



Industrial and Commercial Training

Authenticity Matters More than Intelligence and Personality in Predicting Metacognition

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Article information:

To cite this document:

Dan S. Chiaburu Inchul Cho Richard Gardner , (2015), "Authenticity Matters More than Intelligence and Personality in Predicting Metacognition", *Industrial and Commercial Training*, Vol. 47 Iss 7 pp. -

Permanent link to this document:

<http://dx.doi.org/10.1108/ICT-05-2015-0037>

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Authenticity Matters More than Intelligence and Personality in Predicting Metacognition

Abstract

Metacognition – or learning how to learn – is an important competence in business and academic settings. We tested a model connecting (a) general mental ability (GMA) and (b) five-factor model (FFM) personality traits with individuals' metacognition. Based on a sample of 174 respondents, we found that while metacognition is not predicted by general mental ability (GMA), it is positively predicted by two of the five-factor model personality traits, conscientiousness and extraversion. More importantly, we posited that (c) individuals' authenticity – in the form of (low) self-alienation – will enhance metacognition, over-and-above the previously-mentioned predictors. We discuss how, in settings where authenticity can be facilitated, individuals' metacognition may be enhanced, and lead to potential learning and performance gains.

Keywords: authenticity, self-alienation, metacognition, intelligence, Five-Factor Model, personality traits

Metacognition matters, in both academic and business settings. Described as “thinking about your thinking” (Flavell, 1979), or “knowing about knowing,” (Metcalfe & Shimamura, 1994), metacognition consists of strategies individuals use to plan, monitor, and regulate their cognition (Pintrich, 1999). In addition to being consequential in educational settings (Dimmitt & McCormick, 2012; Pintrich, Wolters, & Baxter, 2000), metacognition is a positive predictor of work-related outcomes: job search behaviors (Turban, Stevens, & Lee, 2009), learning (Schmidt & Ford, 2003), and training transfer (Keith & Frese, 2005). Despite advances in understanding the positive consequences of metacognition, its predictors are – comparatively – neglected. Our objective is to redress the balance and examine individual difference predictors of metacognition, including two traditional (general mental ability [GMA], five-factor model (FFM) personality traits) ones, and a novel one, individual authenticity. In doing so, we aim for a better understanding of metacognition preconditions, which has theoretical and practical implications.

Identifying individuals who rely on metacognition can lead to gains in learning (in both workplaces and academic settings), skill transfer, and job or academic performance. Improving such outcomes is important in contemporary environments, characterized by a need to rapidly update one’s knowledge. This can be done less by focusing on factual, conceptual, and procedural learning (the first three levels in Bloom’s taxonomy). Instead, the spotlight is on metacognition (the fourth level; Anderson et al., 2001). Metacognition is also highly prized in the light of evidence revealing that it helps individuals achieve their learning or performance goals even when operating in less supportive contexts (Burke & Hutchins, 2007: 285). We offer specific hypotheses next, where we highlight the role of authenticity as a predictor, over-and-above traditional predictors such as intelligence and FFM personality traits (see Figure 1).

----- Insert Figure 1 about here -----

Hypotheses

Intelligence and FFM Personality Traits as Predictors of Metacognition

General mental ability is an individual's broad capability to engage in abstract thinking, reasoning, planning, problem-solving, and learning from experience (Lubinski, 2004). Self-regulation, including metacognition, is seen as a key process translating one's mental ability into acquiring of more complex academic or work skills (e.g., reading competencies, specialized work abilities; Zimmerman, 1989; Zimmerman & Labuhn, 2012). Based on both prior theory (Veenman, Elshout, & Meijer, 1997) and on empirical studies showing a moderate correlation between intelligence and metacognition (e.g., van der Stel & Veenman, 2008), we expect GMA to be a positive predictor of metacognition (*H1a*).

Further, from a FFM personality traits standpoint, we propose that both conscientiousness and extraversion should positively predict metacognition. Conscientious individuals, who are dependable and self-disciplined, will be more likely to plan and to adequately consider their learning or work strategies; given their focus on effectiveness, they will also direct their attention toward reducing suboptimal strategies (Barrick & Mount, 1991; Judge & Ilies, 2002), possibly by engaging in metacognition. Extroverts, motivated by social attention (Ashton & Lee, 2001; Chiaburu, Stoverink, Li, & Zhang, 2015) and focused on positive affect (Wilt & Revelle, 2009) are likely resilient when dealing with setbacks in learning contexts or on the job (Judge & Ilies, 2002) and thus more likely to engage in metacognition. Prior research has indeed demonstrated positive associations between these two FFM personality traits and metacognitive skills, with effect sizes almost two times larger for the latter (e.g., Turban et al., 2009). Therefore, we also expect two five-factor model personality traits, conscientiousness and extraversion to positively predict metacognition (*H1b*).

Authenticity: A Stronger Predictor of Metacognition?

We posit that authenticity predicts metacognition over-and-above GMA and FFM personality traits. Arguments focused exclusively on intelligence and FFM-based traits do not consider the extent to which individuals have the requisite freedom to direct their attention toward themselves (rather than toward the task) and engage in cognitions and behaviors relatively unencumbered by external constraints. They also ignore the potential “dark-side” of some personality traits (Judge & LePine, 2007). For example, conscientious individuals may be excessively focused on following norms and rules or, more extremely, be unrealistically perfectionistic (John & Srivastava, 1999; Saulsman & Page, 2004). Potential liabilities associated with conscientiousness – such as excessive internalizing of external influences and a quasi-obsessive focus on tasks (Samuel & Widiger, 2008) – can detract from metacognition. Authentic individuals are less prone to such deleterious influences.

We conceptualize authenticity in a tripartite manner as consisting of (a) (low) self-alienation, (b) authentic living, and (c) accepting external influence (Barrett-Lennard, 1998; Wood, Linley, Maltby, Baliouis, & Joseph, 2008). Even though all authenticity components may positively impact metacognition, stronger arguments can be made for the positive influence of low self-alienation. Not knowing oneself, feeling out of touch with one’s self, and seeing one’s self as alien, greatly reduces human agency and individual self-esteem (Goldman & Kernis, 2002; Horney, 1951; Laing, 1960). Conversely, being present – including via self-awareness – is a precondition for optimal cognitive and emotional processing (Horney, 1951; Kahn, 1992) and will allow individuals to master information and to optimize the processing routes by using metacognition (Kerr et al., 2013). We expect authenticity – in the form of low self-alienation - to predict metacognition over-and-above GMA and FFM personality traits (*H2*).

Methods

Participants

Volunteers ($N = 243$) participated in the study and were provided course credit in exchange for participation. Respondents (female = 48.2 %) attended a large Southern university in the United States and were enrolled in courses in the business school. Participants' mean age was 19.61 ($SD = .64$). The group consisted of 67.5% Caucasians and 32.5% other ethnicities. For each of the study measures, respondents were asked to rate the extent to which they agreed with the respective statements on a 7-point Likert-type scale (1 = strongly disagree; 7 = strongly agree). Data were collected at different points in time throughout the semester, thus introducing psychological separation among the study measures, in line with the guidelines provided by Podsakoff, MacKenzie, Lee and Podsakoff (2003).

Measures

Predictors. We measured *general mental ability (GMA)* with the Wonderlic Personnel Test (Wonderlic, 1973), a timed 12-minute cognitive ability assessment based on 50 questions. The test was administered in several proctored sessions at the beginning of the semester.

Respondents' self-reported their *personality traits*, based on the five-factor model of personality, including *conscientiousness* ("I get chores done right away," $\alpha = .86$), *extraversion* ("I am the life of the party," $\alpha = .87$), *agreeableness* ("I sympathize with others' feelings," $\alpha = .89$), *emotional stability* ("I get upset easily" [reversed], $\alpha = .81$), and *openness to experience* ("I have a vivid imagination," $\alpha = .91$) with the scales provided by Donnellan, Oswald, Baird, and Lucas (2006).

We measured respondents' *authenticity* with the three-dimensional scale developed by Wood et al. (2008). The dimensions include *low self-alienation*¹ ("I feel alienated from myself;" $\alpha = .96$), *authentic living* ("I always stand by what I believe in;" $\alpha = .90$), and *accepting external influence* ("I usually do what other people tell me to do;" $\alpha = .88$).

Outcomes. The dependent construct, *metacognition*, was assessed with the metacognitive self-regulation subscale developed by Pintrich, Smith, Garcia, and McKeachie (1991) as part of the Motivated Strategies for Learning Questionnaire (MSLQ). An item reads, "I ask myself questions to make sure I understand the material I have been studying in this class" ($\alpha = .81$).

Results

Means, standard deviations, and intercorrelations among study variables are presented in Table 1. All correlations are in the expected direction. We tested our hypotheses using multiple regression analysis to examine the extent to which the predictors were associated with the dependent construct — metacognition. For *H1*, we regressed the dependent variable onto the two sets of predictors, GMA and the FFM personality traits (see Table 2). Our results indicated that metacognition was not predicted by GMA ($\beta = -.04$, *ns*), which failed to support H1a. Conversely, both conscientiousness ($\beta = .17$, $p < .05$) and extraversion ($\beta = .21$, $p < .05$) were positively associated with metacognition, supporting our H1b. For completeness, we also report the results for agreeableness ($\beta = .03$, *ns*), emotional stability ($\beta = -.05$, *ns*), and openness ($\beta = .10$, *ns*).

We also hypothesized that authenticity will predict metacognition over and above intelligence and the two FFM personality traits, conscientiousness and extroversion. Based on the correlation results, we found that low self-alienation was positively related to metacognition

¹ To have the two main authenticity subdimensions (authentic living and self-alienation) in the same direction, we use the term "low self-alienation," which is aligned with (high) authentic living.

($r = .21$). Also, these findings are corroborated in our regression results after controlling for GMA and the FFM personality traits (low self-alienation $\beta = .22$, $\Delta R^2 = .052$, $p < .05$). Metacognition was not predicted by the other two authenticity dimensions, authentic living ($\beta = -.02$, ns) and accepting external influence ($\beta = -.04$, ns). Based on these results, H2 was supported.

Discussion

Given that metacognition is useful in both work and academic settings, it is necessary to advance our understanding of its predictors. As our results indicate, intelligence and metacognition are not significantly related; on the other hand, metacognition is positively predicted by trait conscientiousness and extraversion. Finding a non-significant relationship between GMA and metacognition is surprising, especially in the light of theoretical conceptualizations that intelligence and metacognition are interrelated (and sometimes close to equivalent, as in the “intelligence model;” Elshout & Veenman, 1992; Sternberg, 1990). Yet our results do not support this, being more aligned with “independency” (g and metacognition are independent; Allon, Gutkin, & Bruning, 1994) and “mixed” models (Stankov, 2000).

Predictions related to FFM personality traits were supported, suggesting positive relationships between both conscientiousness and extraversion with metacognition. Interestingly, our results are consistent with the ones obtained by Turban and co-authors (2009), even though the relative effect sizes of the two personality traits in this study are somewhat different. Specifically, in their study, conducted in a job search context, extraversion was a better predictor of metacognition than conscientiousness with the effect size being almost two times larger for the former (.41 vs. .21), which is not consistent with our finding that metacognition was positively predicted with about the same strength by both conscientiousness (.16) and

extraversion (.21). The difference in effect sizes could be due to the study context – job search – where extraverted individuals have an advantage.

More important than the prediction by GMA and FFM personality traits is the incremental contribution of authenticity – in the form of low self-alienation - in facilitating individuals' metacognition. In domains such as humanistic psychology, authenticity has long been presented as crucial for individuals' well-being and for a productive life (Fromm, 1955; Horney, 1951; Rogers, 1965). Indeed, as Wood and colleagues' (2008) study revealed, authenticity was positively related to life satisfaction, positive affect, self-esteem, self-acceptance, and environmental mastery. In work contexts, as van den Bosch and Taris (2014) have documented, lack of authenticity, in the form of self-alienation, has a positive impact on individuals' stress and negative affect, and has a detrimental effect on work engagement, job satisfaction, and task performance.

Therefore, we attempt to broaden our understanding of authenticity and its relationship with another important outcome construct, metacognition, important in both business and academic settings. When authenticity is absent or neglected, individuals are out of touch with their 'real selves' or unsure of their self-other or self-environment boundaries. Self-related tentativeness results in unclear cognitions and hesitant actions, impeding individuals' metacognition. Based on our findings, lack of authenticity can originate in the person (given the 'trait' perspective used to conceptualize it; Wood et al., 2008). Yet role-based authenticity can also be at play (with some individuals being more authentic in some social roles; Sheldon, Ryan, Rawsthorne, & Ilardi, 1997), together with situations where authenticity can be contextually-stimulated (via error-making and reflection [Keith & Frese, 2005], or through supportive leadership [Banai & Reisel, 2007]).

Study Limitations and Future Research

This study has several limitations. First, the data were, with the exception of the intelligence measure, self-reported. Despite the fact that we obtained this information from only one source (i.e., the study respondents), we used the best practices outlined by Podsakoff and colleagues (2003) and separated our measures in time, to avoid consistency motifs and demand characteristics. While typical remedies for self-report include collecting data from another source, the constructs used in the current study are less amenable to other-reports, given observers less-than-ideal familiarity with the focal individuals' personality traits, authenticity, and metacognition. Further, the generalizability of our inferences needs to be strengthened in the future. While our findings are likely to generalize to other academic settings, it remains to be seen if they can also be extended to working populations. On the positive side, some of our respondents were in part-time jobs and even had basic managerial experience. However, extensions are necessary with employees of all ages, who work full-time.

Second, while we relied on existing measures to assess our constructs, other perspectives are possible. Authenticity, for example, was assessed in this study through the self-alienation scale proposed by Wood and co-authors (2008). Yet, authenticity as low alienation can also be measured based on the five dimensions proposed by Seeman (1959; 1975), including meaninglessness, powerlessness, self-estrangement, social isolation, and normlessness (see discussion in Chiaburu, Thundiyil, & Wang, 2014). Additional measures to consider may focus either on students in particular (Jessor & Jessor, 1977), extend the study to work settings and assess authenticity / alienation in such contexts (Hirschfeld, Feild, & Bedeian, 2000) or focus on specific forms of alienation (see for example the measure developed by Vallas [1988] to capture Marxist alienation).

Third, further complications arise when one considers the possibility that alienation, as a form of “false consciousness,” is not always transparent to those who may fall prey to it. As Marcuse (1964) noted, “the concept of alienation seems to become questionable when the individuals identify themselves with the existence which is imposed upon them” (p. 11). Future researchers may therefore consider using alternative measures of alienation, where respondents are made aware of possible impositions on their existing selves, or are provided cues to reflect on their difficulties to extricate themselves from their academic or work persona (Costas & Fleming, 2009; Schmid, 2005).

Fourth, authenticity was conceptualized and measured here as an individual difference. It is, however, known that a complementary – primarily structural – perspective exists. Social psychologists and sociologists do indeed offer a structural explanation, where alienation is seen as dependent on existing social or organizational conditions (Ashforth, 1989; Fromm, 1955). If high authenticity or low alienation are to be ‘managed’ from the outside, via structural interventions, it will become necessary to establish the relative importance of structural and individual factors. Finally, our arguments were crafted for a specific form of self-regulation – metacognition. It would be nevertheless interesting to take a broader self-regulation perspective. Specifically, future work can examine other regulatory mechanisms as outcomes, including individuals’ attention, planning, learning strategies, motivation, effort, and persistence (Ford, Smith, Weissbein, Gully, & Salas, 1998; Kim, Oh, Chiaburu, & Brown, 2012; Sitzmann & Ely, 2011).

References

- Allon, M., Gutkin, T. B., & Bruning, R. (1994). The relationship between metacognition and intelligence in normal adolescents: Some tentative but surprising findings. *Psychology in the Schools, 31*, 93-97.
- Anderson, L. W., Krathwohl, D. R., Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., Raths, J., & Wittrock, M. C. (2001). *A taxonomy for learning, teaching, and assessing*. New York: Longman.
- Ashforth, B. E. (1989). The experience of powerlessness in organizations. *Organizational Behavior and Human Decision Processes, 43*, 207-242.
- Ashton, M. C., & Lee, K. (2001). A theoretical basis for the major dimensions of personality. *European Journal of Personality, 15*, 327-353.
- Banai, M., & Reisel, W. D. (2007). The influence of supportive leadership and job characteristics on work alienation: A six-country investigation. *Journal of World Business, 42*, 463-476.
- Barrett-Lennard, G. T. (1998). *Carl Rogers' helping system: Journey and substance*. London: Sage.
- Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44*, 1-26.
- Burke, L. A., & Hutchins, H. M. (2007). Training transfer: An integrative literature review. *Human Resource Development Review, 6*, 263-296.
- Chiaburu, D. S., Stoverink, A. C., Li, N., & Zhang, X.-A. (2015). Extraverts engage in more interpersonal citizenship when motivated to impression manage: Getting along to get ahead? *Journal of Management*. In press.

- Chiaburu, D. S., Thundiyil, T., & Wang, J. (2014). Alienation and its correlates: A meta-analysis. *European Management Journal*, *32*, 24-36.
- Costas, J., & Fleming, P. (2009). Beyond dis-identification: A discursive approach to self-alienation in contemporary organizations. *Human Relations*, *62*, 353-378.
- Dimmitt, C., & McCormick, C. B. (2012). Metacognition in education. In K. R. Harris, S. Graham, T. Urdan, C. B. McCormick, G. M. Sinatra & J. Sweller (Eds.), *APA educational psychology handbook*, vol. 1: Theories, constructs, and critical issues, 157-187. Washington, DC, US: American Psychological Association.
- Donnellan, M. B., Oswald, F. L., Baird, B. M., & Lucas, R. E. (2006). The mini-IPIP scales: Tiny-yet-effective measures of the Big Five factors of personality. *Psychological Assessment*, *18*, 192-203.
- Elshout, J. J., & Veenman, M. V. J. (1992). Relation between intellectual ability and working method as predictors of learning. *Journal of Educational Research*, *85*, 134-143.
- Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive-development inquiry. *American Psychologist*, *34*, 906-911.
- Ford, J. K., Smith, E. M., Weissbein, D. A., Gully, S. M., & Salas, E. (1998). Relationships of goal orientation, metacognitive activity, and practice strategies with learning outcomes and transfer. *Journal of Applied Psychology*, *83*, 218-233.
- Fromm, E. (1955). *The sane society*, New York: Rinehart.
- Goldman, B. M., & Kernis, M. H. (2002). The role of authenticity in healthy psychological functioning and subjective well-being. *Annals of the American Psychotherapy Association*, *5*, 18-20.

- Hirschfeld, R. R., Feild, H. S., & Bedeian, A. G. (2000). Work alienation as an individual-difference construct for predicting workplace adjustment: A test in two samples. *Journal of Applied Social Psychology, 30*, 1880-1902.
- Horney, K. (1951). *Neurosis and human growth*. London: Routledge.
- Jessor, R., & Jessor, S. (1977). *Problem behavior and psychosocial development*. New York: Academic Press.
- John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research*, vol. 2: 102-138. New York: Guilford Press.
- Judge, T. A., & Ilies, R. (2002). Relationship of personality to performance motivation: A meta-analytic review. *Journal of Applied Psychology, 87*, 797-807.
- Judge, T. A., & LePine, J. A. (2007). The bright and dark sides of personality: Implications for personnel selection and team configuration. In J. Langan-Fox, C. Cooper, & R. Klimoski (Eds.), *Research companion to the dysfunctional workplace: Management challenges and symptoms*: 332-355. Cheltenham, UK: Edward Elgar Publishing.
- Kahn, W. A. (1992). To be fully there: Psychological presence at work. *Human Relations, 45*, 321-349.
- Keith, N., & Frese, M. (2005). Self-regulation in error management training: Emotion control and metacognition as mediators of performance effects. *Journal of Applied Psychology, 90*, 677-691.
- Kerr, C. E., Sacchet, M. D., Lazar, S. W., Moore, C. I., & Jones, S. R. (2013). Mindfulness starts with the body: Somatosensory attention and top-down modulation of cortical alpha rhythms in mindfulness meditation. *Frontiers in Human Neuroscience, 7*, 1-15.

- Kim, K., Oh, I.-S., Chiaburu, D. S., & Brown, K. G. (2012). Does positive perception of oneself boost learning motivation and performance? *International Journal of Selection and Assessment, 20*, 257-271.
- Laing, R. D. (1960). *The divided self: An existential study in sanity and madness*. Harmondsworth: Penguin.
- Lubinski, D. (2004). Introduction to the special section on cognitive abilities: 100 years after Spearman's (1904) "'General Intelligence,' objectively determined and measured". *Journal of Personality and Social Psychology, 86*, 96-111.
- Marcuse, H. (1964). *One dimensional man: Studies in the ideology of advanced industrial society*. Boston: Beacon Press.
- Metcalfe, J. F., & Shimamura, P. (1994). *Metacognition: Knowing about knowing*. Cambridge, MA: MIT Press.
- Pintrich, P. R. (1999). The role of motivation in promoting and sustaining self-regulated learning. *International journal of educational research, 31*, 459-470.
- Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1991). *The Motivated Strategies for Learning Questionnaire (MSLQ)*. Ann Arbor, MI: The University of Michigan.
- Pintrich, P. R., Wolters, C. A., & Baxter, G. P. (2000). Assessing metacognition and self-regulated learning. In G. Schraw & J. C. Impara (Eds.). *Issues in the measurement of metacognition*, 43-97. Lincoln, NE: Buros Institute of Mental Measurements.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies *Journal of Applied Psychology, 88*, 879-903.

- Rogers, C. R. (1965). The concept of the fully functioning person. *Pastoral Psychology, 16*, 21-33.
- Samuel, D. B., & Widiger, T. A. (2008). A meta-analytic review of the relationships between the five-factor model and DSM-IV-TR personality disorders: A facet level analysis. *Clinical Psychology Review, 28*, 1326-1342.
- Saulsman, L. M., & Page, A. C. (2004). The five-factor model and personality disorder empirical literature: A meta-analytic review. *Clinical Psychology Review, 23*, 1055-1085.
- Schmid, P. F. (2005). Authenticity and alienation: Towards an understanding of the person beyond the categories of order and disorder. In S. Joseph & R. Worsley (Eds.), *Person-centered psychopathology: A positive psychology of mental health*, 75-90. Ross-on-Wye (UK): PCCS.
- Schmidt, A. M., & Ford, J. K. (2003). Learning within a learner control training environment: The interactive effects of goal orientation and metacognitive instruction on learning outcomes. *Personnel Psychology, 56*, 405-429.
- Seeman, M. (1959). On the meaning of alienation. *American Sociological Review, 24*, 783-791.
- Seeman, M. (1975). Alienation studies. *Annual Review of Sociology, 1*, 91-123.
- Sheldon, K. M., Ryan, R. M., Rawsthorne, L. J., & Ilardi, B. (1997). Trait self and true self: Cross-role variation in the Big-Five personality traits and its relations with psychological authenticity and subjective well-being. *Journal of Personality and Social Psychology, 73*, 1380-1393.
- Sitzmann, T., & Ely, K. (2011). A meta-analysis of self-regulated learning in work-related training and educational attainment: What we know and where we need to go. *Psychological Bulletin, 137*, 421-442.

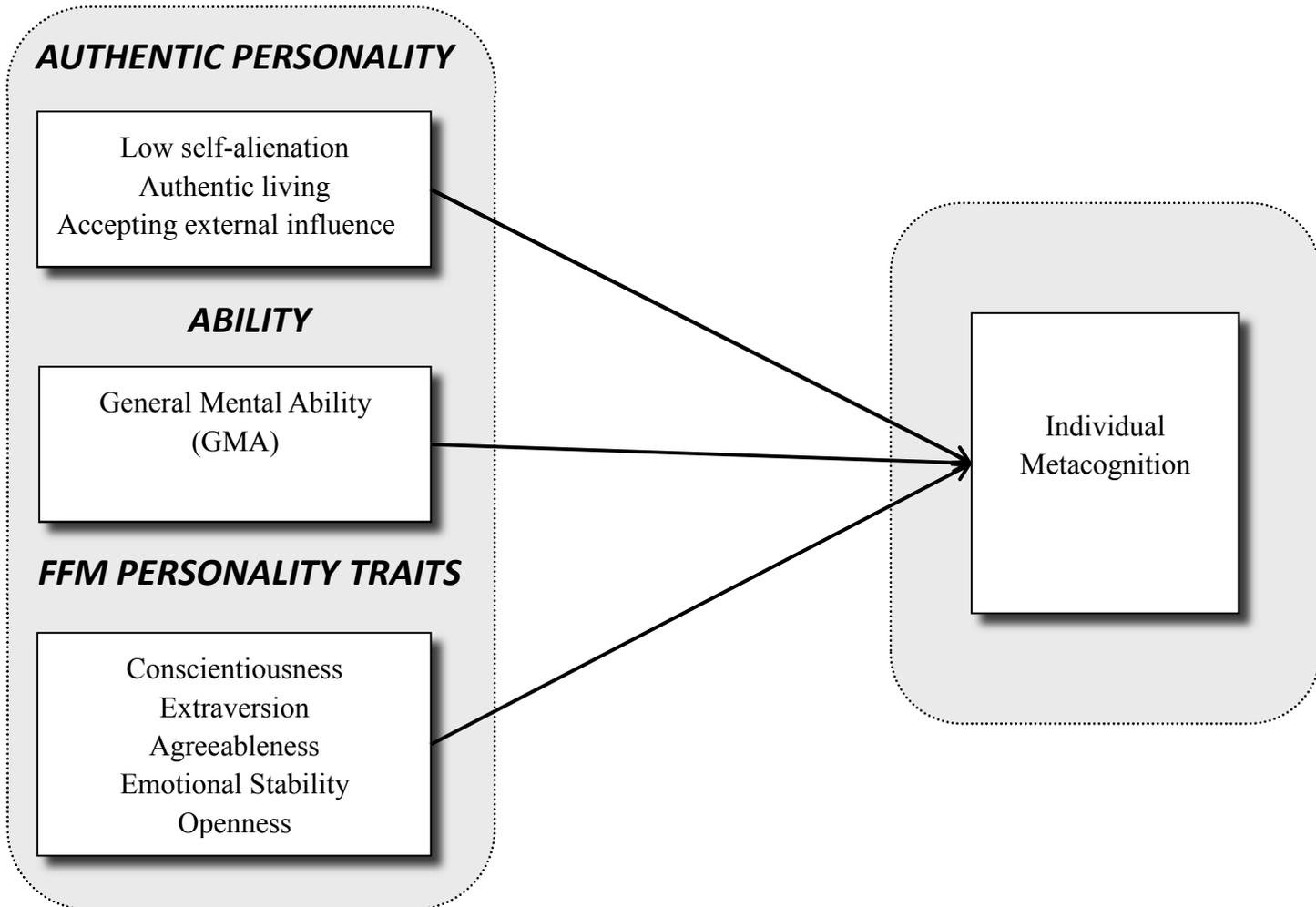
- Stankov, L. (2000). Complexity, metacognition, and fluid intelligence. *Intelligence*, 28, 121-143.
- Sternberg, R. J. (1990). *Metaphors of the mind: Conceptions of the nature of intelligence*. Cambridge: Cambridge University Press.
- Turban, D. B., Stevens, C. K., & Lee, F. K. (2009). Effects of conscientiousness and extraversion on new labor market entrants' job search: The mediating role of metacognitive activities and positive emotions. *Personnel Psychology*, 62, 553-573.
- Vallas, S. P. (1988). New technology, job content, and worker alienation: A test of two rival perspectives *Work and Occupations*, 15, 148-178.
- van den Bosch, R., & Taris, T. (2014). Authenticity at work: Development and validation of an individual authenticity measure at work. *Journal of Happiness Studies*, 15, 1-18.
- van der Stel, M., & Veenman, M. V. J. (2008). Relation between intellectual ability and metacognitive skillfulness as predictors of learning performance of young students performing tasks in different domains. *Learning and Individual Differences*, 18, 128-134.
- Veenman, M. V. J., Elshout, J. J., & Meijer, J. 1997. The generality vs. domain-specificity of metacognitive skills in novice learning across domains. *Learning and Instruction*, 7, 187-209.
- Wilt, J., & Revelle, W. (2009). Extraversion. In Leary, M. R., & Hoyle, R. H. (Eds.). *Handbook of Individual Differences in Social Behavior*, 27-45. New York: The Guilford Press.
- Wonderlic, E. F. (1973). *Wonderlic Personnel Test: Manual*. Los Angeles: Western Psychological Services.
- Wood, A. M., Linley, P. A., Maltby, J., Baliouis, M. & Joseph, S. (2008). The authentic personality: A theoretical and empirical conceptualization and the development of authenticity scale. *Journal of Counseling Psychology*, 55, 385-399.

Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, 81, 329-339.

Zimmerman, B. J., & Labuhn, A. S. (2012). Self-regulation of learning: Process approaches to personal development. In K. R. Harris, S. Graham, T. Urdan, C. B. McCormick, G. M. Sinatra & J. Sweller (Eds.), *APA educational psychology handbook*, vol. 1: Theories, constructs, and critical issues, 399-425. Washington, DC, US: American Psychological Association.

FIGURE 1

Conceptual Model



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Table 1
Descriptive Statistics and Intercorrelations Among Study Variables

Variable	M	SD	1	2	3	4	5	6	7	8	9	10
1. GMA	25.85	4.70										
2. Conscientiousness	4.87	1.28	-.06	(.86)								
3. Extraversion	4.58	1.27	.09	.00	(.87)							
4. Agreeableness	5.50	1.08	.12	.09	.38*	(.89)						
5. Emotional stability	4.84	1.14	.06	.23**	.14*	.14*	(.81)					
6. Openness to experience	5.02	1.19	.07	.05	.25**	.25**	.26**	(.91)				
7. Low self-alienation	5.39	1.40	-.06	.12	.03	.09	.32**	.13*	(.96)			
8. Authentic living	5.97	0.81	.09	.10	-.04	.16*	.19*	.16*	.39**	(.90)		
9. Accepting external influence	3.43	1.30	-.09	-.11	-.08	.06	-.26**	-.07	-.46**	-.39**	(.88)	
10. Metacognition	5.14	1.04	-.01	.17**	.25	.12	.08	.20**	.21*	.10	-.16*	(.81)

Note. N= 182-243, * $p < .05$, ** $p < .01$, Coefficients alpha are presented on the diagonal in parentheses.

Table 2
Regression Results for Metacognition

Variable	Step 1	Step 2
GMA	-0.04	-0.03
Conscientiousness	0.17*	0.16*
Extraversion	0.21*	0.21*
Agreeableness	0.03	0.03
Emotional stability	-0.05	-0.12
Openness to experience	0.10	0.09
Low self-alienation		0.22*
Authentic living		-0.02
Accepting external influence		-0.04
R^2	.098	.150
Model F	3.16**	3.34**
ΔR^2		.052
ΔF		0.18

Note. * $p < .05$, ** $p < .01$; Standardized beta weights are reported.