English Language Learners, LD, and Overrepresentation:
A Multiple-Level Analysis

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Abstract

Continuing unresolved problems in the field of special education include the continued use of discrepancy models; the need for better identification models; continued debate over programmatic issues, ranging from inclusion to self-contained models; and the continued overrepresentation of certain ethnic and racial groups in the learning disabilities (LD) category. This article focuses on students with mild learning disorders in general, and LD in particular, providing a perspective on how this problem has been addressed and suggesting a multilevel approach in which local context plays a central role. We suggest that overrepresentation is best conceptualized as an indicator of underlying issues rather than as the proper focal point of remediation efforts.

A recent comprehensive review of the history of learning disabilities (LD) by Hallahan and Mock (2003) has noted continuing problems in the field of special education that remain unresolved. These problems include the continued use of discrepancy models as ineffective means of diagnosis; the need for better identification models; continued debate over programmatic issues, ranging from inclusion to self-contained models; and the continued overrepresentation of certain ethnic and racial groups in the LD category. We frame the context of this article around this last issue, focusing on students with mild learning disorders in general and on students with LD in particular. In this article, we provide a perspective on the ways in which this problem has been addressed. We suggest that a multilevel approach is required, in which various levels of the learning and development ecology are considered, and in which local context plays a central role. Moreover, we suggest that overrepresentation is best conceptualized as an indicator of underlying issues rather than as the proper focal point of remediation efforts.

Documenting and Unpacking Overrepresentation

In 1979, the National Research Council was asked to conduct a study to determine the factors accounting for the disproportionate representation of minority students and male students in special education programs for students with mental retardation and to propose criteria and practices that would address this problem (National Research Council, 1982). This initiative was driven at least in part by the earlier work of Mercer (1973) on the disproportionate identification and placement of African American and Chicano/Latino students in classes for students with mental retardation, the extension of the civil rights movement of the 1960s to people with disabilities, and subsequent litigation that focused on unfair practices in assessment and other aspects of the special education process. One indication of the continuing importance of the issue of overrepresentation is the fact that this same body saw the need to commission another report on the same topic 20 years later. This resulted in the recent review, *Minority Students in Special and Gifted Education* (National Research Council, 2002), confirming that the disproportional representation of certain ethnic and racial groups in special education that has troubled the special education field for more than 3 decades still persists (Artiles, Trent, & Palmer, 2004). Yet during the time between these two major policy reports, much has changed in the educational landscape, including the increasing diversity of the school-age population, the distribution of students within the various special education categories, educational legislation and policies, and various educational initiatives focused on areas such as school reform, accountability, bilingual education, and reading practices and curricula (McLaughlin & Rouse, 1999; Rueda, Artiles, Salazar, & Higareda, 2002).

The report by the Harvard Civil Rights Project (Oswald, Coutinho, & Best, 2000) suggested several actions to address the issue of overrepresentation of minority students in special education programs in urban public schools, including (a) increasing access to health services for poor women and children; (b) expanding early intervention pro-

grams; (c) increasing discretionary programs of research and technical assistance under the Individuals with Disabilities Education Act (IDEA); (d) improving monitoring and enforcement of IDEA; and (e) fully funding IDEA. These suggestions begin to approximate a multiple level approach as suggested by Rogoff (2003).

In general, *overrepresentation* refers to "unequal proportions of culturally diverse students in special education programs" (Artiles & Trent, 2000, p. 514) and is often assessed by calculating a group's representation in general education or special education in reference to the representation of a comparison group—most often White students. There are several indices (e.g., risk indices, composition indices, and odds ratios; see Note) that provide different lenses on the scope of the problem. However, there is controversy about the best indicators, and several procedures and formulas have been proposed and used throughout the history of this problem (see Reschly, 1997, for a discussion of the strength and limitations of each of these formulas). Whichever index is used, the typical disability categories involved in the issue of overrepresentation have included mild mental retardation (MMR), emotional–behavioral disorders (EBD), and specific learning disabilities (SLD). The most common groups involved in overrepresentation generally include African American, Chicano/Latino, American Indian, and a few subgroups of Asian American students (see Artiles & Trent, 2000, and Artiles, Harry, Reschly, & Chinn, 2002, for an overview).

The most comprehensive and recent look at the issue of overrepresentation is the National Research Council (2002) report. This report justifiably acknowledged weaknesses in currently available national datasets (from the Office of Special Education Programs; OSEP; and the Office for Civil Rights; OCR), including a lack of precision and consistency in definitions, inaccuracies in self-report data, state-to-state variations, and other problems. In spite of

these weaknesses, the report noted the "epidemic" (p. 47) increase in the risk of children of all racial and ethnic groups except Asian/Pacific Islanders for the LD category. The risk indices for these groups ranged from 1.03 to 1.6 in 1974 and from 6.02 to 7.45 in 1998. When data are aggregated across 12 disability categories, African American students have a slightly higher odds ratio (1.18), and Hispanic students have a slightly lower odds ratio (0.94) than European Americans.

Over this same period, in the category of LD specifically, the odds ratios for classification as having LD for African American and Hispanic students fluctuated around 1.0, indicating no significant overrepresentation (although a consistent pattern of higher rates was found for American Indian/ Alaskan Natives compared to European Americans). The panel thus concluded that

> The OSEP data provide no evidence that minority children are systematically represented in low-incidence disability categories in numbers that are disproportionate to their representation in the population. While there is some variation in each category, no single race/ethnic group can be singled out as having higher or lower incidence across all categories. (National Research Council, 2002, p. 61)

In spite of this overall "big picture" view, previous work early on suggested the need to unpack the findings from the analyses of large aggregate data sets. Finn (1982), for example, reviewed the available OCR data and found that minority students were overrepresented in certain categories. Specifically, Finn (1982) found overrepresentation effects for the categories of educable mental retardation (EMR) and trainable mental retardation (TMR) as well as in EBD classes based on district size and size of minority enrollment. The instances of highest disproportion were found where bilingual programs were small or nonexistent. More recently, Artiles and Trent (1994) noted that

1. The larger the minority student population is in the school district, the greater the representation of students in special education classes;
2. The bigger the educational program, the larger the disproportion of minority students; and
3. Variability in overrepresentation data has been found as a function of the specific disability condition and the ethnic group under scrutiny. (p. 414)

Oswald, Coutinho, and Best (2000) and Oswald, Coutinho, Singh, and Best (1998) have analyzed district-level data related to the proportion of students from low–socioeconomic status (SES) backgrounds or to the proportion of minority students in the school population. Schools that served low-SES students were those who may be eligible to receive free or reduced-cost lunches as defined by the federal guidelines. High-poverty schools were defined as those where at least half (50%) of the students served are eligible for and do receive free or reduced-cost lunches. Oswald and colleagues have found that African American and Hispanic students were identified as having LD and EBD more often in districts considered low SES, and they were identified as having mental retardation (MR) more often in low-poverty districts. It should be kept in mind that although these relationships are important, they are correlational and not causal.

Finally, in work conducted in California (Artiles, Rueda, Salazar, & Higareda, 2002, 2005), placement patterns were examined in special education programs as well as by disability category. These analyses compared English learner placement, given the new language policy in California, to the restrictiveness of special education services (i.e., more or less segregated), providing a view of placement as language support was reduced. Given that English language learners (ELLs) are expected to transition rapidly to English-only classes over time, place-

ment patterns by grade level were also examined. Briefly, in the 11 urban districts in California with high proportions of ELLs, high minority enrollments, and high poverty levels, the results revealed an overrepresentation of ELLs in special education emerging by Grade 5 and remaining clearly visible until Grade 12. At the district level, the ELL population was overrepresented in the MR and language and speech (LAS) categories, especially at the secondary level. ELLs were 27% more likely than English-proficient students to be placed in special education in elementary grades and almost twice as likely to be placed in secondary grades (Artiles et al., 2002).

Looking at the degree of isolation, ELLs in *straight English immersion* (where there is no primary language support in the classroom) were more isolated in the special day class option than ELLs in *modified English immersion* (where some primary language support is offered in the classroom) or *bilingual* classrooms (where primary language support is part of the daily instructional program). ELLs in straight English immersion classrooms were almost three times more likely to be placed in a resource specialists program than ELL students in bilingual classrooms; 2.2% of ELL students in straight English immersion were sent to special day classes, compared to 1.9% in bilingual classrooms. As with earlier studies, this work suggests that specific patterns and issues can get obscured when data are aggregated above district levels. It also suggests the need to broaden the placement focus on language proficiency as well as on ethnicity, race, and other critical factors. ELL placement is rarely "unpacked"—that is, variations by disability category, grade level, and type of language support are rarely examined—and few studies focus on older (secondary) students.

In sum, overrepresentation continues to be an issue in the field, although specific patterns have changed. Both early and recent studies have suggested that reliance solely on large-scale databases may obscure important patterns at the more local level.

How Should Overrepresentation Be Conceptualized?

As might be expected, the explanations for overrepresentation are numerous, and there is much contention about how to interpret both the patterns and the implications. In many ways, the disagreements regarding the meaning of these data reflect the often contentious discussion about paradigmatic differences in the field of special education (Artiles, 2003; Brantlinger, 1997). In discussing the overrepresentation issue, the National Research Council (2002) report indicated,

> The interactions of minority and nonminority achievement levels with different levels of poverty and the composition of student enrollments are likely to be complex. It is possible, however, that lower achievement by Black or Hispanic students in a school context in which most of the White and/or Asian students are achieving at a higher level creates the circumstances that lead to greater disproportionate enrollment of the lower-achieving Black or Hispanic students in special education. If there are smaller achievement differences between groups of students in districts with both high concentrations of minority students and high poverty, less disproportion may be observed as a consequence. (p. 77)

Thus, the report focused on two explanations: the *systematic bias hypothesis* (i.e., bias at some level of the system leads to disproportionate identification and placement rates for some groups) or the *achievement difference hypothesis* (i.e., those students who demonstrate greater need are in fact those who get placed). There is another possibility, which is considered here: the misalignment or imbalance of the multiple levels of the teaching/learning system. A multilevel approach will be discussed a little later that incorporates different levels or intervention targets and sees all elements or levels as needing to be balanced and aligned according to the features and demands of the local context. Before discussing this possibility in more detail, we provide a brief discussion of how predominant theoretical frameworks have shaped the thinking and practices related to the issues focused on here.

A Brief Look at Educational Frameworks and Interventions

Over the last 50 years, a broad variety of theoretically driven interventions and educational programs have been developed in special education, and the relative merits of each have been strongly debated (Andrews et al., 2000). Although the specific number and labels of the various theoretical approaches on which these programs are based can be debated, it is possible to recognize distinct approaches that have helped shape the field over the last 5 decades. These frameworks have guided special education practice over the last half century, and are briefly outlined in Table 1. Although extended discussion of the various approaches is beyond the scope of the present article, it is safe to say that they do represent different and recognizable emphases in addressing special education intervention issues.

Much of the intervention work in special education has understandably focused on learning and instruction. There are recognizable programs, classroom interventions, and instructional practices that are traceable to the frameworks represented in Table 1. Although it would be possible to provide representative examples of approaches and practices, these will not be presented here, because they will be familiar to most readers and because to do so would risk losing the primary focus of this article. Specifically, there are some notable points about these frameworks. First, they have led to powerful interventions that have all been successful to varying degrees in

TABLE 1
Educational Intervention and Remediation Perspectives

Approach	Focus	Examples
Behavioral	Focus on external behavior; either change behavior or change environment	Programmed instruction, engineered classroom, applied behavior analysis interventions
Cognitive	Individual learning strategies and processes	Cognitive, mnemonic, and metacognitive strategy training
Social cognitive	Learning-related beliefs and values that affect active choice, persistence, mental effort; vicarious learning, and modeling	Motivation-related interventions (attributions, self-efficacy, etc); modeling
Social constructivist	The social and cultural nature of teaching and learning; the role of cultural tools and mediation	Scaffolding, peer instruction, collaborative learning; funds of knowledge, connection to real-world activities; cultural accommodation (social organization of classroom, discourse features, content and materials), multicultural education
Organizational	Bureaucratic structures, practices, and policies	School reform and restructuring
Critical theory; Sociopolitical	Intergroup power relations, larger social and political issues	

different contexts. Second, the predominance of work in special education has been guided by the first three frameworks (behavioral, cognitive, and social cognitive). Third, much of the work in the field relies most heavily on a single framework. Finally, the three most commonly used frameworks tend to center on individual learner variables.

To illustrate these points, we draw on examples from the domain of reading because of its prominence in the research literature due to federal priorities and other policy considerations. Much of the current research and the resulting interventions are driven by a cognitive framework, which seeks to understand the component cognitive processes that result in successful reading both for monolingual speakers (e.g., Lindsey, Manis, & Bailey, 2003; Schatschneider, Carlson, Francis, Foorman, & Fletcher, 2002; Semrud-Clikeman, Guy, Guy, Griffin, & Hynd, 2000; Swanson, Saez, Gerber, & Leafstedt, 2004;) and for ELLs (Cisero & Royer, 1995; Durgunoglu, Nagy, & Hancin-Bhatt, 1993; Muter & Diethelm, 2001).

This same emphasis is evident in other work as well. Synthesizing research on effective approaches, Swanson, Harris, and Graham (2003) reviewed a multitude of interventions for successful instruction of students with LD. These included effective remediation of word identification and decoding difficulties, teaching text structure to improve reading comprehension, enhancing the mathematical problem solving of students with mathematical disabilities, process writing and interventions for writing disabilities, and science and social studies issues. Similarly, Gersten and Baker (2000) synthesized the results of 24 studies (15 intervention studies and 9 descriptive studies) and identified a set of instructional guidelines for teaching ELLs. These guidelines included (a) building and using vocabulary as a curricular anchor; (b) using visuals to reinforce concepts and vocabulary; (c) implementing cooperative learning and peer-tutoring strategies; (d) using native language strategically; and (e) modulating cognitive and language demands.

Taken as a whole, this important body of work has led to increased understanding and powerful interventions for students at risk of being placed in LD programs. However, as a group, they tend to draw on a single theoretical perspective, thus minimizing consideration of other important variables, such as those discussed by Klingner et al. 2005. The argument here is that the overall impact of this important work may be limited in the long run primarily because of the predominant focus on a single-level approach to interventions and remediation that is primarily aimed at addressing individual deficits based on component cognitive processes. To restate the argument, existing studies typically focus on one level rather than on multiple levels of inquiry. The singular focus of each theoretical approach to research most often does not address educational intervention and remediation perspectives from a multilevel approach.

What Is Missing From Current Solutions?

Though recognizing the value of existing work, it is our assertion that a more comprehensive approach that includes simultaneous attention to multiple levels of learning and development in specific local settings may prove most effective to addressing the needs of these special students in the diverse contexts and schools serving them. This contention is based on recent extensions of sociocultural theory that conceptualize learning and development as a function of multiple, interacting levels of influence (Rogoff, 2003). The *multiple levels of analysis approach* includes the individual, the interpersonal, and the cultural–institutional

focus of analysis (Rogoff, 2003). Individual factors include cognitive, motivational, and other learning-related characteristics. Work in this tradition has targeted component cognitive skills, learning strategies, metacognitive and executive factors, and motivation-related variables such as self-efficacy and attributions for failure and success. Interactional factors have to do with interpersonal relationships and the social–organizational features of specific settings with respect to how they affect engagement, participation, cooperative learning, and achievement. Institutional and community factors include home and family, community, and larger sociopolitical considerations, such as conflict over bilingual education, immigration, and economic resources.

According to Rogoff (2003), a multidimensional approach described as *transformation of participation perspective* encourages and addresses the educational problems in the context of the classroom, family, and the larger sociocultural spheres. Until now, theories, policies, and intervention programs have tended to address only one single level of the intersecting system. It is our premise that all three dimensions must be considered to alleviate issues of both overrepresentation and illiteracy.

We believe that the existing, current approaches are powerful. However, we also argue that although these approaches are not wrong, they are incomplete for two reasons. First, in the attempt to address "scaling up," projects often do not take local context into account. What works in one setting will not always work elsewhere without conscious attention to features of the local context. Second, they tend to address a single level rather than multiple levels in a coordinated and comprehensive way, thus ignoring important sociocultural variables that interact with cognitive and social variables in complex ways, especially for populations in at-risk circumstances.

There are examples where projects have taken a somewhat broader focus to include an emphasis on factors such as school–community collaboration and culturally responsive assessment and instructional practices (Arreaga-Mayer & Perdomo-Rivera, 1996; Artiles & Ortiz, 2002; Baca, De Valenzuela, & Garcia, 1996; Barrera, 2003; Cloud, 2002; Garcia, 2002; Ortiz, 2002; Ortiz & Yates, 2002). One study in particular that represents the use of a multiple level approach is that of Klingner, Ahwee, Pilonieta, and Menendez (2003). This research focused on instructional practices, strategies, and support offered to teachers in addition to addressing barriers to scaling up. Conclusions addressed the instructional barriers of time and support and referenced problem issues in the local school context and culture. This particular project drew on a multilevel approach and focused on many areas in an integrated fashion; furthermore, the specific focus *was tailored to the local context*. We posit that after examining a particular school environment, an intermediate step and analysis may be necessary to tailor programmatic and placement decisions for a particular setting.

Building on a Multiple Level Approach

How does one go about thinking how to address these intersecting levels in a given context? It is evident that the issue of overrepresentation is a pervasive problem, persisting over time. One implication of the pervasive nature of this issue is that this is a systemic, organizational problem that requires solutions at a variety of levels and from a variety of perspectives. As described earlier, there are good examples of programs and initiatives that have had some success at the levels and in the specific settings they are designed to address. However, the emphasis on scaling up has been more difficult to achieve. We suggest that this may be due to a focus on "packageable" solutions that are meant to be universally applicable rather than on multitiered solutions based on generalizable principles that are adapted to the local sociocultural context.

A Problem-Solving Model for Helping Integrate Levels: Gap Analysis

One potentially helpful problem-solving model that may help think about integrating various levels of analysis is from the work on human performance and organizational settings—specifically, *gap analysis* (Clark & Estes, 2002). In general, approaches such as this try to solve organizational performance problems by bringing to bear a systematic problem-solving process that considers many factors simultaneously. Although a comprehensive review of this work and this approach in particular is beyond the scope of this article, it involves setting organizational (e.g., school district or school) goals that are meaningful and important and clearly communicated. These long-term, broad goals then translate to more immediate goals that reflect specific, measurable indicators that can be used to compare with some ideal standard. The difference between the current performance on these goals and the ideal is known as the "gap." The next step in the problem-solving process is to determine the causes of the gap. What do specific individuals or teams of individuals need to do to close the gap? That is, what is the specific cause of the gap? Factors that might be targeted include lack of knowledge, motivational issues, or organizational issues (organizational cultural models or policies, practices, and structures) that need to be addressed. Before taking steps to provide solutions, these potential or presumed causes need to be examined and validated. When this step is complete, targeted solutions can be developed and assessed for effectiveness (Champion, 2002; Kirpatrick, 1994).

When translated to the issue of overrepresentation, schools and districts might think about collaboratively setting appropriate long-term goals related to achievement, student out-

comes, overrepresentation, and other related issues. These goals would then need to be clearly communicated to all members of the learning community involved, and then the gap in performance must be determined. The specific indices and goals related to overrepresentation and low achievement would need to be set at the local level and might vary considerably. Next, consideration would need to be given to determine what individuals or teams of individuals would need to do to close the gap and meet the goals. The causes of the gap would need to be determined. Knowledge issues might include not knowing about the characteristics of ELLs, not knowing how to address cultural or linguistic issues in teaching, lack of awareness about recent research on second language development and literacy, and so on. Motivational issues (drawing from current theories of motivation, e.g., Covington, 2000; Ormrod, 2003; Pintrich, 2003; Wigfield & Eccles, 2000) might be related to a number of factors, from self-efficacy (beliefs about how successfully one can teach low-achieving students or ELLs) to dysfunctional attributions ("These students cannot learn because they are not motivated and have low IQs") to low task value for changing practice. There may also be organizational issues, such as an institutional cultural model that does not consider important the needs of the local community, or counterproductive organizational policies and procedures, such as funding formulas that encourage the labeling of students or policies that deny some services once other services are obtained (e.g., special education vs. bilingual education). There may be clashes in the cultural models between parents and community members on the one hand and the school or district on the other hand (e.g., expectations about the allocation of resources). The specific solutions to these problems would be dependent on the validation process that would rule out presumed causes that turn out not to be important explanatory or causal factors.

The point of such a gap analysis is that it involves systematic, active problem solving at a variety of levels simultaneously. Moreover, it involves a generalizable approach that can be used in a variety of very different settings but that still requires attention to and adaptation to the local context. Such a process also implies a much more multidisciplinary approach than has been the case in the past, requiring that we venture beyond the boundaries that have been useful analytically but that have perhaps hindered the possibility of looking at the "big picture."

Discussion and Conclusions

The National Research Council (2002) report suggested the need to move the analysis of learning problems and overrepresentation beyond a singular focus on the child:

> The conceptual framework in which the committee considered the issue of minority disproportion in special education and gifted and talented programs, then, is one in which the achievement or behavior at issue is determined by the interaction of the child, the teacher, and the classroom environments. Internal child characteristics play a clear role: what the child brings to the interaction is a function both of biology and of experience in the family and the community. But the child's achievement and behavior outcomes will also reflect the effectiveness of instruction and the instructional environment. (p. 3)

Unfortunately, there has been little guidance or direction about how such an approach might proceed, and there have been few, if any, examples of successful implementation. Most interventions to solve overrepresentation have focused on one level of analysis—the individual student (individual instructional interventions), the classroom (classroom organization or social and cultural accommodations), or the institutional/policy level (changing

policy or restructuring). Although each level is important, we argue that a variety of levels need to be considered simultaneously and that these need to be examined in a specific local context (see Figure 1). The continuing nature of the problem of overrepresentation and underachievement of minority students suggests that we need to move beyond the advances we have made in understanding the problem thus far.

There is a powerful intellectual inheritance in special education, which has been well summarized by Reid and Valle (2004):

> In that medicine and psychology spawned the field of learning disabilities (as well as the institution of special education), it is no surprise that the traditional conceptualization of learning dis/abilities embodies the scientific, medical, and psychological discourses; a scientific expert (e.g., school psychologist, neuropsychologist, clinical psychologist) must make a "diagnosis" based on comparisons with the performance of children thought to be "disability-free." However, as a disciplinary offspring not only of medicine but also of psychology, special education also embraces the inherent assumptions of that parent discipline. We see the basic tenets of science, medicine, and psychology in the centering and privileging of statistically defined "normalcy" (Davis, 1995), individualizing and pathologizing of difference, and adherence to the objective traditions of science (Linton, 1998). Hence, special educators choose *the individual* as the primary unit of analysis. (p. 515)

Although the contributions from this inheritance have been valuable, the issue of overrepresentation may need to move beyond existing disciplinary boundaries, especially as they have facilitated a lens that focuses primarily on individuals. Different intellectual traditions and disciplines have much to contribute in looking at a variety of levels of the learning and development system. Thus, interdisciplinary collaboration should be a valuable part of the solution.

Where is Overrepresentation Most Effectively "Located" and Addressed?
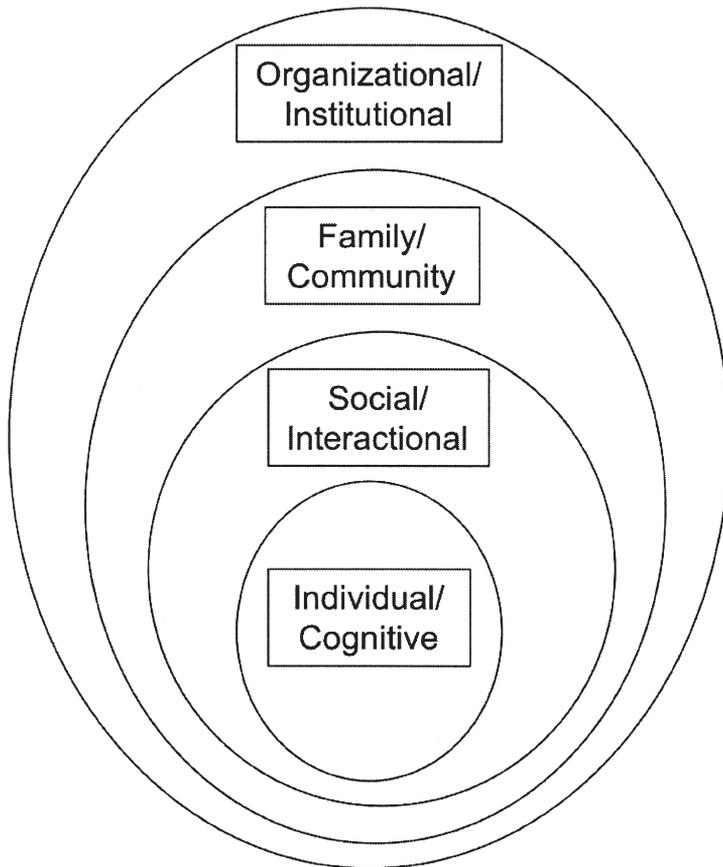
FIGURE 1. What is an appropriate unit of analysis to "locate" and address overrepresentation?

Frequently, overrepresentation is treated as an outcome rather than as an indicator of underlying problems. The problem-solving approach suggested here may help address this issue through the systematic examination and validation of presumed causes from a variety of different perspectives. The argument is not that the amount of specialized expertise and assistance provided to students should be decreased or disappear, as urban schools are filled with students who need meaningful assistance. Rather, we argue that the assistance needs to be more closely targeted to the under-lying (validated, not presumed) causes. Finally, as schools and districts seek to monitor their efforts with regard to this problem, the type of data collected and the need to unpack these data must be carefully considered.

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NOTE

The risk index (RI) is calculated by dividing the number of students in a given racial or ethnic category served in a given disability category by the total enrollment for that group in the school population. Thus, a risk index of 6 for African American students in a given category means that 6% of all African Americans were given that label. The composition index is calculated by dividing the number of students of a given racial or ethnic group enrolled in a particular disability category by the total number of students (summed across all groups) enrolled in that same disability category. The sum of composition indices for all the groups will total 100%. This index does not control for the baseline enrollment of a given group. Finally, the odds ratio divides the risk index of one group by the risk index of another (most often White) group for comparative purposes. Odds ratios higher than 1.0 indicate greater risk of identification.

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