Academic integrity “captured” by a personality-based test

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The main goal of this study was to develop and validate a personality-based academic integrity test which could serve as a predictor of students' academic dishonesty. A new Academic Integrity Test (AIT), based on methodological principles accepted in the field of work integrity, was created during this study. The test was developed on one student sample (N=350), and then validated on another (N=471).

Validation of the AIT confirmed its relations with three dimensions previously found to be consistent correlates of work integrity measures – Conscientiousness, Aggressiveness and Neuroticism, with the addition of Negative Valence. The correlation between the AIT and a cognitive ability measure was not significant, which is in accordance with previous research. The test retained significant relations with the aforementioned personality measures in simulated applicant condition (except with Neuroticism), leading to the conclusion that the AIT maintains construct validity in situations susceptible to self-presentation.

Key words: academic integrity, integrity, personality traits, forced-choice test, faking

Academic integrity is a term that refers to a relatively stable tendency to exhibit honest behavior during academic education. The easiest way to explain this term is to refer to its direct opposite, “academic dishonesty”, which implies conscious engagement in illicit actions regarding academic education (Gaberson, 1997). These actions include an array of counterproductive behaviors such as: plagiarism, lying, copying other’s work, falsifying documents, false impersonation, helping others commit fraud, etc.

The term “counterproductive behavior”, as defined in the field of work integrity (see next section for details), stands for voluntary behavior that violates significant organizational norms and consequently threatens the well-being of the organization or its members, or both (Robinson & Bennett, 1995).
defines counterproductive behavior not only as morally unacceptable individual behavior, but as something harmful to the organization and its members.

Due to various definitions of this term, it is hard to provide a precise estimate of how widespread these kinds of behaviors are. A historical analysis shows that they have always been present, and that technological development and modern lifestyle have spurred the development of new forms of counterproductive behavior (Davis, Drinan, & Bertram Gallant, 2009). A recent study in Serbia, conducted on a large sample of students, examined eight classes of attitudes towards school misbehavior: attitudes towards exam cheating, truancy, falsifying school documents, rationalizing violence towards teachers, bribery and corruption, school nepotism and general attitudes towards misbehavior (Peruničić & Mirić, 2011). The study showed that many students do not consider such behavior as an offense, but as fairly common, or even recommended behavior.

Studies that focus on academic integrity and similar concepts (cheating, dishonesty, plagiarism, etc.) are primarily based on descriptive analyses. The research usually focuses on percentages of students who have engaged in counterproductive behavior, attitudes toward certain behaviors, or demographic data related to academic integrity (Del Carlo & Bodner, 2004; Elzubeir & Rizk, 2003; Monica, Ankola, Ashokkumar, & Hebbal, 2010; Rabi, Patton, Fjortoft, & Zgarrick, 2006; Shirazi, Jafarey, & Moazam, 2010). Many of these studies use context-specific questionnaires and check-lists, but systematic attempts to construct measures which would “capture” academic integrity on the level of personality are still missing. Personality traits were used as a predictors of academic honesty, along with demographic and situational variables. One of these studies details the connection between Eysenck’s personality traits, neuroticism and psychoticism, and student cheating (Jackson, Furnham, Levine, & Burr, 2002). The authors of this study conclude that the two personality dimensions are not suitable for predicting academic dishonesty and that the Five Factor Model would probably yield a better prediction since it comprises the Conscientiousness trait which is substantially related to integrity.

In the absence of systematic research on individual differences that could predict academic dishonesty, it seems justified to build on findings from the more prolific field of work integrity (although this is not common practice, the specification “work” will be used throughout the article to distinguish integrity measured in the workplace from integrity in academic settings). Our standpoint is that integrity should encompass some dispositions not predominantly dependent on particular settings – academic, organizational, or other. As the field of work integrity represents the framework of our own study, seeking to adapt this concept to academic environments, we devote the next section to presenting the basic postulates and findings of work integrity research and relating it to academic integrity.
RELATIONS BETWEEN WORK AND ACADEMIC INTEGRITY

Work integrity has been more extensively investigated than its academic counterpart. This term is also related to the prediction of counterproductive behaviors, but those that occur in a work environment: theft, tardiness, absence from work, lack of discipline, tendency to engage in conflicts, drug abuse, etc. Psychological investigations of work integrity were promoted by employers who recognized the need for a test that would measure workers’ propensity for theft (Guastello & Rieke, 1991; Sackett, 1994). This resulted in the first work integrity tests which have recently developed into modern instruments used primarily for selection purposes.

The main obstacle in this field is the lack of an exact definition of the term integrity. This is explained by the fact that work integrity tests were created as criterion-focused occupational personality scales (Ones & Viswesvaran, 2001). This is the reason why work integrity tests are the focus of research, and not the construct of work integrity itself (Marcus, Lee, & Ashton, 2007). The primary measure of the quality of these tests is their predictive validity, and not a precise definition of the particular construct. Years of studies have shown that work integrity tests can successfully predict propensity for counterproductive workplace behavior, but also general workplace performance (Berry, Sackett & Wieman, 2007; Ones, Viswesvaran, & Schmidt, 1993).

Studies dealing with the validation of the work integrity construct, although without a clear theoretical base and hindered by the focus on predictive validity, have produced partly consistent results, yet with no final solution. Viewed from the standpoint of the five factor model, work integrity shows the most consistent correlation with Conscientiousness, followed by Aggressiveness (reversed Agreeableness) and Neuroticism (reversed Emotional stability). Several meta-analyses have supported these findings (Berry et al., 2007; Ones et al., 1993; Wanek, 1999). The question which still needs to be addressed is – what is left in work integrity beyond these three traits? Several answers have been offered – a sixth personality dimension named “Honesty-Humility”, self-control, etc. (for a detailed discussion see Berry et al., 2007). Previous research has also found that overall work integrity test scores are unrelated to cognitive ability (Ones et al., 1993), although some correlations were found on the facet level (Duehr, Sackett, & Ones, 2003).

For the purpose of this study, we rely on the stand that integrity is a compound dispositional trait, related primarily to Conscientiousness, Agreeableness and Emotional Stability, noting that these three do not account for all of the variance in integrity (Berry et al., 2007).

Work integrity tests are usually classified into two groups (Sackett, Burris, & Callahan, 1989). The first group comprises overt tests which consist of items related to counterproductive behaviors, primarily theft. The other group consists
Another fact speaking in favor of personality-based integrity tests is that they are more resistant to faking than overt counterproductive behavior tests. When testing candidates for selection purposes, a relation between test scores and a reward (employment) is very clear. For this reason, it is necessary for the test to appear less obvious, which is where personality-based tests have a clear advantage, owing to their more neutral form.

Faking can be hindered by utilizing the forced-choice item form. Research shows that subjects can increase their scores on Likert-type scales by one standard deviation, and with forced-choice tests by only one third of a standard deviation (Jackson, Wroblewski, & Ashton, 2000; Okanović & Okanović, 2009). This problem must be taken into consideration when constructing tests that will be used in situations when subjects are motivated to represent themselves in a favorable manner (e.g. when someone applies for a job or wishes to enroll some University program). This is the reason for using forced-choice techniques when constructing academic integrity test.

The main goal of this study was to develop and validate a personality-based academic integrity test which could serve as a predictor of academic dishonesty. In the process of doing so, we sought to abide to the principles that have been proven most effective in the area of work integrity research. Considering the nature of integrity tests, the starting point can not be a previously formed theoretical base for the academic integrity construct, but empirical criteria – in this case, establishing a correlation of personality trait markers with counterproductive behavior in the academic environment. The test should also be based on forced-choice items in order to alleviate the effects of faking by subjects. After determining the content of the test, our second goal was to validate this newly developed Academic Integrity Test (AIT) to determine its factor structure, convergent and divergent validity and susceptibility to faking.

Although the rationale for transferring a concept from one field to another is mentioned above, we have to address few subjects. Integrity tests in organizational psychology were developed to address a practical problem (prediction of theft in the workplace), which is not the case here. An integrity
test in educational settings is not primarily intended for the purpose of selection, but as a research tool (although it can be used in selection process). Even though counterproductive behaviors in organizational and educational environments are not identical (which makes our task more challenging), using the same approach in both domains allows us to compare work and academic integrity, and possibly leads us to an insight into the construct of integrity as a general characteristic of an individual.

Methods

Participants and procedure. A total of 350 subjects participated in the first phase of the research, which resulted in the construction of the Academic Integrity Test. Participants were University students, first to fourth year of studies, 58% female, with the mean age of 20.97, SD=2.54. The procedure of developing the AIT is described in detail in the Measures section.

The test was then validated on a second sample, which consisted of 471 subjects. Participant were again students, third to fifth year of studies, 75% female, with the mean age of 22.23 (SD=2.17). The tests (AIT, Big Five Plus Two and a cognitive ability test) were administered during regular classes, anonymously, and on a voluntary basis.

An additional step in test validation included testing the effects of faking on the AIT – two weeks after taking the initial test (straight-take condition) subjects were instructed to respond to the AIT as if applying for a teacher-assistant job (simulated application condition). The Mean shift between two conditions and correlations with personality measures were analyzed. The response rate in the applicant condition was 64%, due to participants’ absence from classes (N=302).

The whole study involved undergraduates from seven institutions of higher education in Serbia. Participation in the survey was voluntary, and all participants signed an informed consent form.

Measures

Counterproductive student behavior questionnaire (CSB). This questionnaire was created for research purposes and it covers a wide array of counterproductive behaviors in educational settings: exam and pre-exam cheating, failing to fulfill required obligations, plagiarism, tardiness, propensity to conflicts, not following and disrupting classes and drug abuse. The questionnaire consists of 24 items combined with a five-point scale created to assess the self-reported frequency of these behaviors (e.g. I talk with my colleagues during classes; I use my cell phone to cheat on exams). Students were instructed to include only instances when circumstances allowed such behaviors. A higher score on the CSB indicates higher frequency of counterproductive behaviors. Cronbach’s Alpha of the CSB was high (.86).

The CSB was used in the initial phase of this study – as a criterion for creating the Academic Integrity Test (see below).

Academic integrity test (AIT). The test was developed during this research in order to measure academic dishonesty based on personality traits. Markers of the Big Five personality dimensions (e.g., curious, conscientious...) were used as the basis for the test. The test consists of marker pairs, where one marker represents academic integrity, and the other one is neutral (naturally, the subjects are not familiar with this information, or the purpose of the test). The participants are asked to choose one marker from each pair that describes them better, without skipping pairs or picking both traits in one pair. The final score is calculated as the sum of all chosen items representing academic integrity in positively oriented pairs (e.g., organized vs. creative) and all chosen neutral items in negatively oriented pairs (e.g., indecisive vs.
irresponsible). The final version of the test consists of 18 pairs, with 18 representing the theoretical maximum score. A higher test score represents a higher level of academic integrity.

The initial phase of test construction required that trait markers be classified in two clusters: markers related to academic integrity and neutral markers. The initial set consisted of 70 markers, 14 for each of the five personality dimensions (Goldberg, 1992). Cluster membership was decided empirically, by correlating each marker with the CSB score. A group of 65 students was instructed to complete the CSB along with the full list of 70 markers, with the instruction to estimate how well each of the markers describes them. Based on their correlation with the CSB, 25 markers were selected as measuring academic integrity, while the rest were marked as neutral (the first group consisted of markers that achieved a statistically significant correlation with CSB).

Before forming pairs of academic integrity and neutral markers, it was necessary to calculate a desirability index for each marker. The reason for this is one of the main principles of forced-choice measures, aimed at minimizing the effects of faking – making the paired items equally desirable to the subjects, while differentiating them based on which construct they are supposed to measure. Desirability of markers was assessed by a group of 34 students instructed to rate how desirable the trait would be for a good student. The data gathered allowed the formation of pairs of markers from two groups with both markers having a similar desirability index (within one standard deviation). A preliminary version of the test consisted of 115 pairs, with no marker appearing more than seven times. After testing during the next phase, the number of pairs was reduced to 18. The criteria for selection of pairs were: a significant correlation with the CSB score, a close to 50% chance of being selected and a significant contribution to higher reliability of the test.

The 18-item version of the AIT demonstrated good psychometric properties on the original sample (Cronbach’s Alpha=.83, KMO=.76, Skewness=-.06, Kurtosis=-.58). The correlation with CSB (r=-.41, p<.01), as well as with the average academic grade (r=.35, p<.01), was medium.

The test is provided in the Appendix, along with scoring instructions.

Personality measures. The Big Five Plus Two Inventory (Smederevac, Mitrović, & Čolović, 2010), developed on a large Serbian sample, comprises seven primary lexical personality dimensions, where each of the dimensions comprises 2–3 facets, 18 in total: Neuroticism (anxiety, depression, negative affectivity), Extraversion (cordiality, positive affectivity, sociability), Conscientiousness (self-discipline, persistence, prudence), Aggressiveness (rage, maladjustment, bad temper), Openness (intellect, novelty seeking), Positive valence (superiority, positive self-image) and Negative valence (manipulativeness, negative self-image). Besides standard Big5 traits measures, this inventory comprises two additional self-evaluation dimensions, Positive and Negative valence. Positive valence implies respect for personal characteristics and awareness of personal values, while Negative valence implies awareness of personal undesirable traits and self-assessment as a person who manipulates others in order to achieve goals. The standard Big5 dimension of Agreeableness consistently appears in reversed direction in Serbian language, and is therefore named Aggressiveness. The inventory consists of 184 items combined with a five-point Likert scale, with high subscale reliabilities (.79-.92).

Cognitive ability. TN–10 (Pogačnik & Bele-Potočnik, 1983) is an ability test that primarily measures fluid intelligence, and to a lesser extent contains perceptive and spatial components. The test consists of 30 tasks organized as series of 14 graphic characters and 5 proposed characters (the subject has to mark the one that continues the series).

Socio-demographic variables. Participants were required to provide data on gender, age, academic department, academic year, average grade.
Results

Psychometric properties of the AIT

The AIT proved to have good psychometric properties when administered to the validation sample. It showed a high level of internal consistency, calculated by tetrachoric correlations (Table 1). The average score in the sample group does not deviate significantly from the theoretical average score (Figure 1). Gender differences were non-significant ($t_{(443)}=1.423$, $p>.05$).

<table>
<thead>
<tr>
<th>M</th>
<th>SD</th>
<th>Cronbach’s Alpha</th>
<th>KMO</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
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<td>10.32</td>
<td>3.70</td>
<td>.83</td>
<td>.74</td>
<td>-.23</td>
<td>-.48</td>
</tr>
</tbody>
</table>

Factor structure

Confirmatory factor analysis (CFA) was performed in order to test the factor structure of the AIT. CFA was conducted in AMOS 18, using each of the AIT items as indicators of a general academic integrity factor (error terms for indicators were allowed to correlate). A one-factor solution was tested, and adequate goodness-of-fit indicators were achieved ($\chi^2=130.22$, $df=92$, $p<.05$, GFI=.97, AGFI=.95, CFI=.98, RMSEA=.03, SRMR=.04). Standardized factor loadings range from .04 to .70, with an average of .34. CFA results indicate that indicators adequately represent the expected one factor solution for AIT.

Convergent and divergent validity

Convergent and divergent validity were determined via correlations with three classes of variables: personality traits (Big Five Plus Two primary traits and facets), abilities (general cognitive ability) and academic performance (average grade). See Table 2 for results.
As expected, Consciousness (primary dimension and facets) proved to be the strongest correlate of the AIT, with the self-discipline facet having the highest correlation. A high level of correlation with Conscientiousness is expected, since Conscientiousness refers to one’s attitude towards responsibilities and the strength of one’s will, which clearly accounts for a large share of variance in academic integrity. This is also confirmed by the fact that 11 out of 18 markers in the AIT are actually markers of Conscientiousness. The second most important correlate of the AIT is Negative valence, primarily because of the manipulativeness facet, which implies intrusiveness, boasting and domination over other people. Aggressiveness also showed a moderate correlation with the AIT, which is also a theoretically and empirically grounded relation (in the Big Five Plus Two inventory Aggressiveness replaced Agreeableness, a more commonly used lexical dimension, and is considered its negative counterpart). The correlation between Neuroticism and the AIT was small, with negative affectivity showing the strongest link to AIT. Contrary to expectations, the AIT also showed small (although significant) correlations with Extraversion and Openness. These correlations may occur as a consequence of ipsative scoring, since neutral markers in the AIT were chosen mostly from Extraversion and Openness.

<table>
<thead>
<tr>
<th>variable</th>
<th>r</th>
<th>variable</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personality Traits</strong></td>
<td></td>
<td><strong>Openness</strong></td>
<td>-.109*</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>-.129**</td>
<td>intellect</td>
<td>-.068</td>
</tr>
<tr>
<td>anxiety</td>
<td>-.090</td>
<td>novelty seeking</td>
<td>-.122**</td>
</tr>
<tr>
<td>depression</td>
<td>-.131**</td>
<td>Positive valence</td>
<td>-.045</td>
</tr>
<tr>
<td>negative affectivity</td>
<td>-.159**</td>
<td>superiority</td>
<td>-.107*</td>
</tr>
<tr>
<td>Extraversion</td>
<td>.113*</td>
<td>positive self-image</td>
<td>.079</td>
</tr>
<tr>
<td>cordiality</td>
<td>.180**</td>
<td>Negative valence</td>
<td>-.351**</td>
</tr>
<tr>
<td>positive affectivity</td>
<td>.153**</td>
<td>manipulativeness</td>
<td>-.316**</td>
</tr>
<tr>
<td>sociability</td>
<td>-.007</td>
<td>negative self-image</td>
<td>-.259**</td>
</tr>
<tr>
<td><strong>Conscientiousness</strong></td>
<td>.456**</td>
<td><strong>Abilities</strong></td>
<td></td>
</tr>
<tr>
<td>self-discipline</td>
<td>.460**</td>
<td>Cognitive ability</td>
<td>-.065</td>
</tr>
<tr>
<td>persistence</td>
<td>.326**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>prudence</td>
<td>.376**</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aggressiveness</strong></td>
<td>-.332**</td>
<td><strong>Performance</strong></td>
<td></td>
</tr>
<tr>
<td>rage</td>
<td>-.333**</td>
<td>Average grade</td>
<td>.071</td>
</tr>
<tr>
<td>maladjustment</td>
<td>-.224**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bad temper</td>
<td>-.274**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: *p<.05. **p<.001.
The correlation between the AIT and cognitive ability test was not significant, which is in compliance with previous research (Ones et al., 1993; Wanek, 1999; Berry et al., 2007). The correlation between the AIT and average grade was not significant, contrary to expectations based on empirical findings that personality-based work integrity tests show consistent correlations with work performance.

Susceptibility to faking

The effects of faking on the AIT were examined primarily by determining the difference in AIT scores between the straight-take and simulated applicant condition. This difference was significant ($t_{(301)} = 8.09, p < .01$), leading to a preliminary conclusion that the AIT is susceptible to faking like virtually all self-report measures. But the size of the mean shift was roughly one third of the standard deviation ($\Delta M = 1.42$), which is, so to say, the established amount of faking related to forced-choice measures (Jackson et al., 2000). Knowing that this increase is three times smaller than with corresponding Likert-type scales, we could say that the AIT provides a certain resistance to faking in line with other forced-choice measures.

The second faking-related question is whether the AIT can maintain relations to (straight-take reported) personality measures in the applicant condition. Although some decrease across correlations with the AIT was observed (.06 on average), the AIT still retained most of the important criterion correlations – all except those with Neuroticism. In specific, the AIT retained significant correlations with Conscientiousness ($r = .39, p < .01$), Aggressiveness ($r = -.27, p < .01$), and Negative valence ($r = -.30, p < .01$), while the correlation with Neuroticism decreased significantly ($r = -.04, p > .05$). The other three personality measures showed insignificant correlations with the AIT: Extraversion ($r = .05, p > .05$), Openness ($r = -.09, p > .05$), Positive valence ($r = -.09, p > .05$). The same was noted for Cognitive ability ($r = -.11, p > .05$) and Average grade ($r = .09, p > .05$).

DISCUSSION

The main idea behind this research was to transfer the work integrity measurement methodology to the field of academic integrity. The research was based on connecting academic integrity with personality traits, which represents a contribution in the study of counterproductive student behavior, considering that academic integrity research has not paid much attention to this aspect (unlike work integrity). Also, academic integrity studies have so far been focused on specific behaviors such as plagiarism and cheating. Similar to personality-based work integrity tests, this research expanded the group of behaviors related to academic integrity measures.

The analyses indicated that the Academic Integrity Test developed within this study correlates as expected with three dimensions previously noted to be the strongest correlates of work integrity measures – Conscientiousness,
Aggressiveness and Neuroticism. These findings were in concordance with the predominant opinion and findings in the field of work integrity (Berry et al., 2007; Ones et al., 1993; Wanek, 1999), and with our expectations based on the content of the AIT. That is, personality descriptors which were included in this test as academic integrity-related markers (on the basis of their correlations with the CSB), originated mostly from these three personality dimensions. While the AIT reached moderate levels of correlation with Conscientiousness and Aggressiveness, the relation with Neuroticism was initially small and turned insignificant in the simulated applicant condition, indicating that the AIT encompasses only a small part of Neuroticism variance.

The AIT also correlates with Negative Valence, a self-evaluation dimension from the Big Five Plus Two inventory, which, among other things, implies a tendency to achieve goals through intrusiveness, intrigue or taking advantage of other people. As the authors of the inventory stated, a high Negative Valence score, particularly if it pertains to the manipulativeness facet, is characteristic of persons with psychopathic tendencies, who describe themselves as dangerous, manipulative and feared by others (Smederevac et al., 2010). The content of the Negative Valence dimension is clearly related to academic integrity and represents a logical addition to the three previously established correlates. The results also indicated that there is a small, but significant correlation between the AIT and Extraversion and Openness. The main reason for this could be ipsative scoring – not awarding a point to one dimension automatically increases the score of another. Previous work integrity studies have not shown a consistent connection with these two traits, probably because of the choice of criteria.

Regardless of the significant correlations of Extroversion and Openness with the AIT, our findings support the claim that the construct of academic integrity is mainly related to Conscientiousness, Aggressiveness and Neuroticism, with the addition of Negative Valence. The role of the remaining dimensions seems to depend on the situation and the choice of criteria. This supports the viewpoint of academic integrity as a complex disposition for a range of behaviors which could be described as moral, honest, prosocial or adjusted, and its content mainly includes aspects of three personality domains. Corresponding results in the fields of work and academic integrity lead to the conclusion that these two constructs have the same, or at least very similar content. This fact suggest the possibility of using the AIT in work environments as a work integrity test. If the test performs well in both situations, then the integrity construct can be considered regardless of the context (work or academic), which would represent a significant contribution to the affirmation of the construct in both practical use and scientific research.

Since the correlation between the AIT and the cognitive ability test was not significant, our study reinforces prior conclusions that measures of integrity and cognitive ability are unrelated (Ones et al., 1993; Wanek, 1999; Berry et al., 2007). This lack of correlation between the AIT and cognitive ability would probably yield an increase in AIT’s incremental validity when using the two measures simultaneously. The AIT failed to reach a significant correlation
with the average academic grade as well. This is somewhat unexpected, since personality-based work integrity tests can, apart from serving their primary function as tools for predicting counterproductive work behavior, successfully predict general work performance. Our findings showed that honest students are not more successful academically than their less honest colleagues. Recent findings (Peruničić & Mirić, 2011) point to the possibility that the wide spread of some misbehaviors, along with students’ perceptions of their desirability, could decrease the relationship between the disposition for academic honesty and academic success. However, in the original sample (the sample on which the AIT was created), the correlation between AIT scores and the average grade was moderate, which implies that there might be a relation between these two variables. The reasons why such a difference occurs between two samples remain unclear and demand further empirical examination.

During the construction of the test, much attention was paid to the test form, developed to reduce susceptibility to faking. This is very important since the object of measurement is a trait connected to willingness to provide socially desirable answers. The items are provided in the forced-choice form, providing a certain degree of protection from faking. Considering that its items do not relate directly to counterproductive behaviors, the AIT represents a good example of the “hidden purpose test”. In our study, the difference in AIT scores between the straight-take and the applicant condition was roughly one third of a standard deviation. This result is in compliance with previous faking studies with personality measures, which established that forced-choice items show a mean shift of one third of SD, while single-stimulus measures show an increase of a full SD (Jackson et al., 2000; Okanović & Okanović, 2009). A comparison with adequate single-stimulus measures was not conducted in our study, which precludes drawing straightforward conclusions on low fakeability of the AIT, but the observed mean shift shows promising results when compared to the results of previous studies. Further, the more important indicator of attenuated susceptibility to faking is the fact that the AIT retained significant correlations with most of the personality measures in the simulated applicant condition (all except Neuroticism). The stability of correlations with Conscientiousness, Aggressiveness and Negative valence contributes to the conclusion that the AIT can maintain construct validity in situations susceptible to self-presentation. It can be claimed that the test has all prerequisites to minimize the effects of faking, but this claim must be further examined.

The practical achievement of this research is the construction of the Academic Integrity Test. The length of the test is suitable for research and practical use – it consists of only 18 items with very simple instructions, so that its completion should last only several minutes.

The primary limitation of this study is the lack of behavioral validation. Our finding that the AIT significantly correlates with CSB on the original sample is promising, but further validation requires establishing relations to behavioral criteria. Although great effort has been invested into creating an instrument less prone to faking, its development is based on establishing a relation with a
questionnaire which is susceptible to self-presentation (CSB). For this reason, further validation studies should be focused on behavioral measures instead of self-reports. It would also be beneficial to add some variations into the criterion variables, because it is possible that the choice of criteria changes the role of “neutral” dimensions, Extraversion and Openness. In this way, it would be possible to ascertain the range of the test’s predictive potential. Despite these limitations, we recommend this test for use in different contexts, in both work and student population, considering favorable indications of both construct and predictive validity.

The second limitation is related to sampling. Our sample consisted of students from five different years of studies and seven different academic institutions, so it is safe to say that it is fairly representative of the student population. On the other hand, we used convenience sampling, which could have affected the results.

CONCLUSION

The main goal of this study was to develop and validate a personality-based academic integrity test which could serve as a predictor of academic dishonesty. A new instrument – the Academic Integrity Test – was developed during the study, based on methodological principles accepted in the field of work integrity. The AIT showed expected correlations with three dimensions previously noted to be consistent correlates of work integrity measures – Conscientiousness, Aggressiveness and Neuroticism, with the addition of Negative Valence. The concordance of results from the fields of work and academic integrity lead to the conclusion that these two constructs have the same, or at least very similar correlates. This fact suggests the possibility of using the AIT as a work integrity test, and if the test should perform well in both environments, then the integrity construct could be considered as an invariant feature regardless of the context (work or academic).

The AIT retains significant correlations with personality measures (except with Neuroticism) even in the simulated applicant condition, leading to the conclusion that the test maintains construct validity in situations susceptible to self-presentation. It can be claimed that the test has all prerequisites to attenuate the effects of faking, but this claim needs to be corroborated by further empirical evidence.

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Appendix

Academic Integrity Test

This is a test that contains pairs of traits. Please select one trait in each pair that describes you better. Sometimes it will be hard to decide, as it will appear that neither trait describes you well, or both traits describe you equally well. Nevertheless, choose one feature in each pair that describes you slightly better. Please do not skip pairs, nor select both traits in one pair.

<table>
<thead>
<tr>
<th></th>
<th>a. organized</th>
<th></th>
<th>a. adventurous</th>
<th></th>
<th>a. hardworking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>b. curious</td>
<td>7</td>
<td>b. organized</td>
<td>13</td>
<td>b. curious</td>
</tr>
<tr>
<td></td>
<td>a. conscientious</td>
<td>8</td>
<td>a. unanalytical</td>
<td>14</td>
<td>a. unanalytical</td>
</tr>
<tr>
<td>2</td>
<td>b. assertive</td>
<td>9</td>
<td>b. disorganized</td>
<td>15</td>
<td>b. irresponsible</td>
</tr>
<tr>
<td>3</td>
<td>b. contented</td>
<td>10</td>
<td>a. conscientious</td>
<td>16</td>
<td>a. angry</td>
</tr>
<tr>
<td></td>
<td>a. contented</td>
<td>11</td>
<td>b. active</td>
<td>17</td>
<td>a. inactive</td>
</tr>
<tr>
<td>4</td>
<td>a. hardworking</td>
<td>12</td>
<td>a. impractical</td>
<td>18</td>
<td>a. impractical</td>
</tr>
<tr>
<td></td>
<td>b. extraved</td>
<td></td>
<td>b. unquisitive</td>
<td></td>
<td>b. calm</td>
</tr>
<tr>
<td>6</td>
<td>b. extraverted</td>
<td></td>
<td>a. impractical</td>
<td></td>
<td>b. unstable</td>
</tr>
</tbody>
</table>

Scoring instructions

Score one point for 1a, 2a, 3b, 4a, 5b, 6a, 7b, 8a, 9a, 10b, 11a, 12a, 13a, 14a, 15b, 16a, 17a, 18a. Sum all the points to get total score.

Note: Serbian version is available upon request.