for Rules and Certainly among the Turkish-Dutch minority.

Secondly, another explanation may be that the ethnic score differences in personality are due to a selection effect: Ethnic minority students and employees may actually need to be more conscientious than ethnic majority members in order to attain higher levels of education or secure employment on the Dutch job market. This may, consequently, be reflected in the higher Conscientiousness scores.

Thirdly, ethnic score differences on personality scales may not reflect existing differences in personality traits but may instead be due to the reference-group effect (Heine et al., 2002). This would mean that when ethnic minorities compare themselves relatively more frequently than ethnic majority members with others who are for instance low in Orderliness, they may consequently score themselves relatively high on this facet. This reference-group effect was examined in Chapter 7 and is discussed at the end of this section.

Fourthly, ethnic score differences on personality scales may be the result of culturally-based response styles instead of existing differences in personality traits. For instance, in some cultures, range restriction toward the center of a scale may be more likely to occur than in other cultures (Chen, Lee, & Stevenson, 1995). Such differences in response styles were in line with the distinction often made between individualist and collectivist cultures (Hofstede, 1980, 2001). The latter would be assumed to be more likely to respond on the basis of group norms and the former on the basis of individual preference (Chen et al., 1995). Providing socially desirable answers could also be a culture-
influenced response style. However, the present study showed that none of the ethnic groups gave significantly more social desirable answers on any one of the scales, effectively contradicting the suggestion that one of the ethnic groups provided socially desirable answers across all scales; alternatively, this finding might also mean that some traits are more socially desirable within one culture than in another.

In sum, our results imply that the prediction of academic and work outcomes benefits from the use of narrow traits. Using narrow traits as predictors of important outcomes clearly helps to explain the way in which personality influences all sorts of behaviors in educational and organizational settings. However, our findings also suggest that the narrow traits show larger ethnic score differences than the broad traits. Thus, when researchers and practitioners use narrow traits in the prediction of important outcomes, they should be aware that these traits could produce significant ethnic score differences. Therefore, future research should examine what kind of reasons there are for these ethnic score differences and whether the relations between narrow traits and outcomes are different among ethnic groups.

**Contextual specificity**

Besides focusing on narrow personality traits, a second way to improve the predictive validity of personality measures is adding a specific context or ‘frame-of-reference’ to each personality item. Previous empirical studies focusing on the frame-of-reference effect confirm the positive effects of providing not only a specific but also a relevant context in personality tests in order to predict academic performance (e.g., Lievens et al., 2008). However, with respect to the prediction of work criteria, the frame-of-reference effect has not been extensively studied. Therefore, this dissertation examined whether the prediction of three work outcomes improved by adding a relevant context to personality items, that is, adding the tag “at work” to all items. The findings (see Chapter 6) indeed strongly suggest that adding a relevant context to personality items leads to a higher validity of work outcomes. Explanations for this finding are mentioned in the introductory chapter: Adding a relevant context not only improves respondents’ consistency when filling out a personality test (Lievens et al., 2008), but also helps to prevent irrelevant score differences between respondents (e.g., Schmit, Ryan, Stierwalt, & Powell, 1995), both resulting in higher predictive validities. Furthermore, our findings also show that the use of a conceptually irrelevant frame-of-reference, in our case a home context, actually decreases the predictive validity. These findings are in line with the theory of conditional dispositions (Wright & Mischel, 1987), which claims that individuals may behave consistently and predictably within similar situations, but do not necessarily behave consistently across different situations. Thus, the most important conclusion is that non-contextualized and inappropriately contextualized personality scales yield less information about the kinds of behavior employees are likely to show in real-life work situations than appropriately contextualized personality scales. Please note that this
dissertation did not pay attention to ethnicity effects with regard to contextual specificity. However, in the next section (limitations and suggestions for further research), there are some suggestions provided for future research concerning this issue.

**Referent specificity**
Besides trait and contextual specificity, the issue of specificity was also approached from a third angle, namely with respect to the so-called comparison other issue, which refers to the reference-group effect (RGE; Peng, Nisbett, & Wong, 1997; Heine et al., 2002). This RGE occurs when responses to self-report items are based on respondents’ scores relative to a comparison group rather than on their absolute level of a construct (Credé, Bashshur, & Niehorster, 2010). Until now, no studies have been conducted to test the reference-group effect in personality judgments with different ethnic reference groups. Moreover, it was not known what effects are to be expected, especially among ethnic groups who live in the same country. The results of the study described in Chapter 7 suggest that the use of reference groups influences the manner in which Turkish-Dutch minorities respond to personality tests. We found no score differences between the Dutch majority and the Turkish-Dutch when the latter compared themselves with people from their own Turkish-Dutch minority group. This was what we had expected: When people compare themselves with similar others, in this case people from their own ethnic group (in-group comparison), true personality differences between ethnic groups may be masked. However, the results also showed that when the Turkish-Dutch minorities reflected on their behavior in comparison to the Dutch majority group (out-group comparison), they tended to perceive themselves as less honest and humble than the Dutch majority. In addition, the findings also suggest that an in-group comparison and an out-group comparison result in different personality profiles among Turkish-Dutch minorities: When Turkish-Dutch minorities thought about how they behave in comparison to the Dutch majority group (out-group comparison) when responding to each personality statement, they see themselves as more emotional as well as less agreeable and less open for new experiences than when they compared themselves with people from their own Turkish-Dutch minority group (in-group comparison). All in all, Turkish-Dutch members seem to be influenced by perceptions of comparison others when filling out a personality test. Yet, an important question remains whether the use of reference groups influence the predictive validity of personality tests.

**Limitations and suggestions for further research**
Below the most important limitations will be discussed and avenues for future research will be highlighted. Firstly, a possible limitation of the studies described in this dissertation is that, except for GPA in Chapter 2 and 3 and job performance in Chapter 4, the other predictors and criteria used were self-report questionnaires. This means that participants may have completed these questionnaires in a socially desirable manner. With regard to
personality, the sores on the personality questionnaires were never used to make important decisions, such as selection decisions, so participants had no apparent reason to complete the personality questionnaires in a socially desirable manner. With regard to the criteria, it is most likely that the questionnaire measuring counterproductive behavior has been subject to a social desirability bias, because participants had to indicate how frequently they had shown undesirable behaviors such as cheating and plagiarism at school or absenteeism and alcohol abuse at work. However, several scholars have argued that participants may fake when instructed to do so, but that they are less likely to fake in actual situations, such as selection situations (e.g., Morgeson et al., 2007; Ones & Viswesvaran, 1998). Furthermore, in a study on the effects of social desirability on the relations between personality and several criteria (such as work performance and counterproductive work behavior), Ones, Viswesvaran, and Reiss (1996) found that social desirability does not influence criterion-related validities of personality scales in general nor those of integrity scales in particular. In future studies it might be worthwhile to obtain external measurements, for instance official records of counterproductive behaviors (such as ratings of absence), to counteract the effects of response styles. On the other hand, external measurements may also provide an incomplete picture because not all counterproductive behaviors can be registered; self-report measurements have the advantage of taking into account a broader range of counterproductive behaviors (Ones et al., 1993). Yet another method would involve obtaining other-rated reports of counterproductive behavior from closely-related study peers or colleagues. Peers and colleagues might be uniquely capable of providing relatively accurate ratings of a broad range of counterproductive behaviors and are less susceptible to self-serving response biases.

Secondly, a limitation of the study among ethnic majority and minority students (Chapter 3) and the study on the reference-group effect (Chapter 7) was the sample size of the ethnic minority sample. The study in Chapter 3 consisted of non-Western ethnic minorities with a Turkish, Moroccan, Surinamese or Antillean background (N = 184). Therefore, it was not possible to conduct analyses on separate homogeneous ethnic minority groups and to draw conclusions for separate ethnic groups. Future researchers are encouraged to examine the prediction of academic performance by personality in a sample consisting of large homogeneous ethnic minority groups in order to draw conclusions for separate ethnic groups. In the study described in Chapter 7, only 34 Turkish-Dutch participants fully participated. The difficulty was that we focused on a homogenous ethnic group and employed a within-subject design. Furthermore, based on a manipulation check, 27% of the participants in the out-group condition (Dutch majority reference-group) were removed from the dataset. The high percentage Turkish-Dutch participants that were removed from this condition could be due to the fact that we asked participants to evaluate themselves compared to the Dutch ethnic majority group. It
seems plausible that respondents were confused because of the word ‘ethnic’ when referring to the Dutch majority group.

Thirdly, contrary to our expectations, our findings suggest that Honesty-Humility/Integrity and its facets are not significantly related to job performance. As to date no prior research of personality measures had looked into this issue, one of the explicit aims of this dissertation was to investigate whether there are any interaction effects between Honesty-Humility/Integrity and one’s type of occupation in the prediction of job performance. However, a limitation of our dissertation is our imperfect attempt to categorize the occupations of the employees. We used the well-known typology of Holland (1997), who categorized occupations (e.g., nurse, real estate agent, and clerk) into six types: realistic, investigative, artistic, social, enterprising, and conventional. Two studies described in Chapter 4 did not show any interaction effects between Honesty-Humility/Integrity and occupational type in the prediction of job performance. Yet, these categories may have been too broad because some occupations may have been a combination of types (such as an advisor) and jobs that maybe were too varied, such as a nurse and teacher, fell within the scope of one type. Therefore, future research in this area should at least include one specific profession group, such as sales persons, teachers or economists, in order to answer the question whether being honest and humble contribute to performance among specific professions. Another suggestion for future research in this area may be to categorize occupations by the level of rewards employees obtain for showing integrity and to investigate whether the relation between Honesty-Humility/Integrity and job performance differs between occupations which reward low integrity versus occupations which reward high integrity.

Based on our findings on contextual specificity (Chapter 6), we may conclude that adding a relevant context to personality items leads to improved criterion validity. Yet, this dissertation did not pay attention to ethnicity effects with regard to contextual specificity. Interestingly, from cross-cultural research it is known that Western versus non-Western groups self-report differently depending on the context provided. Westerners do not have a lot of trouble describing themselves without any specific context, whereas non-Westerners have a much stronger contextualized self concept (e.g., Cousins, 1989). Therefore, contextualizing items of a personality inventory [at school, at work, at home, in my free time...] may even have a stronger differentiating effect between contexts for non-Western ethnic minority people than for ethnic majorities. Furthermore, for non-Westerners, contextualizing items may offer a more realistic, natural, and valid way of self-description. An interesting topic for future research will be to examine whether contextualized personality items will lead to improved reliabilities and validities of personality constructs, in particular for non-Western minority respondents.

The study on the reference-group effect (Chapter 7) showed no score differences between the Dutch majority and the Turkish-Dutch when the latter compared themselves with people from their own Turkish-Dutch minority group. This was what we had
expected: When people compare themselves with similar others, in this case people from their own ethnic group (in-group comparison), true personality differences between ethnic groups may be masked due to the so-called reference-group effect. However, another explanation for this finding may lie with the fact that we primarily focused on broad factor-level traits, but failed to focus on the narrow traits, such as the facets of the Big Five or HEXACO factors. Several studies found that analyses on the facet level showed moderate group differences, but that the use of broad personality factors to compare groups appeared to mask these differences (Foldes, Duehr, & Ones, 2008; Van Iddekinge et al., 2005). These last findings are also in line with our results described in Chapter 3 and 5 which suggest that the use of broad personality traits may partially conceal ethnic score differences since the narrow traits show larger ethnic score differences. Therefore, future research is encouraged to examine the reference-group effect on the factor- as well as on the facet-level.

**Practical implications**

The studies on trait specificity (Chapters 2, 4, and 6) suggest that the prediction of academic and work outcomes benefits from the use of narrow traits. In an academic context, it may be relevant to know which narrow traits are particularly relevant so that these may be used in the process of offering students information about potential causes of academic success and failure. Practically, personality tests may be included in student mentoring and study skills enhancement projects in which students may be given feedback on their personality. Such personality feedback may provide several benefits. Firstly, if students are unaware of their strengths, raising awareness about their potential may strengthen their confidence level with respect to their academic education. Secondly, providing students with feedback on their personality may also increase their awareness of potential weak spots. In academic skills enhancement projects, such awareness is typically the first necessary step in the journey towards overcoming potential weaknesses. Thirdly, if students score low on important personality traits and support is needed, the information gained may be used to discuss the actions that need to be taken. For instance, students with a low score on Conscientiousness may be advised to take extra classes to learn how to plan, set study-related goals, and develop a structured approach to study tasks. Similarly, students with a low score on Honesty-Humility/Integrity, in particular Greed Avoidance, could be shown that too great an attachment to wealth and social status might result in poorer academic performance. It is important that those students consider the amount of time they expect to spend on their study and reflect on their main goals and motives for following education.

With respect to the display of counterproductive behaviors at school, research has indicated that students showing dishonest behaviors at school are more likely in the future to display dishonesty at the workplace as well (Nonis & Swift, 2001). As counterproductive behaviors in work settings violate organizational norms and threaten
the well being of the organization and its members (Robinson & Bennett, 1995),
dishonesty should be discouraged as early as possible. Nonis and Swift (2001) suggest that
it is important to increase students’ awareness and understanding of what is unethical
behavior and to offer techniques for encouraging ethical behavior among students, such
as specific ethics classes to learn ethical decision-making. For students with a low score on
Conscientiousness and Honesty-Humility/Integrity facets Need for Rules and Certainty,
Diligence, and Fairness such techniques may be helpful to reduce counterproductive
behaviors.

In one of the studies conducted, ethnic minorities showed on average lower
levels of academic performance than majority students, which supports earlier findings
(e.g., Roth & Bobko, 2000). Furthermore, the results also suggest that some personality
traits are more important to minority than to majority students. For example, our findings
reveal that among ethnic minorities Conscientiousness displays a relatively limited
predictive validity for academic performance in comparison to ethnic majority students.
Vice versa, Integrity, in particular its facet Sincerity, was found to a stronger predictor of
academic performance for ethnic minorities than for ethnic majorities. Institutions for
higher education might wish to develop special projects to support minority students.
Such projects could be used to help these students develop important study skills, as well
as raising their self-esteem, motivation, and confidence. In addition, projects for ethnic
minority students could also be used to raise the ability of parents from ethnic minority
backgrounds to support their children achieve their full potential at school.

In an organizational environment, it may be worthwhile to include personality
tests in coaching projects where employees receive feedback on their personality. In co-
operation with their employees, managers may explore the impact of certain aspects of
personality on work performance. Our findings suggest that in the context of using
personality questionnaires for mentoring projects as well as for selection procedures, it is
important to consider the scores on the broad as well as on the narrow level. Focusing
exclusively on the broad traits will lead to a loss of detailed information: The narrow traits
may provide more specific insights into an employee’s personality and its impact on his or
her performance.

In a professional setting, counterproductive behavior may cause ineffective job
performance, job turnover, and accidents, and costs organizations billions each year
(Bennett & Robinson, 2000). It is therefore important to decrease the occurrence of
CWBs. The findings on the facet-level suggest above all that employees who seek order,
who live according to certain rules, inhibit impulse, are honest towards others, and avoid
corruption, show less CWBs than others. Interestingly, workers who seek excitement,
need to be in the spotlight, and are receptive to ideas that might seem strange tend to
show more CWBs. Knowing which narrow traits exactly are relevant for the occurrence of
CWBs may help organizations to prevent such behaviors. This may for instance be
achieved during the selection process by focusing on the relevant predictive narrow traits
or at an organizational level by taking into account situational factors that may trigger or encourage such behaviors.

The study with regard to contextual specificity (Chapter 6) underscores the notion that adding a relevant context (e.g., frame-of-reference) to personality items improves the predictive validity. Furthermore, using a frame-of-reference which is conceptually irrelevant to the criterion seems to result in lower predictive validities. This finding may suggest that non-contextualized (or inappropriately contextualized) personality scales yield less information about the kinds of behavior employees are likely to show in real-life work situations than appropriately contextualized personality scales. This conclusion may help test-designers to develop selection tests which are not only reliable, but also valid, by indicating a correct frame-of-reference. Especially when a context is widely applicable (e.g., school or work context), designing a contextualized personality questionnaire with tagged items (adding either the tag “at work” or the tag “at school” to all items) may be worth considering; these items are easily to produce and increase the predictive validity compared to standard personality questionnaires.

The results of the study on the reference group effect (Chapter 7) suggest that the use of reference groups influences the manner in which Turkish-Dutch minorities respond to personality tests. Credé et al. (2010), however, have shown that the use of reference groups may subsequently result in significant decreases in the criterion-related validity, as compared with personality tests that do not specify a reference group. They explain this finding by arguing that respondents are unlikely to perceive the reference group similarly. In our case, the perception of an out-group (that is, the Dutch majority) reference group may be significantly different for one person with a Turkish-Dutch minority background compared to another with the same background, as both persons do not exactly have the same Dutch majority members in their environment. This would suggest that personality tests that do not specify a reference group are to be preferred over personality inventories that do identify a particular reference group. Credé et al. advocate that an alternative possibility would be to naturally refer to reference groups. For example, in selection situations they suggest that applicants may better fill out a personality inventory in a work setting, which may consequently activate an employee’s reference group. This leads us to the positive effects of providing a specific context (frame-of-reference) in personality tests, which was described above.

Conclusion

Employees and students show all kinds of productive and less productive behaviors at work and at school. Five of these behaviors have been studied in this dissertation: (1) job performance, (2) organizational citizenship behavior (OCB), (3) counterproductive work behavior (CWB), (4) academic performance, and (5) counterproductive academic behavior (CAB). Our results support the findings of numerous previous studies showing that personality can contribute to the prediction of these work and academic criteria (e.g.,
Hurtz & Donovan, 2000; O’Connor & Paunonen, 2007). In particular, the results provide the first empirical evidence indicating that the new sixth personality dimension, Honesty-Humility/Integrity, is the second-best predictor of academic performance, after Conscientiousness. However, our findings also show that Honesty-Humility/Integrity and its facets are not significantly related to job performance. We therefore conclude that scholars would be wise to be careful before concluding that Honesty-Humility and Integrity are important predictors of job performance.

As the past decades have seen significant increases in the numbers of ethnic minorities in Western societies, this dissertation also focused on another important issue in personality assessment, namely ethnicity effects. In an educational context, the results show that ethnic minorities showed on average lower levels of academic performance than majority participants. In addition, the findings also reveal that among ethnic minorities Conscientiousness displays a relatively limited predictive validity for academic performance in comparison to ethnic majority students. Vice versa, Integrity was found to be a stronger predictor of academic performance for ethnic minorities than for ethnic majorities. At the other hand, in an organizational setting personality was found to predict job performance, OCB, and CWB to the same degree among Dutch and Turkish-Dutch employees.

Furthermore, three kinds of specificity were examined. First, we focused on trait specificity, i.e., using narrow rather than broad personality traits (e.g., Ashton, 1998). Our findings show that narrow traits are able to explain more variance than the broad traits in the prediction of academic and work outcomes. However, the results also suggest that the narrow traits showed larger ethnic score differences than the broad personality traits. Second, we looked at contextual specificity, i.e., the specificity of the situational context to which respondents refer when filling out a personality inventory, such as the home, school, or work context (e.g., Lievens et al., 2008). Interestingly, adding a relevant context to personality items leads to higher predictive validities. Third, we examined referent specificity, which refers to the specificity of the comparison other in self-reported personality, such as an in-group or out-group comparison other (e.g., Heine, et al., 2002). The findings suggest that the use of reference groups influences the manner in which Turkish-Dutch minorities respond to personality tests. However, more research is needed to conclude whether specifying a comparison other in personality tests influences the predictive validity.

In sum, the main purpose of this dissertation was to improve the prediction of academic and work outcomes by means of personality measures. One important conclusion is that the predictive validity of personality increases by focusing on relevant narrow traits instead of the respective broad traits. Another important conclusion is that the predictive validity of personality also improves when a specific and relevant context is added to the personality items. Taken together, this dissertation accentuates the
importance of trait and contextual specificity in personality measurement in order to improve the prediction of work and academic outcomes.