Lexington Public Schools

Student Services Staffing & Financial Assessment

November 13, 2010

The District Management Council
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Introduction

The District Management Council, in combination with its special education division, District and Community Partners, is pleased to provide our findings and conclusions per your RFP dated April 12, 2010.

Scope of Work

This study had a very specific scope of work as dictated by the RFP. The work centered on analyzing:

- Speech and language services
- Occupational therapy
- Resource rooms
- Counseling

In each area this project focused on:

- Staffing levels
- Financial resource allocation
- Pedagogical approach and philosophy

The Lexington Public Schools (LPS) provide an excellent education to students, including those with and without special needs. A hallmark of highly effective organizations is that they are self-reflective and embrace continuous improvement. This undertaking is proof of the district's commitment to building from strength. Nothing in this report attempts to classify practices as "good" or "bad" but rather "current state" and "the next step forward."

Research methods

This project was a very large undertaking in a very short period of time. The staff of the Lexington Public Schools worked extremely hard during a very busy time of year to make this study a reality. We wish to thank everyone who participated in our interviews, guided us on our classroom visits, and provided the large volume of data. Moreover, without the long hours and weekend work of special education administrators, this study would not have been possible.

The research included:

1. Interviews with over 100 people (special education teachers, preschool staff, general education teachers, OTs, speech and language therapists, counselors, principals, curriculum leaders, special education administrators, the special education director, the superintendent and parents).

2. Visits to each type of district wide special education program for students with significant needs. If the program has multiple locations, multiple visits were made.

3. Visits to resource rooms and inclusion classrooms at the elementary, middle, and high school levels. Modeled after a principal's walk through, each visit included observations and brief conversations, if not disruptive.

4. The collection of staffing, financial, scheduling, and IEP data, including:

    - Weekly schedules prepared by each staff member in speech and language, OT, counseling, and resource room teachers. All but 3 staff members provided their schedules.
    - Budget information
    - Data from all IEPs that include any of the targeted services
    - Information from HR concerning staff credentials
    - Other data required to fulfill the RFP

5. Benchmarking analysis using multiple points of comparison. LPS data was compared to our proprietary national database of like communities, our custom designed database of like communities in the state, and our best practice library from districts that have closed the achievement gap.

6. It should be noted that data has been adjusted to reflect part-time status.

A note about the data collected

Most of the data provided appears to be clean and accurate. One exception was the IEP data in SEMS Tracker. Typically IEP data requires some "scrubbing" to aid in analysis. For example we expect that minutes might be entered as min., min, minutes or simply 30. The types of services provided also tend to have different names for the same service, such as OT, occupation therapy, OC therapy, etc. These variations are easily unified for analysis.

The data in the LPS database was not a reliable source to conduct one particular analysis. The data has 745 different names for services when 20 to 50 is more typical. Frequency of service was described in over 2,000 different ways, over 2,000 services weren't assigned to a school, nearly 1,000 services were not assigned to a provider, and 40% of students receiving speech and languages services weren't assigned to a therapist.

This did not impede the vast majority of our work since we could convert the teacher-supplied schedules into an electronic database.

The district had already started to take steps to address this issue, and is well on its way to having data that is easier to analyze.

1. Speech and Language Services

1a. Prevalence of service

In LPS, 460 students receive speech and language services. This is 7.4 % of students in the district and 47.2 % of students with IEPs. This is a typical level for districts in Massachusetts.

Level	Enrollment	Students receiving speech and language services	Percent of students receiving speech and language services
Elementary	2,757	283	10.3%
Middle	1,496	92	6.1%
High	1,970	85	4.3%
Total	**6,223**	**460**	**7.4%**

On a percentage of enrollment basis, 60% as many middle school students receive speech and language therapy services as elementary students and 70% as many high school students receive speech and language therapy services as middle school students. This means that services are prone to continue into the older grades. This is an above average continuation rate for districts in the state.

	Elementary to middle	Middle to high
Continuation Rate	60%	70%

1b. Staffing levels

The Lexington Public Schools employs 19.1 FTE speech and language therapists. This is an unusually high number. All speech and language therapists are certified, none are assistants. The district does employ assistants for occupational therapy. Nearly all feedback from the interviews was very positive about the skills and professionalism of the speech and language staff.

- Staffing is 1.8 times more than the median of like communities nationwide.
- Staffing is 1.4 times more than the median of like communities in Massachusetts.

1c. Direct service with students

Speech and language therapists perform many roles, including:

- Direct service with students
- Testing for initial and 3 year re-evaluations
- Report writing
- Attending IEP meetings
- Travel between buildings
- School duties

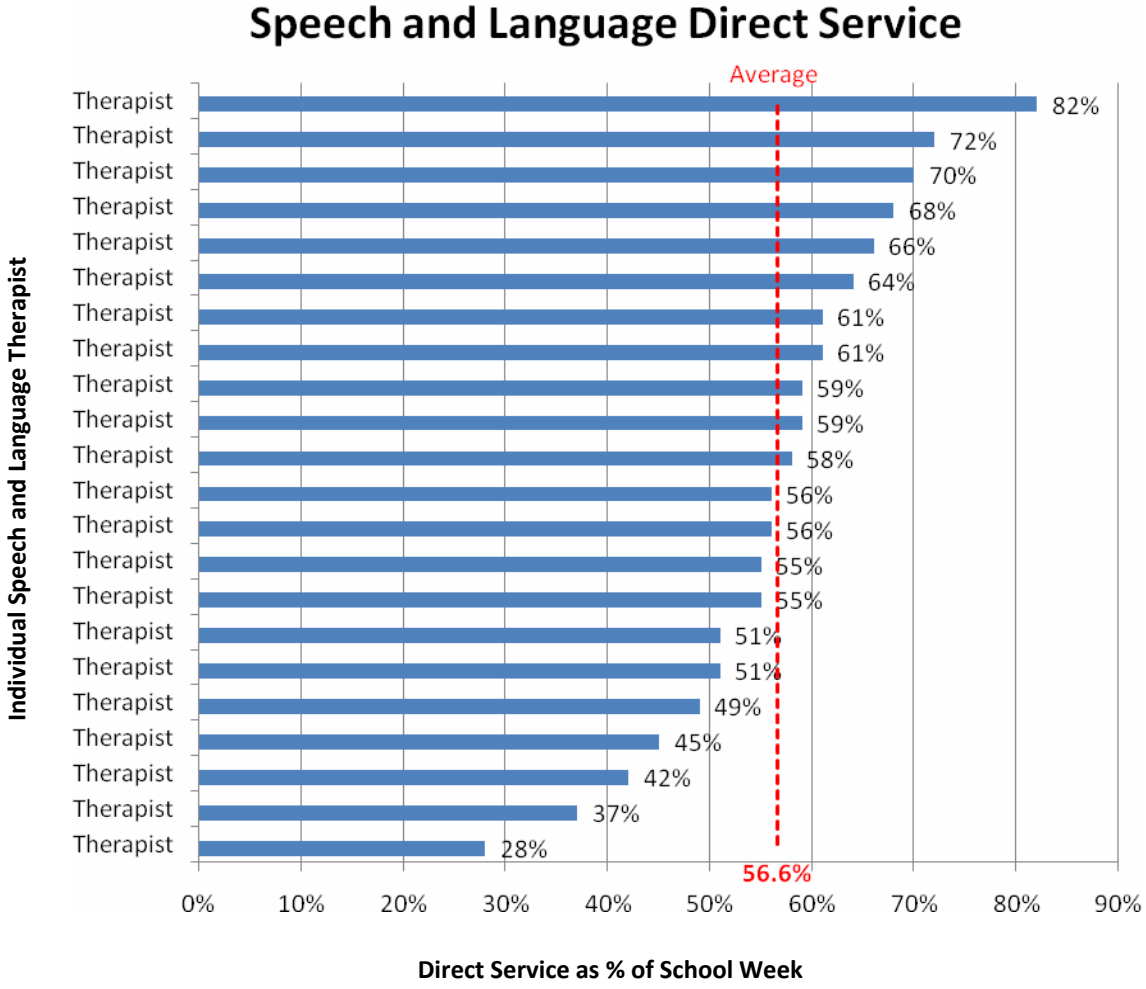
- Lunch bunch
- Consultations
- Parent communications
- Additional tasks

Few districts have set expectations for how much time each week speech and language therapists should spend with students, although they almost always have very hard and fast expectations for general education staff.

The average full-time speech and language therapist in LPS spends 56.6% of their week with students. The average, however, does not tell the whole story. Some spend much more time, while a few spend much less. On average, speech therapists are not providing direct service for nearly 3 hours/day. The speech and language staff, however, expressed that they feel their schedules are very full, but others in the district expressed concern that some had very "light" schedules.

To help gauge direct time with students:

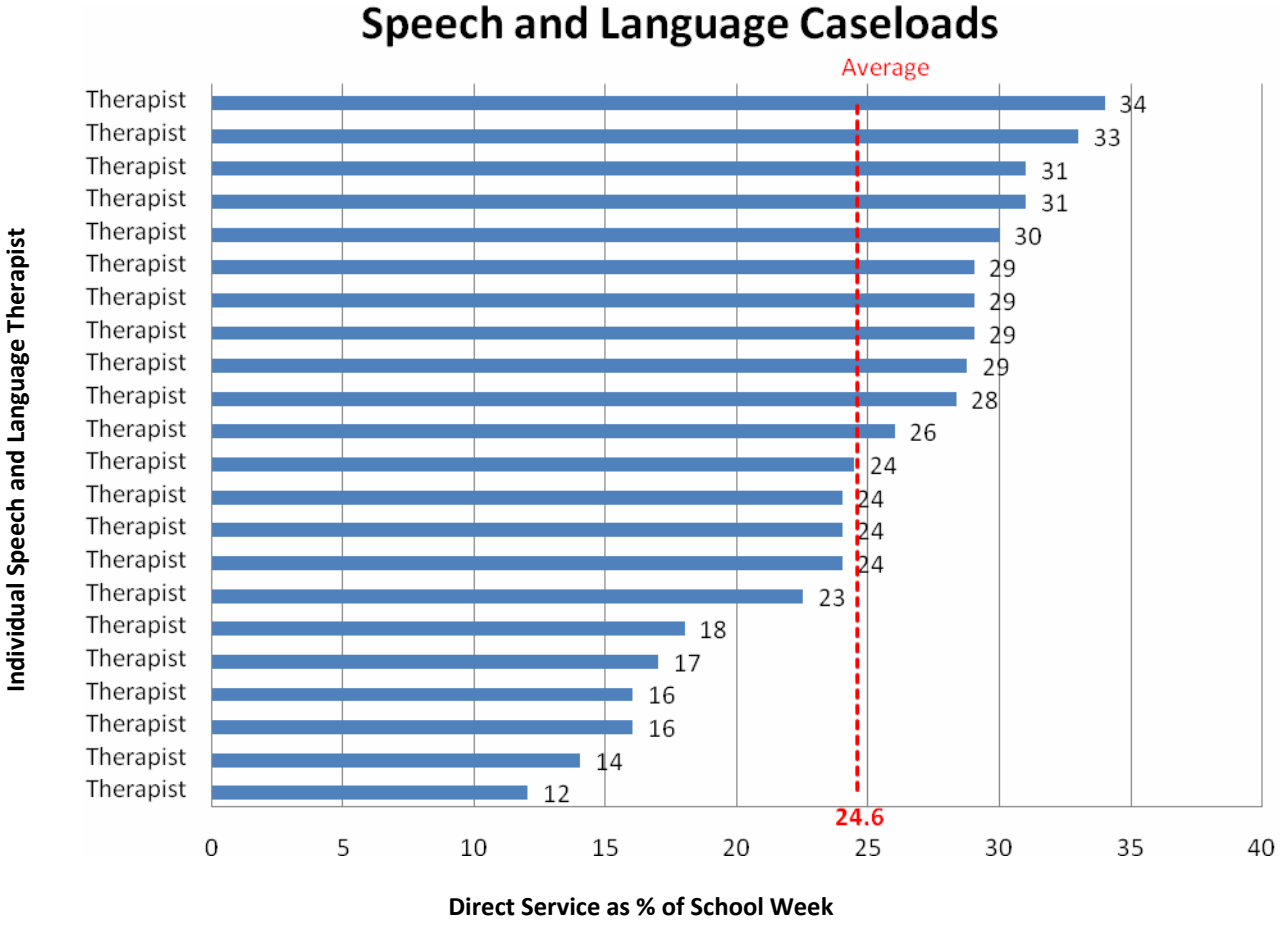
- The typical elementary classroom teacher across the country spends 80-85% of the school day providing direct instruction with children.
- ASHA (the American Speech and Hearing Association) reports that the national median for direct service for a full-time school-based therapist is 75% of the school day. This is almost 1/3 more than the LPS average.

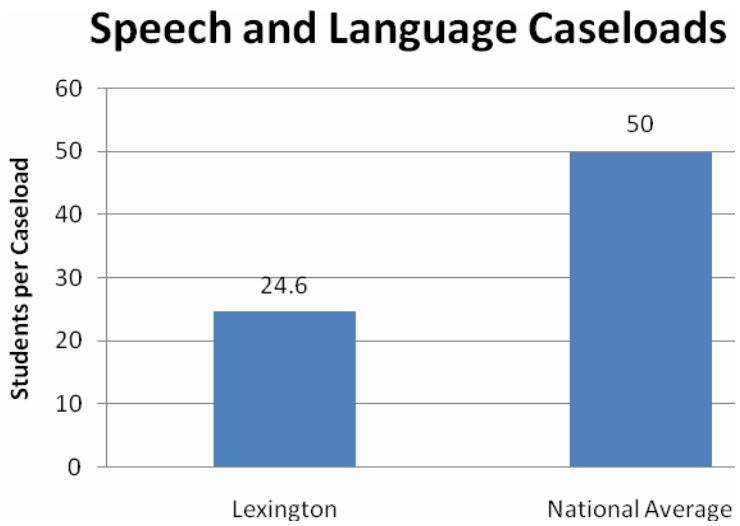


1d. Caseload

Full time speech and language therapists in LPS have an average caseload of 24.6 students. This is low. The average, however, does not tell the full story. A number of therapists have much higher caseloads and an even larger number have much smaller caseloads. All figures are adjusted if less than a 1.0 FTE position.

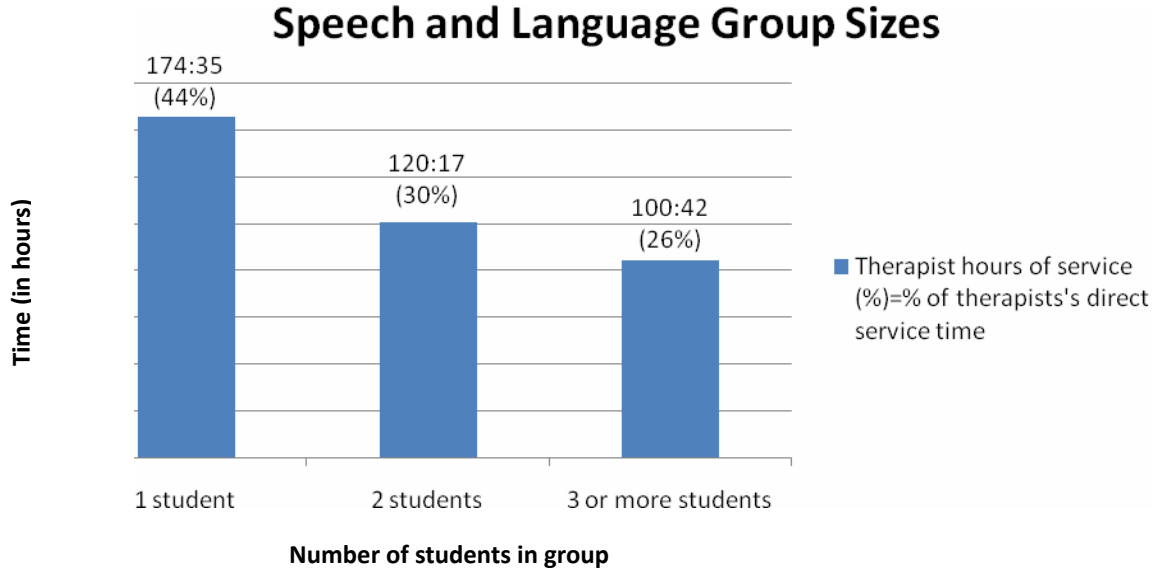
- ASHA, the speech and language professional organization reports that the median caseload of a school-based full-time speech and language therapist is 50 students nationwide (Based on a 2008 ASHA schools survey).
- ASHA, which is an advocate for speech and language therapists, recommends caseloads of 40 typical students or 25 severe needs students (Based on a 2002 ASHA Workload Analysis Technical Report). Few districts have adopted these guidelines.
- Occupational therapists in the district see 13% more students on average than speech therapists.


Speech and Language Caseloads
Average
Therapist 34
Therapist 33
Therapist 31
Therapist 31
Therapist 30
Therapist 29
Therapist 29
Therapist 29
Therapist 29
Therapist 28
Therapist 26
Therapist 24
Therapist 24
Therapist 24
Therapist 24
Therapist 23
Therapist 18
Therapist 17
Therapist 16
Therapist 16
Therapist 14
Therapist 12
24.6
0 5 10 15 20 25 30 35 40
Individual Speech and Language Therapist
Direct Service as % of School Week


Speech and Language Caseloads
60
50
40
30
20
10
0
Students per Caseload
24.6
50
Lexington
National Average

1e. Group size

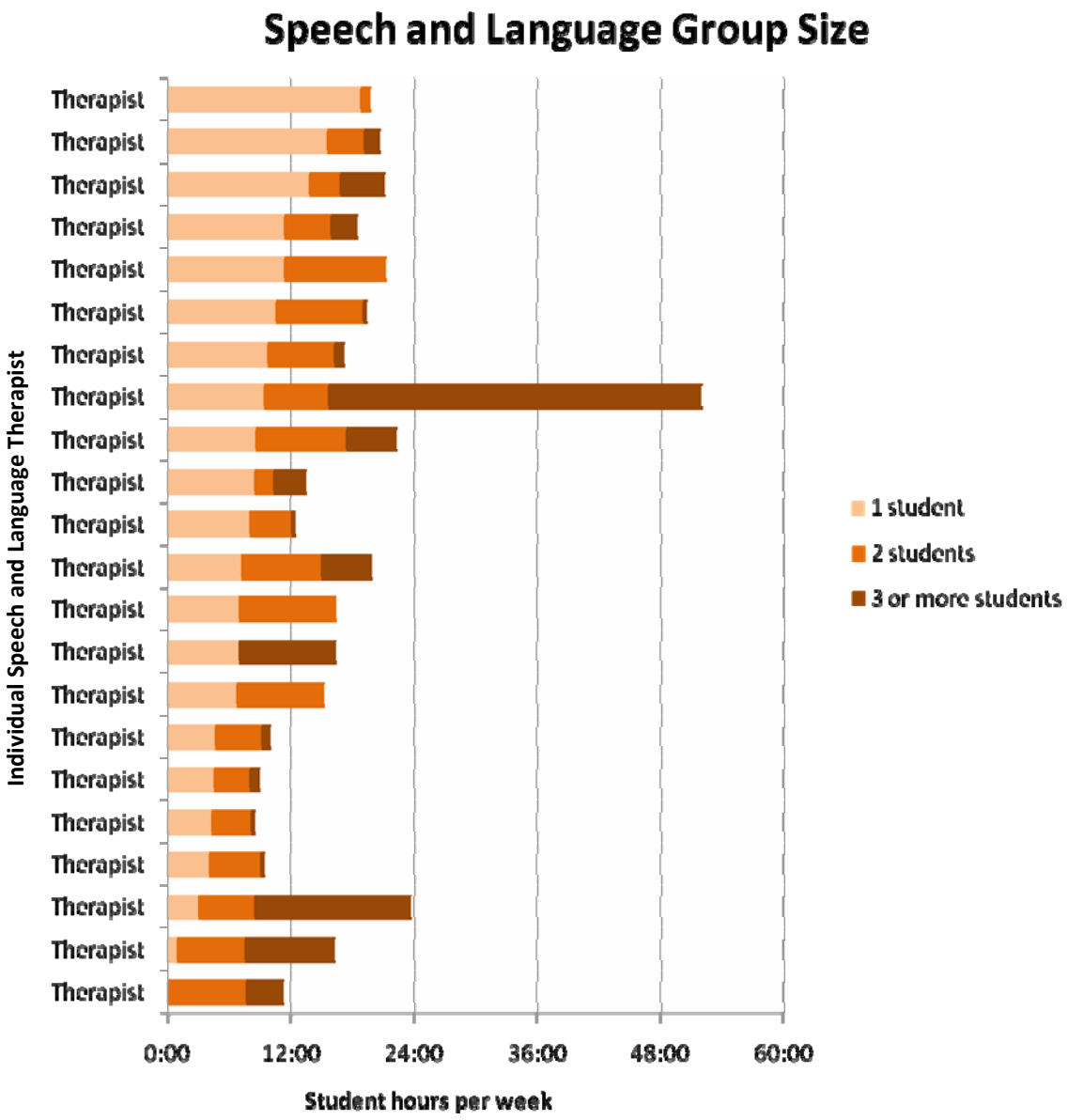
Most students in Lexington receive speech and language services individually or in groups of 2. Nearly 75% of therapist time is spent in sessions of 1 or 2 students. In fact, 44% of all therapist time is in 1:1 sessions.



The likelihood of 1:1 service seems to depend more on the therapist than on student need. There is a very wide variation by therapist. Based on our interviews, there are no clear guidelines in the district concerning group size (or other aspects of speech and language).

Group size is a topic where common practice does not align with best practice. The pattern of very small groupings is not uncommon for affluent suburban communities. It can, however, be hard to justify based on student need. For example:

- Less than 10% of the IEPs (based on SEMS Tracker) require 1:1 service.
- The National Reading Panel recommends groups of 3-5 students for reading remediation, which is very similar to language services.
- Social pragmatics is more realistic in groups of 4-5 students.
- Our work with leading universities suggests that most students would be well served in groups of 2-4 students.



High need students and average group size

Serving students with significant communication needs is a special case for speech and language groupings. On the surface, it could appear that these students will require individual therapy. In fact, best practice methods suggest that this is not the case, as based on recommendations from an expert consultant at the MGH Institute of Health Professions (Speech and Language Literacy Center).

In some districts, students with severe communication needs are served 1:1 for a few hours a week in a pull-out setting. If a student needs such intensive instruction, such as young students on the autism spectrum in substantially separate classes then it is important that speech and language be integrated into their core instruction.

This best practice is achieved through in-class group instruction for intensive need populations, with the participation of the classroom teacher and a speech and language therapist. This reflects the importance of speech and language, allows the classroom teacher to reinforce the lessons all day long, increases the frequency of service, provide a more "real world" setting for the student, and increases communication with peers. This model provides quite a few benefits for students and it is also cost effective.

The following hypothetical example compares serving 8 high needs students in two classrooms. Group push-in provides 50% more instructional time per student at 63% less FTE.

Example: High Needs Classrooms

	Pull-out	Whole class push-in	Comparison
Students	8	8	
Classrooms	2	2	
Sessions/ week	2	3	
Service for each student (per week)	2	3	50%
Therapist hours required (per week)	16	6	-63%

Note: assumes each session is 1 hour

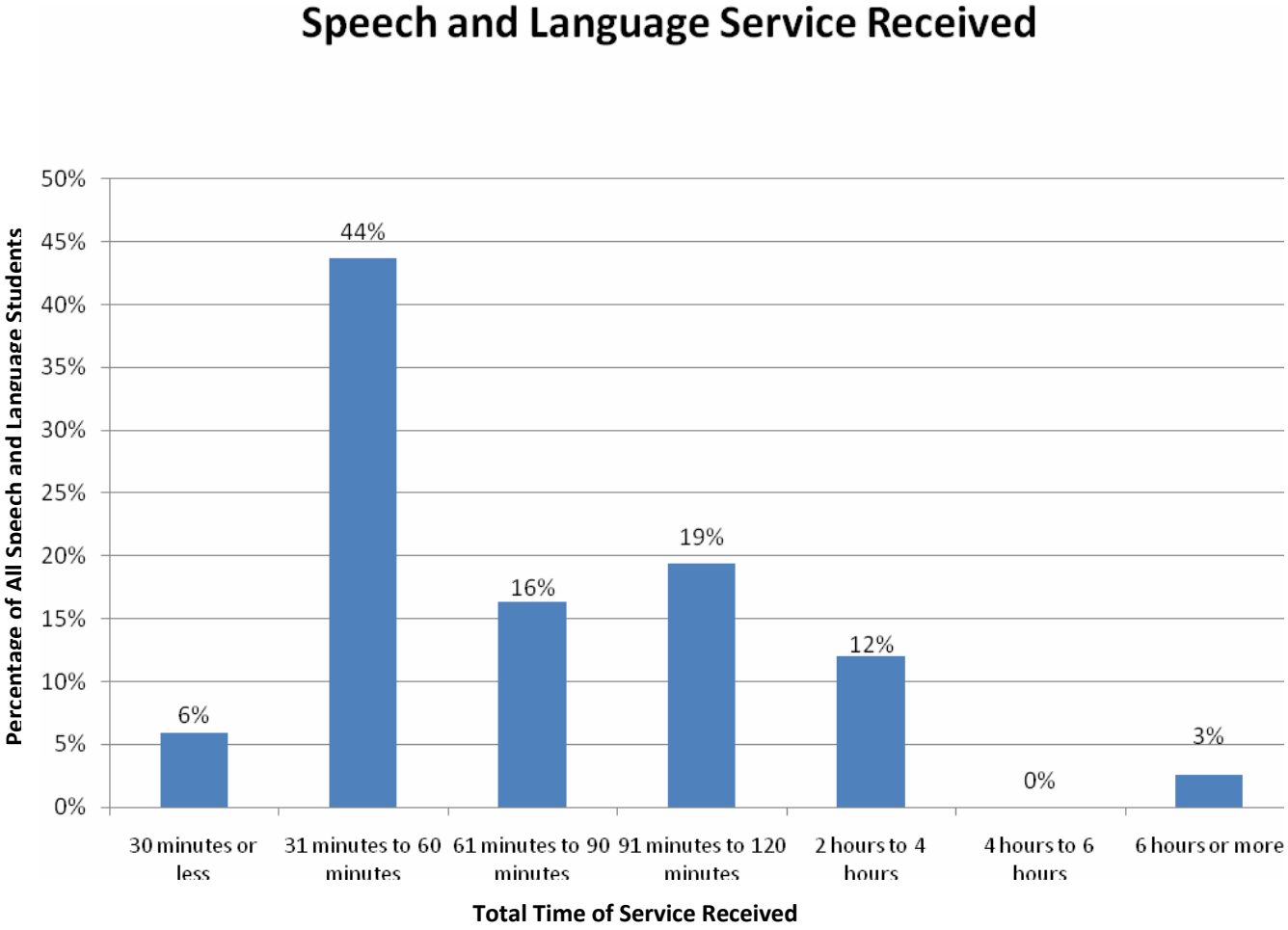
Scheduling and group size

Scheduling considerations can decrease average group size. Generally speaking, speech and language therapists do not pull students from math, English, and reading. Many buildings do not have a coordinated master schedule so there isn't a plan for when math and language arts are taught. Each therapist must create their own schedule from limited available slots, negotiate student availability with other special education staff and at times beg general education teachers for some flexibility. This does not optimize speech and language groupings. A more centralized (building or district level) approach to scheduling, aided by software could be very beneficial in achieving optimal groupings.

1f. Amount of service

Like many aspects of speech and language, the district does not have guidelines for how much service is warranted for a given level of need.

- In Lexington only 50% of students receive an hour or less of speech and language service each week.
- 1/3 of students receive more than 90 minutes of service a week.
- During our interviews, some staff indicated that speech and language therapists play an expanded role in written language and reading and are concerned that they may have strayed beyond their core role.



Options and financial implications

The significant variation in work load and service delivery model for each therapist indicates that few guidelines exist. The very significant difference in actual workload for special education therapists and general education teachers reinforces the need for district wide guidelines to increase equity and guide the allocation of limited resources.

Lexington is a well above average district with its own culture, expectations, and pressures. This section of the report will outline a range of options for consideration and their financial impact. It is up to the district leadership to decide what is appropriate for the Lexington Public Schools.

Direct service options

Setting an expectation for direct service will have a number of benefits. It creates equity between staff, it allows for more thoughtful staffing, and it can significantly impact the budget. Because this factor impacts therapists, but not students, no changes to any IEP is required to implement.

Level of direct service	Average % direct service	FTE	Financial opportunity
Current baseline	57%	19.1	N/A
All therapists below district average increased to current district average	61%	18.2	$67,500
All therapists currently below 80th percentile in district increased to current 80th percentile	67%	16.9	$165,000
Match national median	75%	15.4	$277,500
Match typical elementary general education teachers (national norm)	82.5%	14.0	$382,500

Note: Assumes annual cost of $75,000 (including benefits) per FTE

Some districts have some staff do all the testing, and other do only direct service.

Caseload options

Setting a guideline for caseload reflects that each student requires additional report writing, IEP meetings, and other work. Caseload options are often developed in conjunction with direct student service expectations. The following options are provided as standalone decisions to help gauge the impact of each option, but best practice would be to pair direct service with caseload guidelines. Nationally, some districts have adopted a central testing team so that each added student does not overburden the therapists.

Caseload	Average caseload	FTE	Financial opportunity
Current baseline	24.6	19.1	
All therapists below district average increased to current district average	28	16.7	$180,000
All therapists below 80th percentile in district increased to current 80th percentile	30	15.1	$300,000
Match state median	50	9.2	$742,500
Match national median	53	8.7	$780,000

Group size options

On its own, changing the average group size has the greatest impact on overall staffing needs. It can, however, quickly increase the therapist's caseload. Some, but not all, IEPs would need to be modified, depending on decisions made. A central testing team can help minimize the impact of the larger caseloads that come with larger group sizes.

	Average group size	Caseload	FTE	Financial opportunity
Current baseline	1.7	24.6	19.1	
75% of 1:1 service moves to groups of 2 students	2.2	33	14.4	$352,500
Set average group size to 2 students	2	30	15.9	$240,000
Set average group size to 2.5 students	2.5	37	12.7	$480,000
Set average group size to 3 students	3	44	10.6	$637,500

Note: Data includes preschool students with IEPs.

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2. Occupational Therapy

Many of the systems issues concerning speech and language also apply to occupational therapy as well. OTs are asked to test students, determine if a disability exists, set the amount of service, and build their own schedules. Few checks and balances are in place.

2a. Prevalence of service

In LPS, 268 students receive OT services. This is 4.3% of students in the district and 27.5% of students with IEPs.

Level	Enrollment	Students receiving occupational therapy services	Percent of students receiving occupational therapy services
Elementary	2,757	223	8.1%
Middle	1,496	41	2.7%
High	1,970	4	0.2%
Total	**6,223**	**268**	**4.3%**

On a percentage of enrollment basis, 34% as many middle school students receive occupational therapy services as elementary school students and 7% as many high school students receive occupational therapy services as middle school students.

	Elementary to middle	Middle to high
Continuation Rate	34%	7%

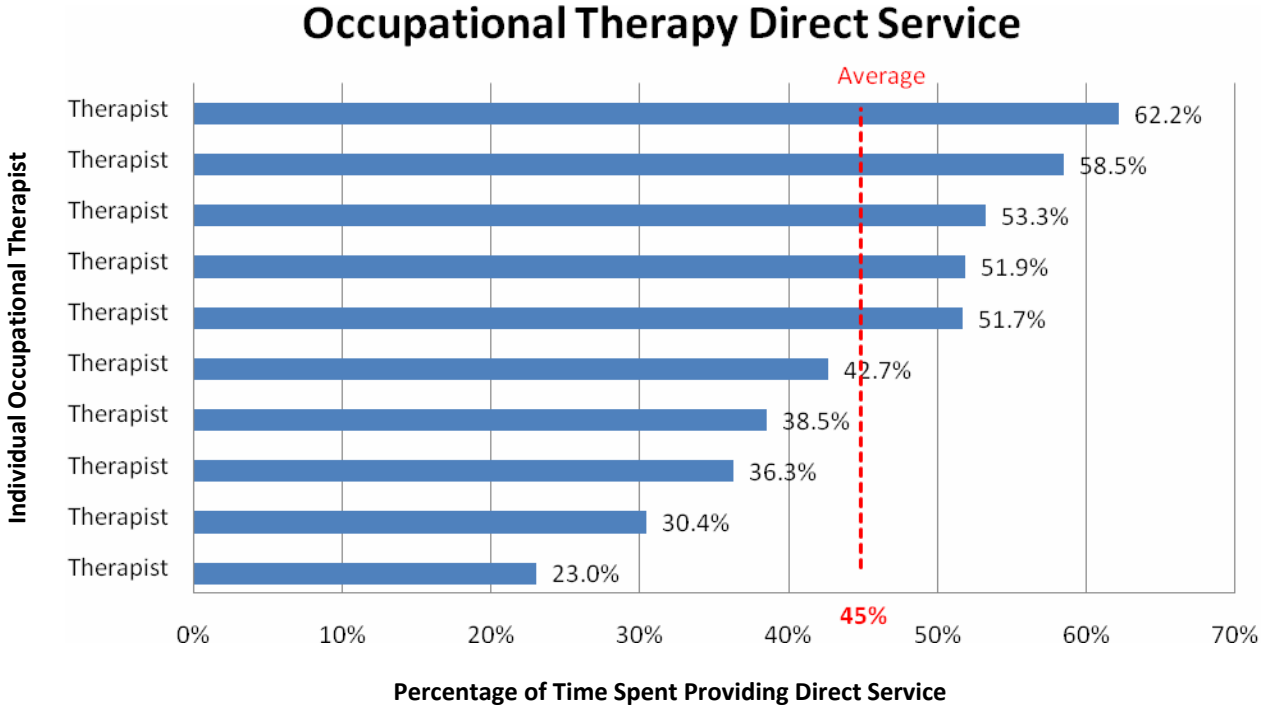
2b. Staffing levels

The Lexington Public Schools employ 9.3 FTE occupational therapists. The district uses both certified OT's and OT assistants.

- Staffing level is 2.6 times more than like communities nationwide.
- Staffing level is 1.6 times more than like communities in Massachusetts.

2c. Direct service with students

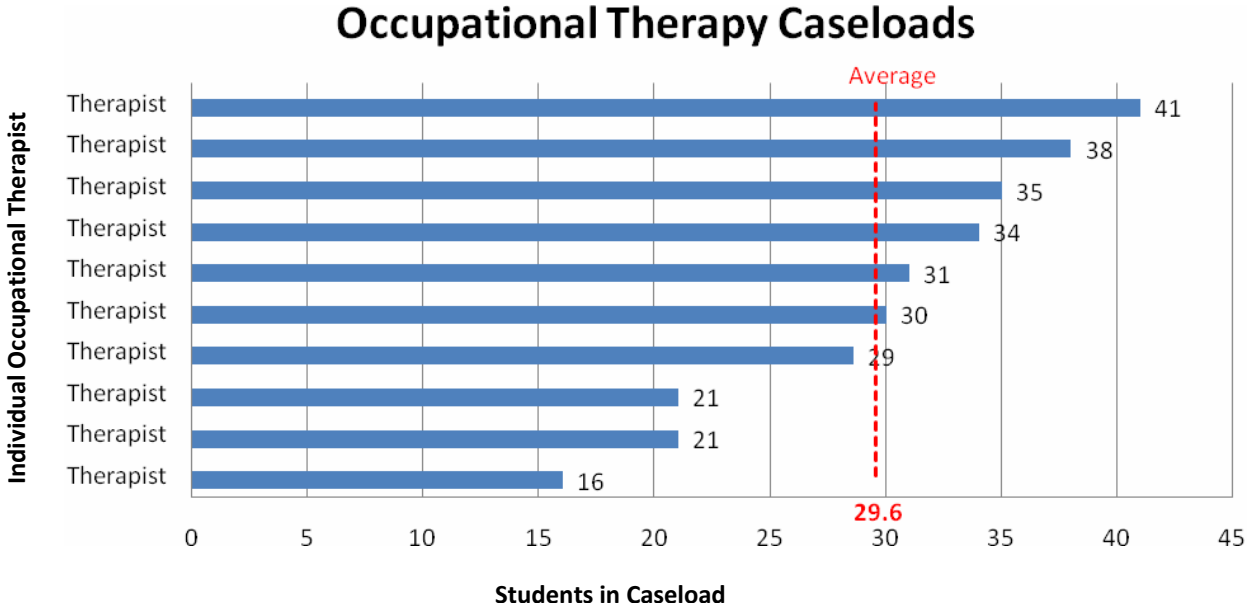
The average full-time occupational therapist (including COTAs) in LPS spends 45% of their week with students. Again, the average does not tell the whole story. Some spend much more time, while a few spend much less. On average, occupational therapists are not providing direct service for over 3 hours/day.



Note: Includes certified occupational therapy assistants (COTAs)

2d. Caseload

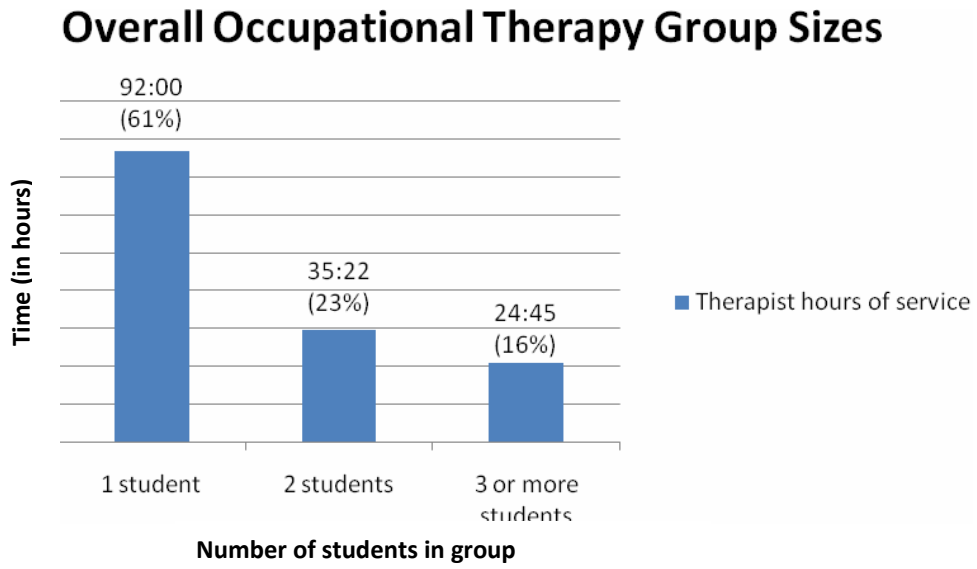
Full time occupational therapists in LPS have an average caseload of 29.6 students. The average, however, doesn't tell the full story. A number of therapists have much higher caseloads and a few have much smaller caseloads. All figures are adjusted if less than a 1.0 FTE position.



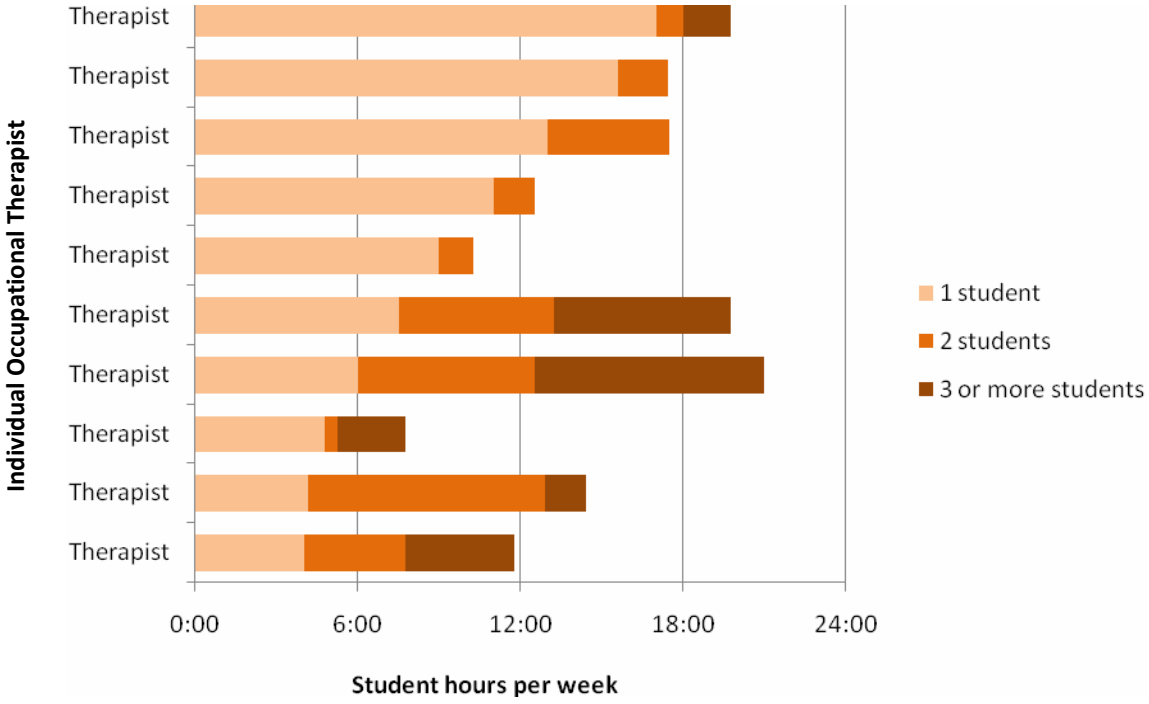
Note: Includes certified occupational therapy assistants (COTAs)

2e. Group size

Most students in Lexington receive OT services individually. Over 60% of therapist time is spent in sessions with 1 student.



How many groups are 1:1 or not seems to depend more on the therapist than on student need. There is a very wide variation by therapist. Based on our interviews, there are no clear guidelines in the district concerning group size (or other aspects of OT).



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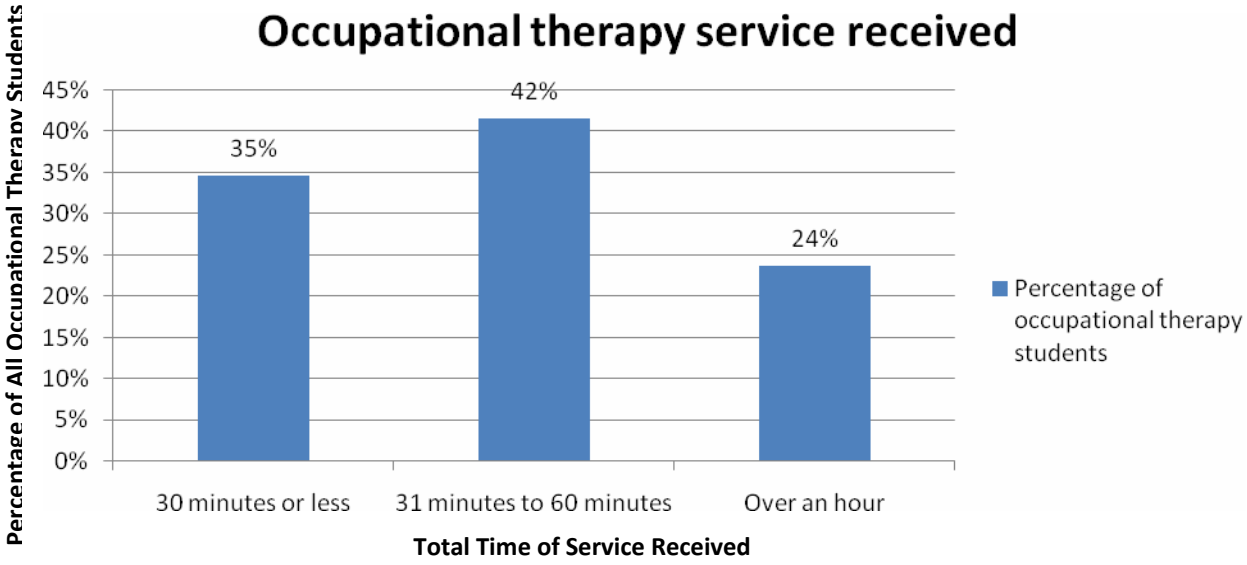
2f. Amount of service

Like many aspects of OT, the district does not have guidelines for how much service is warranted for a given level of need.



Note: Each bar represents the % of students who receive a given amount of service. For example, 35% of students who receive OT get 30 minutes or less each week.

Options and financial implications

The significant variation in work load and service delivery by each therapist indicates that few guidelines exist.

Lexington is a well above average district with its own culture, expectations, and pressures. This section of the report will outline a range of options for consideration and their financial impact. It is up to the district leadership to decide what is appropriate for the Lexington Public Schools.

Direct service options

	Average % direct service	FTE	Financial opportunity
Current baseline	45%	9.3	
All therapists below district average increased to current district average	50%	8.9	$30,000
All therapists currently below 80th percentile in district increased to current 80th percentile	59%	8.3	$75,000
Match national median for speech and language therapists (no similar data available for OT)	75%	6.9	$180,000
Match elementary general education teachers	82.5%	5.5	$285,000

Caseload options

	Average caseload	FTE	Financial opportunity
Current baseline	29.6	9.3	
All therapists below district average increased to current district average	34	8.2	$82,500
All therapists below 80th percentile in district increased to current 80th percentile	36	7.7	$120,000
Match state median for speech and language therapists (no similar data available for OT)	50	5.5	$285,000
Match national median for speech and language therapists (no similar data available for OT)	53	5.2	$307,500

Group size options

	Average group size	Caseload	FTE	Financial opportunity
Current baseline	1.6	29.6	9.3	
75% of 1:1 service moves to groups of 2 students	2.8	45	6.1	$240,000
Set average group size to 2 students	2	37	7.4	$142,500
Set average group size to 2.5 students	2.5	43	6.4	$217,500
Set average group size to 3 students	3	46	6.0	$247,500

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3. Resource Room

This portion of the study relates to the role of special education teachers in providing academic support to students with IEPs. The term *resource room* is a bit misleading. Much of the support given is not provided in the resource room but rather the special education teacher works with students in the general education classroom (push-in or inclusion model). This section excludes substantially separate classes.

To analyze the role of special education teachers in providing academic support it is best to use a systems-thinking lens when looking at the issue. There are a number of important interrelationships, including:

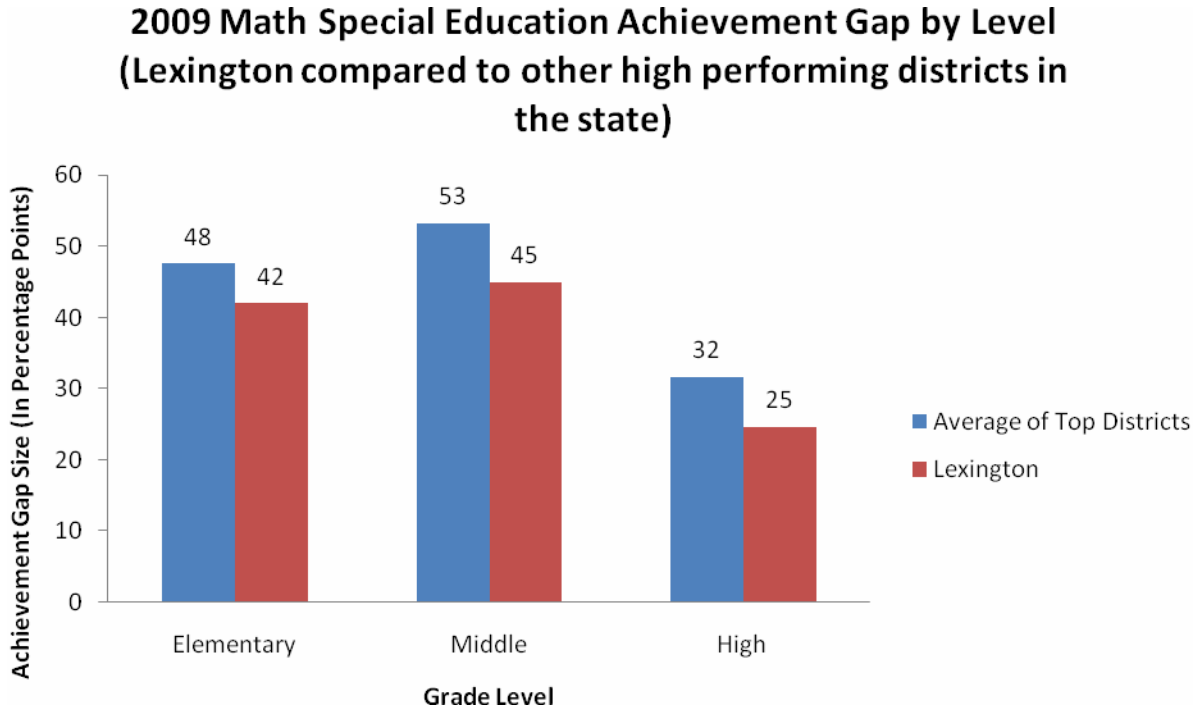
- These academic support teachers also have a significant role in the IEP process. They typically conduct half of the required testing for initial and three year IEP evaluations and attend all IEP meetings for students on their caseload.
- In many schools, paraprofessionals are directed by these special education teachers.
- The work, role, and staffing levels of special education teachers should not be discussed absent the context of general education efforts and best practices.

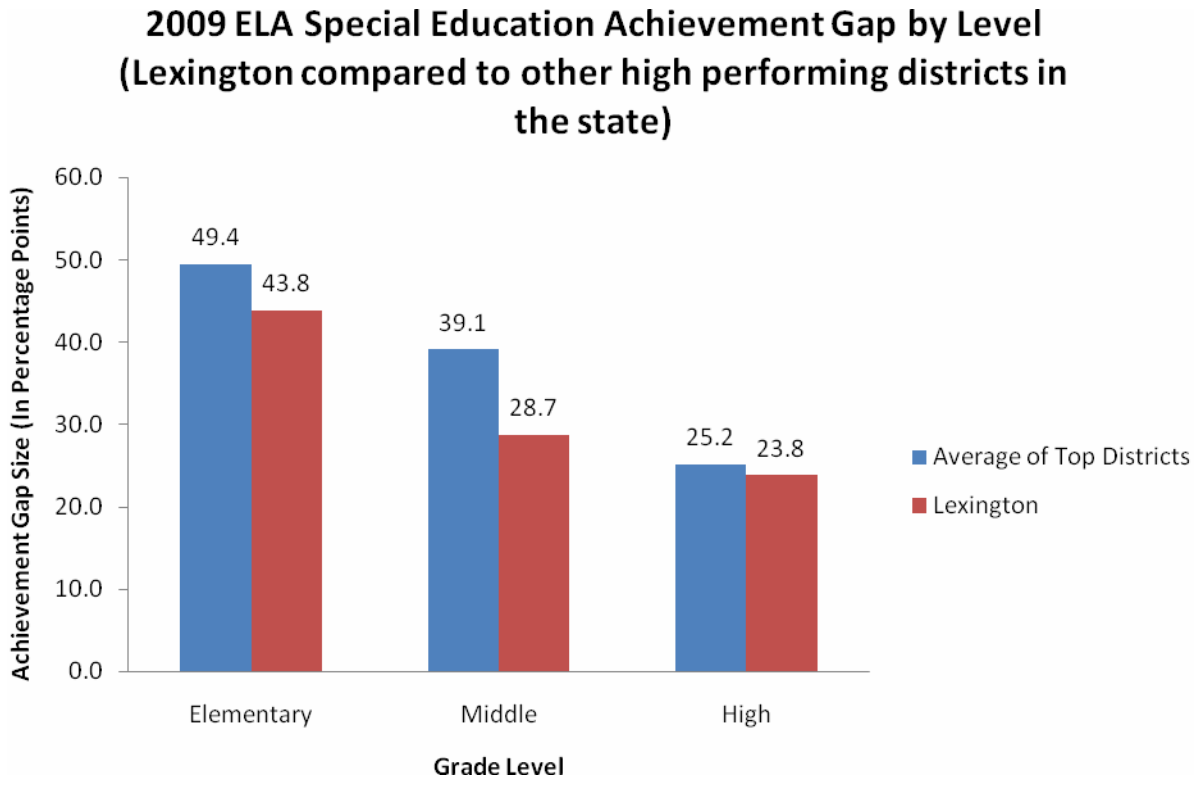
3a. Achievement gap

The role and staffing of resource room teachers is best discussed in the context of student achievement.

Both general education and special education students in Lexington achieve at very high levels. All comments should be taken in the context of continuous improvement. The achievement gap in Lexington is smaller than that in other high-performing districts throughout the state. This should be a source of pride for the district. While the achievement gap is smaller than that in many districts, it is still large in absolute terms.

- The special education achievement gap in Lexington is smaller than that in all other high-performing districts in Massachusetts.
- The special education achievement gap decreases at the higher grades.
- The special education achievement gap is on a similar scale as the racial achievement gap.





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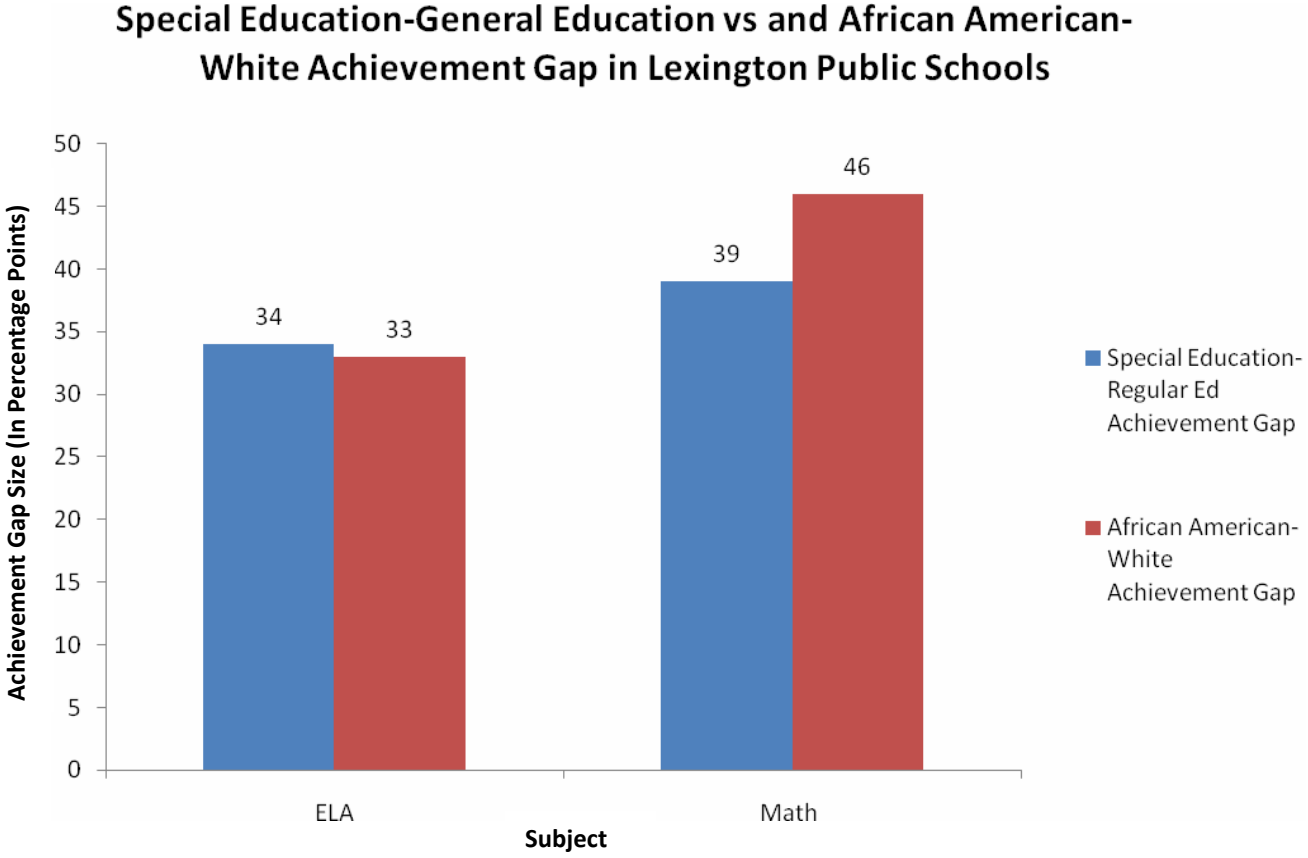
The achievement gap for students with special needs is of a similar magnitude with the achievement gap between African American and white students in the district.

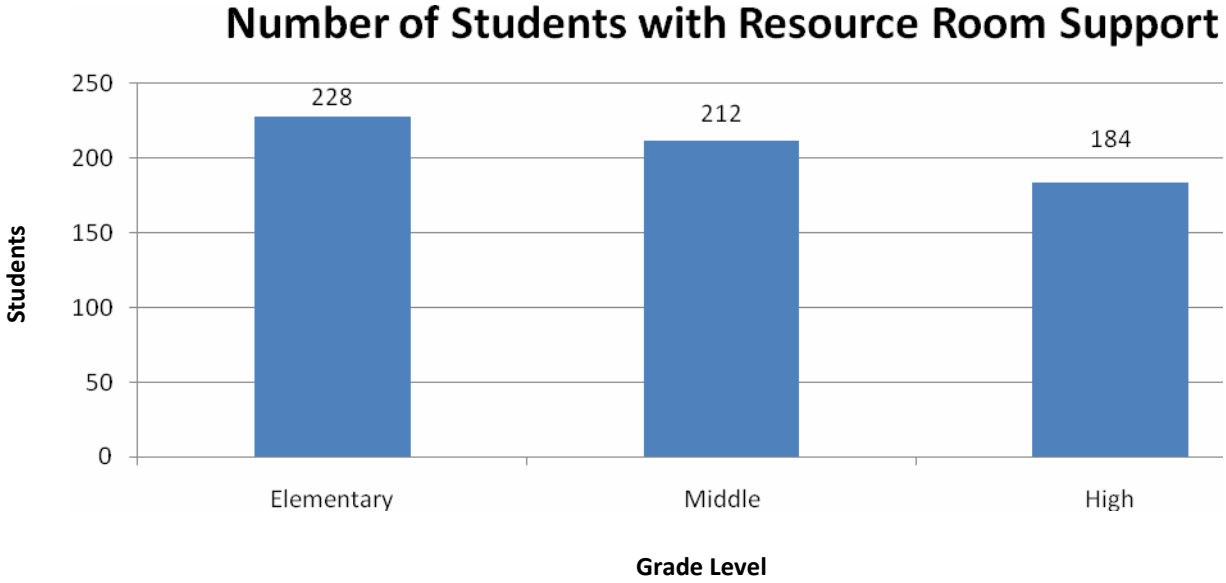


3b. Prevalence of service

In LPS, 624 students receive resource room support services. This is 10.0% of students in the district and 64.1% of students with IEPs.

Level	Enrollment	Students receiving resource room services	% of students receiving resource room services
Elementary	2,757	216	7.8%
Middle	1,496	224	15.0%
High	1,970	204	10.3%
Total	**6,223**	**644**	**10.3%**

Special education resource room staff work at all grade levels, but with more children at the secondary level than the elementary level. This can be problematic, since the content is more complex at the secondary level, and not all resource room staff have extensive content expertise.



3c. Staffing levels

The Lexington Public Schools employ 43.8 FTE resource room teachers. This does not include staff assigned to substantially separate programs.

3d. Direct service with students

Special education teachers have a guideline of 24 students on their caseload, but they do not have any contractual or even informal expectation for how much of the week they spend with students.

One important point to note is that nearly all the resource room staff expressed (passionately) the concern that they were not actively supervised and are "left to their own to figure out what to do." They don't feel part of the general education curriculum and instruction world, although this has changed a bit recently. They indicated that building principals often consider them "part of special education and thus we do not really report to them." They also believe central office special education leadership is overwhelmed with "fire fighting legal cases, preventing legal cases, assisting the more needy students in substantially separate classrooms, working with high need parents, and ensuring compliance. They just do not have enough time left for us." Our interviews with other staff members suggest that the special education teachers have correctly summarized the situation.

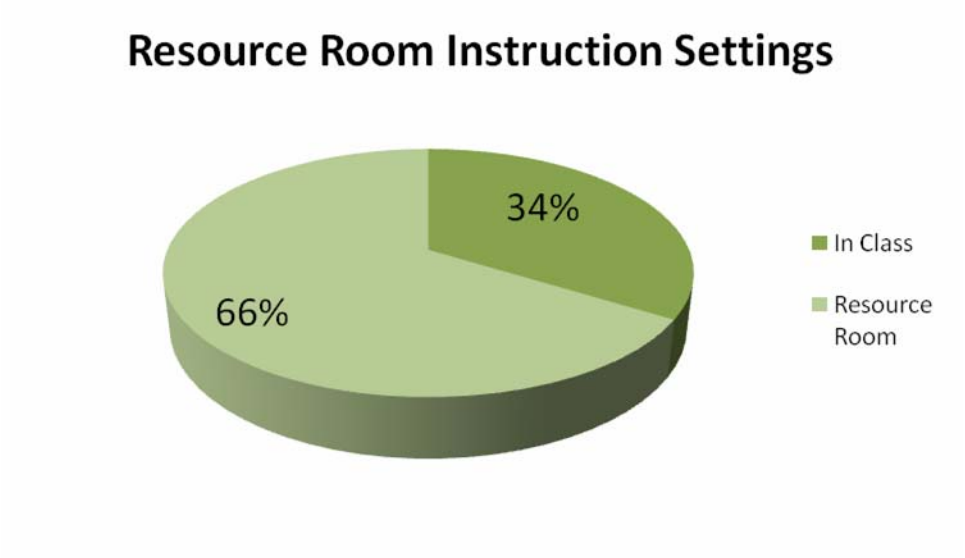
This level of independence has required each resource room teacher to independently decide:

- Whether to provide services in class (push-in) or pull-out students to the resource room.
- What curriculum to use (general education, self developed or separately purchased).
- What to teach (review of general education material, skills, homework help, test prep, or study skills).

Based on the interviews, there is a wide variation in the decisions made and no system beyond professional judgment to gauge the effectiveness of resource room services. Interview participants

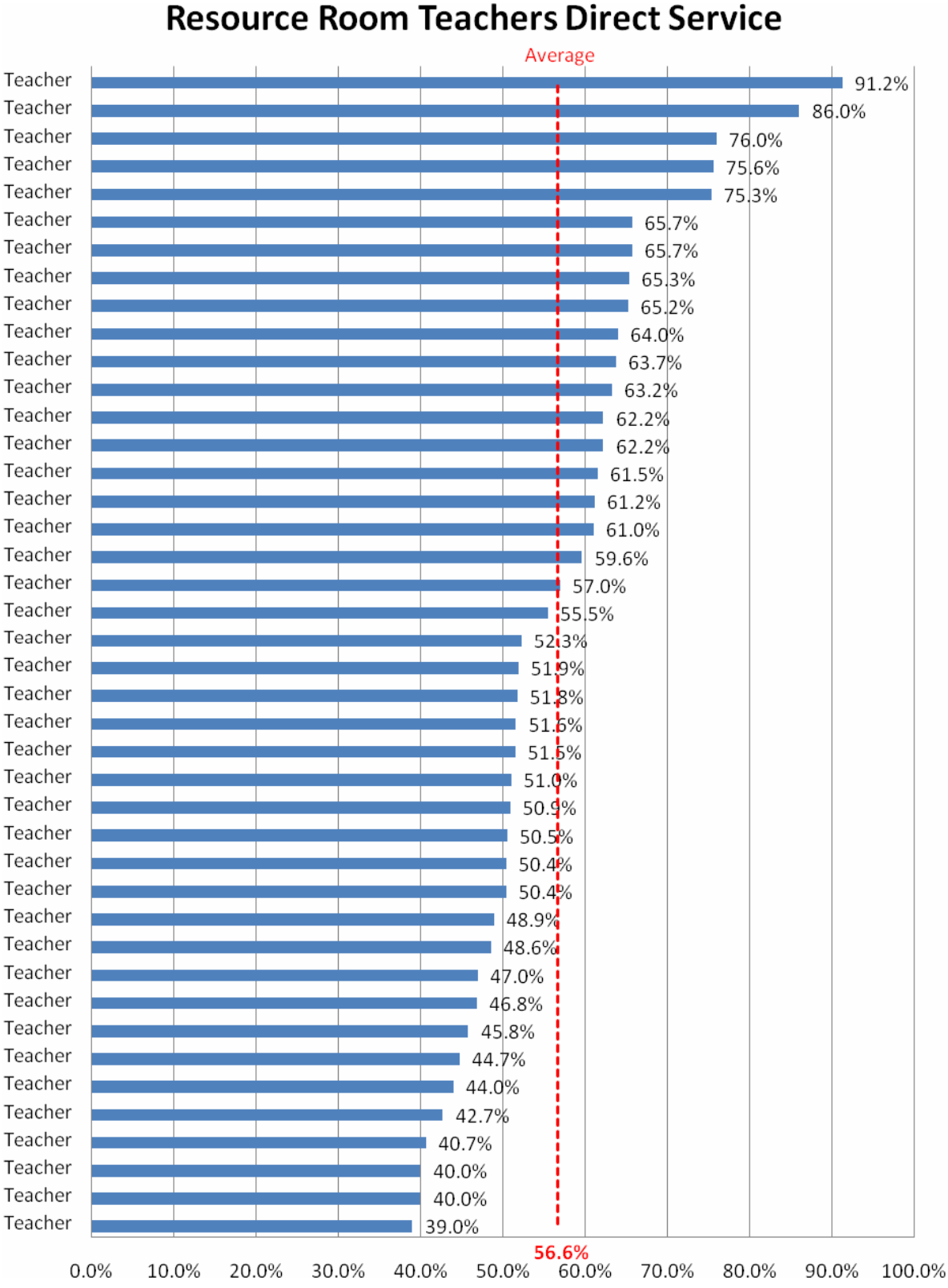
indicated that most pull-out support was homework help or skills not directly connected to classroom instruction.

One third of "resource room" support is actually provided as push-in/inclusion. This has significant staffing, scheduling, and pedagogical ramifications. It does not appear that this is district directed based on a theory of action as much as evolution based on teacher preference.



The wide variation in what each teacher does is mirrored by the wide variation in how much each staff member works directly with students.

- On average, resource room teachers work with students (including push-in time) just 57% of the school week.
- Some work 30% more and some work 25% less than the district median.
- To help put this in perspective, this affords over 5 days per student (31 hours) for testing and meetings on average. In many districts these important functions take only 1 ½ days per student and in most non-school settings they take less than a day.


Resource Room Teachers Direct Service
Average
Teacher 91.2%
Teacher 86.0%
Teacher 76.0%
Teacher 75.6%
Teacher 75.3%
Teacher 65.7%
Teacher 65.7%
Teacher 65.3%
Teacher 65.2%
Teacher 64.0%
Teacher 63.7%
Teacher 63.2%
Teacher 62.2%
Teacher 62.2%
Teacher 61.5%
Teacher 61.2%
Teacher 61.0%
Teacher 59.6%
Teacher 57.0%
Teacher 55.5%
Teacher 52.3%
Teacher 51.9%
Teacher 51.8%
Teacher 51.6%
Teacher 51.6%
Teacher 51.0%
Teacher 50.9%
Teacher 50.5%
Teacher 50.4%
Teacher 50.4%
Teacher 48.9%
Teacher 48.6%
Teacher 47.0%
Teacher 46.8%
Teacher 45.8%
Teacher 44.7%
Teacher 44.0%
Teacher 42.7%
Teacher 40.7%
Teacher 40.0%
Teacher 40.0%
Teacher 39.0%
56.6%
0.0% 10.0% 20.0% 30.0% 40.0% 50.0% 60.0% 70.0% 80.0% 90.0% 100.0%
Percentage of Time Spent Providing Direct Service

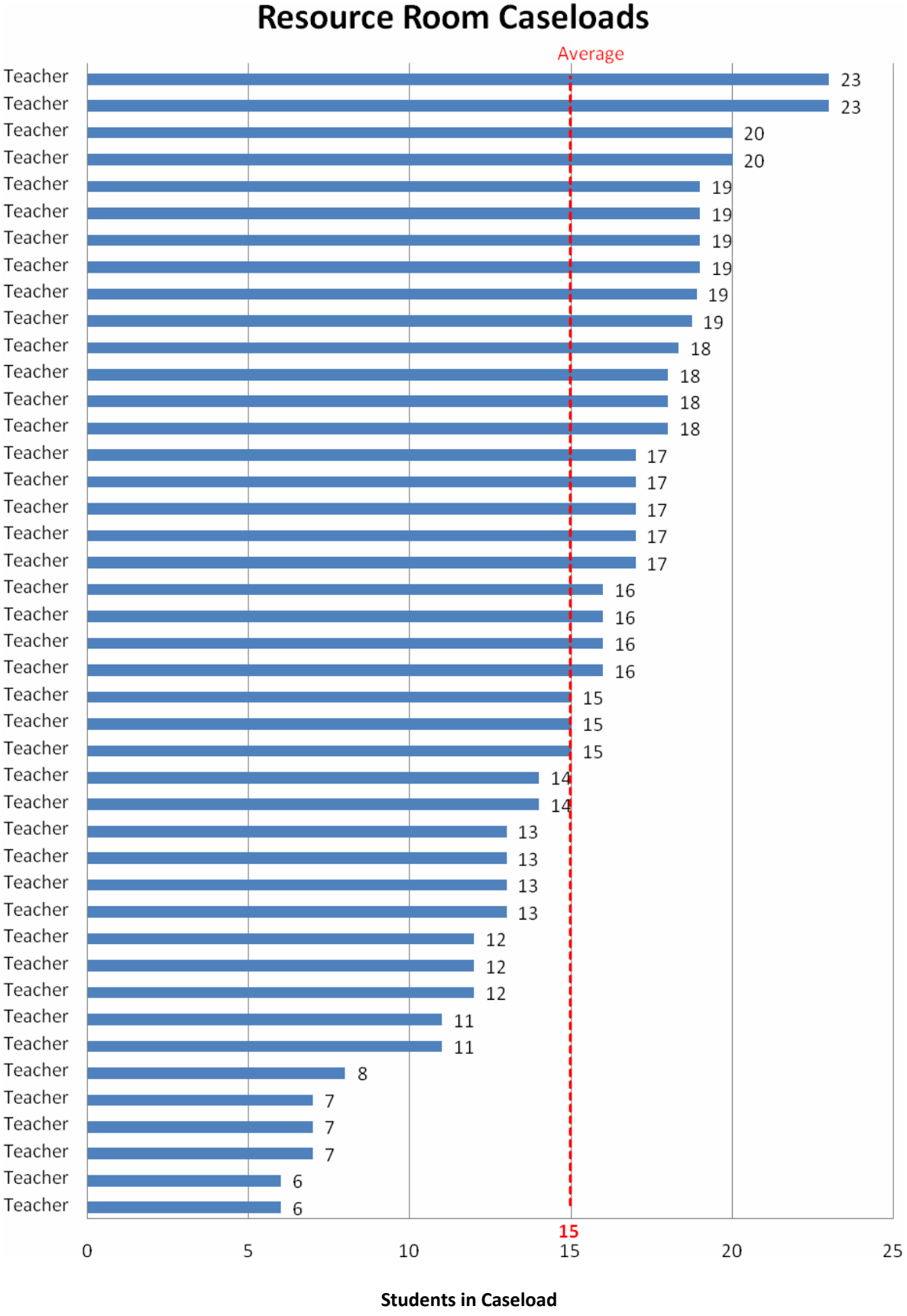
3e. Caseload

Resource Room teachers in LPS have on average 15 students on their caseload. Based on recent reviews we have conducted in other school districts, this is a relatively small caseload, but it is not unheard of either. The variation in caseload is quite significant, ranging from 6 to 23 students. Some resource room staff indicates that they spend up to 12 hours/week supporting a single student. If this level of support is needed, then it may be that a different model would be better for the student and more cost effective.

Comparison with like districts is difficult because the role and service delivery model varies greatly from district to district, and the risk of comparing apples to oranges is significant.

A few safe comparisons can be made:

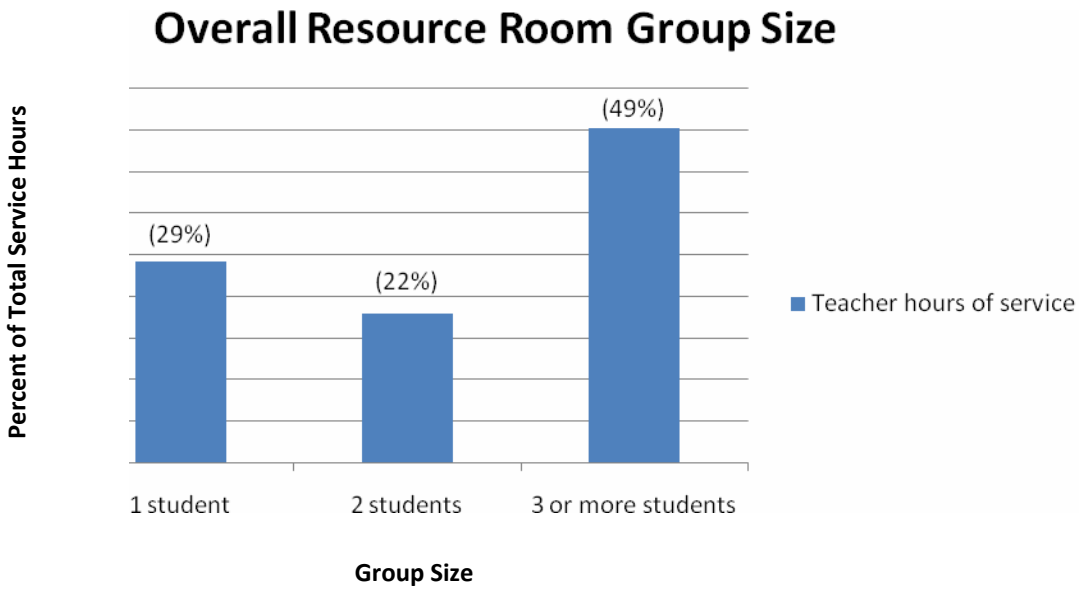
- 11 staff members service 19 or more students, which indicate other staff in the district manage a larger caseload.
- The National Reading Panel model for tier 2 remediation and intervention (which is a similar role to resource room support) suggests a remediation/intervention reading teacher caseload of 25-35 students.
- One Lexington staff member commented that she had previously worked in a nearby affluent school district and her caseload was 34, which was typical for the district.


Resource Room Caseloads
Average
Teacher 23
Teacher 23
Teacher 20
Teacher 20
Teacher 19
Teacher 19
Teacher 19
Teacher 19
Teacher 19
Teacher 19
Teacher 18
Teacher 18
Teacher 18
Teacher 18
Teacher 17
Teacher 17
Teacher 17
Teacher 17
Teacher 17
Teacher 16
Teacher 16
Teacher 16
Teacher 16
Teacher 15
Teacher 15
Teacher 15
Teacher 14
Teacher 14
Teacher 13
Teacher 13
Teacher 13
Teacher 13
Teacher 12
Teacher 12
Teacher 12
Teacher 11
Teacher 11
Teacher 8
Teacher 7
Teacher 7
Teacher 7
Teacher 6
Teacher 6
15
0
5
10
15
20
25
Students in Caseload

3f. Group size

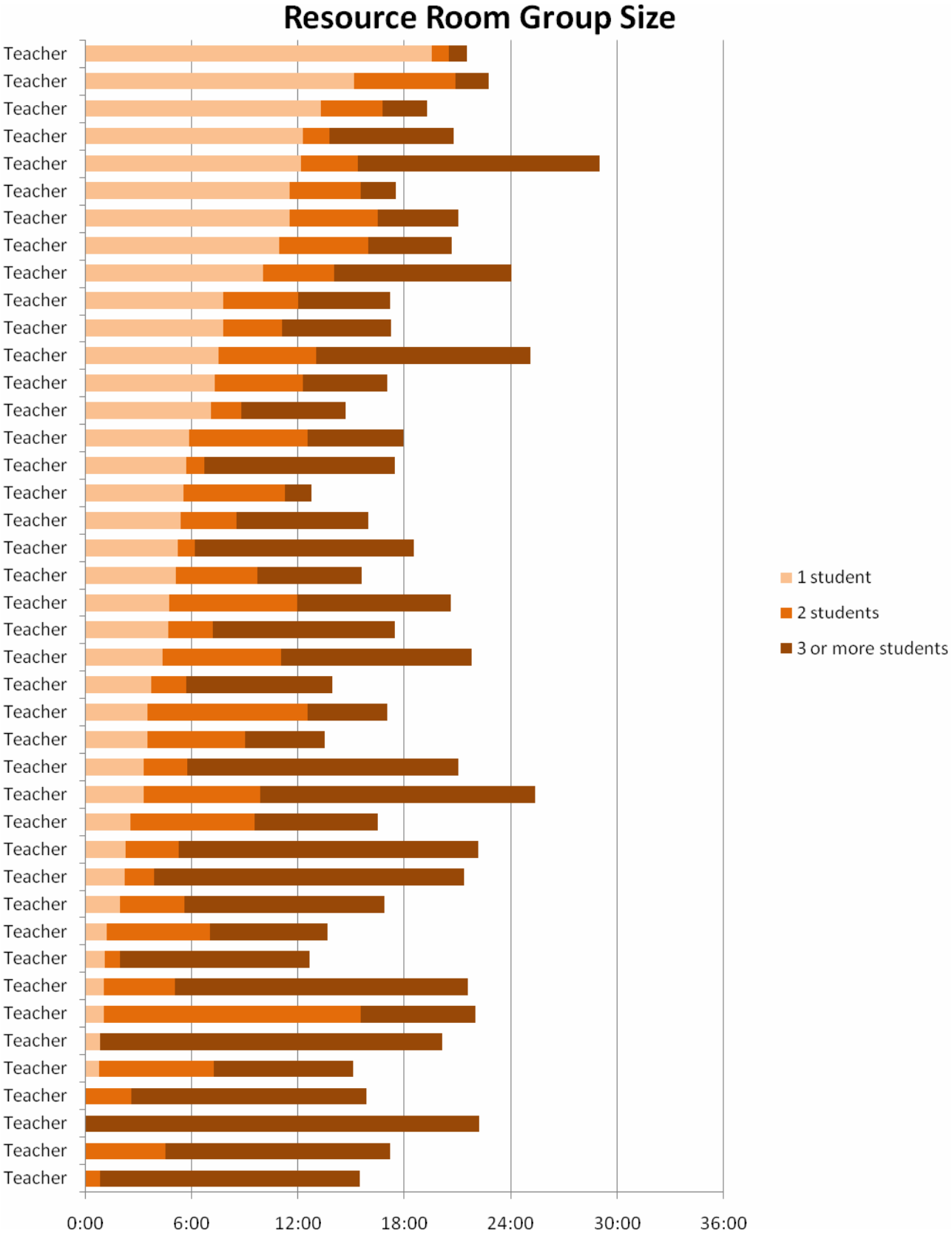
Resource Room support is provided in very small groups with 51% of student hours spent in groups of 1 or 2. A number of factors contribute to the small group sizes:

- With a push-in model, general education class schedules dictate group size. If only 1 student on a teacher's caseload is in a particular general education class during a particular period, only a group of one is possible.
- In an effort to not disrupt core instruction, pull-out should not happen during key subjects like math and reading, so scheduling constraints can prevent grouping students. There is an adage that states "If you do not schedule special education first, you cannot schedule it at all." Most schools schedule resource room support last, but not Clarke Middle School or Lexington High School.
- Small caseloads leave enough time to provide individualized support. Special education teachers and parents both appreciate the close bonds that very small groups allow. Any system will gravitate to very small groups if possible. At the high school, for example, staff often stay with a student all four years, opting for a closer relationship over familiarity with the curriculum.



How to read this chart:

For example, 29% of the hours of support provided by resource room teachers each week are provided to groups of 1 student.


Resource Room Group Size
Teacher
0:00
6:00
12:00
18:00
24:00
30:00
36:00
1 student
2 students
3 or more students
Hours of Service Provided

3g. Certification and skill sets of resource room staff

Most school systems hire special education teachers for resource rooms/ academic support roles. IDEA however, is not black and white. Content expert teachers can provide the instruction under direction of a special education teacher. Often special education staff are asked to teach content that they have not been trained or prepared to teach. The Lexington Public Schools are no exception.

- Nearly all resource room staff are certified in special education.
- Only 5% of the elementary resource room staff are also certified in reading. For elementary students who struggle, reading is the primary skill deficit. Less than 1/2 the elementary special education staff are certified as an elementary teacher or in any core subject.
- At the secondary level, where the content complexity is quite significant, less than 1/3 of the resource room staff are certified in any content area. Those who are content certified are still expected to teach across all content areas, not just in their area of expertise.

Resource room staff areas of certification

Certified in	Elementary	Secondary
Special education	97%	98%
Reading	5%	9%
Core academic subject*	42%	32%

*Resource room staff who are not certified in the subject are not the teacher of record.

Options and financial implications

The district has two broad options to consider:

1) Optimize the current "teacher on their own" model.

2) Develop a new district-wide theory of action (See Section 4).

Given the very large variation in caseloads and approaches used, some guidelines could be set on the current model. It is impossible to separate the many variables, but because the contract caps caseloads at 24 students, the caseload variable will govern most options. All current forms of support should be possible within the caseload guidelines, especially if scheduling improves.

Caseload	Average caseload	FTE	Financial opportunity
Current baseline	15.0	43.8	
All teachers below district average increased to current district average	17	38.7	$382,500
All teachers currently below 80th percentile in district increased to current 80th percentile	19	33.9	$742,500
All staff assigned contract guideline	24	26.8	$1,275,000

Financial implications of a new theory of action

Since no definitive new theory of action exists, no definitive costs can be calculated. In most cases, any alternative plans will be more cost effective as well as more effective.

- Many of the best practice options include general education staff in the lead, so the 24 student caseload limitation does not apply.
- Because best practice classes are scheduled as part of the master schedule, larger group sizes are possible.
- Because the coaching role of the special educator does not require five days a week in class, staffing requirements decrease.

A rough estimate is that to implement a new theory of action based on the examples provided would require 25% to 40% fewer FTE than current staffing.

4. The Need for a Consistent Theory of Action

A theory of action is a set of beliefs, policies, and practices connected by logic rules. In short, it is why you think something will be successful.

Dieting provides a perfect example of the difference between hope and a theory of action. I will eat less and thus will lose weight is not a theory of action – it is a hope. Weight Watchers, on the other hand, developed a comprehensive theory of action:

1. Create a baseline (know your starting weight).
2. Set a goal (desired end weight).
3. Tightly control calorie intake (measured through the points system).
4. Set an exercise schedule (physical activity is required for success).
5. Weekly weigh-in (for motivation and progress monitoring).
6. Adjust as needed (mid-course corrections based on weekly weigh-in).
7. Celebrate success (plan for end of services).
8. Revise program based on success and failures of all participants (new program improvements each year).

Based on all the data collected, special education academic support lacks a comprehensive theory of action. Certainly many strategies are being employed, such as inclusion, push-in, skills building, teacher support, paraprofessional support, study skills, and more. When pressed for a theory exactly how and why these strategies will raise student achievement, they appear closer to a hope than a fully developed theory of action.

There is no one right theory of action for helping struggling students. Each district requires a plan that reflects its values, parental expectations, finances, and history. To help kick start the discussion, a powerful best practice theory of action is presented below, drawing on the findings of the Rennie Center study of best practices in special education.

1. Make inclusion the preferred setting
   - Limit use of resource rooms
   - Structure general education classes and teachers to be successful inclusion classes
   - General educators take the lead

2. Use standards based education as a catalyst for change
   - Staff believe that students with special needs can reach grade level in reading, math, and English

3. Provide extra time, a lot of extra time.
   - Time is the variable, not the learning or the standards

4. Change, but only a little, the curriculum for students with special needs, while maintaining general education standards
   - High rigor for all students

- Instruction is tightly aligned to a clear, comprehensible standard
- Accommodations are incorporated into daily classroom instruction for all students

5. Make extensive use of student achievement data
   - Data reviewed at the student level
   - Both formative and summative assessments used regularly

6. Create a belief system embracing students with special needs achieving at high levels
   - High levels of achievement by students with special needs is a the responsibility of all teachers and administrators, not just special education staff

7. Foster collaboration
   - Walls between special education and general education are knocked down
   - Give schools strong support from the central office

8. Give schools strong support from the central office
   - Superintendent and general education leadership, as well as special education administrators placed a high priority on students with special needs achieving at high levels

The current practice in LPS differs from this best practice theory of action in a number of ways:

- Special education support is not tightly connected to the general education curriculum. (Recent efforts in elementary reading will be a joint general and special education effort). Resource room pull-out support is not re-teaching or pre-teaching, for the most part. During push-in support, it is difficult to supplement the core curriculum while it is being taught for the first time, especially when the special education teacher hasn't seen the material in advance.
- Academic support staff are talented professionals, but not content experts. It is hard to effectively teach material that the teacher has not mastered.
- Perhaps the greatest difference between best practice and LPS practice is the issue of time on task. Struggling students need more time, often a lot more time. Push-in, which is 65% of all support, adds no additional time. Some pull-out takes place during the core instruction time block which also provides no extra time. Richard DuFour said it best "Learning should be the constant and time the variable." In many cases in LPS the time for instruction is fixed.

Different districts have put these ideas into action in different ways:

- Create a general education math class for struggling students, both with and without an IEPs. This was a general education class taught by a math teacher using the general education curriculum. The class met for 2 periods a day and included time for doing some homework in class as a daily check for understanding. Students had twice the time to master the material. A special education teacher coached the general education teacher (not the students) one day a week in specialized teaching strategies.
- If concerned about grouping struggling students together, a district can apply a different twist to the model. All struggling students participate in a regular math class one period a day randomly intermixed with non-struggling students. The math teacher teaches four such classes, then

struggling students from all four classes (with and without an IEP) attend a second period with their same general education classroom teacher later in the day. This second session is for pre-teaching and re-teaching. Integrating the day's instruction is automatic, because both classes have the same teacher. As in the prior example, special education staff serve as pedagogical coaches to the content expert math teacher.

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5. Counseling Services

Counseling services are provided by three types of providers in the district; psychologists, social workers and guidance counselors.

- The psychologists are trained as counselors but are primarily used for IEP testing. Since they are building based some provide some informal counseling.
- The social workers are assigned primarily to the secondary schools and provide the bulk of formal counseling services.
- Guidance counselors fill many roles including providing formal and informal counseling. They provide the bulk of counseling at the elementary level.

5a. Caseloads

Since most counseling is of short duration it is impossible to fully reflect the true caseloads of the counseling staff.

The psychologists do not have a formal counseling caseload except for students in district-wide programs for emotional/behavior needs. The social workers and guidance counselors do have a formal caseload, which includes both students with and without an IEP. Some social workers provide the majority of their services to students on IEPs, while others split roughly 50% general education, 50% special education.

5b. Roles and Responsibilities

The very small caseloads for guidance counselors and social workers indicates that much of their work is on an as needed, informal basis. Each building sets its own priorities. This is not undesirable, but it does make resource allocation decisions difficult.

The counselors expressed much concern that they receive inconsistent and at times contradictory directions from building and special education administrators concerning what is the desired split between general education and special education students. For the most part, the social workers and counselors are left to schedule themselves and work closely with building based staff to identify students in need. This issue is compounded by the organizational structure. The district does not have K-12 director of guidance.

The counseling staff, both social workers and guidance counselors, expressed feeling that they were not respected as professionals, not fully welcomed into PLCs or the IEP process.

Our interviews with other staff members confirmed a lack of respect by many. Some parents also expressed concerns. They feel that the counselors are very inconsistent. Some had good experiences while others expressed the concern that they weren't experienced in counseling and spend too much time on administrative tasks and not enough on students.

5c. Criteria

The counseling staff shared that few criteria exist. “It’s a mystery to me” was a common refrain. They did not feel that they had the authority to set the criteria; but rather decisions were made to them, not by them.

Financial Implications

With the loose and shifting role definition and the high degree of informal support provided, it would be unfair to the staff to provide options for criteria or revised staffing levels. The district should first create a clear statement of the role and expectations for counseling services in the district. Only with such clarity of purpose can a fair evaluation of staffing and criteria be conducted.

6. Systems and Criteria

The Lexington Public Schools have hired talented and passionate special education staff and (de facto) ask them to work very independently. Decision making, rules of operation, and broad guidelines are left, primarily, to each individual's professional judgment. The primary finding concerning district wide special education systems and criteria is that there are few, if any.

During our interviews teacher and therapists energetically discussed "how things worked in their building" and commented how different it was from other schools. The variations within buildings were also quite significant.

6a. Eligibility criteria – speech and language and OT

All therapists use a wide range of nationally normed test instruments. They use broad-based comprehensive assessments with more detailed specialized tests as well.

While these tests produce numeric scores, interviews indicate that professional judgment, not the scores, determine eligibility, grouping, and frequency of service. Each therapist applies their personal judgment. No clear exit criteria seem to exist.

6b. Test instruments for initial referrals

Lexington has an abundance of testing instruments:

- A sample of 48 IEPs revealed 138 unique tests administered to these students.
- Of the 138 different tests administered to the 48 students, 105 were given to only one or two students. This wide range of tests makes creating standard criteria difficult.

There does not appear to be any standardization in how students are tested.

- The students sampled were given anywhere between 1 and 16 tests to determine eligibility for an IEP. This raises the question, "Does the district have a common set of criteria?"
- 41 of the 48 students received 5 or more tests.

A Sampling of Students Being Tested for an IEP: How many different test instruments were used

Times test used	Number of tests	Percentage of tests
1x	89	64%
2x	16	12%
3x	11	8%
4x	6	4%
5-9x	8	6%
>9x	8	6%
Total	**138**	**100%**

Number of Tests Administered During an IEP Evaluation

Number of tests administered	Number of students	Percentage of students
10+	23	48%
5-9	18	38%
1-4	7	15%
Total	**48**	**100%**

6c. Eligibility criteria – resource room support

Resource room support is provided to nearly all students with IEPs who struggle academically. It is the primary intervention for struggling students. Since the system lacks a district wide theory of action for resource room support, it only follows that there are no district wide criteria.

Best practice districts use a model of standards based education to determine if academic support is required. In a standards based system, the district has clearly defined standards – what every student should know and be able to do at a given grade, in a particular subject. They also have common formative assessments to determine who does and does not meet the standard. All students, with or without a disability, who do not meet the standard are automatically entitled to remediation and intervention support. There is no referral to special education and the support efforts are provided by general education or special education staff, based on areas of student need and staff expertise. In this model, the existence of a disability does not drive the type of academic support received.

In the case of students with severe disabilities, a specialized curriculum is needed and resource room may not be the appropriate service.

As with best practices in speech and language and OT, support ends when students no longer meet the entrance criteria.

6d. IEP referrals, goal setting, and the IEP process in general

The overall identification rate of students receiving special education services in Lexington is 17.0 %, which compares to the state average of 17.0 %. Massachusetts does have one of the highest identification rates of students with special needs, but given the context and state regulations, the district does a reasonable job identifying students with special needs.

Incidence of disabilities

Disability	Lexington	Lexington percentage	State percentage	Lexington multiple	Variation in # of students
Specific Learning Disabilities	242	3.9%	5.6%	0.70	-104
Communication	220	3.5%	3.0%	1.17	32
Neurological	110	1.8%	0.7%	2.45	65
Subtotal –Specific Learning Disabilities, Communication & Neurological	**572**	**9.2%**	**9.3%**	**0.99**	**-7**
Autism	89	1.4%	1.2%	1.24	17
Development Delay	81	1.3%	1.9%	0.69	-36
Subtotal – Autism & Developmental Delay	170	2.7%	3.0%	0.90	-19
Health	131	2.1%	1.3%	1.66	52
Emotional	85	1.4%	1.5%	0.93	-6
Multiple Disabilities	51	0.8%	0.5%	1.75	22
Intellectual	28	0.4%	1.1%	0.41	-41
Sensory / Hard of Hearing	11	0.2%	0.1%	1.34	3
Physical	7	0.1%	0.2%	0.69	N/A
Sensory / Vision Impairment	4	0.1%	0.1%	1.05	N/A
Sensory / Deaf Blind	0	0.0%	0.0%	N/A	N/A
Total	**1059**	**17.0%**	**17.0%**	**1.0**	**-1**

Note: Data comes from a different source than previously referenced data. Previously referenced IEP data provided by district; data in incidence of disabilities chart from MA DOE website. MA DOE data is from October 2009, data provided by district is from May 2010.

The IEP process has a number of checks and balances, with special education administrators reviewing IEPs and getting directly involved in the more complex situations. This level of review is uncommon, but very helpful given the lack of clear criteria.

The IEP process in Lexington is typical for school districts in the state, but staff report that it does not run as smoothly as they would like. They voiced concerns that the review cycle was too slow, and the reasons for the changes made during the review aren't shared. Many of the referrals from general education teachers are vague regarding student need. Building administrators also expressed a concern that the referral process to the district-wide programs was unclear and seemed to vary on a case-by-case basis.

6e. Measures of program effectiveness

Currently the district cannot measure the effectiveness of particular programs, strategies or pedagogical approaches. Given the very wide variation of efforts in the district, it would be difficult to measure them all. Best practice districts employ a much smaller number of programs, design the interventions with measurement in mind, and refine the programs frequently based on the results. Two types of data are typically used to evaluate program effectiveness: absolute achievement and growth over time.

6f. Systems for integrating RTI (Response To Intervention)

RTI is a relatively new concept that stresses general education intervention prior to special education referral and support. As in most districts across the state, RTI in Lexington was added on top of the existing systems and structures. The theory, however, is to replace and reshape. Each principal has been tasked with making RTI function in their building, with varying results. Most staff expressed support for the concept, confusion with the process, and uncertainty over how it really differs from PLCs, good teaching, or data teams. Special education staff and general education staff both seem uncertain of their roles in the process.

6g. Systems for scheduling and staffing

Like many of the systems reviewed, scheduling and staffing is more professional judgment than a formal system. Individual therapists and resource room staff create their own schedules. Because the information in the IEP database is not clean enough, it is difficult for administrators to review or help with scheduling or to fine tune staffing decisions.

An area of particular concern for staff and parents is the lack of a comprehensive master building schedule. This means that math, reading, and IEP meetings are scheduled without tight integration with therapists schedules. Many, if not most, IEP meetings are scheduled without consideration of previously scheduled direct service with students.

Creating a thoughtful, comprehensive master schedule is difficult to do without software, but it can be done with a great deal of planning before school starts.

Therapists and resource room staff have ample time in their weekly schedule to conduct testing and other meetings without double booking student direct service.

7. Conclusions and Recommendations

Given the many graphs, charts, and statistics included in this report is easy to lose the big picture in all the details. Taking a step back, the research indicates much to be proud of and a number of opportunities to simultaneously increase student learning while reducing costs. Our conclusions and recommendations are intentionally targeted, rather than comprehensive, in the belief that a short list is better than a long one.

Commendations

1. The special education achievement gap is small, compared to like districts in the state.

While still striving to continuously improve student achievement, the district should be proud that students with special needs achieve at higher levels than like communities. The gap narrows at the older grades, indicating the longer students are in the system the greater the benefit.

2. The district has a culture of high expectations and a drive for continuous improvement.

Lexington is one of the highest performing districts in the state, yet it actively and aggressively works to improve outcomes for students. During interviews with 100 plus people, no one seemed content to rest on past success. Both staff and leadership spoke candidly and passionately about ways to further improve.

3. Programs for students with severe special needs are widely praised.

Parents, teachers and administrators all are very pleased with the district's programs to serve students with significant special needs. They felt that these were high quality classes that provided much needed services. The programs allow students to interact with their typical peers, remain in their community and are very cost effective.

4. The identification rate of students with special needs is typical for the state.

It is not common to praise being average, but affluent school districts tend to have above average rates of referral to special education. Given the lack of formal eligibility criteria, this is especially commendable. This success is possible, in large part, by a great deal of intervention and oversight by central office administrators.

5. Very high levels of service and staffing.

The district has made an enormous financial commitment to serving students with special needs. Staffing levels are very high, caseloads are small, and a desire to help as many children as possible exists. As the financial environment has worsened, the district has been proactive and thoughtful to find cost effective ways to serve children well.

Opportunities for continuous improvement

1. Develop a comprehensive theory of action for helping struggling students which encompasses both general education and special education.

It is recommended that a clear theory of action for helping struggling students is developed prior to developing guidelines and criteria for eligibility. For example, if reading intervention was primarily a general education effort, or if an IEP wasn't needed for counseling, very different criteria would be developed than is currently the case. IDEA requires that general education interventions be used prior to special education services are provided. This is good for students and the budget.

The role of data teams, RTI (Response to Intervention), PLCs (Professional Learning Communities), reading, resource room support, inclusion, and co-teaching need to be folded into a single comprehensive system of remediation and intervention. This should be a one plan, not seven separate efforts, based on a clearly articulated theory of what do students need to achieve.

Based on best practices outlined in Section 4, general education leadership should take the lead in developing the plan, with support from special education. General education leadership should have ultimate responsibility for student achievement, including students with mild to moderate special needs.

The best practice framework provides for flexibility to adapt to Lexington's culture but at its core any comprehensive program will provide for extra time on task, highly skilled teachers, clear grade level expectations, and frequent monitoring of student achievement. This is easier when implemented district wide rather than building by building.

The district can be pleased that it has a relatively small achievement gap compared to like districts in the state, but cannot be completely pleased with it either. The gap is large in absolute terms and Massachusetts has the highest achievement gap in the country.

2. Create workload guidelines and staff accordingly.

In nearly all parts of the district, enrollment drives staffing. The number of first graders, for example, determines the number of first grade teachers. There is no formal system to guide staffing levels for speech and language therapists, OTs, and resource room staff.

Explicit workload or caseload guidelines will improve equity and resource allocation. A thoughtful process that considers target group sizes and a coherent theory of action will be required to develop these guidelines. Given that staff expressed concerns about the communication process in general, an inclusive and facilitated process might ease development and implementation of any new guidelines.

This report outlines best practice frameworks for creating guidelines (See Appendix 3). A team of teachers, therapists and administrators can customize the best practice framework to reflect and respect the values of Lexington.

3. Create unambiguous guidelines for eligibility for special education, service levels, group size and exit.

The lack of clear guidelines creates many strains on the system including perceived over referral to special education, potentially excessive time committed to testing, high levels of legal or potential legal actions, intensive oversight by special education administration, friction between special education front line staff and the central office as well as with their general education colleagues, and waste of limited resources.

Clear guidelines could be based on both nationally normed tests and classroom based measures, such as common formative assessments. This process is greatly simplified if a common set of test instruments are used district wide and if unambiguous measures of student achievement are established.

Overtime, clear criteria will increase equity for children and reduce the staffing needed to test students and review IEPs.

4. Improve the technical infrastructure supporting special education.

Technology has helped ease the work, improved the quality of decisions, and reduced costs in many aspects of our world. It has not had this effect for special education in Lexington. The IEP central database includes too much inaccurate data to be helpful to staff or useful to administrators. Scheduling therapists and resource room staff is done manually and with little oversight, despite the district's considerable financial commitment of 72 FTE and over $5,000,000. This challenge exists because the student information system and the IEP software cannot share data. Efforts are already underway to move to a system that will share information.

Centralizing and automating the scheduling of therapists, resource room staff, (and reading teachers?) would help staff and ensure that the workload guidelines are driving staffing decisions.

5. Create a system to improve the two-way flow of information.

Despite the best intentions of all involved, insufficient or ineffective communication has created frustration for many. Numerous channels of communication are needed, such as between central office special education administrators and building based special education staff, between special education leadership and general education curriculum leadership, between building principals and special education staff, within job alike groups and more.

Implementing the four opportunities above will require extensive communication and collaboration. Since no one is intentionally not communicating, a formal, scheduled system to share information, air concerns, make decisions, share decisions, and receive feedback on decisions is needed.

Since everyone is very busy already, it is suggested that formal communication mechanisms be built into existing meetings, such as PLCs, early releases, and cabinet meetings. It would require expanding the attendance at some of these meetings to be more cross departmental at times.

8. Appendix

Appendix 1: A framework for developing criteria

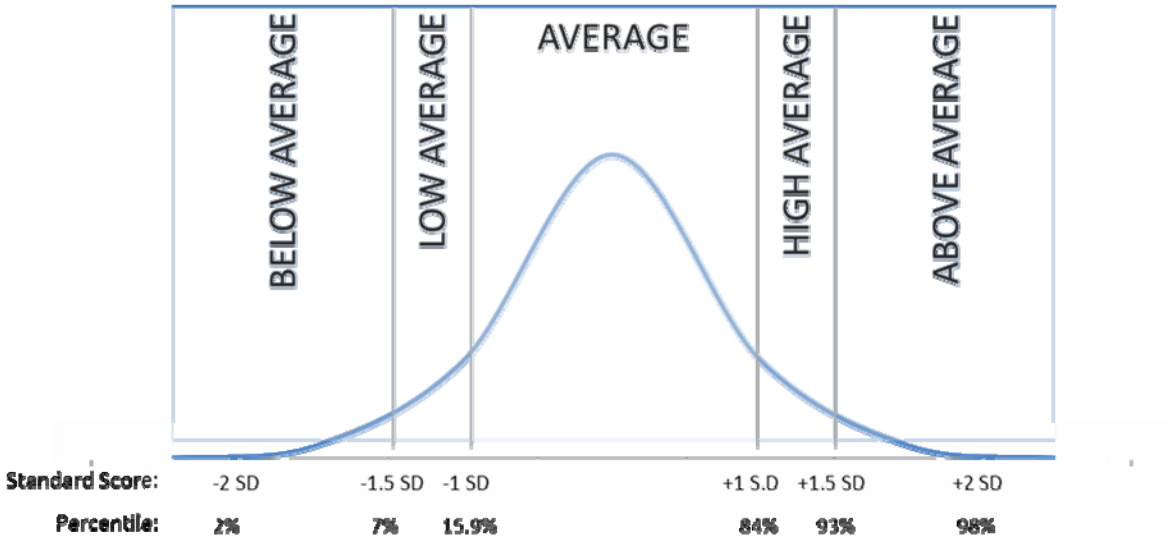
Nationally, there are no universally accepted criteria. Best practice models are based on two types of criteria 1) nationally normed tests and 2) classroom based measures.

Determining if a disability exists

A disability, as measured by nearly all special education test instruments and as embraced by IDEA, is based on a relative measure of ability – is the student typical to their grade level peers, above average, or below average? A disability exists when a student is below average compared to students nationwide. Federal law does not set a definition as to how far below average indicates a disability. Some states have weighed in on this question, but Massachusetts has not.

The normal distribution curve provides a visual to understand standardized test scores. The curve depicts the concept that the largest number of scores will cluster near the average. There will be fewer children the further away you move from average.

A standard deviation (SD) is a widely used measure of test score results. It shows how much variation there is from the "average" (mean). A low standard deviation, such as 1.0, indicates that the results are very close to the mean, whereas a high standard deviation such as 2.0 indicates that the results are not at all typical. This concept can be used to help create criteria to determine whether a student has a disability, i.e. is not like most of their peers nationwide.



Some states and districts designate a specific threshold the student must meet on a comprehensive test. A comprehensive test covers a wide range of related skills such reading, or speech and language. These tests can be distinguished from more narrowly focused skill tests (subtests) such as decoding nonsense words or retelling a story. Typically struggling in a narrow skill will not be sufficient to indicate a disability. Options for defining a disability include the following:

- **1.0 standard deviation below the mean**. Setting this as the threshold would mean that any student who scored 1 standard deviation below the national average on a comprehensive test would be deemed to have a disability. This is a fairly generous definition of a disability, since it includes students of average ability.
- **1.5 standard deviations below the mean.** Setting this as the threshold would mean that any student who scored 1.5 standard deviations below the average would have a disability. This is a common threshold for the determination of a disability. It is official referred to as "low average" and not universally considered below average.
- **2.0 standard deviations below the mean.** This would mean only students scoring unambiguously below average would be eligible for services.
- 1.25 or 1.75 standard deviations are at times compromises between the major thresholds.

A skill deficit, but not a disability

In some cases, a struggling student will score average or above average on the comprehensive tests. This will surprise or even anger parents and classroom teachers, since only students who exhibited a difficulty get referred to special education for testing. In many cases the student has a skill deficit, but not a disability.

On one level there is no meaningful difference. The student needs help either way. On another level the difference is important. Special education and its legal protections, paperwork, meetings, and related costs is reserved for students with disabilities, not skill deficits.

Setting a separate threshold for subtests of specific key skills would allow students in this situation to potentially receive services (either general education, RTI, or special education) for a specific area of need. This support is typically short-term, often less than a year. Options include the following:

- **1.5 standard deviation below the mean.** This would be a generous level for special education services, given that these students don't have a full disability and only lack mastery of a narrowly defined skill.
- **2.0 standard deviations below the mean.** This level indicates a significant deficit in a key skill.
- 1.75 standard deviations is a compromise between the major thresholds.

Because these students will typically require services for a short time period, it is important to determine how often to review their progress and terminate services. Options include:

- Monthly
- Every three months
- Yearly

Which tests?

The question of which nationally normed test instruments to use is an easy one. It does not really matter. What does matter is that the school system use the same instruments across the district. Typically there

will be one comprehensive test per major topic area (different versions based on age of student) and a battery of subtests, but only one for each topic.

Classroom based measures to determine if services are warranted

If a student does have a disability, then classroom-based measures are reviewed to determine if the disability impacts the student's education. A disability that does not impact the student's classroom achievement would not qualify for special education services. This is worth repeating. The existence of a disability is not sufficient to qualify for an IEP.

Doug Reeves suggests the best classroom based measures are district wide formative assessments, end of unit tests, class participation, writing samples, and other actual student work. District wide formative assessments have the advantage of embracing a common definition of grade level proficiency.

- Many staff members expressed a concern that "Anything less than an A could be considered a disability for Lexington students," While said half in jest, setting a consistent measure of student achievement as measured by common formative assessments would be helpful.
- Criteria such as less than a B for the semester, or needs improvement on MCAS could be short-term proxies for common formative assessment data.

Exit criteria

Few in the district could clearly articulate when services should end. Logic dictates that students should terminate services when they no longer meet the entrance criteria.

Examples of less ambiguous criteria

The balance between professional judgment and unambiguous criteria will always create some tension. The pendulum appears to be shifting towards criteria based decisions, just as general education has become more data driven. A number of states have established numerical guidelines for eligibility of some services, especially for speech and language, that can serve as a model. The following states include data driven criteria: New Jersey, Connecticut, Wisconsin, Missouri, Idaho, North Dakota, and Wyoming.

Appendix 2: Like communities

- For national comparisons, like communities were identified from a national sample of nearly 900 schools in 45 states serving over 11,200,000 students. Lexington was compared to other districts that have a low incidence of poverty and have similar per pupil spending.
- Massachusetts staffing comparisons included the top-20 cities and towns with regard to median household income. Only cities and towns with K-12 school systems were considered (those with regional schools at any level were eliminated). The cities and towns included in the comparison include: Andover, Bedford, Cohasset, Duxbury, Harvard, Hopkinton, Medfield, Needham, Newton, Norfolk, Norwell, Sharon, Southborough, Wayland, Wellesley, Westford, Weston, Westwood, Winchester.
- Achievement Gap data was compared to the top 30 K-12 districts with the largest percentage of students scoring advanced on MCAS in ELA and math.

Appendix 3: Best Practices for Managing Special Education Related Services

IDEA assures certain services such as speech and language, occupational therapy, counseling or physical therapy are provided to some students with special needs. These services are intended to help a student benefit from special education services and meet the academic and social goals outlined in their IEP. They play an important role in the education of students with special needs. Research has revealed that in some schools related services are not managed as closely as other aspects of the district, to the detriment of students, therapists, and taxpayers.

Important, but off to the side

Related services are as important as all other special or general education services, but the structure of the special education department and the specialized nature of the work can lead to related services receiving less formal oversight and supervision.

- In each building there is often only 1 speech or occupational therapist. Therapists often work in isolation.
- The therapist who provides the direct service to students often also conducts the testing and recommends the level of service required. This system provides for few checks and balances.
- When testing for eligibility, standardized nationally normed tests are used, but surveys reveal that most decisions by therapists are based primarily on their professional judgment rather than formal criteria. This creates the opportunity for substantial variation in eligibility and service levels.
- The IEP team is charged with making the final decision for eligibility for a given service and for how much service, but often no one else on the team feels qualified to question the therapist in their area of expertise.
- Therapists are often required to make their own schedule, but not all therapists are skilled at building schedules.
- When creating a schedule, therapists often lack the clout to optimize their schedule. Classroom teachers, specialists, others often build their schedules first, leaving the therapist to fitting children into the remaining “free time”.

Related services aren’t intentionally managed less than other aspects of the district, but the typical structure pushes related services off to the side and out of the light.

Students, staff, and taxpayers suffer

The typical structure of providing related services doesn’t meet the needs of any of the key stakeholders.

Children suffer if services are under referred due to inconsistent criteria for eligibility. They are negatively impacted if they receive more services than necessary. Like taking too much medicine, more

isn't better. Since the school day is fixed and most related services happen outside the general education classroom, extra support means less math, English, reading or social time with their peers.

Staff suffer when caseloads are uneven due to different scheduling methods and varying eligibility criteria. Therapists also feel great stress at the start of the year while building schedules with limited expertise, necessary data, or influence within their building.

Taxpayers suffer if scarce resources aren't allocated as effectively as possible.

Despite the draw backs to the current structure, it is common place.

- Based on surveys from more than 200 related services therapists across the country, over 75% report that they do not use hard data or formal criteria as their primary means of determining eligibility or service levels.
- Based on data from nearly 900 schools across 45 states, it is common to see 200% variation in speech and language staffing and 1,000% variation in occupational therapy staffing between like communities (adjusted for total student enrollment). In most cases, the districts do not know if they are on the high or low end of the spectrum.
- Caseloads for related services staff often vary by 30-40% within a district or between like districts.

Small changes have a big impact

It is not intuitive that small changes to eligibility criteria, service delivery methods, or scheduling can yield significant changes to staffing requirements. A few examples:

Best practices for criteria driven decision making

Many districts lack formal criteria for determining who is eligible for related services, or if eligible, how much service is warranted. In a survey in a midsized suburban school district of 14 special education staff members responsible for testing:

- Staff used 70 different test instruments, with almost zero overlap.
- When asked what score or range of scores indicated a disability, only 1 person could articulate their criteria.
- When asked how they decided whether 30 minutes/week of a given service or 60 minutes was needed, no one could articulate rules and few even had rules of thumb.

Very few districts have a formal process or criteria for ending a related service other than a student moving on to a new school where that service may not be offered or no longer fits into the students schedule.

Four best practices, working together, can greatly increase the effectiveness, fairness, and cost effectiveness of providing related services for students on an IEP.

1. Create objective criteria for service eligibility.

Most of the test instruments used during the IEP determination process are nationally normed. State testing also provides objective grade level measures of student ability. In the case where national norms don't exist, it is not difficult to create numeric ratings or logic flow charts for observational and subjective criteria. There will always be exceptions and the criteria are intended as guidelines not hard and fast rules. Exceptions should be subject to review.

2. Create criteria for frequency and form of support.

Once a service is deemed necessary, a district should have uniform and clear guidelines for how often the service is provided and what group sizes are reasonable.

3. Create exit criteria to end services when appropriate.

Success in special education should be reaching grade level and no longer needing services. The role of related services is not to "cure" the child, but to assist the student in accessing special education services. Formal exit criteria should be developed and independence should be valued as an important end goal.

4. Monitor adherence to the criteria.

After criteria are established, a formal system of monitoring adherence to the criteria is required. While not all children will fit neatly into the guidelines, clear patterns of compliance will emerge. Most often when staff are not following the guidelines it is only due to a misunderstanding. Professional development or coaching can quickly improve the situation.

Best practices for scheduling related services

A paradox of public schools is that some schedules are reviewed in great detail, while others are seldom reviewed at all. The high school class schedule or the schedule for elementary specialists are managed in fine detail and regularly revised. The schedule for a given speech and language pathologist or occupational therapist might not be reviewed by anyone. Surprisingly, related service schedules can have a greater impact on overall staffing needs than any other schedule in the district.

Most central offices establish fairly firm guidelines for class size and workload. For example, elementary teachers are expected to teach X students, and they receive one prep period a day. High school teachers are expected to have a student load of Y and teach 5 periods a day. Many districts, however, do not set similar expectations for related service therapists.

Based on studies of over 200 related service providers nationwide, it is common to see:

- Caseloads varying by 30% within a given district, even when similar students are served.
- Contact hours with children varying by 50% from therapist to therapist.
- Average group size varying by 250%, even when similar students are served.

Four best practices, taken together, can greatly increase the effectiveness, fairness, and cost effectiveness of scheduling related services.

1. Benchmark staffing and caseloads to like communities.

Benchmarking, the process of comparing how others do the same things you do, provides a starting point for review and analysis. Our proprietary database and ongoing research allows us to compare your district to hundreds of similar districts.

2. Establish expectations for student contact hours and caseloads.

Related service therapists have complicated jobs, juggling direct service to students, testing, report writing, and attending meetings. Just because their work is complicated, however, doesn't mean that guidelines can't or shouldn't be set. Guidelines help create greater equity across buildings and provide special education leadership with a more thoughtful basis for determining staffing needs.

3. Establish guidelines for desired student groupings and group sizes.

Certain services are best provided one to one, while others are more beneficial when students learn in small groups and learn from their peers.

4. Infuse expertise, tools, and clout to the scheduling process.

Even with clear expectations for contact hours, target caseloads, and group size guidelines, few therapists can develop the optimal schedule. Some lack expertise in creating schedules, which is a very specific skill set. Few have the clout to negotiate on an equal footing with a principal or classroom teacher that has already built a schedule, even when it breaks up many of the desired groups. If therapists must or should work in more than one building, these issues are magnified exponentially.

Appendix 4: Best Practices for Raising Student Achievement

No set of strategies can be copied and pasted from one district to another, there is much to learn from other school systems. Two sources can help guide the discussion.

The Rennie Center for Education Research and Policy identified schools, not districts, that significantly closed the achievement gap in its 2009 report: Seeking effective policies and practices for students with special needs. The districts profile are:

- Shrewsbury Public Schools (elementary)
- Braintree Public Schools (middle school)
- Arlington Public Schools (high school)
- Plymouth Public Schools (high school)
- Assabet Valley Regional (vocational technical high school)
- Montachusett (vocational technical high school)

The American Enterprise Institute, a prominent educational think tank, will be publishing this winter a white paper on best practices in closing the special education achievement gap based on the national research by the District Management Council. It includes a compilation of the best practices from many schools and published research. Their major findings include:

Rethink General Education Before Rethinking Special Education

Only by redesigning what and how struggling students are taught in general education, can the cost and the effectiveness of special education improve.

This helps in many ways:

- If students never fall behind, they are more likely to graduate.
- Struggling students often feel labeled as "losers" and are more likely to tune-out or drop out.
- Special education services are the most expensive form of remediation and intervention. The testing, meetings, and paper work require many staff hours. Auxiliary services are often tacked on, which are unlikely to be requested absent a referral to special education.
- An IEP is generally for life. In a diverse sample of school systems, nearly all elementary students with an IEP still received special education services in high school. By contrast, it is common to see more than half the students who receive intensive general education intervention no longer need extra help after a few years.

Rethinking just a few aspects of general education instruction can dramatically increase the achievement of students with disabilities. In the short run, these efforts are cost-neutral and, in the long run, they are cost-effective. Most importantly, they can change the trajectory of a child's life:

Reading, reading, and reading

In real estate, the adage goes, only three things matter-location, location, and location. Likewise, to raise the achievement of students with special needs, only three things matter-reading, reading, and reading.

- Nationwide, 40% of all students in special education have reading as their core challenge.[5]
- Fully 80% of students nationwide with the broad disability "SLD" (specific learning disability) struggle with reading.[6] SLD is the largest disability group, accounting for over 40% of students with disabilities.
- Reading is the gateway to all other learning. Social studies, English, and science cannot be mastered without strong reading skills. Even modern math is word problem-intensive.

K-5 best practices

Based on the work of the National Reading Panel (NRP), the What Works Clearinghouse, and the experience of best-practice districts, a proven, cost-effective plan for teaching reading to struggling students exists.

The key elements include:

1. Clear and rigorous grade-level expectations for reading proficiency.
2. Frequent measurement of student achievement and growth, influencing instruction and intervention.
3. Early identification of struggling readers, starting in kindergarten.
4. Immediate and intensive additional instruction for struggling readers, averaging 30 minutes a day and using more than one pedagogical strategy.
5. Remediation and intervention that are seamlessly connected to each day's full class instruction.
6. Balanced instruction in the five areas of reading (phonemic awareness, phonics, fluency, vocabulary, and comprehension) as part of a 90-minute/day literacy block.
7. Explicit instruction in phonics in the early grades and comprehension in the later grades.
8. A skilled teacher trained in reading instruction.

Best Practice	Typical Special Education Reading Program	Consistent with NRP Recommendations?
1. Clear and rigorous grade-level expectations for reading proficiency.	Most IEPs mention only vague goals to "improve," not unambiguous reading levels. Subconsciously, many special education teachers do not believe their students can reach grade level.	Seldom
2. Frequent measurement of student achievement and growth, influencing instruction and intervention.	Student achievement is usually measured annually, and often not tied to an explicit reading level.	Seldom
3. Early identification of struggling readers, starting in kindergarten.	In many districts, reading support doesn't begin until first grade or later.	Sometimes
4. Immediate and intensive additional instruction for struggling readers, averaging 30 minutes a day and using more than one strategy.	Because many districts provide special education reading support during classroom reading instructional time, there is no additional time provided to students. When extra time is provided, 2 or 3 times per week is more common than 5 times.	Seldom
5. Remediation and intervention that are seamlessly connected to each day's full class instruction.	Special education staff most often use a different curriculum than the classroom teacher, and seldom coordinate instruction.	Never
6. Balanced instruction in the five areas of reading (phonemic awareness, phonics, fluency, vocabulary, and comprehension) as part of a 90-minute/day literacy block.	Some special education reading programs do address the five areas of reading. Many districts, however, leave the reading curriculum to the discretion of the teacher.	Sometimes
7. Explicit instruction in phonics in the early grades and comprehension in the later grades.	Some special education reading programs do explicitly teach phonics, but few teach comprehension. Many districts, however, leave the reading curriculum to the discretion of the teacher.	Sometimes
8. A skilled teacher trained in reading instruction.	Most special education teachers have little or no formal training in teaching reading. Their ongoing professional development centers on compliance	Seldom

	issues, not reading instruction.	

This plan, first identified in 1997, has worked wonders in many districts, yet it is still quite uncommon. Many special education reading programs are in direct conflict with these best practices. Three self-imposed barriers get in the way.

- Reading remediation must be tightly connected to daily instruction in the classroom. This requires classroom teachers, reading teachers, and special education teachers to work hand-in-hand with common curricula, assessments, and programs. This level of cross-departmental cohesion is very rare in the siloed culture of schools.
- Schools are reluctant to hold special needs students to the same achievement criteria as non-struggling students.
- Too many special education teachers lack the training to be effective reading teachers.

Grades 6-12: the same, but more

If struggling readers have not participated in an effective reading program by 5th grade, they tend to struggle in all subjects. Referral rates to special education often jump when reading comprehension difficulties prevent students from mastering English, science, social studies, and math.

The best practices for K-5 apply to the older grades but with two additions:

- Explicit instruction in comprehension replaces the emphasis on phonics.
- The extra instructional time required increases significantly, up to one or two hours per day to make up for prior lost years.

This need for significant extra time on task runs into another self-imposed dilemma for many schools. Richard Dufour popularized the mantra, "Whatever it takes," to describe his commitment to help struggling students. While most schools mouth these words, their unstated mantra is, "Whatever it takes, so long as it doesn't disrupt our traditional schedule, staffing patterns, or departmental turf."

Few schools, especially middle and high schools, will provide two-three hours per day of reading intervention. Most provide almost zero. Why? Many of these schools don't traditionally hire certified reading teachers. Even if they did, allotting more time to reading would require students to be exempt from foreign language and some science or social studies, because there just isn't enough time in the day to add more reading without subtracting something.

The Green Dot charter schools in Los Angeles, for example, provide up to three hours per day of reading instruction to struggling students. Within a year or 18 months, most students reach grade level, despite starting two to four years behind. Few traditional public schools can match this commitment (whatever it takes!) or the results.

Inclusion is good, but is it enough? Effective English and math instruction

In too many districts, students with special needs are suffering from the best of intentions. In times past (and sadly in some schools still), students with special needs were excluded from the general education

setting. They went to special classes, often in the basement, with few materials, scant curriculum, and no expectations of success. This was bad, and the world responded.

Inclusion, the practice of students with special needs participating in general education classrooms, became the solution to ineffective, down-in-the-basement special education programs. These more rigorous courses, according to theory, would lead to better results. The commitment to inclusion as a philosophical imperative and a civil right is strong. Some states like Connecticut mandate that 80% of the students with special needs be in general education classrooms 80% of the day. Many districts religiously track minutes of student inclusion per day, but do not track student achievement at all.

In short time, however, schools remembered why some children needed a special class. In general education the pace was too fast. Special education students felt embarrassed to ask questions and they also became distracted in large classrooms.

Over the years, districts have tried a series of costly ideas to make inclusion work: adding paraprofessionals (unskilled assistants) to help the struggling students, adding a special education teacher in the general education room (co-teaching), providing extra time after class for homework help (resource room) or inclusion for most subjects but special math and English classes (replacement). The result has been lots of time spent in the general education classroom, not much learning, and very high costs.

Inclusion, as a philosophy, is consistent with the values of most school systems, but it is not, in and of itself, a means to close the achievement gap. O'Keefe and Henderson (2009) reviewed all research that evaluated the impact of inclusion, focusing on the populations most likely to be included in the general education setting – learning disabled, autism and intellectual disabilities. They found 38 studies from 1996 to 2009. Their most striking finding was that 0% of the research measured academic achievement. All the research focused on social acceptance and peer interactions. This bias in academic research reveals a bias in the conventional thinking regarding inclusion. Deep down, we have embraced it for social gains, not for learning gains. Fortunately, inclusion paired with a new, proven approach to closing the achievement gap, provides the best of both worlds.

The neediest students need the best teachers

Too often, students with special needs are taught math by special education teachers who are skilled in the law, report-writing, and disability screening but are not experts in the topics they are teaching.

In a special education room in a secondary school, you will see a bright, caring, passionate veteran teacher stand at the board and try to explain the day's math to one student, Earth science to another, biology to a third, and U.S. history to a fourth. This was the "extra help" provided to students with special needs, intended to help them master rigorous grade-level material.

An honest look at the situation suggests (1) we would never allow this teacher to teach any of those subjects to general education students; she is not certified in any of these fields (2) every student sitting in front of her had already been taught that day by a certified teacher in that subject and still struggled (3) we send students to a generalist after not learning the material from an expert in the field, and (4) not a single general education math or science or social studies teacher would agree to teach outside their field, yet we expect special education teachers to teach them all. This doesn't make sense.

In many districts, the situation is even more nonsensical. It is common for students struggling in math or English to be removed completely from the regular math or English classes, and have a "replacement" class instead. This means a student who has difficulty learning will never have a teacher trained in math or English, but only a special education teacher who often has no formal training or expertise in the subject. It also assumes no extra time on a task is needed. If an hour a day with a math teacher would not be enough, why do we think an hour a day with a non-math teacher is sufficient?

Schools that have closed the special education achievement gap use a surprisingly common sense approach, which embraces a different twist on inclusion:

Tear down the wall
The classes for struggling students are general education classes for all struggling students, regardless of whether they have special needs. There are no separate classes or support for students on an IEP. This is the kind of inclusion that can close the achievement gap. These classes are taught by math and English teachers, and supervised by the math and English department heads.

Start with a great teacher
Great teachers know the material well, can relate to students who are not necessarily academically motivated, and who have a range of strategies to explain the concepts. Often, they use more visuals, break down the concepts into smaller components of knowledge, and avoid long lectures.

Create the status in the department
It is always prestigious to teach advanced placement and honors classes. If struggling students are relegated to new hires and tired veterans, then the best teachers will not teach struggling students. Best-practice schools remove the stigma of teaching lower-level classes, and even make it a sign of respect.

Increase the time, keep the rigor
The classes for struggling students teach the standard level curriculum. The expectation is to master the full course, and pass the standard mid-year and final exam. Rather than watering down the content or dropping half the material, the class meets two periods a day. Twice the time to learn the material. Class size is also reduced to 12-15 students to encourage asking questions and to foster individual instruction.

The concept of increasing the time on task, rather than decreasing the scope or rigor, is very consistent with the "Standards-Based Education" movement. Students with mild disabilities should master the same grade-level content as their peers. It will just take them a bit longer. Most districts that have closed the special education achievement gap have embraced Standards-Based Education for all students and, in fact, they often did not think of it as a special education effort at all.

Perhaps the most striking difference between best-practice schools and the more conventional rests in the teacher's mind, not the student's. The achievement gap closes when the teacher believes it is his/her responsibility to help all students reach grade level, not to soften the social and emotional impact of the students' inability to master the material.

Don't forget to teach study skills
Struggling students are often not adept at being a student. There is an art to navigating school. Many students with disabilities have issues with forgetting to write down their homework assignment , not studying for a test, or taking incomplete notes, which adds a great deal of confusion to reviewing for a

test. While many students get the hang of being a student all on their own, students with disabilities don't as easily.

The curricula of many private special education schools include extensive instruction and structure for these study skills. Yet few public middle and high schools teach note-taking or create a system to ensure that homework assignments are in students' hands before they leave the classroom.

On this point, some special educators will say that they do teach study skills and embrace national programs like AVID. The problem is that special education teachers are teaching procedures that are not reinforced or even used by the math or English teachers. Best-practice districts embed study skill instruction and practice into the longer math and English classes.

Test often, adjust, but don't give up

Paradoxically, most remedial classes test their students very infrequently, and are prone to grade inflation as well. The "A" for effort often carries the day. Best-practice districts, however, give short assessments (sometimes just one question) daily or weekly to determine who has learned what. If the concept was not mastered, it is re-taught with a different method. Rather than calling 50% correct a B+, they teach again until 85% is mastered.

Best-practice schools have created a very different model of inclusion. It focuses on student learning first, while creating an inclusive classroom as a means, not an end. Closing the achievement gap in math and English sounds great, but how to pay for these smaller, longer classes? This strategy is cost-neutral in most districts. Schools are already spending a great amount on special education remediation and intervention staff. Special education extra-help classes typically have only a handful of students and often include teaching assistants as well. Simply by shifting positions in the budget from special education to general education, this best practice can be implemented at no additional cost.

Co-teaching is a means, not an end

Few ideas have captured the imagination of special educators more than co-teaching, the practice of teaming a special education teacher with a general education teacher in a regular classroom for students with and without an IEP. The hope is that the general education teacher provides content expertise and the special educator provides modifications and accommodations to students with special needs (and perhaps all the children in the class). Proponents of co-teaching extol it is "the best of both worlds", that it, "brings children together rather than separates", and that it "finally knocks down the walls between general education and special education". Unfortunately, co-teaching is like dieting. Lots of people want to lose weight and look good in a bathing suit, but actually doing so very hard.

National research indicates that co-teaching seldom raises student achievement. John Hattie (2009) in his epic review of educational research notes that no studies have shown student gains from co-teaching and that on average it actually produced less learning than a class with a single teacher. Interviews with hundreds of staff who co-teach overwhelming dwell on the lack of qualifications of the special education teachers ("they don't know the material any better than the kids") and the lack of respect from general educators ("they treat me like an overpaid paraprofessional").

Why the passion for co-teaching? Because the status quo isn't working and co-teaching is an attempt to infuse content expertise and grade level standards into special education. In many districts, co-teaching is a rejection of the past, more than a coherent theory of action.

When pressed how to make co-teaching effective, the common answers are:

1. Pair the general education and special education teacher for many years, so they learn how to work well together.
2. Provide one period a day for both teachers to plan lessons, otherwise the special education teacher is seeing the material for the first time when presented to the students.
3. Provide professional development to increase the special education teacher's content knowledge.
4. Set clear roles for each partner.
5. Paraprofessional support would be nice, too.

These steps would be a big help, but they are awfully difficult to pull off. Teacher turnover and bumping based on seniority make long term teacher pairing rare. A common planning period requires a reduced teaching load, costing $30,000/ year in extra staffing per co-taught classroom and how many Tuesday afternoon PD sessions will it take to make a non-math teacher a skilled teacher of math? And what exactly should the special education teacher do, while material is presented at the board by the general education teacher? Can a student listen to two teachers at once? In nearly all districts co-teaching is in lieu of extra help, thus struggling students get less instructional time.

Good co-teaching is hard, and ineffective co-teaching is actually harmful to students and the budget. Co-teaching is also very costly.

- Two teachers instead of one
- Reduced teaching lead for both teachers
- Lots of professional development

For less money a district could:

- Continue to mix students with and without IEPs, but cut the class size in half, providing core instruction with just 10-12 students.
- Provide 2 periods of typical instruction a day, doubling time on task.
- Provide a reduced class size (say 17 students) that meets 8 periods a week instead of 5.

Regardless of the approach used or staff passion, any program as expensive and lacking wide-spread success as co-teaching deserves a clearly articulated theory of action, a method of monitoring academic results, and a cost-benefit analysis with alternative means of helping struggling students.