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Academic and practical intelligence: A case study of the Yup'ik in Alaska

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Abstract

We assessed the importance of academic and practical intelligence in rural and relatively urban Yup'ik Alaskan communities with respect to Yup'ik-valued traits rated by adults or peers in the adolescents' communities. A total of 261 adolescents participated in the study; of these adolescents, 145 were females and 116 were males, and they were from seven different communities, six rural ($n=136$) and one relatively urban ($n=125$). We measured academic intelligence with conventional measures of fluid and crystallized intelligence. We measured practical intelligence with a test of everyday-life knowledge as acquired in Native Alaskan Yup'ik communities. Finally, we collected ratings from the adolescents' peers and adults on the traits that are valued by the Yup'ik people; thus, we evaluated the reputation for the Yup'ik-valued competences. The objective of the study was to estimate the relative contributions of conventional knowledge and everyday-life knowledge in predicting the ratings on Yup'ik-valued traits. The results indicated that everyday-life knowledge predicts Yup'ik-valued traits in the presented sample and that the predictive power of this knowledge is higher in adolescents (especially boys) from rural communities than from the semiurban community. The obtained result pattern further strengthens our arguments for the multidimensionality of human abilities and the importance of practical intelligence in nonacademic settings.

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1. Academic and practical intelligence: a brief review of the literature

Although psychologists and laypeople often think of intelligence as a unitary entity, various aspects of intelligence (e.g., intelligence demonstrated in a classroom and intelligence demonstrated in everyday life) may be somewhat distinct. One of the earliest psychologists to make this point was an experimental psychologist, [Thorndike \(1924\)](#), who argued that social intelligence is distinct from the kind of intelligence measured by conventional intelligence tests. Many others subsequently have made this claim as well about social and practical intelligences (see reviews in [Kihlstrom & Cantor, 2000](#); [Sternberg et al., 2000](#); [Wagner, 2000](#)). A related claim was made by a well-known psychometrician, [Guilford \(1967\)](#), who separated behavioral content from more typical kinds of test-like content in his theory of the structure of intellect. More recently, [Gardner \(1983, 1999\)](#) has argued that interpersonal and intrapersonal intelligences are distinct from the more academic ones (e.g., linguistic and logical–mathematical). Similarly, [Mayer, Caruso, and Salovey \(1999\)](#), and [Mayer, Salovey, and Caruso \(2000\)](#), and [Salovey and Mayer \(1990\)](#) further stressed the multidimensionality of intelligence, pointing out the separateness of emotional intelligence (see also [Goleman, 1995](#)).

Speaking generally, [Neisser \(1976\)](#) stated that the conventional wisdom accurately reflects two different kinds of intelligence, academic and practical. Implicit theories of intelligence, in the United States ([Sternberg, 1985b](#); [Sternberg, Conway, Ketron, & Bernstein, 1981](#)) and elsewhere ([Grigorenko et al., 2001](#); [Sternberg & Kaufman, 1998](#); [Yang & Sternberg, 1997](#)), also suggest some separation of academic and practical aspects of intelligence. Although specifics of definitions of academic and practical intelligence vary between studies and cultures, the thrust of these notions remains the same: the concept of academic (analytical) intelligence is used to signify the person's ability to solve problems in academic (classroom-like) settings, whereas the concept of practical intelligence is used to signify the person's ability to solve problems in everyday settings (practical life problems). For children, aspects of classroom-like settings may invoke practical intelligence. For example, knowing the information for a test invokes largely academic intelligence, but knowing how to study for the test invokes a great deal of practical intelligence.

The psychological theory underlying the present research makes a similar claim, namely, for a distinction between analytical intelligence (or what Neisser refers to as “academic intelligence”) and practical intelligence ([Sternberg, 1985a, 1988, 1997, 1999](#)). According to Sternberg's triarchic theory of successful intelligence, the basic information-processing components underlying abstract analytical and applied practical intelligence are the same (e.g., defining problems, formulating strategies, inferring relations, etc.). But differences in tasks and situations requiring the two kinds of intelligence, and hence in the concrete contexts in which they are used, can render the correlations between scores on tests of the two kinds of intelligence positive, trivial, or, in principle, negative (see [Sternberg et al., 2000](#); [Sternberg, Grigorenko, & Bundy, 2001](#)). From the point of view of individual differences, people who well apply a set of processes in one context may not be those who well apply them in another context.

The issue in this article is not over whether analytical (academic) intelligence matters at all. We believe there is solid evidence that the kind of analytical intelligence measured by conventional kinds of intelligence tests predicts performance, at least to some degree, in a variety of situations (see [Barrett & Depinet, 1991](#); [Carroll, 1993](#); [Gottfredson, 1997](#); [Herrnstein & Murray, 1994](#); [Hunter & Hunter, 1984](#); [Jensen, 1998](#); [Neisser et al., 1996](#); [Schmidt & Hunter, 1981](#); [Sternberg, Grigorenko et al., 2001](#); [Wigdor & Garner, 1982](#); see also essays in [Sternberg, 2000](#)). Hence, we would not want to test for everyday-life intelligence (i.e., practical intelligence) *rather than* for conventional intelligence (i.e., academic

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