

Recent Research in the Field of Giftedness:

The Field in 30 Minutes or Less

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Abstract

The task of translating research findings to practitioners with the goal of seeing them implemented and receiving feedback from the practitioners on the real-life validity of these findings is both critical and daunting. The science-practice disconnect is getting more acute in this era of rapidly accumulating research information and pressure to make evidence-based policy decisions. The educational sciences offer little guidance as to how these bi-directional translations should occur. Yet in the absence of such translations, misconceptions arise, both in the minds of researchers and practitioners. In this opinion piece, a number of myths, which have arisen due to such a lack of systematic connection between research and practice, are discussed. The piece closes with a call for a discussion on how this translation/connection can be implemented effectively so that myths and misunderstandings may be dissolved and an accurate representation of the field's latest findings can be the subject of real and meaningful dialogue between researchers, practitioners and lay-people.

Academicians are often asked to talk to educators to update them on the most “recent research” in... whatever (learning disabilities, cooperative learning, teaching mathematics, arts and education—you name it!). In this particular case, I have been asked to and would like to comment on the recent research in giftedness. I really like it when such requests come my way, for a number of reasons. First, I like having a reason—having been assigned a mission, if you will— to take a global look at the field, to go systematically through its best journals while putting aside some time to think about the field’s new developments. Second, I appreciate the chance to exert my professional (albeit subjective) judgment on what in the field is important for the future and what is transient and not ultimately useful. Third, I really like talking with educators. What, from the “ivory tower” of academic research, matters in the field? We have seen that it takes practice some time to react—academic innovations take time to digest and penetrate to the front lines of schooling, and any implementation of new ideas is costly. So, discussing with practitioners about what matters and what does not, what they might pay attention to and implement now, what they might follow at a distance, and what they should probably simply ignore, is something both very exciting and very daunting. The craft of translating academic research into practice is a special line of mastery that is not easy for either academicians or for practitioners. And, finally, it gives me a chance to identify what I perceive as understudied aspects of the field or underdeveloped facets of the theories involved, where more research and more thinking is needed.

There is no clear set of guidelines for how to summarize the field of research and interpret it for practitioners. In fact, the observed disconnect between research and practice is so huge that in a number of fields (i.e., medicine), a new “brand” of activity was established specifically to address this—something called ‘translational research’ (also referred to as translative research or translational science). Translational research proposes to directly connect basic (or laboratory) research with practice. It is conceived as a “two-way-street,” by which scientists can provide practitioners with new approaches and tools and practitioners can make observations about the phenomena of interest (e.g., teaching and learning) and share these observations with researchers to stimulate research activities. One particular task for researchers that has been referred to as critical is the laying to rest of myths, held by many practitioners and laypeople, that have arisen due to the lack of proper understanding between research and practice. As an aside, it must be noted, of course, that myth-making can happen on both sides, and that researchers may have formed their own mythologies about real life (in classrooms, in this case). That is why translational research must be bi-directional—to address myths on both sides. But the researchers’ myths and misconceptions are... a point for another piece of writing, not this one, so we’ll return now to the long-standing myths that research has struggled to dislodge from the arena of educational practice regarding the education of the gifted.

Here is how I would like to structure this brief commentary: I would like to give my reader (or listener, were I to summarize these comments in a presentation) no more than 30 minutes. While summarizing the field (in 30 minutes or less), I would like to review some of the major myths existing in the practice of gifted education (i.e., misbeliefs that have arisen as a result of lack of clarity in or the misinterpretation of research) and comment on what recent research on giftedness has contributed to the dismantling of these myths. In preparing this brief commentary, which is also an invitation to discussion, I relied on what is viewed as the leading research journals in the field of giftedness. Specifically, I reviewed all of the issues published between 2007 and currently (July of 2010) of the following journals: *Gifted Child Quarterly*, published by the National (US) Association for Gifted Children, *Journal for the Education of the Gifted*, published by the Association for the Gifted, *Talent Development and Excellence*, published by the International Research Association for Talent Development and Excellence

(IRATDE), *Roeper Review*, published by the Roeper Institute, *High Ability Studies*, published by the European Council for High Ability (ECHA), and *Gifted and Talented International*, published by the World Council for Gifted and Talented Children. The myths and misconceptions that are discussed here were extrapolated from a relevant series of brief publications in *Gifted Child Quarterly* (2009) and from an overview of the most prominent themes in the gifted literature between 1994 and 2003 (Jolly & Kettler, 2008). In presenting them, I set a stepping stone in the space between educational research and practice in the field of giftedness and invite a discussion of the issues so important to further learning in the lab and in the classroom.

Myth 1: There is a single definition of giftedness (or talent): One is either gifted or not

This myth, that was derived initially from Terman's (Terman, 1925) research, has been incredibly difficult to dismount throughout the 80+ years of the existence of the field of studies into giftedness. This myth makes multiple assumptions such as (1) gifts are heritable and present at birth; (2) these gifts define a homogeneous group of "gifted" children; and (3) there is a single "one-size-fits-all" definition for identifying these children. Individually and collectively, these assumptions have been difficult to shake, although volumes and volumes of research evidence testify otherwise (for comprehensive reviews, see Balchin, Hymer, & Matthews, 2009; Neihart, Reis, Robinson, & Moon, 2002; Plucker & Callahan, 2008; Sternberg & Davidson, 2005). Although there is a long list of "sources of diversity" among gifted and talented individuals (and, thus sources of variability in definitions of giftedness and talent), the principle ones are delineated (Reis & Renzulli, 2009) as abilities and attitudes; achievement domains; history of schooling and academic foundation; identity and group identification (culture and religion); effort and motivation; intellectual attitudes and entrepreneurship. The bottom line is that, regardless of the particular constellation in which these sources of diversity of gifts and talents are considered, there is no single definition of giftedness and, thus, giftedness cannot be reduced to high IQ scores, however low (at 5, 3, 1, or .1%) the threshold is established (Borland, 2009). And the last five years of research into gifted education has generated dozens of articles disputing this very old and yet very resilient myth. In the literature, this attempt has been marked by asystematic efforts to develop new assessment instruments designed to diversify identification methods both in the domain of maximum performance across multiple (e.g., Chart, Grigorenko, & Sternberg, 2008; Mandelman, Tan, Kornilov, Sternberg, & Grigorenko, 2010; Tan, et al., 2009) and in specific domains (e.g., Chan, 2010; Lubart, Pacteau, Jacquet, & Caroff, 2010), through rating scales (e.g., Pfeiffer & Petscher, 2008), and performance task portfolios (VanTassel-Baska, Feng, & Evans, 2007).

Yet, regardless of the large-scale efforts from the research community to encourage the utilization of new instruments and new definitions of giftedness, practice adopts these new definitions rather slowly. An overview of the most common practices around the world (Mandelman, Tan, Aljughaiman, & Grigorenko, 2010), indicates that conventional tests of intelligence and academic achievement are still the major vehicles of gifted identification. Thus, although researchers, with a notable exception (Lubinski, Benbow, Webb, & Bleske-Rechek, 2006), keep promoting varying and diverse approaches to identifying gifted and talented children, practitioners tend seek formalized (but not necessarily standardized) approaches that are time-, cost-, and expertise effective. Clearly, the direction of research that pertains to the development of diversifying, theory-based, and yet portable and efficient assessments suitable for purposes of the identification of gifted and talented children, is and will remain one of the main directions of research in the field of gifted education.

Myth 2: Giftedness has a linear trajectory toward success

According to this myth, the identification of gifted and talented individuals opens a linear and straightforward path toward a successful realization of gifts and talents. Previous research in the literature, however, indicates the presence of a wide spectrum of outcomes for children labeled as gifted. These outcomes range from dropping out of school or out of the field of talent, to underachievement, as well as unexpected (i.e., outside the anticipated trajectory of intellectual giftedness or talent) and expected (i.e., within the anticipated trajectory) successful outcomes. Much previous research (e.g., Lubinski & Benbow, 2006) has documented these varying pathways, but evaluations of the immediate and long-term effects of early models of working with gifted and talented that are still in place, such as Stanley's talent search programs (Lee, Matthews, & Olszewski-Kubilius, 2008; Swiatek, 2007), still continue. In addition, researchers are interested in understanding the natural course of giftedness as children mature and encounter stressful and negative life events (J. Peterson, Duncan, & Canady, 2009). Moreover, currently the field is particularly engaged in research that documents the factors that divert or diversify trajectories of gifted and talented children. In particular, there is evidence that a lot changes within the child as a result of entering various forms of gifted education; these changes occur in a number of dimensions, ranging from his/her views of the own abilities profile to developing and adjusting coping strategies and altering peer relationships (Cross & Swiatek, 2009). Thus, the field realized that sometimes (and it is very important, for policy reasons, to figure out when), gifted programs themselves might impact a gifted child by diverting his or her trajectory from super-achievement toward underachievement. Understanding the "side effects" of gifted education is a thread of research that has recently intensified.

Myth 3: Gifts and talents are innate and, therefore, can be detected early in life

Inquiry into the etiology of giftedness is what, arguably, started the field of giftedness. Quite contrary to the misconception that research accepts the innate nature of giftedness, the ongoing debate on the roles of somehow biologically (genetically) defined predispositions for gifts and talents (Thompson & Oehlert, 2009) and deliberate practice (Ericsson, Roring, & Nandagopal, 2007) remains central to the field and far from being resolved, although numerous resolutions of these tensions, incorporating both points of view, have been proposed. What this debate has brought up recently, however, in terms of new research lines in the field, are studies that focus on early and very early identification of gifts and talents, as early as pre-K and K entries. These studies, however, are currently at the stage of instrument development and data accumulation. More substantive longitudinal work is needed to comment on whether such early and very early identifications can result in useful and effective alterations to policies. What we do know is that, even if giftedness is identified early (or even very early) there is a long and hard road between this early identification and the subsequent meaningful realization of this gift.

Myth 4: Gifted education could and should be rather different from general education

The fairness and equality debate around gifted education has been prominent in the field since its inception approximately 100 years ago. This debate is still quite central to the field (Cooper, 2009), although there are examples of various solutions to, it as exemplified by different countries (Mandelman, Tan, Aljughaiman, et al., 2010). Yet, regardless of the particulars of the many possible resolutions of this debate, the recent literature consistently focuses on the junction between general and gifted education. As any variant of gifted education exists in the broader context of general education (whether in a country or in a district), gifted education often echoes the major developments in general education. Thus, a number of tendencies that are currently prominent in the US general education system have impacted US gifted education as well. Most notable, of course, is the impact of No Child Left Behind (NCLB) and the

accountability movement (Scot, Callahan, & Urquhart, 2009). As the prominence of standardized testing has increased throughout the US system, so it has also in the context of gifted education. Standardized achievement tests have been used for the identification purposes for a long time, but, in the context of the accountability research, they have been used even more for the purposes of monitoring progress of both gifted children and gifted programs (T. R. Moon, 2009). Currently, there is a real concern in the field that the accountability reform has generated a powerful tendency to teach to the test, which, in many cases, does not leave room for teaching for deep understanding, which is the core of gifted education (Scot, et al., 2009).

Another accentuated line of recent developments in the field of general education (or, rather, special education aimed at other than gifted students with special educational, SE, needs) has to do with the concept of Response-to-Intervention (RTI)—an approach to the classification and remediation of children with SE needs, where eligibility for SE is established through a multi-tiered process of assessment and educational intervention, captured in the new edition of the Individuals with Disabilities Education Improvement Act (IDEIA). In gifted education this process has been paralleled, in a number of programs, with the concept of front-loading. That is, when high-potential children are pre-identified and provided with opportunities for advanced work early, so that formal identification occurs only after this advanced work is noted (Briggs, Reis, & Sullivan, 2008).

Since both NCBL and IDEIA are the documents currently guiding general and special education in the US, their presence has triggered a line of new research on their impact on gifted education. Studies addressing the junction between general (and special needs) and gifted education will remain prominent (at least in the USA) as the laws approach their reauthorization.

Myth 5: There is an ideal way to teach gifted students

At least as much attention is given to issues of gifted programming as to issues of gifted identification, as both are fraught with complexity and controversy. Yet, in the public mind, there is still hope for the “silver bullet” (Callahan, 2009) gifted education program, or the single curriculum for all gifted children (Kaplan, 2009). In fact, as of now, the literature contains dozens (if not hundreds) of gifted curricula, although often unsupported by any rigorous empirical data. Thus, the field remains marked by the ever-present challenge of identifying and evaluating evidence-based, effective and feasible programs for educating and developing students with gifts and talents. Lately, there is more and more of a push to substitute “arm-chair best thinking” (Callahan & Moon, 2007) with a substantiated process of making informed and research-based decisions about particular programs (Hertberg-Davis, 2009; Hockett, 2009; VanTassel-Baska & Brown, 2007). Yet, the field of gifted education is still rather far from achieving the machinery available to the field of general education while adapting research-based teaching programs. This is because there are substantially fewer rigorous studies, especially independent studies conducted by non-developer groups, of various pedagogical programs. Evidence in support of both particular models of gifted education (i.e., differentiation, acceleration, peer-ability grouping, pull-out, school-wide enrichment models, talent search models) and specific programs—i.e., Integrated Curriculum Model, ICM (VanTassel-Baska & Little, 2003), Multiple Menu Model, MMM (Renzulli, Leppien, & Hays, 2000), Parallel Curriculum Model, PCM (Tomlinson, et al., 2002)—remains rather limited. Although, when asked about its most empirically investigated models, the field will point to ICM, MMM, and PCM, the body of published materials on these programs do not meet the standards of what is referred to as “evidence-based.”

As the field performs evaluations of programs that were intentionally developed for gifted students, it also reflects on programs that were not developed for gifted students but are often

used to serve these students' needs. For example, the Advanced Placement (AP) and the International Baccalaureate (IB) Diploma Program are often used to meet the needs of gifted students, although they have never been purposefully evaluated as methods for teaching gifted students (Gallagher, 2009). Of note is that the distribution of AP and IB programs has, unfortunately, the same "signature" underrepresentation of children from disadvantaged backgrounds, as does the distribution of pretty much any gifted programs. The AP Program reflects this underrepresentation even in schools with a high percentage of minority students, students receiving free and reduced price lunch, and lower levels of education in the community (Burney, 2010). Of note also that gifted students themselves perceive AP and IB as environments that are not ideal for their learning but that are more appropriate and stimulating than regular classes in their schools (Hertberg-Davis & Callahan, 2008). Yet also, while admittedly not benefitting greatly from AP and IB programs, students identified as gifted perceive these programs similarly to those students who are not identified as gifted, i.e., as stressful and demanding (Shaunessy & Suldo, 2010). Their way of coping with this stress, however, is different from that of students not identified as gifted (Shaunessy & Suldo, 2010).

Although it might not be supported by a large body of empirical evidence, the field of gifted education has claimed to have extrapolated a number of general assertions on "what works." These recommendations include such observations as that the programs are more sustainable when delivered by a network of professionals practicing both general and gifted education (Hockett, 2009; VanTassel-Baska, 2009) than by a single professional in a single classroom (Sisk, 2009); that a program to succeed needs to have certain systemic elements (Tomlinson, 2009) to ensure a continuum of services designed to provide opportunities for talent to emerge (Gentry, 2009); that gifted programs should capitalize on the strengths of the general education programs in which they are embedded or with which they are associated, rather than serve as a means to improve the general atmosphere in a district/school (Robinson, 2009); and that commitments from the district and community in which a program unfolds are crucial for the success of any program (Adams, 2009).

In addition, as the field takes stock of its resources, there are ongoing attempts to try to understand what gifted programs do for the educational attainments of gifted children (Gavin, Casa, Adelson, Carroll, & Sheffield, 2009), the psychological machinery underlying their gifts (Duan, Shi, & Zhou, 2010), and their motivation to succeed (Fredricks, Alfeld, & Eccles, 2010). There is also an ongoing inquiry regarding how decisions about program placement are made depending on individual characteristics of the gifted (i.e., gender, Preckel, Goetz, Pekrun, & Kleine, 2008), and how these characteristics can modify placement decisions (Neihart, 2007).

Thus, although research into effective programming for gifted and talented has been going on since the conception of the field, this research continues and will constitute the core of gifted studies. Recent summative realizations in the literature state that when aligned, general principles for general and gifted curricula demonstrate more common than distinct features (Hockett, 2009). Broadly, both fields agree that high-quality curricula, whether delivered in general or gifted education settings, should be "authentic, outcome driven, flexible for individual differences, and challenging" (Hockett, 2009, p. 412). They, of course, also should rely on the latest research and technology. For example, there is a strengthening accent, within existing and developing programs, on distance education, although systematic empirical evaluations of distance learning within gifted education are still very few (Wallace, 2009).

Myth 6: Lives of gifted and talented are easy

A relatively new and rapidly intensifying line of inquiry is associated with the myth that high-ability students do not face problems and challenges (S. M. Moon, 2009) and, correspondingly,

these studies focus on the special social and emotional needs of gifted children (J. S. Peterson, 2009), specifically, on the “costs” of being identified as gifted and talented and/or of participating in gifted programs (Aljughaiman & Tan, 2009).

For example, it has been shown that participation in an acceleration program may result in lowered social status and more negative peer ratings (Hoogeveen, van Hell, & Verhoeven, 2009). It has also been observed that being identified as gifted is associated with perceived friendship of less quality (Schapiro, Schneider, Shore, Margison, & Udvari, 2009). However, these studies are only few. Moreover, there is no robust body of research that rigorously investigates the connection between gifts and talents and mental health (Hoogeveen, et al., 2009); the literature ranges from stating that giftedness is a risk to stating that it is a protective (Mueller, 2009) factor for mental health problems. Similarly, there are relatively few studies that investigate the impact of particular gifted programs on indicators of self-regulated learning; the results of these studies also indicate a complex impact of grouping on various meters of self and other appraisal of gifted children’s levels of ability and achievement (Preckeland & Brüll, 2008). Clearly, given the inconclusiveness of the research pertaining to the connection between identification and services and short- and long-term outcomes of both, more systematic studies of this connection are needed (Martin, Burns, & Schonlau, 2010).

In addition to calling for more research, the literature also calls for developing practical counseling approaches to working with gifted and talented children (Wood, 2010). It has been stated that these approaches should engage not only the children themselves, but also their families (Briggs, et al., 2008; Morawska & Sanders, 2009). This new line of research in gifted education certainly has the potential to develop further.

Myth 7: Other (but aptitude and achievement) facets of giftedness are immeasurable

This myth is characterized by a substantial amount of resistance to any alterations. “Other” facets of giftedness that have been implicit to the field but have been argued to be difficult to measure are (among others) creativity, practicality (entrepreneurship), and leadership. This myth has been challenged multiple times by multiple researchers (Treffinger, 2009) and recent literature contains specific illustrations of approaches to the measurements of these constructs (e.g., Grigorenko, Jarvin, Tan, & Sternberg, 2008; Lubart, et al., 2010). Yet, often conversations with educators include references to these “difficulties.” These references bring up a difference between “real” and “cosmetic” (Friedman-Nimz, 2009) translations of research findings into practice. Sometimes, even if research is convincing about the multiplicity and diversity of giftedness, there is still a practical challenge of finding effective and affordable ways of utilizing these research findings in everyday practice of schools. With regard to this particular myth, the problem might also lie elsewhere. Measurements of other aspects of giftedness might take more time and innovative thinking, might be a bit more expensive and demanding of higher levels of expertise on the side of assessors—or they might be something else, but they are measurable! And the recent research in the field demonstrates it systematically and convincingly.

Here I have briefly outlined the major recent directions of research in the field of giftedness, as I see them. The summative picture is diverse and pulls the field in a number of different directions, two of which, identification and education, remain its cornerstones. Has the field changed compared to what it was five years ago? Yes and no. It certainly overlaps with its “old self,” but it has also made an incremental step forward having resolved some issues. And it has acquired some new tensions. As for the overlap and the field’s baggage of “old” issues, one has to keep in mind that any change, especially a large-scale change of ingrained

misconceptions, takes time. It has been noted that, for a teacher working with gifted students, it takes a substantial amount of pre-service (VanTassel-Baska & Johnsen, 2007) and in-service support to register change in his or her behavior that is aligned with the philosophy of gifted education (VanTassel-Baska, et al., 2008). The deconstruction of myths takes not only a behavioral change, but also the change in conceptions and views. Yet, change does happen, and there are multitudes of examples of gifts and talents being served with minimal available materials in the presence of pedagogical support and expertise (Adams, 2009). With the research pulling away from a simplistic definition of giftedness and abbreviated ways of serving gifts and talents, toward appreciating the richness of variability and diversity of abilities and achievement, and with educators (at least some!) braving the applications of the research finding in their everyday practice, sooner or later these old myths, hopefully, will be laid to rest. As for the new tensions, as they are exemplified here, they are, perhaps, not universal and may pertain to “local” (i.e., country-wide) aspects of dealing with particular tendencies in the education system as a whole (i.e., the impact of NCBL and IDEIA in the USA). Yet, although these are country-specific illustrations, they tap into the general issue of the relationship between general and gifted education.

This summary is, of course, biased and driven by my professional perceptions of what is important in the field of research on giftedness. I attempted here to do what a researcher does—go through the literature and summarize it to the best of my capacity. I have attempted to translate research to practitioners, having accentuated things that appear important to me. I now invite a response from readers—other researchers and practitioners alike—as dialogue between the two, a two way translation, might be the best way forward in the advancement of education for our gifted and talented children.

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