

Demographic and personnel service delivery data: implications for including students with disabilities in Italian schools

Michael F. Giangreco¹, Mary Beth Doyle² & Jesse C. Suter³

Abstract

Recent research in inclusion-oriented schools in the United States has begun to document how a variety of demographic and service delivery variables (e.g., percent of students identified as disabled, percent of time in regular class, personnel utilization) can hinder or support innovations in curriculum, instruction, and social/behavioral interventions. After providing some contextual information about Italian and American special education and describing key findings from the US research exploring service delivery variables in inclusion-oriented schools, the current study presents school demographic and service delivery data collected in 16 schools in five regions of Italy. The findings indicate substantial variation across schools on a variety of variables. We pose a series of questions prompted by the data and invite Italian researchers and practitioners to offer their analysis, interpretation, and insights about the meaning and potential implications of these data for improving inclusive educational opportunities for students with disabilities.

Keywords: Disabilities, Inclusion, Personnel service delivery, Italian Schools

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¹ University of Vermont. E-mail: Michael.Giangreco@uvm

² St. Michael's College. E-mail: mdoyle@smcvt.edu

³ University of Vermont: E-mail: jesse.suter@uvm.edu.

1. Demographic and personnel service delivery data: implications for including students with disabilities in Italian schools

International research on educating students with disabilities and other special educational needs has been dominated by studies evaluating a wide variety of curricular, instructional, and social/behavioral interventions to identify evidence-based practices meant to facilitate positive academic, functional and social outcomes. There has been substantially less attention devoted to school and classroom service delivery practices that allow such interventions to be effectively implemented under typical conditions, rather than conditions that rely on extra or atypical supports from researchers in school or nonschool settings (e.g., clinics). While some literature (Gersten, Keating, Yovanoff, & Harniss, 2001; Russ, Chiang, Rylance, & Bongers, 2001) has addressed important special education service delivery practices (e.g., special educator caseload issues), much of the available research has not: (a) focused on the unique contexts presented by inclusion-oriented schools, (b) explored a wide array of service delivery parameters, (c) examined the interrelationships among service delivery variables within and across schools, or (d) identified the service delivery practices under which successful interventions have been utilized.

Inattention to service delivery issues has contributed to an ongoing research-to-practice gap (McLeskey & Billingsly, 2008), which may explain why schools sometimes do not use interventions reported to be effective. Some recommended interventions simply have not been sufficiently researched under real world conditions nor have many investigations sought to determine what types of service delivery configurations (e.g., staffing patterns, class size/configurations) would allow them to be implemented in schools. Although intervention research remains vital to continued development of the field, without correspondingly effective service delivery configurations, even the most advantageous innovations in curriculum, instruction, and social/behavioral interventions will not fully realize their intended impact or sustain it over time.

The primary purposes of this paper are to: (a) provide a brief overview of key similarities and differences between the Italian and American special education context to assist the reader in understanding the service delivery data presented, (b) describe key findings from a recent line of research exploring service delivery parameters in inclusion-oriented schools in the United States; (c) present school demographic data representing a subset of these parameters collected in 16 Italian schools, and (d) pose a series of questions about what implications these data may have for improving practices in public schools in Italy. In reference to this final purpose, we invite Italian researchers and practitioners who are knowledgeable about inclusion-oriented education for students with disabilities and other special

educational needs to comment on the findings and offer their perspectives on their potential meaning and implications. We hope this opens a dialogue to facilitate international collaboration and extend our understanding about the roles service delivery data play in improving practices in inclusion-oriented schools in Italy, the US, and potentially other countries.

2. Similarities and differences between Italian and American Special Education

In the 1960s there was societal unrest in both Italy and the US; one manifestation was a groundswell of public concern and about segregated mental health and disability-related services. Grassroots efforts by parents, self-advocates, and their allies led to the deinstitutionalization movement as well as the passage of national education legislation in the 1970s designed to increase access to public schooling and regular class placement for students with the full range of disabilities. At that time, some school-aged children with more severe disabilities did not attend school and for those who did, special schools and classes dominated the educational landscape. In both countries only about 20% of students with disabilities attended regular classes (Vianello, 1996; Cornoldi, Terreni, Scruggs, & Mastropieri, 1998; US Department of Education, 2010b). Although the initial legislation in both countries provided a legal basis favoring regular class placement for students with disabilities, both also left open the possibility to educate students with severe disabilities in more segregated environments (Taylor, 1988; D'Alessio, 2011).

Over the past 40 years the two countries have taken different paths toward pursuing their common legislative intent, namely to provide appropriate education and more inclusive opportunities for students with disabilities. The Italian approach began with rapid initial placement of students with disabilities and other special educational needs in regular classes followed by incremental legislative and implementation adjustments over a period of many years. Passage of Law 118 in 1971 led to widespread national closure of nearly all the country's special education schools and special education classes in favor of regular class placements for students with disabilities and other special educational needs (Sidoli, 2008; Canevaro & de Anna, 2010). In the early years of this transition (1971-1977) concerns were voiced that the rapid insertion of students with disabilities in regular education classes was implemented without sufficient supports in place (Vitello, 1991; D'Alessio, 2011). Proponents of regular class placement contended that this rapid transition was essential because without the actual presence of students with disabilities there would be insufficient

impetus for change; they argued if Italy waited for attitudes to be more positive and all supports to be in place this substantial shift toward regular class placement might not have occurred and therefore the educational and civil rights of students with disabilities would have been unnecessarily compromised and delayed (Berrigan, 1988; Canevaro & de Anna, 2010).

Incremental adjustments progressed with a series of legislative efforts (e.g., Law 517/1977; Law 104/1992; Law 185/2006) providing frameworks and mechanisms (e.g., assessment, availability of support teachers, caseload limits, class size parameters, functional dynamic profile, individual education plan) designed to support the national policy of school inclusion referred to as *integrazione scolastica*. Once this shift to regular class placement was initiated, it advanced from about 20% in the early 1970s to consistent reports of approximately 98% of its students with disabilities placed in general education classes by the 1990s (Cornoldi *et al.*, 1998; Palladino, Cornoldi, Vianello, Scruggs, & Mastropieri, 1999).

In the US, education is primarily a state, rather than national, responsibility. Prior to the passage of federal legislation in 1975, the Education for All Handicapped Children Act (later reauthorized as IDEA, the Individuals with Disabilities Education Act), many states already had compulsory public education laws for all or most students with disabilities. So when the national law was passed ensuring access to a free, appropriate, public education for all children and youth with disabilities ages 3 through 21, most students with mild disabilities were already receiving public education as were some students with more severe disabilities in some states, albeit most commonly in publicly operated special schools or special classes. The new federal law initially had the most immediate impact on students with severe or low incidence disabilities who were not previously afforded access to public schooling in some states.

These students had been either at home without access to public schooling or were educated in schools associated with private non-profit or charitable organizations such as the ARC (formerly the Association for Retarded Citizens), Easter Seals, United Cerebral Palsy Association, and others, many of which were created or operated by parents who had children with disabilities.

In contrast to Italy, the US approach to including students with disabilities in regular classes has been incremental. On average, the rate of primary regular class placement (meaning 80% or more of their school day) of students with disabilities, has progressed only about 1% per year and consistently has maintained this slow upward trend over four decades. For example, from 1990 to 2006, the rate of primary regular class placement rose from approximately 33% to 54% with substantial variation among states still existing in 2006 (e.g., Virginia 10%; North Dakota, 78%; Giangreco, Hurley, & Suter, 2009).

By 2010 approximately 61% of students with disabilities nationally were included in regular classes as their primary educational placement (US Department of Education, 2010a). There continues to be wide variation in placement based on type of disability. For example, whereas 61% of students with specific learning disabilities and 86% with speech language impairments are in regular classes as their primary educational placement, the rates are only 16% and 13% respectively for students with intellectual disabilities and multiple disabilities (National Center for Educational Statistics, 2011b).

It is important to recognize that the respective regular class placement rates in Italy (98%) and the US (61%) are not exactly comparable, nor are they quite as far apart as they may seem at first glance. The US percentage represents only students with disabilities who are in regular class at least 80% of the time. When US students who attend regular class 40% to 79% of the time are added, the US total rises to 81%; when those in regular class less than 40% of the time are added in, the US total for regular class placement reaches 95% (US Department of Education, 2010a). What remains unreported in Italy is the actual percent of time students with disabilities spend in the regular classes where they are assigned. Some Italian students with disabilities are pulled out of class for individual or small group instruction, for behavioral reasons, or to receive services (e.g., physical therapy) away from school during the school day. What can be said with some confidence is that approximately 98% of students with disabilities in Italy attend regular class for all, most, or some portion of the school day, but the average percentage of time in versus time out of the regular classroom is unknown. Unless or until countries adopt similar definitions and reporting standards it will remain challenging to compare the nuances of regular class placement statistics, leaving only the most segregated options (e.g., percent in special education schools) as potential points of accurate comparison.

Another difference confounding the comparison of regular class placement rates is the respective ways the countries define disability and count students as disabled.

Historically Italy certifies approximately 2% of its students as disabled (Palladino *et al.*, 1999; Meijer & DeJager, 2001), whereas the US identifies over 13% of students enrolled in school as disabled and eligible to receive services under the IDEA (National Center for Educational Statistics, 2011a). Approximately 60% of American students with disabilities are identified as either learning disabled or speech language impaired, while in Italy most students with specific learning disabilities are not considered “disabled” and are not eligible for services under Italy's national disability-related education laws. In Italy students with learning disabilities are a regular education responsibility and their needs are addressed under other legislation.

For example, recently Law 170/2010 was designed to ensure that general education teachers provide necessary accommodations for children such as those with dyslexia, dysgraphia, and dyscalculia. As a result of these socially constructed differences in disability definitions and special educational needs labeling, there are students with specific learning disabilities in US, some of whom spend the majority of their school day in special education classes, who if they lived in Italy would not be certified as “disabled” under Italian education law and would in regular class full-time. Similarly, the 98% of students with disabilities that Italy reports including in regular class all, most, or some of the time, are primarily students with more significant intellectual, physical, sensory or multiple disabilities that are included at markedly lower rates in the US.

There are undoubtedly many other differences between how Italy and the US provide educational supports for students with disabilities. Further, it is vital to recognize that educational placement data, even when favorable, do not provide any information about the quality of educational services being offered in either country and therefore should not be considered alone as a proxy for appropriate or quality education.

3. Research exploring service delivery in US inclusion-oriented schools

Over the past several years our team at the University of Vermont has initiated a line of research exploring school service delivery variables and practices with a particular focus on inclusion-oriented schools. Key findings about school service delivery have been gleaned from national US data sources (Giangreco, Hurley, & Suter, 2009), studies conducted in inclusion-oriented schools in Vermont (Giangreco & Broer, 2005; Giangreco, Smith, & Pinckney, 2006; Suter & Giangreco, 2009; Giangreco, Suter, & Hurley, 2011), and in inclusion-oriented schools across six states (i.e., California, Connecticut, Kansas, New Hampshire, Vermont, Wisconsin; Giangreco & Broer, 2007; Giangreco, Broer, & Suter, 2011).

Viewed together, these studies depict a wide range of service delivery practices from state to state and school to school. In the sample of inclusion-oriented schools, with primary regular class placement rates around 94% and class sizes generally in the low 20s (making them similar on these dimensions to many schools in Italy), a subset of findings are especially relevant. A key difference between Italy and the US is that, on average, these US inclusion-oriented schools identify approximately 14% of their students as disabled (i.e., eligible for special education under the IDEA federal legislation) and another 16% as having

some other kind of special need making them at-risk for educational problems or failure (e.g., substantial delays in literacy or numeracy); so the combined total of students with disabilities and some other special need was approximately 30% of a school's population.

These schools, on average, employed three to four times as many special education paraprofessionals (hereafter referred to as assistants) as special education teachers; in some cases many more. This is consistent with national trends indicating that US states that have higher regular class placement rates tend to employ proportionally more assistants. Regardless of how many assistants a school had per the number of students with disabilities (e.g., 1:3, 1:6, 1:10), school staff consistently reported feeling either just adequately staffed or understaffed; in part this suggests that there is no "right" ratio and that often what "feels right" is based on what school personnel are accustomed to.

In many schools, assigning more assistants has become the primary mechanism to support students with disabilities in regular classes with escalating requests for more. Although there are many skilled assistants who make valuable contributions, the research literature in the US and internationally has identified concerns that assistants have unclear and potentially inappropriate instructional roles, tend to be inadequately trained and supervised, and may actually pose obstacles to providing quality inclusive education and appropriate instructional supports (Giangreco, Doyle, & Suter, in press). A substantial percentage of assistants in these US schools, estimates ranging from 30% to over 50%, are assigned in a one-to-one format, a problematic approach because it can contribute to a wide variety of inadvertent detrimental effects (Giangreco, 2010).

The caseloads and practices of special education teachers in inclusion-oriented schools raise serious concerns about their opportunities to utilize the skills they have gained through their teacher preparation studies and ongoing professional development. The average number of students with disabilities served per special education teacher ranged from approximately 11 to nearly 17. Many special educators also had additional support responsibilities for other students with special needs (e.g., 3 to 6 students with delays in literacy and/or math) who did not qualify as disabled under US law. These special educators often have their time spread across several classrooms and grade levels, while on average they attempt to supervise three to four assistants. They tend to spend less time (under 40%) in instruction than both regular education teachers and assistants, and also provide a substantial amount of their instructional time (approximately 75%) with students with disabilities outside the regular classroom. Under these conditions they are only able to offer about 2% of their time per assistant to provide training and supervision (Suter & Giangreco, 2009; Giangreco, Suter, & Hurley, 2011).

In addition to caseload numbers, one variable has been shown to have a significant relationship to the self-efficacy ratings of special education teachers in inclusion-oriented schools, namely the ratio of special education teachers in FTE (full-time equivalents) to total school enrollment; this is referred to as special educator school density (Suter & Giangreco, 2009; Giangreco, Suter, & Hurley, 2011). The range of special educator school density ranged widely, from 1:38 to 1:224, averaging around the 1:94 in Vermont schools and 1:111 in the six states listed earlier (Giangreco, Broer, & Suter, 2011). Two important findings have been discovered about special educator school density in the sample of inclusion-oriented schools studied. First, special educator school density shows an inverse correlational relationship with the percentage of students identified as disabled; as the percentage of students labeled disabled in a school rises, the special educator school density ratio decreases.

This explains why schools where special educators have approximately the same average caseload size can have substantially different special educator school density ratios. For example, the data set includes two schools that both have an average special educator caseload size of 11.5, but School A has a special educator school density ratio of 1:131 while School B's ratio is 1:69. This occurs because School A identifies 8.8% of its students as disabled, while School B identifies 18.5% as disabled. Interestingly, these two schools had a very similar combined percentage of students with disabilities or other special need, 26% and 28% respectively. Funding mechanisms that provide special educator resources to schools based on the number of students identified as disabled create an incentive to label students as disabled. Ironically, in these systems where resources are linked to disability labeling, schools that are able to appropriately serve students with special needs by strengthening their school-wide supports and avoiding disability labeling often lose resources. Underscoring the importance of this loss of resources, higher special educator school density has been correlated with lower self-efficacy ratings by special educators (Giangreco, Suter, & Hurley, 2011). A potential solution to this problem is to provide resources to schools based on total school enrollment numbers along with potential adjustments for likely contributors to student learning challenges (e.g., economic disadvantage, non-dominant language use). In other words, in schools that are inclusion-oriented, where it is known that all or nearly all their students with disabilities or special needs are expected to be in the regular classroom, we could consider basing availability of personnel resources on total enrollment rather than percentage identified as disabled.

In the present study, we collected data in Italian schools on a subset of the demographic variables from the US studies. The aforementioned US studies included three types of quantitative, descriptive data from: (a) a school demographic

questionnaire, (b) a special educator questionnaire about their caseload and work responsibilities, and (c) a special educator questionnaire about their students who received ongoing one-to-one support from assistants (e.g., student characteristics, service provision). This initial study of Italian schools was limited exclusively to a subset of the school demographic variables that: (a) seemingly spanned cross-cultural boundaries, (b) were identified as important variables in the US studies, and (c) could reasonably be collected during meetings with school leaders.

4. Method

4.1 Design

This study employed a descriptive, quantitative design. Data were collected between October and November 2011 from a convenient, purposeful, sample of inclusion-oriented schools. This was one component of a larger set of sabbatical activities conducted by the first and second authors during a three-month stay in Italy to learn about “*integrazione scolastica*” (i.e. school inclusion).

4.2 Settings

The 16 public schools that participated in this study were located in five regions of Italy (e.g., Lazio, Lombardia, Puglia, Veneto, Sicilia). The schools were identified with the assistance of university colleagues and regional education ministry administrators who served as liaisons between the researchers and the schools. As shown in Table 1, the schools spanned all grade levels including five elementary schools (“*Infanzia*” – “*Primaria*”), four elementary/middle schools (“*Infanzia*” – “*Primaria*” – “*Secondaria I*”), and seven high schools (“*Secondaria II*”).

Total student enrollment in these schools ranged from 231 to 1,560 ($M = 752.8$, $SD = 339.0$). On average, approximately 14% of enrolled students were from cultural/ethnic minorities (non-Italians) and approximately 12% were learning Italian as a second language. Estimates regarding the percentage of students in these schools who were considered economically disadvantaged ranged from approximately 1% to over 20% ($M = 9.4\%$, $SD = 6.8$). Average class size ranged from 19 to 27 ($M = 23.3$, $SD = 2.7$).

4.3 Participants

One or more school leaders in each site, typically the principal and/or assistant principal, supplied the school demographic data presented in this study, often with the assistance of other school personnel (e.g., office staff, special education teachers).

Table 1 - Overall School Demographic Data

School by Region	School Level	Mean	Total	Cultural/Ethnic Minorities ^a		Economic Disadvantaged ^a		Italian as Second Language	
		Class	School Enrollment	n	%	n	%	n	%
Lazio 1	Infanzia - Primaria	25	577	54	(9.4)	40	(6.9)	8	(1.4)
Lazio 2	Secondaria II (T)	25	1030	200	(19.4)	250	(24.3)	134	(13.0)
Lombardia 1	Secondaria II (L)	25	1560	70	(4.5)	20	(1.3)	70	(4.5)
Lombardia 2	Primaria	22	521	47	(9.0)	21	(4.0)	47	(9.0)
Lombardia 3	Primaria	23	231	22	(9.5)	-	-	22	(9.5)
Lombardia 4	Secondaria II (P)	25	669	120	(17.9)	84	(12.6)	120	(17.9)
Puglia 1	Primaria	20	427	43	(10.1)	60	(14.1)	20	(4.7)
Sicilia 1	Primaria - Secondaria I	25	1000	50	(5.0)	200	(20.0)	20	(2.0)
Sicilia 2	Secondaria II (L)	20	440	5	(1.1)	20	(4.5)	5	(1.1)
Veneto 1	Infanzia - Secondaria I	24	846	371	(43.9)	104	(12.3)	371	(43.9)
Veneto2	Secondaria II (L, T, P)	27	735	66	(9.0)	100	(13.6)	84	(11.4)
Veneto 3	Secondaria II (L)	27	1100	10	(0.9)	10	(0.9)	10	(0.9)
Veneto 4	Infanzia - Secondaria I	20	896	151	(16.9)	80	(8.9)	90	(10.0)
Veneto 5	Primaria - Secondaria I	20	854	85	(10.0)	43	(5.0)	85	(10.0)
Veneto 6	Primaria	19	309	109	(35.3)	30	(9.7)	109	(35.3)
Veneto 7	Secondaria II (T, P)	25	850	203	(23.9)	30	(3.5)	140	(16.5)
<i>M</i>		23.3	752.8	100.4	(14.1)	72.8	(9.4)	83.4	(11.9)
<i>SD</i>		2.7	339.0	94.3	(11.9)	69.4	(6.8)	89.8	(12.1)

Note. L = Liceo; T = Tecnico/Technical; P = Professionale/Professional.
^aEstimates provided by school administrators.

Although not reflected in the demographic data, other individuals we encountered during our travels further informed the questions we pose in the discussion section of this paper. These individuals included: (a) 81 students with certified disabilities we observed in the 16 schools and 2 agency sites we visited, (b) approximately 860 nondisabled students and 91 school personnel (e.g., classroom teachers, special educators, assistants) in 37 regular classrooms where 52 of the 81 students with disabilities were observed, and (c) conversations with 89 individuals associated with the schools (e.g., teachers, special educators, administrators, parents, agency personnel), a small subset of whom also were also observed.

4.4 Procedures and instrumentation

Prior to our arrival in Italy we prepared a brief letter introducing ourselves, explaining our upcoming sabbatical visit. The letter expressed our interest in observing in schools where students with intellectual and multiple disabilities were being included in regular education classes and speaking with school personnel. Secondly, we developed a 13-item school demographic questionnaire patterned after one component of our US studies, though smaller in scope covering basic demographic and personnel utilization variables (e.g., student enrollment, average class size, number of students with disabilities, number of “*insegnante di sostegno*”, number of assistants). Both the introductory letter and questionnaire were translated from English to Italian. After arrival in Italy, but before distribution to potential school sites, a bilingual Italian researcher reviewed both documents and minor edits were made to improve the translation.

Our university and education ministry liaisons shared the letter and questionnaire (in both Italian and English) with their local school colleagues to assist us in scheduling school visits. Typically, we spent a half-day or more at each site, and in one case two days at the same site. One or more bilingual colleagues accompanied us to each site; additionally some of our school hosts were bilingual or they identified a teacher who was bilingual, often the school's English teacher. In an effort to minimize misunderstanding or misinterpretation of questionnaire items, rather than asking the administrators to simply complete questionnaire as a written document, we posed each question verbally, through an interpreter when necessary. This allowed us to ask follow-up questions to clarify the meaning of the question and to verify their responses. Even though the questions seemed fairly simple, typically it took 1 to 2 hours to respond to the 13 demographic questions. For example, it took time clarifying the question and responses pertaining to the percentage of time students with disabilities were actually present in typical classrooms or who should be counted as an assistant -- these types of counts often resulted in an extensive discussion before the school leader provided a final response. Additionally, some variables, such as the reported number of students: (a) economically disadvantaged, (b) from cultural/ethnic minorities, and (c) with special educational needs who were not disabled, were offered as estimates because: (a) the schools did not all maintain data on these variables, and (b) the schools did not share common definitions for these variables.

4.5 Data analyses

Questionnaire data were analyzed using basic descriptive statistics (e.g., percent, mean, standard deviation; see base variables in Tables 1 and 2) in SPSS (Statistical Package for the Social Sciences).

By summing or deriving ratios from the base variables we created five calculated variables (see Table 3). A small number of Pearson correlations (two-tailed) were run to explore relationships between variables that were statistically significant in the US studies.

Table 2 - *Students with Disabilities, Other Special Educational Support Needs, and Specialized Support Personnel*

<i>School by Region</i>	<i>Students with Certified Disabilities</i>		<i>Students with Certified Disabilities in Regular Class (80% or More)</i>		<i>Students with BES (Not Certified Disabled)</i>		<i>“insegnante di sostegno”/ Specialized Support Teacher FTE</i>	<i>Assistente/ Assistant FTE</i>
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>		
Lazio 1	14	(2.4)	14	(100.0)	49	(8.5)	6.0	3.0
Lazio 2	74	(7.2)	54	(73.0)	155	(15.0)	23.0	6.0
Lombardia 1	13	(0.8)	13	(100.0)	20	(1.3)	5.0	4.0
Lombardia 2	30	(5.8)	28	(93.3)	5	(1.0)	8.5	13.0
Lombardia 3	6	(2.6)	6	(100.0)	20	(8.7)	2.0	4.0
Lombardia 4	40	(6.0)	39	(97.5)	67	(10.0)	13.0	4.0
Puglia 1	17	(4.0)	12	(70.6)	50	(11.7)	12.0	6.0
Sicilia 1	26	(2.6)	26	(100.0)	46	(4.6)	11.0	1.0
Sicilia 2	43	(9.8)	43	(100.0)	44	(10.0)	32.0	8.0
Veneto 1	38	(4.5)	37	(97.4)	17	(2.0)	17.9	4.0
Veneto2	26	(3.5)	24	(92.3)	19	(2.6)	14.0	3.0
Veneto 3	4	(0.4)	4	(100.0)	4	(0.4)	3.2	2.0
Veneto 4	24	(2.7)	24	(100.0)	13	(1.5)	13.0	8.0
Veneto 5	16	(1.9)	16	(100.0)	15	(1.8)	9.0	1.4
Veneto 6	12	(3.9)	10	(83.3)	20	(6.5)	4.5	0.4
Veneto 7	18	(2.1)	10	(55.6)	20	(2.4)	8.0	3.0
<i>M</i>	25.1	(3.8)	22.5	(91.4)	35.3	(5.5)	11.4	4.4
<i>SD</i>	17.5	(2.4)	14.6	(13.6)	36.8	(4.6)	7.8	3.2

Note. BES = Bisogni Educativi Speciali/Special Educational Needs; FTE = Full-Time Equivalent.

Table 3 - *Calculated Variables Regarding Students with SEND and Personnel Utilization*

<i>School by Region</i>	<i>SEND Combined students with disabilities and BES</i>		<i>Ratio of IdS FTE to Students with Disabilities</i>	<i>Ratio of IdS FTE to SEND</i>	<i>IdS School Density: Ratio of IdS FTE to Total School Enrollment</i>	<i>Special Services Concentration: Ratio of Assistants FTE to IdS FTE</i>
	<i>n</i>	<i>%</i>				
Lazio 1	63	(10.9)	2.3	(10.5)	96.2	0.5
Lazio 2	229	(22.2)	3.2	(10.0)	44.8	0.3
Lombardia 1	33	(2.1)	2.6	(6.6)	312.0	0.8
Lombardia 2	35	(6.7)	3.5	4.1	61.3	1.5
Lombardia 3	26	(11.3)	3.0	13.0	115.5	2.0
Lombardia 4	107	(16.0)	3.1	8.2	51.5	0.3
Puglia 1	67	(15.7)	1.4	5.6	35.6	0.5
Sicilia 1	72	(7.2)	2.4	6.5	90.9	0.1
Sicilia 2	87	(19.8)	1.3	2.7	13.8	0.3
Veneto 1	55	(6.5)	2.1	3.1	47.4	0.2
Veneto2	45	(6.1)	1.9	3.2	52.5	0.2
Veneto 3	8	(0.7)	1.2	2.5	341.6	0.6
Veneto 4	37	(4.1)	1.8	2.8	68.9	0.6
Veneto 5	31	(3.6)	1.8	3.4	94.9	0.2
Veneto 6	32	(10.4)	2.7	7.1	68.7	0.1
Veneto 7	38	(4.5)	2.3	4.8	106.3	0.4
<i>M</i>	60.3	(9.2)	2.3	5.9	100.1	0.5
<i>SD</i>	51.5	(6.4)	0.7	3.2	92.8	0.5

Note. SEND = Students with Educational Needs and Disabilities; BES = Bisogni Educativi Speciali/Special Educational Needs;

IdS = "Insegnante di Sostegno"/Specialized Support Teacher; FTE = Full-Time Equivalent.

5. Findings

Although this sample of 16 schools is too small to draw many statistically significant inferences or to make broad generalizations, visual analyses of the data raise a series of potentially important issues and offer some interesting

patterns overall, especially when comparing the seven “Secondaria II” schools with the nine lower graded schools (see Tables 2 and 3). For example, the percentage of students with certificates of disability in the full sample averaged 3.8% ($SD = 2.4$), ranging from 0.4% to 9.8%; making this sample's percentage slightly higher than 2% to 2.5% rate typically reported nationally. A closer examination of the schools shows that five of the seven “Secondaria II” schools were those situated at the furthest ends of the distribution, with two schools identifying less than 1% and three schools identifying over 6% as disabled; the highest at 9.8%. Overall, the percentage of these students with disabilities who were reported to spend 80% or more of their time in the regular classroom was fairly high, with an average of 91.4% ($SD = 13.6$). While half of the schools reported 100% of their students with disabilities were in regular class at least 80% of the time, the remaining half ranged from 55.6% to 97.5%, with four schools reporting below 85%.

The percent of students identified by the schools as having "special educational needs" (i.e., “bisogni educativi speciali”) but not meeting the criteria to receive disability-related services presents an interesting pattern. Given that Italy has relatively stringent criteria to certify a student as disabled, resulting in a relatively low identification rate compared to many other western countries, one might reasonably expect the percentage of students with the "special educational needs" (not disabled) designation to exceed those labeled disabled. In general this expectation is reflected in this sample; on average these schools identified 5.5% ($SD = 4.6$) of their students as having special educational needs, ranging from below 1% to 15%; on average this is approximately 2% higher than the percentage with certified disabilities. There were some exceptions to this pattern; five of the schools identified the same or a higher percentage of students as disabled than those identified as having special educational needs. Overall, there was a strong and significant relationship between schools' percentage of students certified as disabled and those with special educational needs, $r(16) = .59, p = .02$. Schools with a low percentage of students with disabilities tended to identify a relatively low percentage with special educational needs (e.g., Veneto 3, Veneto 5), and schools with relatively high percentage of students with disabilities tended to identify a relatively high percentage with special educational needs (e.g., Lazio 2, Sicilia 2).

A closer look at the distribution suggests three subcategories of relationship between the percentage of students identified as disabled and those with special educational needs exist. First, of the 16 schools, just under half ($n = 7$) identified substantially more students as having special educational needs than certified as disabled, often two, three or four times as many (e.g., 2.4% disabled, an additional 8.7% with special educational needs).

Second, in five schools, the percentage of students with disabilities and those with special educational needs were virtually identical, within one-half of one percent. And third, the remaining four schools identified a lower percentage of their students as having special educational needs compared to those certified as disabled, the reverse of what might be expected in the general population.

Interestingly, four of five of these cases that had nearly identical percentages of students with disabilities and those with special educational needs were “Secondaria II” schools, and again they represented the outer ranges of the distribution on both the high and low ends. For example, the high school that identified 9.8% of students as disabled also identified an additional 10% of its students as having special educational needs. Conversely, the high school that identified 0.4% of its students as disabled only identified an additional 0.4% of its students as having special educational needs.

When one examines the combined percentage of students with special educational needs and disabilities (SEND; see Table 3), the average of 9.2% ($SD = 6.4$) may obscure the more interesting finding represented by the wide range from 0.7% to 22.2%; nine schools had a combined SEND percentage of approximately 7% or below while seven schools were over 10%. Again, Secondaria II schools populated both ends of the distribution.

On average, special education teachers (“insegnante di sostegno”) in FTE (full-time equivalents) were available to support approximately two students with certified disabilities ($M = 2.3, SD = 0.7$). This caseload size number of students with disabilities represented the most tightly clustered data point with the least variability among the schools, ranging from an average low of 1.3 to a high of 3.5. In addition, a strong and significant correlation was found between “insegnante di sostegno” FTE and the percentage of students with disabilities, $r(16) = .83, p < .001$. When the total SEND population (i.e., students with special educational needs and disabilities) is considered, on average there is one “insegnante di sostegno” FTE for approximately every six students ($M = 5.9, SD = 3.2$), with a wider distribution across schools, ranging from 2.5 to 13.

Beyond caseload numbers of students with certified disabilities or those with other special educational needs, another way to conceptualize the availability of “insegnante di sostegno” to serve an individual school is using a metric called *special educator school density* (i.e., the number of special educators/“insegnante di sostegno” in FTE in a school compared to the total student enrollment in the school). On average, this sample of schools had one “insegnante di sostegno” for approximately every 100 students enrolled in the schools ($M = 100.1, SD = 92.8$). This average is below the 1:138 ratio that until recently had been codified in law after first being included in Law 449/1997, with a later provision (Ministerial Circular 27/2003) that the school

principal could appoint more support teachers to face school needs (D'Alessio, 2008, p. 59).

Special educator school density ratios in this sample ranged quite dramatically, from approximately 1:14 a low ratio (very dense), to a high ratio (very lean) of approximately 1:342. Only two schools exceeded the 1:138 ratio, interestingly both again were *Secondaria II* schools and both were *Liceo*. In several of the schools the special educator school density varied substantially even though the average special educator caseloads, which varied by only one of two students on average, were quite similar. For example, Lombardia 1 and Veneto 6 reported nearly identical average special educator caseloads of students with disabilities, 2.6 and 2.7 respectively. Yet their special educator school density ratios differed vastly, 1:312 and 1:68.7 respectively. In part this may be explained by the differences in the percentage of students with certified disabilities in each school (i.e., Lombardia 1, 0.8%; Veneto 6, 3.9%). These schools closely followed the same pattern identified in the inclusion-oriented schools in the US, namely that there was a statistically significant inverse relationship between the percentage of students a school certifies as disabled and the special educator school density, $r(16) = -.69, p = .003$. In other words, schools that identify a lower percent of students as disabled tend to have a higher special educator school density, fewer special educators per capita to serve the total school enrollment. Alternately, schools that identify a higher percent of students as disabled tend to have a lower special educator school density, more special educators per capita to serve the total school enrollment. When the two special educator school density statistical outliers (i.e., 1:312; 1:346) were removed from the analysis, the inverse relationship was even stronger, $r(14) = -.82, p < .001$.

The schools in this sample, on average, employed twice as many “*insegnante di sostegno*” as assistants, referred to in Table 3 as the special services concentration (i.e., ratio of assistants to “*insegnante di sostegno*” in FTE; $M = 0.5, SD = 0.5$). Notably, there were two schools that employed more assistants than “*insegnante di sostegno*”. Among the remaining schools, their *special services concentration* ranged from 0.8 to 0.1, with schools that had nearly the same number of special educators and assistants (e.g., Lombardia 1) to schools where they employed substantially more “*insegnante di sostegno*” than assistants (e.g., Sicilia 1).

6. Discussion

In considering the findings, the reader is encouraged to remain cognizant of the study's limitations. First, data were collected from a convenient sample of

schools ($n = 16$), each at a single point in time. Although this is a small number of schools, our research experiences in Vermont have indicated that even a sample of this modest size can be useful and potentially representative of a broader set of schools. In our Vermont-based research, once we had collected school demographic data from approximately our first 12 schools, the results (e.g., means, standard deviations, ranges, ratios) remained virtually the same after collecting data in over 60 schools. Whether a similar level of stability of results would be replicated in Italian schools is unknown. Second, there is the ever-present possibility of a translation error, miscommunication, or cultural misunderstanding. Third, all data were based on report rather than direct observation or counts. Fourth, an inherent limitation of any questionnaire responses is the potential for idiosyncratic interpretation. We attempted to minimize these limitations through our on-site data collection procedures presented in the Method section. Despite these limitations, the findings offer a variety of information regarding special education service delivery and hold potential implications for these and other schools seeking to improve inclusive opportunities for their students with disabilities in general education classes.

As we first presented in our introduction to this article, our intention is not to make judgments about these data as we might if we were studying a system with which we were more familiar. Rather, our intention here is to point out findings that raised questions for us and to pose those questions to Italian researchers and practitioners so that they might offer their analyses and interpretation of these findings. We have purposely included all of the raw data provided by the schools in Tables 1 and 2 so that Italian researchers might explore or notice additional patterns or relationships that we did not report in the findings. We offer the following comments and questions in a spirit of collaboration and gratitude to all of our Italian colleagues who took their valuable time to help us understand inclusive educational efforts in Italy. We hope this discussion contributes to our shared mission, namely to advance inclusive educational opportunities for students with disabilities by extending this international dialogue about school service delivery.

6.1 Students with disabilities and other special educational needs

It seemed to us as visitors, that in Italy the social construction of what it means to be "normal" is quite expansive -- this is something we left the country appreciating and wanting to understand more thoroughly. This wide sense of "normal" is partly evidenced by the fact that the national prevalence of the school-aged population certified as disabled is only approximately 2.0% to 2.5%, and students with other special educational needs referred to as DSA (Disturbo Specifico dell'Apprendimento/Specific Disorders of Learning) (e.g., learning

disabilities, dyslexia, dysgraphia, reading or math delays, relatively minor speech/language difficulties) are not considered disabled. So what does it mean that the schools in this sample had an average of 3.8% of their students certified as disabled? Is this merely an insignificant artifact of the small sample size, or does it reflect a national trend toward higher rates of identification of students as disabled? If it is the later, are there actually now more students with disabilities severe enough to be certified disabled, or are those previously identified as having special educational needs (e.g., DSA, learning disabled) increasingly being certified as disabled in some schools?

Even more importantly, why did the high schools in this sample occupy the furthest ends of the distribution both top and bottom, ranging from 0.4% to 9.8% of their students certified as disabled? Is there something about the transition process to “Secondaria II” schools that results in these wide differences? Similarly, why do some of these high schools that have a high percentage of disabled students also have a high percentage of students with special educational needs and those with a lower percentage of disabled students tend to have relatively few other students with special educational needs? There seems to be wider variability between the high schools, but more consistency within them.

Regardless of why, what impact does a relatively high or low concentration of students with disabilities and special educational needs have on school service delivery, faculty and students? Some US proponents of inclusive education have historically advocated for “natural proportions” in placement (Brown, Ford, Nisbet, Sweet, Donnellan, & Gruenewald, 1983), meaning that the percentage of disabled students in any given school or classroom should closely align with the percentage of students with disabilities in the local community; thus seeking to avoid congregating students with disabilities. Are the higher percentages of students with disabilities and other special educational needs in some schools: (a) simply a naturally occurring phenomenon, (b) a conscious, desired choice, or (c) a cause for concern and potential action? Are teenage students with disabilities staying in school until age 19, like most of their peers without disabilities? How many students with more severe disabilities are leaving school shortly after they reach the compulsory schooling age of 16 and transitioning to adult services options that are primarily disability-only settings?

One similarity between the US and Italy is that specialized supports often are provided based on the number of students identified as disabled. A positive feature of the role of the “*insegnante di sostegno*” (specialized support teacher) is that they are present in classes where students with disabilities are placed to support the entire classroom, not exclusively the students with disabilities. What are the implications of this model for students who have special educational needs but who are considered not disabled (e.g., DSA, learning disabled)?

Are they grouped in classes or schools with students who have disabilities in an effort to offer them support? If they are not in a class where an “*insegnante di sostegno*” is assigned, what supports are available to them? Are there different school or post-school (e.g., university, vocational) outcomes for students with special educational needs who are in classes where “*insegnante di sostegno*” supports are available because of the presence of a student with a disability versus when these same students are in classes where “*insegnante di sostegno*” services are not available to them? Ultimately, are more students getting labeled disabled in a benevolent attempt to provide them with access to otherwise unavailable supports?

6.2 Regular class placement

A couple of fundamental issues were raised by our simple data collection in reference to percent of time students with disabilities spend in the regular classroom. What constitutes 100% and what constitutes a regular class? It turns out these seemingly obvious questions are not quite as straightforward as they appear. Here are some ambiguous examples we encountered where respondents interpreted the same phenomena differently. Consider the example of a student with a severe disability who spends the first 25% of each typical school day at a local therapy center receiving specialized services (e.g., physiotherapy) before being transported to school. From the moment the student arrives at school midmorning she is in regular class with her nondisabled peers the entire time. What percent of time is she in regular class? Is it 75% because she is in class 75% of the time available to her classmates, or 100% because during the time she is at school she is in class the entire time?

None of the schools we visited had any designated special classes. Yet in some cases small groups of students, all with certified disabilities, were taught together for varying periods of time in separate rooms at school where no nondisabled peers were present or away from school (e.g., community recreation center). In other cases individual students were taught in a one-to-one format by either an “*insegnante di sostegno*” or assistant for varying periods of time in a separate room. Are these examples considered participation in regular class? If there are no designated special classes, is everything else considered regular class?

While there is no doubt that for decades Italy has been an international leader in providing access to regular class for students with disabilities as well students who would be considered disabled in other countries, the regular class inclusion statistics most commonly associated with Italy (e.g., 98% of students with disabilities in regular class) may not clearly represent what is happening in a way that can be consistently understood and readily compared across schools within Italy or internationally.

Is there any value to Italian students with disabilities, schools, or researchers in developing a more consistently applied operational definition of what constitutes regular class placement or inclusion rates? In our US-based research we have identified some modest discrepancies between what administrators and special education teachers reported about issues such as the extent to which particular students were included in regular class or taught by various personnel (e.g., teachers, special educators, assistants). This encourages us to collect data from multiple sources allowing for data triangulation and to explore the use of direct observational measures or other methods (e.g., student schedule review) to gain a more accurate understanding of regular class placement.

It is important to recognize that none of the aforementioned points address the qualitative issues of what happens in regular class or elsewhere. Some level of individualized or small group instruction outside the regular classroom may be appropriate for certain students, regardless of whether they have disabilities, special educational needs, or neither designation. When considering potential pull-out services or scrutinizing current ones, it is important to: (a) examine why the student is being pulled-out and for how long, (b) whether the support can be appropriately offered in the regular classroom, (c) whether the pull-out suggests needed changes in the structure or operation of the regular classroom, and (d) develop a plan to reintegrate students into the regular classroom as much as possible. Invariably, these considerations lead to qualitative questions about what is happening in the regular classroom. Are students with disabilities seated with their classmates participating in shared activities or they seated apart from their classmates with an “*insegnante di sostegno*” or assistant doing the same or different work? Do students with disabilities have appropriately adapted curriculum and instruction? Does the classroom teacher demonstrate shared ownership for the instruction of the student with a disability in the classroom? While these and other qualitative questions are beyond the scope of this study, it is vital to remain cognizant of the fact that while placement in a regular class is an important point of access, mere presence in the regular classroom does not ensure quality of curriculum, instruction, or supports necessary for a successful inclusive education (Giangreco, 2011).

6.3 Personnel utilization

A point of great interest to us during our time in Italian schools was the generally consistent practice of employing proportionally more “*insegnante di sostegno*” than assistants to support students with disabilities in general education classes. This practice, one we consider desirable, is the reverse of what is encountered in many inclusion-oriented schools in the US, where assistants substantially outnumber special education teachers. Our research has identified

the disproportionate utilization of assistants rather than more highly trained special educators as a major area of concern in inclusion-oriented US schools and a serious threat to equitable educational opportunities for students with disabilities (Giangreco, Broer, & Suter, 2011; Giangreco, Suter, & Hurley, 2011).

When American special educators, administrators, and parents hear that the average caseload size for an “*insegnante di sostegno*” in this sample is slightly over two students with disabilities, with minimal variability across schools, it would not be surprising if they immediately assumed that Italian schools have many more personnel resources than American schools, where double-digit caseloads are the norm in inclusion-oriented schools and the national caseload size for special educators in recent years have averaged around 15 (Giangreco, Hurley, & Suter, 2009). By using the calculated variable, special educator school density (i.e., ratio of special education teacher FTE to total school enrollment), we can see that on average inclusion-oriented schools in Vermont actually have slightly more special education teacher resources than the Italian schools in this sample. With a ratio of about 1:94, the Vermont schools have a slightly lower ratio than the average 1:100 ratio in this sample of Italian schools.

Although the descriptor, special educator school density, is not one used in the Italian context, it seems that the concept is one that has been considered, discussed, and applied in Italy at least since Law 449/1997 referred to a ratio of “*insegnante di sostegno*” to student population of 1:138. This ratio was not necessarily selected as a desirable ratio based on research, but was rather a number based on a national average of what existed in schools at the time the law was passed (Renzo Vianello, personal communication, October 2011). Our recent research suggests that special educator school density is significantly correlated with special educator self-efficacy ratings (Giangreco, Suter, & Hurley, 2011) and we find potential value in assigning special education teacher resources based on total school population, rather than exclusively based on the number of students identified as disabled -- this assumes a naturally occurring distribution of students with disabilities and other special educational needs. Variations in special educator school density may help explain perceived concerns expressed by Italian educators about the adequacy of resources to support inclusive placements of students with disabilities (Cornoldi *et al.*, 1998), especially in schools where the ratio substantially exceeds 1:100. Although cross-cultural comparisons are always fraught with complications (D'Alessio & Watkins, 2009), this ratio may allow for more accurate comparison of personnel utilization internationally, at least in countries that rely on some form of special education teacher role.

What do Italian researchers and practitioners think are the implications of the wide range of special educator school density ratios identified across schools

in this sample? How might the special education school density ratio variable be utilized by Italian schools ensure equitable access of “insegnante di sostegno” services for students with disabilities and those with other special educational needs? How do Italian researchers and practitioners interpret the similarities between the findings in the US and Italy that: (a) percent of students with disabilities and special educator school density are significantly negatively correlated, and (b) schools with very similar average caseload sizes for their “insegnante di sostegno” can have substantially different special educator school density ratios?

7. Conclusion

While inclusion-oriented schools around the world continue to advance their curricular and instructional practices, the service delivery parameters within which inclusive education is delivered remain vital to ensuring appropriate and quality schooling for students with and without disabilities. The variables presented in this study provide a set of foundational variables with the potential to impact practice and offer a starting point for international exchange and cooperation. More fully understanding the potential impact and importance of these service delivery variables is especially important during this era of global economic challenges. We hope to learn more about the meaning and potential implications of these data by inviting Italian researchers and practitioners to offer their analysis, interpretation, and insights. We look forward to extending the dialogue on these issues and continue to be grateful for what we have learned to date through the generosity of our Italian colleagues.

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