San Dieguito Union High School District

SPECIAL EDUCATION TASK FORCE MEETING

TUESDAY, NOVEMBER 28, 2017
9:45 AM – 2:15 PM

CANYON CREST ACADEMY / THE CAGE
5951 VILLAGE CENTER LOOP ROAD, SAN DIEGO, CA 92130

Welcome to the meeting of the San Dieguito Union High School District Special Education Task Force.

PUBLIC COMMENTS

If you wish to speak regarding an item on the agenda, please complete a speaker slip located at the sign-in desk and present it to the facilitator prior to the start of the meeting. When the facilitator invites you to the podium, please state your name before making your presentation.

In the interest of time and order, presentations from the public are limited to three (3) minutes per person, per topic. The total time for agenda items shall not exceed twenty (20) minutes. An individual speaker's allotted time may not be increased by a donation of time from others in attendance.

In accordance with the Brown Act, public comments are limited to item(s) on the published agenda. Unless an item has been placed on the agenda, no discussion or action may be taken. The facilitator may 1) acknowledge receipt of the information, 2) refer to staff for further study, or 3) refer the matter to the next agenda.

PUBLIC INSPECTION OF DOCUMENTS

In compliance with Government Code 54957.5, agenda-related documents that have been distributed to the Task Force less than 72 hours prior to the Task Force Meeting will be available for review on the district website, click here and/or at the district office. Please contact the Administrative Services department for more information.

CELL PHONES / ELECTRONIC DEVICES

As a courtesy to all meeting attendees, please set cell phones and electronic devices to silent mode and engage in conversations outside the meeting room.

In compliance with the Americans with Disabilities Act, if you need special assistance, disability-related modifications, or accommodations, including auxiliary aids or services, in order to participate in the public meetings of the District's Special Education Task Force, please contact the Administrative Services office. Notification 72 hours prior to the meeting will enable the District to make reasonable arrangements to ensure accommodation and accessibility to this meeting. Upon request, the District shall also make available this agenda and all other public records associated with the meeting in appropriate alternative formats for persons with a disability.

SAN DIEGUITO UNION HIGH SCHOOL DISTRICT
SPECIAL EDUCATION TASK FORCE

MEETING AGENDA

TUESDAY, NOVEMBER 28, 2017 | **CANYON CREST ACADEMY / THE CAGE**
9:45 AM – 2:15 PM | **5951 VILLAGE CENTER LOOP ROAD, SAN DIEGO, CA 92130**

The San Dieguito Union High School District has scheduled a Special Education Task Force Meeting for Tuesday, November 28, 2017, at the above location.

1. CALL TO ORDER ..... 9:45 AM

INFORMATION ITEMS

2. WELCOME: MAUREEN O'LEARY BURNESS

3. APPROVAL OF MINUTES / OCTOBER 30, 2017 SPECIAL EDUCATION TASK FORCE MEETING
   Motion by _____ , second by _____ , to approve the minutes of the October 30, 2017 Special Education Task Force Meeting, as shown in the attached supplements.

4. REVIEW DRAFT VISION AND MISSION STATEMENTS: MAUREEN O'LEARY BURNESS

5. DATA: JULIE GOLDBERG, WITH DISCUSSION: ALL

6. LUNCH

7. DISTRICT ANALYSIS: ALL
   a) What are we doing well, what are the challenges, what can we leverage, what are some potential challenges that could impact the work we do?

8. EVIDENCE BASED PRACTICES ARTICLE / RESOURCES: MAUREEN O'LEARY BURNESS

   a) Best in Special Education Service Delivery
   b) Best Practices in Special Education Delivery and Interventions

8. PUBLIC COMMENTS
   In accordance with the Brown Act, public comments are limited to item(s) on the published agenda. Unless an item has been placed on the agenda, no discussion or action may be taken by the Task Force. The facilitator may 1) acknowledge receipt of the information; 2) refer the matter to staff for further study; or 3) refer the matter to a future agenda. (*See Task Force Agenda Cover Sheet for further information on public comments.*)

9. SYNOPSIS OF OUR DAY AND NEXT STEPS

10. ADJOURNMENT

The next regularly scheduled Special Education Task Force Meeting will be held on December 20, 2017, *at San Dieguito High School Academy. San Dieguito High School Academy is located at 800 Santa Fe Drive, Encinitas, California 92024.*

San Dieguito Union High School District

MINUTES

SAN DIEGUITO UNION HIGH SCHOOL DISTRICT
SPECIAL EDUCATION TASK FORCE

MONDAY, OCTOBER 30, 2017
9:45 AM – 2:15 PM

OAK CREST MIDDLE SCHOOL
675 BALOUR DRIVE, ENCINITAS, CA 92024

The Special Education Task Force of the San Dieguito Union High School District held a meeting on Monday, October 30, 2017, at the above location.

Attendance / Committee:

Parent Representatives: Sophy Chaffee, Nancy Lazerson, *Kent McIntyre (Absent)*, Karen Rusnak, Lisa Shulman

NCCSE CAC Representatives: *Julie Cheeseman-Law (Absent),* Amy Flicker, JoAnne Stress

Certificated Staff (Special Education**):** Liz Dargan (Academic Support at TPHS), Diane Dekker (Learning Center at EWMS), Paula Goodfellow (Speech and Language Pathologist, Elizabeth Marshall (Academic Support at TPHS), Kellie Maul (Functional Life Skills at OCMS)

Certificated Staff (General Education): Duncan Brown (Counselor at SDHSA), Erin Charnow (Math at LCC), Matt Livingston (Science at TPHS), Roxzana Sudo (English at TPHS), *Mark VanOver (Social Science at CCA) (Absent)*

Workability: Nathan Molina (Transition Services Coordinator)

Classified Support: Elizabeth DelVal (Workability / TPP)

Administrators: Rob Coppo (Principal, TPHS), Cara Dolnik (Principal, CVMS), *Tiffany Hazlewood (Program Supervisor, District Office) (Absent)*, Jeremy Meadows (Assistant Principal, LCC), Brieahna Weatherford (Principal, OCMS)

Attendance / Project Lead:

Mark Miller, Associate Superintendent, Administrative Services
Meredith Wadley, Director of School and Student Services

Maureen O'Leary Burness, Facilitator
Lesley Rhodes, Executive Assistant, Educational/Administrative Services, Recording Secretary

Attendance / SDUHSD Governing Board:
Joyce Dalessandro, Vice President

1. CALL TO ORDER
   Maureen O'Leary Burness called the meeting to order at 9:51 a.m.

INFORMATION ITEMS

2. WELCOME AND INTRODUCTIONS
   Maureen O'Leary Burness, Special Education Task Force Facilitator, was introduced to the group.

3. APPROVAL OF MINUTES / OCTOBER 11, 2017 SPECIAL EDUCATION TASK FORCE MEETING
   Motion by Nancy Lazerson , second by Kellie Maul, to approve the minutes of the October 11, 2017 Special Education Task Force Meeting, as shown in the attached supplements. Motion carried unanimously.

4. GUIDING PRINCIPLES: MAUREEN O'LEARY BURNESS
   Ms. O'Leary Burness led the Guiding Principles activity. Groups reported out their work.

5. MISSION / VISION: MAUREEN O'LEARY BURNESS
   Ms. O'Leary Burness led the Mission / Vision activity. Groups reported out their work.

6. INDIVIDUALS WITH DISABILITIES EDUCATION ACT (IDEA): MAUREEN O'LEARY BURNESS
   Ms. O'Leary Burness reviewed the Federal law, Individuals with Disabilities Education Act, (IDEA) as presented. Discussion followed.

7. LUNCH BREAK
   Ms. O'Leary Burness convened the meeting at 11:49 a.m.
   Ms. O'Leary Burness reconvened the meeting at 12:19 p.m.

8. SAN DIEGUITO UNION HIGH SCHOOL DISTRICT (SDUHSD) CONTINUUM OF SERVICES: SDUHSD SPECIAL EDUCATION TEAM

   Meredith Wadley, Director of School and Student Services, reviewed SDUHSD Specialized Programs descriptions (handout) and discussed enrollment. A handout, "Special Education Specialized Programs Descriptions" was distributed, a copy of which may be reviewed in the Administrative Services office.

9. CLASSROOM VISITS: SPECIAL EDUCATION TEAM

   The group was dismissed to visit classrooms at 1 p.m.

10. CLASSROOM VISITS DEBRIEF

    The group returned at 1:37 p.m. and debriefed their classroom visits, subsequently sharing highlights with each other.

11. PUBLIC COMMENTS

    There were no public comments.

12. SYNOPSIS OF OUR DAY AND NEXT STEPS

    Ms. O'Leary Burness asked the group the following three questions to ponder, then deliver feedback for future agenda development:

    - What data points do we still need to explore?
    - What else, generally, do you need to do your work?
    - What questions do you have?

    Ms. O'Leary Burness agreed to send the group a draft Mission / Vision statement.

13. ADJOURNMENT

    The meeting was adjourned at 2 p.m.

_____ _____

Maureen O'Leary Burness, Position (Facilitator) Date

_____ _____

Mark Miller (Associate Superintendent) Date

SPECIAL EDUCATION TASK FORCE WORKSHOP

November 28, 2017

DRAFT Vision/Mission Statements:

The Vision:

The San Dieguito Union High School District provides a full continuum of supports and services to all students with disabilities so that they are prepared and able to achieve a level of competence, self-reliance, and independence, based on their own unique abilities and increased awareness, so that they each transition successfully to their future.

The Mission:

Our students learn, grow, and thrive in innovative programs that build independence, so that we prepare each student for a successful transition to life after school.

Decisions and practices will be student-driven and based on evidence and data.

We maintain a "Students First"philosophy.

We support students as they enter the High School District, to prepare each student to be a successful student during their high school years, focusing on effective communication, organizational skills, and academic supports for instruction and homework.

We provide supports to students so that each actively participates in his/her educational processes, including the IEP process and in activities that increase self advocacy and self-determination.

Each student is respected as a unique individual and offered high expectations, not bound by label.

We structure each classroom and educational environment to meet the needs of the students sitting in the room.

We work with parents as partners so that they are well informed and educated about programs and supports, as well as about the emotional growth of their students as they transition to young adulthood.

We provide and sustain balanced life skills, academic, and transition curricular options based on students' true and ever changing/evolving abilities, interests, and future goals, while maintaining efficient/ equitable use of resources available.

We will provide the necessary supports to all staff so that they are informed both of student needs and of evidence-based ways to address and support those.

Group norms:

- All voices are heard and valued
- We will demonstrate respectful listening
- We will practice Data-driven decision making
- Agreements will be by consensus
- We embrace change
- Our focus will be on creating a strategic plan to ensure each student's success in progress toward goals.
- We will practice flexibility.

Multiple measures approach to reviewing student success

Nov. 28, 2017

New CA Accountability Model

CA School Dashboard

Equity Report

San Dieguito Union High - San Diego County

List of all schools in this district

Enrollment: 12,726 **Socioeconomically Disadvantaged:** 9% **English Learners:** 4% **Foster Youth:** 0%

Grade Span: 7-12 **Charter School:** No

Dashboard Release: Spring 2017

Equity Report | Status and Change Report | Detailed Report | Student Group Report

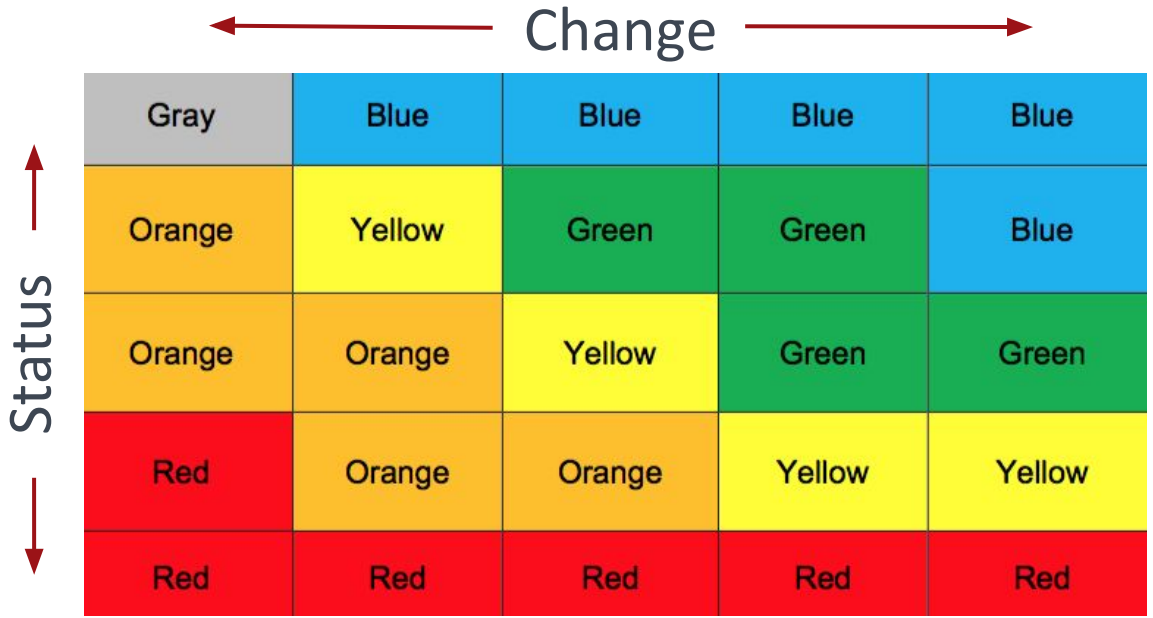
The Equity Report shows the performance levels for all students on the state indicators. It also shows the total number of student groups that received a performance level for each indicator and how many of those student groups are in the two lowest performance levels (Red/Orange). The total number of student groups may vary due to the number of grade levels included within each indicator. Select any of the underlined indicators for more detailed information.

State Indicators	All Students Performance	Total Student Groups	Student Groups in Red/Orange
Chronic Absenteeism	N/A	N/A	N/A
Suspension Rate (K-12)		10	2
English Learner Progress (1-12)		1	0
Graduation Rate (9-12)		6	1
College/Career	N/A	N/A	N/A
English Language Arts (3-8)		8	0
Mathematics (3-8)		8	1

Select any of the underlined local indicators to see the local data for those with a met rating.

Local Indicators	Ratings
Basics (Teachers, Instructional Materials, Facilities)	Met
Implementation of Academic Standards	Met
Parent Engagement	Met
Local Climate Survey	Met

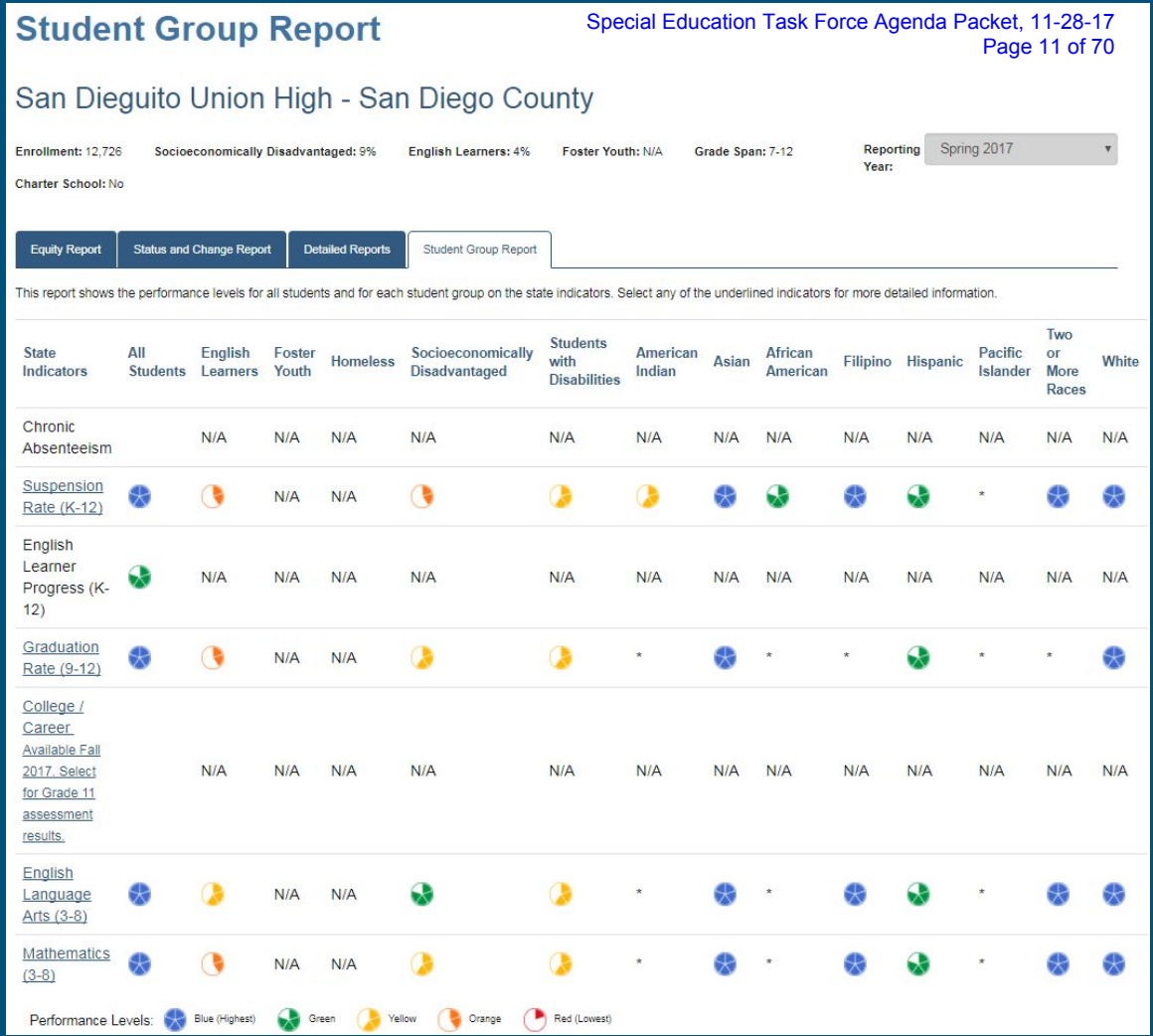
THE CALIFORNIA MODEL



The model uses percentiles to create a 5x5 grid that combine **status** and **change** that are equally valued in making an overall determination for a **performance category** (**color**).

New CA Accountability Model

CA School Dashboard



Student Group Report

San Dieguito Union High - San Diego County

Enrollment: 12,726 **Socioeconomically Disadvantaged:** 9% **English Learners:** 4% **Foster Youth:** N/A **Grade Span:** 7-12 **Reporting Year:** Spring 2017

Charter School: No

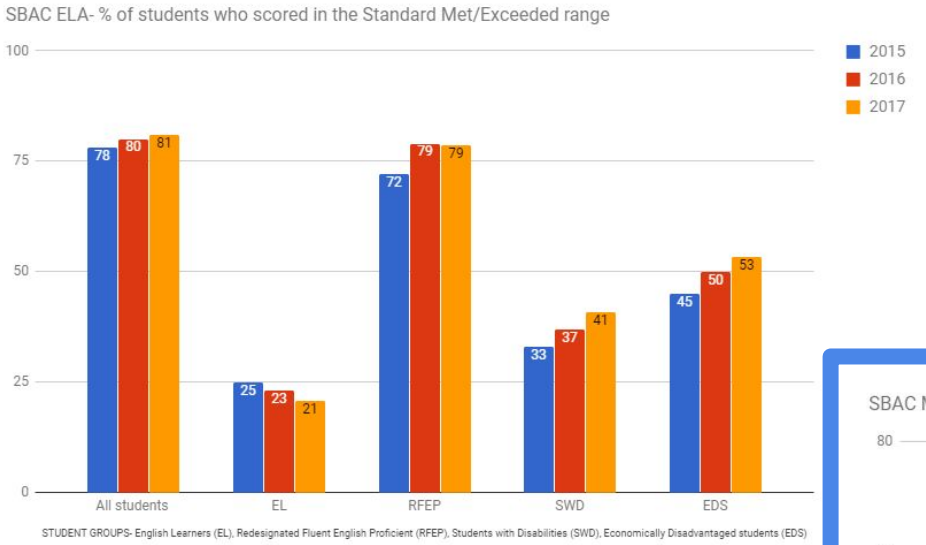
Equity Report | Status and Change Report | Detailed Reports | Student Group Report

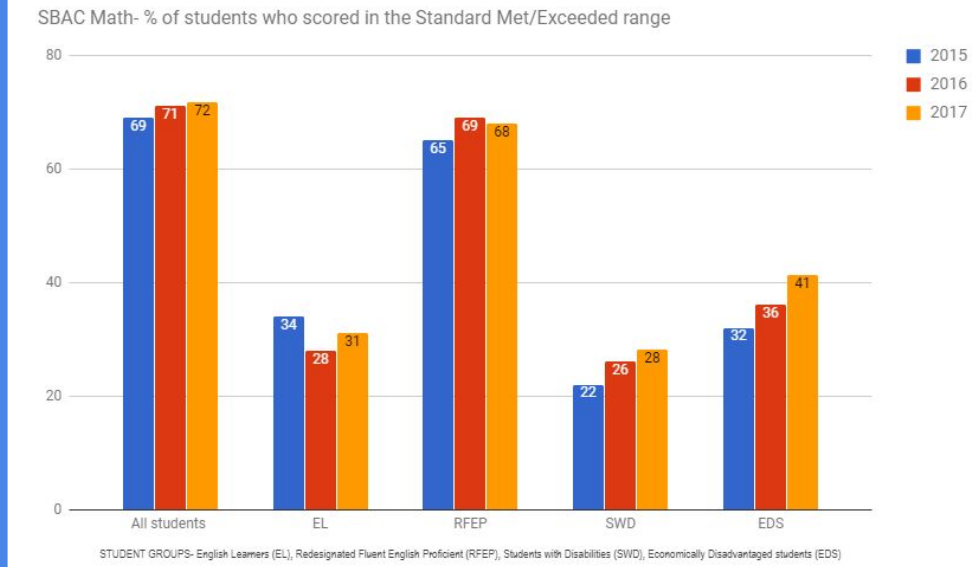
This report shows the performance levels for all students and for each student group on the state indicators. Select any of the underlined indicators for more detailed information.

State Indicators	All Students	English Learners	Foster Youth	Homeless	Socioeconomically Disadvantaged	Students with Disabilities	American Indian	Asian	African American	Filipino	Hispanic	Pacific Islander	Two or More Races	White
Chronic Absenteeism		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Suspension Rate (K-12)			N/A	N/A								*		
English Learner Progress (K-12)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Graduation Rate (9-12)			N/A	N/A			*		*	*		*	*	
College / Career Available Fall 2017. Select for Grade 11 assessment results.		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
English Language Arts (3-8)			N/A	N/A			*		*			*		
Mathematics (3-8)			N/A	N/A			*		*			*		

Performance Levels: Blue (Highest) Green Yellow Orange Red (Lowest)

Academic Indicators
in English Language Arts & Math



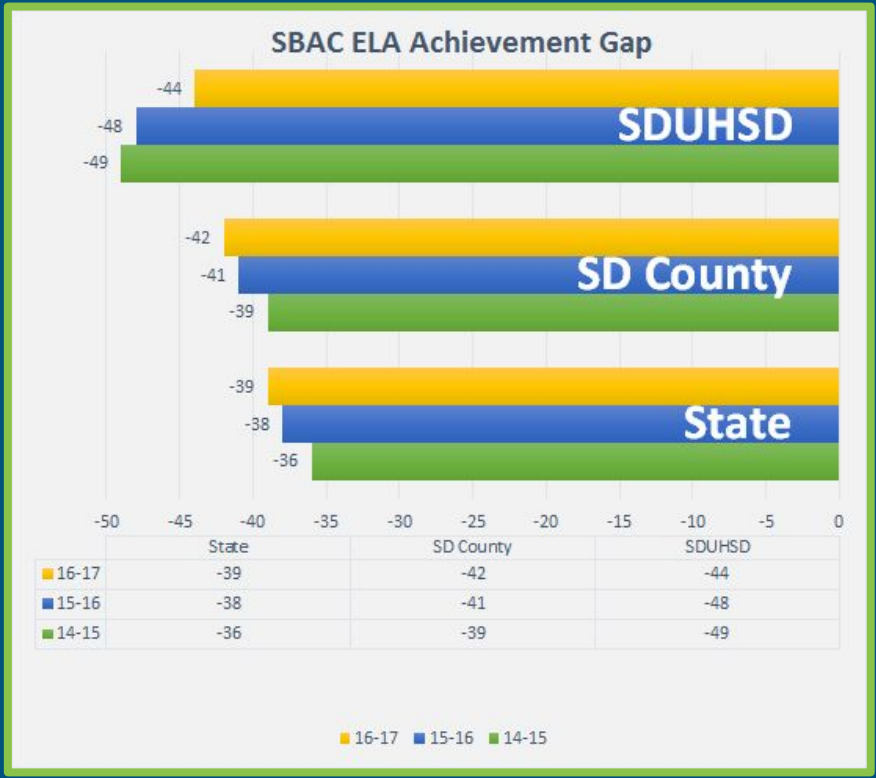


% of students who scored in the Standard Met/Exceeded range by student group

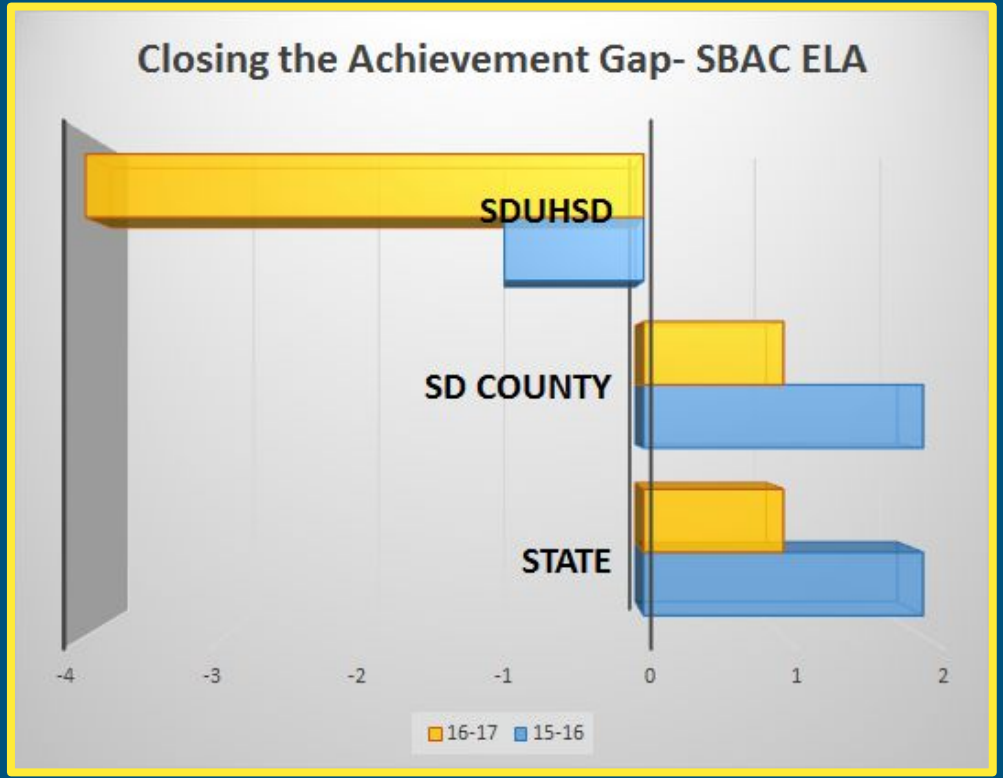
Source: CAASPP

Academic Indicators

Achievement Gap in ELA on SBAC



	State	SD County	SDUHSD
16-17	-39	-42	-44
15-16	-38	-41	-48
14-15	-36	-39	-49



Academic Indicators

SDUHSD is closing the achievement gap

Multi- year SBAC results in ELA- Comparing the % of students without and with a disabiility who scored in the Standard Met/Exceeded ranges

Education Agency	Spring 2015 Students without a disability	Spring 2015 Students with a disability	Spring 2015 Achieve Gap	Spring 2016 Students without a disability	Spring 2016 Students with a disability	Spring 2016 Achieve Gap	Spring 2017 Students without a disability	Spring 2017 Students with a disability	Spring 2017 Achieve Gap	Grade span included
State	48	12	-36	52	14	-38	53	14	-39	3-8,11
SD County	56	17	-39	60	19	-41	61	19	-42	3-8,11
SDUHSD	82	33	-49	85	37	-48	85	41	-44	7,8,11
Huntington BUHSD	78	25	-53	81	27	-54	82	30	-52	11
Tamalpias	82	40	-42	76	28	-48	78	31	-47	11
El Dorado	79	26	-53	85	35	-50	80	25	-55	11
Carlsbad	74	30	-44	79	36	-43	80	36	-44	3-8,11
Poway	76	34	-42	81	34	-47	79	35	-44	3-8,11
San Marcos	66	16	-50	73	16	-57	72	19	-53	3-8,11

Multi- year SBAC results in MATH- Comparing the % of students without and with a disabiility who scored in the Standard Met/Exceeded ranges

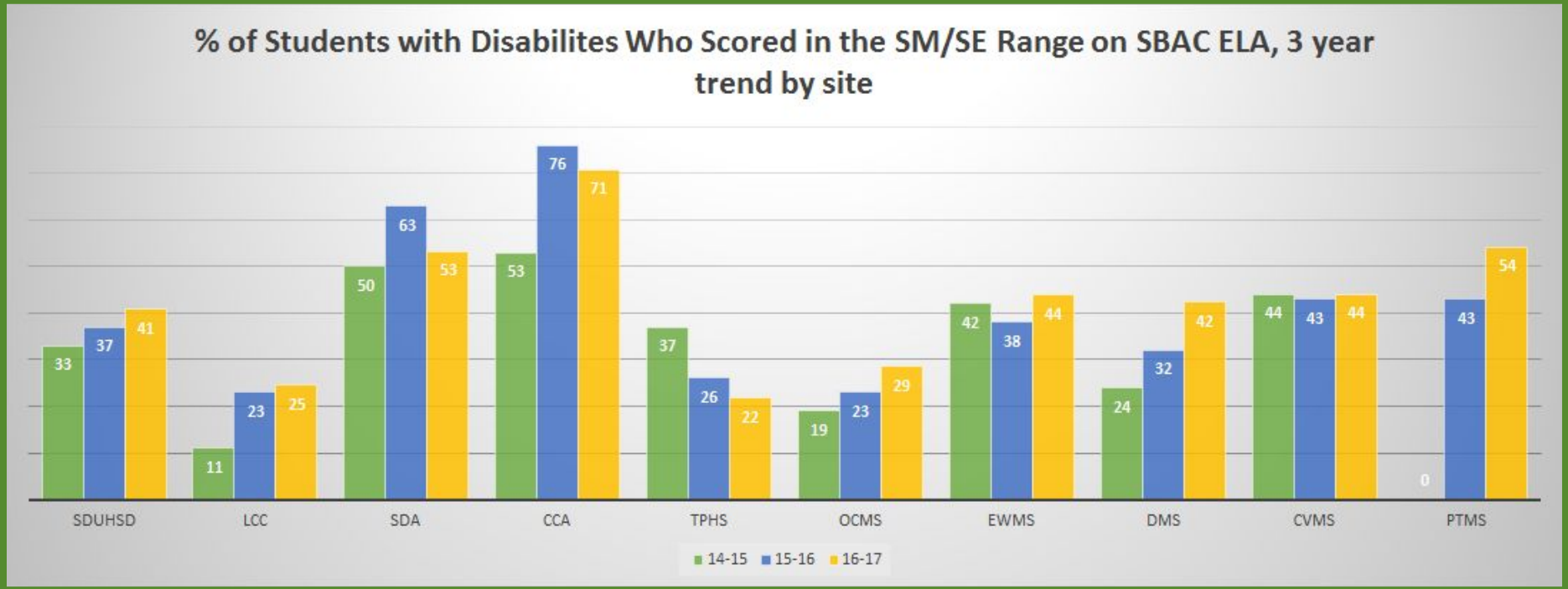
Education Agency	Spring 2015 Students without a disability	Spring 2015 Students with a disability	Spring 2015 Achieve Gap	Spring 2016 Students without a disability	Spring 2016 Students with a disability	Spring 2016 Achieve Gap	Spring 2017 Students without a disability	Spring 2017 Students with a disability	Spring 2017 Achieve Gap	Grade span included
State	36	11	-25	40	9	-31	41	11	-30	3-8,11
SD County	43	13	-30	46	15	-31	48	15	-33	3-8,11
SDUHSD	73	22	-51	76	26	-50	76	28	-48	7,8,11
Huntington BUHSD	51	8	-43	55	10	-45	56	9	-47	11
Tamalpias	65	22	-43	59	9	-50	62	20	-42	11
El Dorado	58	11	-47	62	17	-45	59	10	-49	11
Carlsbad	63	26	-37	68	27	-41	69	30	-40	3-8,11
Poway	69	30	-39	72	29	-43	71	30	-42	3-8,11
San Marcos	51	12	-39	55	11	-44	55	13	-42	3-8,11

Achievement Gap for students with disabilities when compared to students with no reported disability- 3 year trend

ELA	2015	2016	2017	Closing the gap?	
State	36	38	39	✗	3
SD County	39	41	42	✗	3
SDUHSD	**49**	**48**	**44**	✓	**-5**
Huntington BUSD	**53**	**54**	**52**	✓	**-1**
Tamalpias UHSD	42	48	47	✗	5
El Dorado UHSD	53	50	55	✗	2
Carlsbad USD	44	43	44	!	0
Poway USD	42	47	44	✗	2
San Marcos USD	50	57	53	✗	3

MATH	2015	2016	2017	Closing the gap?	
State	25	31	30	✗	5
SD County	30	31	33	✗	3
SDUHSD	**51**	**50**	**48**	✓	**-3**
Huntington BUSD	43	45	47	✗	4
Tamalpias UHSD	**43**	**50**	**42**	✓	**-1**
El Dorado UHSD	47	45	49	✗	2
Carlsbad USD	37	41	40	✗	3
Poway USD	39	43	42	✗	3
San Marcos USD	39	44	42	✗	3

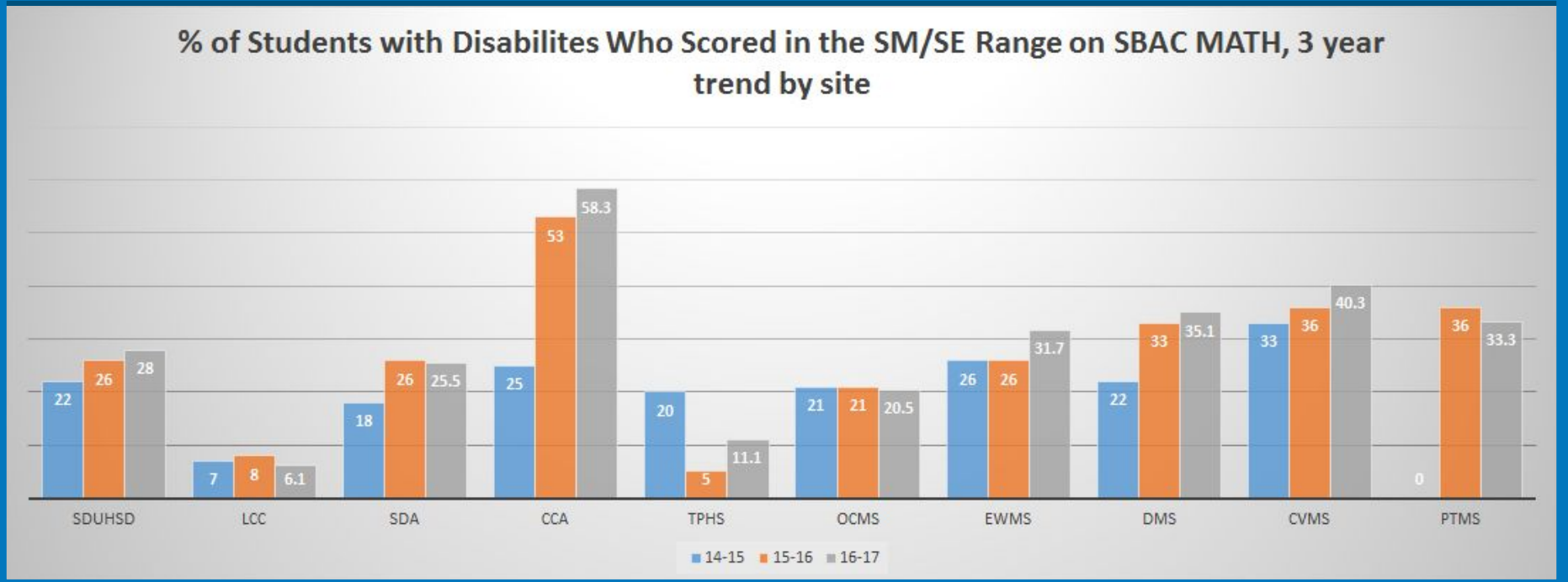
SBAC ELA results by site



SPECIALIZED PROGRAMS AT EACH SITE

LCC: Learning Center SEAS HSLA FLS TAP	**SDA:**	**CCA:** Coastal LA	**TPHS:** Learning Center Seaside Prep FLS TAP	**OCMS:** FLS TAP	**EWMS:** Learning Center	**DMS:** Learning Center SEAS MSLA	**CVMS:** TAP	**PTMS:**

SBAC Math results by site

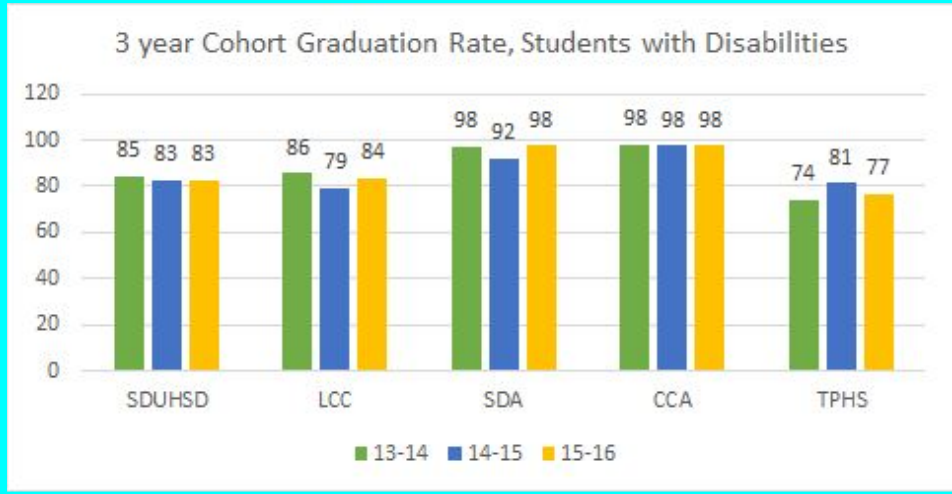


SPECIALIZED PROGRAMS AT EACH SITE

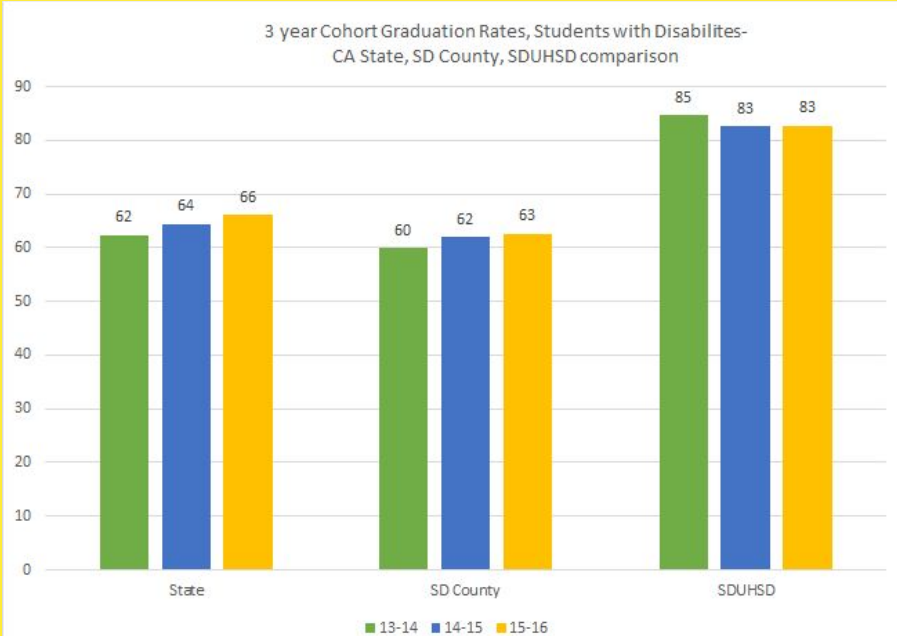
LCC:	SDA:	CCA:	TPHS:	OCMS:	EWMS:	DMS:	CVMS:	PTMS:
Learning Center SEAS HSLA FLS TAP		Coastal LA	Learning Center Seaside Prep FLS TAP	FLS TAP	Learning Center	Learning Center SEAS MSLA	TAP	

Cohort Graduation Rate

SDUHSD high schools

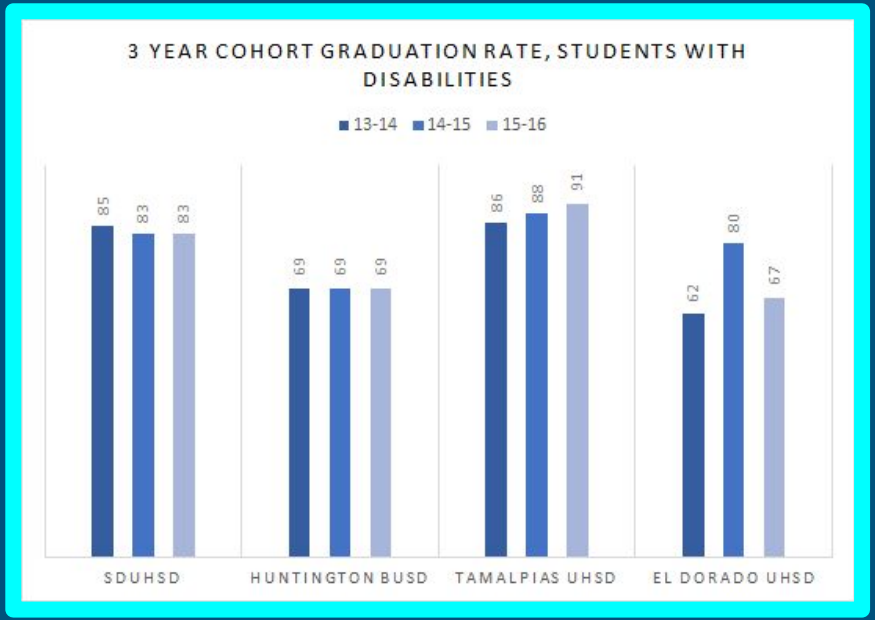


SDUHSD compared to CA state and SD County averages



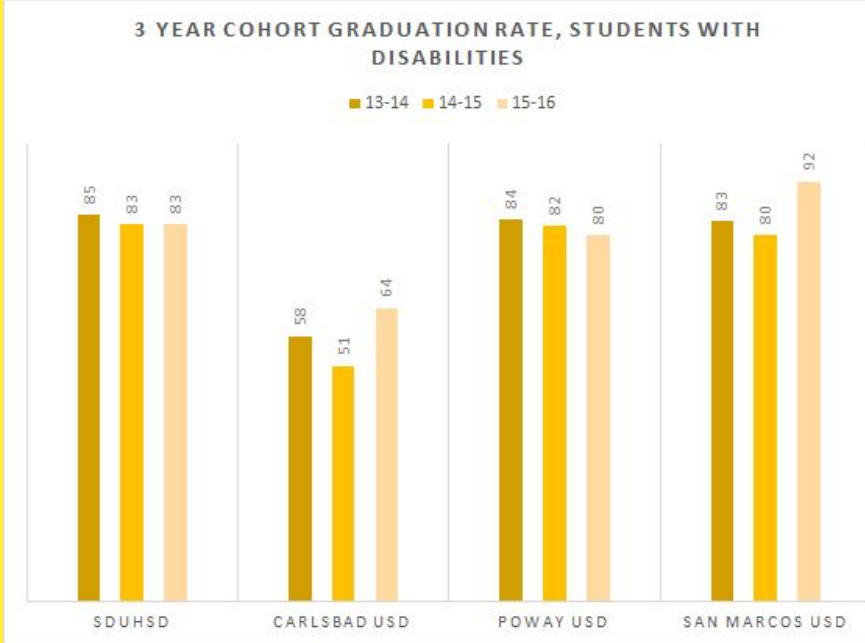
Source: CDE DataQuest

Cohort Graduation Rate



SDUHSD compared to districts with similar demographics within the state

SDUHSD compared to CA state and SD County averages



Cohort Graduation Rate

By Student groups, SDUHSD sites, State, County, Comparable Districts and Neighboring Districts

★ SDUHSD students with disabilities have a higher graduation rate than the state and SD county averages for all students *(highlighted in blue)*

	All			English Learner			Socio-Economically Disadvantaged (SED/LI)			Special Education		
	13-14	14-15	15-16	13-14	14-15	15-16	13-14	14-15	15-16	13-14	14-15	15-16
State	81	82	84	65	69	73	76	78	80	62	64	66
SD County	80	82	82	61	66	56	71	75	76	60	62	63
SDUHSD	97	96	96	85	81	79	89	87	84	85	83	83
LCC	97	96	94	72	72	42	87	88	72	86	79	84
SDA	99	99	100	96	93	100	99	96	100	98	92	98
CCA	100	99	100	*	100	100	100	100	100	98	98	98
TPHS	96	98	97	91	87	90	92	88	92	74	81	77

	All			English Learner			Socio-Economically Disadvantaged (SED/LI)			Special Education		
	13-14	14-15	15-16	13-14	14-15	15-16	13-14	14-15	15-16	13-14	14-15	15-16
State	81	82	84	65	69	73	76	78	80	62	64	66
SD County	80	82	82	61	66	56	71	75	76	60	62	63
SDUHSD	97	96	96	85	81	79	89	87	84	85	83	83
Huntington BUSD	94	94	95	80	82	84	89	91	92	69	69	69
Tamalpias UHSD	97	96	96	88	92	87	90	87	86	86	88	91
El Dorado UHSD	94	95	94	68	82	79	85	90	90	62	80	67
Carlsbad USD	94	92	94	81	80	84	86	82	90	58	51	64
Poway USD	96	96	95	85	86	85	89	89	90	84	82	80
San Marcos USD	94	94	98	88	84	94	92	93	98	83	80	92

School Climate Indicators
Cohort Dropout rates

	All			English Learner			Socio-Economically Disadvantaged (SED/LI)			Special Education		
	13-14	14-15	15-16	13-14	14-15	15-16	13-14	14-15	15-16	13-14	14-15	15-16
SDUHSD	1.8	2.7	2.6	10.3	12.3	14.5	8.5	9.2	11.5	4.6	7.6	4.2
LCC	2.1	2.5	3.6	24	15.6	39.4	9.9	5.4	18.4	8.6	4.8	3.3
SDA	1	0.3	0.3	4.2	0	0	1.2	1.3	0	2.5	2.7	2.2
CCA	0.2	0	0	0	0	0	0	0	0	1.9	0	0
TPHS	1	1.5	0.7	2.3	8.5	3.5	2.8	7.4	1.6	1.4	8.6	3.1

Other Student Outcomes

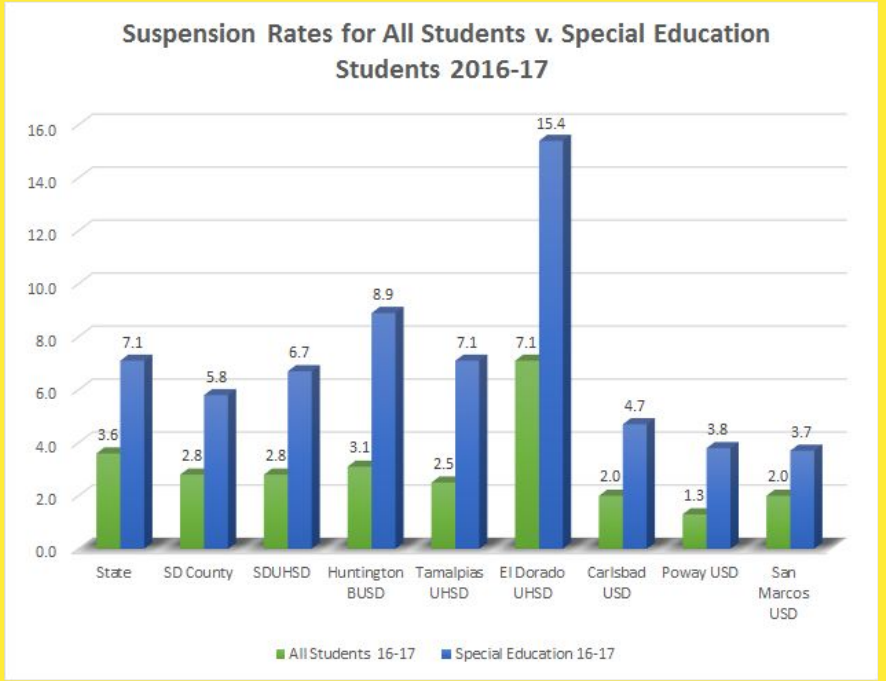
15-16 Cohort:

- 237 students in the cohort, 196 graduates
  - 22 students earned a Certificate of Completion
    - students enroll in ATP
    - students enroll in Mira Costa's Adult Education Program

School Climate Indicators

Suspension Rates for Students with Disabilities

	All Students				Special Education
	13-14	14-15	15-16	16-17	16-17
State	4.3	3.8	3.7	3.6	7.1
SD County	3.4	3.0	2.7	2.8	5.8
SDUHSD	1.3	1.4	1.6	2.8	6.7
Huntington BUSD	1.8	2.8	2.0	3.1	8.9
Tamalpias UHSD	2.9	1.3	2.2	2.5	7.1
El Dorado UHSD	8.4	7.0	6.9	7.1	15.4
Carlsbad USD	1.9	2.1	2.1	2.0	4.7
Poway USD	1.2	1.1	1.1	1.3	3.8
San Marcos USD	1.5	1.3	1.5	2.0	3.7



Source: CDE DataQuest

School Climate Indicators

Suspensions by Offense for Students with Disabilities

Name	Cumulative Enrollment	Total Suspensions	Violent Incident (Injury)	Violent Incident (No Injury)	Weapons Possession	Illicit Drug Related	Defiance Only	Other Reasons
Statewide	771024	108854	15209	55144	3134	8475	21822	5070
San Diego County	70477	7451	1095	3699	241	598	1403	415
San Dieguito Union High	1411	133	6	35	3	43	32	14
Poway Unified	4749	311	63	180	10	23	26	9
Carlsbad Unified	1470	93	7	51	3	15	11	6
San Marcos Unified	3287	185	8	86	5	43	31	12

Name	Cumulative Enrollment	Total Suspensions	Violent Incident (Injury)	Violent Incident (No Injury)	Weapons Possession	Illicit Drug Related	Defiance Only	Other Reasons
Statewide	771024	108854	14%	51%	3%	8%	20%	5%
San Diego County	70477	7451	15%	50%	3%	8%	19%	6%
San Dieguito Union High	1411	133	5%	26%	2%	32%	24%	11%
Poway Unified	4749	311	20%	58%	3%	7%	8%	3%
Carlsbad Unified	1470	93	8%	55%	3%	16%	12%	6%
San Marcos Unified	3287	185	4%	46%	3%	23%	17%	6%

LINGERING QUESTIONS?

Public Data Sources and Info:

DataQuest
Ed Data
CAASPP
CA School Dashboard
Parent guides to dashboard
- CDE PDF
- CDE Video

BEST PRACTICES IN SPECIAL EDUCATION SERVICE DELIVERY

September 2016

In the following report, Hanover Research reviews special education organization and delivery, paying particular attention to administrative structures, resource allocation, and coordination.

HANOVER RESEARCH
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TABLE OF CONTENTS

EXECUTIVE SUMMARY AND KEY FINDINGS

INTRODUCTION

Increasingly, special education is focused on including students in the general education classroom whenever possible. The standard in Georgia is that 90 percent of students with disabilities spend at least 80 percent of the day in general education classrooms.[1] Districts employ a continuum of services to meet the needs of their students in the least restrictive environment possible.

However, coordinating these services and implementing an effective special education program can be challenging. In this report, Hanover Research reviews the literature on special education services and delivery, identifying common challenges and current practices. The report proceeds as follows:

- **Section I: Overview of Special Education Service Delivery Models** identifies three common types of service delivery models, and introduces the relationship between special education and Response to Intervention (RTI).
- **Section II: Special Education Program Administration** describes administrative considerations for special education program delivery, including staffing, student grouping, scheduling, and evaluation.

KEY FINDINGS

- **Special education service models offer a spectrum of supports, corresponding with the range of needs among students with disabilities.** Districts can use alternative "pull-out" settings, integrated instruction, co-teaching, or inclusive classrooms to coordinate delivery of IEPs in each student's least restrictive environment, as mandated by federal legislation such as ESSA and IDEA. Research is so far inconclusive about which particular model is most effective, but suggests potentially positive impacts from each model. Districts should consider local needs and resources when planning their own spectrum of supports.
- **General classroom teachers, special educators, and para-educators serve important roles in creating a "least restrictive environment" for each student.** General classroom teachers provide inclusive instruction to all students. Special educators may support specific needs within or outside of the general education classroom, through pull-out sessions or in alternative, isolated settings. Para-educators can serve a variety of roles under the general or special educator, such as providing instructional assistance in the classroom or in specific settings, acting as a translator, or conducting parental involvement activities. Districts must provide sufficient training to ensure each educator

[1] "An Administrator's Guide to the Instruction of Students with Disabilities in the Least Restrictive Environment." Georgia Department of Education, 2012. p. 1. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Special-Education-Services/Documents/Admin%20Guide%20to%20LRE.pdf

understands and is comfortable with their role, as well as ongoing time for these educators to coordinate delivery of services.

- **Scheduling must consider the individual needs of students, educator credentials and preferences, and whole-school structures in order to create *sufficient*, *efficient*, *effective*, and *appropriate* special education programs.** Schedules are first governed by IEPs, which supersede general education requirements and standardized testing. They should be unique to each student and take into consideration student abilities and needs. Administrators should then consider how full-school schedules and spaces contribute to ease of movement between special and general education settings. Finally, general, special, and para-educator credentials and preferences must be consulted to ensure appropriate staffing and caseloads for the desired schedule.
    - **Parallel schedules** create content linkages across the general and special education settings, such that a common subject is taught at any given time within a grade or a school. These may be difficult to coordinate at the elementary school level, given the role of the general classroom educator in teaching most subjects.
    - **Flexible schedules** establish a school-level spectrum of services that identifies integrated and alternative supports that can be offered to any student in need based on, for example, a Response to Intervention model.
    - **Grid schedules** visualize individual students' daily plan of supports, including identification of integrated and alternative options as well as daily contact hours with general, special, and para-educators.

SECTION I: OVERVIEW OF SPECIAL EDUCATION SERVICE DELIVERY MODELS

In this section, Hanover provides an overview of special education service delivery models as an introduction to the secondary research and peer district profiles. Specifically, it identifies three common types of service delivery models, and introduces the relationship between special education and Response to Intervention (RTI).

THREE SPECIAL EDUCATION INSTRUCTIONAL MODELS

Students with disabilities or special needs have traditionally been educated in separate settings than other students or have been "pulled out" of the classroom for special instruction. Since the 1980s, however, increasing numbers of students with disabilities have been included in the general education curriculum due to concerns about the cost and effectiveness of separate special education programs, as well as pressure from disability rights activists.[2] Federal legislation has also encouraged increased inclusion of students with disabilities in the general education classroom.

Provisions of the No Child Left Behind Act (NCLB) and Individuals with Disabilities Education Improvement Act (IDEA) have encouraged states to include students with disabilities in the general education curriculum by requiring that students with disabilities participate in state assessments for reading and math.[3] In addition, IDEA requires that students with disabilities receive appropriate education in the "least restrictive environment" possible, meaning that students with disabilities should be educated with children who are not disabled, and separate instruction should occur only when "the nature or severity of the disability" means that education in regular classes cannot be achieved satisfactorily.[4] Modifications under the current Every Student Succeeds Act (ESSA) allow for greater nuance in the provision of educational services to students with disabilities, emphasizing local autonomy and family needs in determining the optimal environment for each individual.[5]

Currently, special education delivery is characterized by three general models, listed in Figure 1.1: alternative settings, integrated instruction, and full inclusion. Alternative settings ("pull-out") provide instruction outside of the regular general education environment. Full inclusion, on the other hand, places students with disabilities 100 percent in the general education

[2] Rea, P.J., V.L. McLaughlin, and C. Walther-Thomas. "Outcomes for Students With Learning Disabilities in Inclusive and Pullout Programs." *Exceptional Children*, 68:2, 2002. p. 203. http://people.oregonstate.edu/~hammerr/soc516/Rea_et_al_2002.pdf

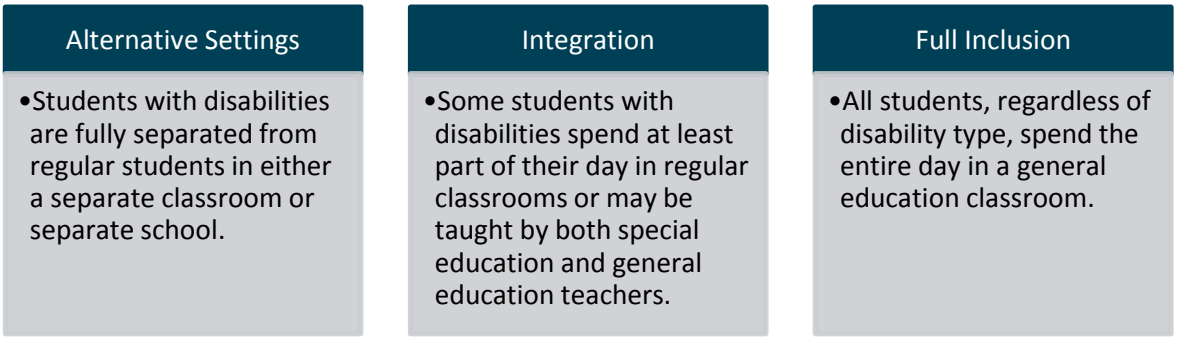
[3] Hall, S. "NCLB and IDEA: Optimizing Success for Students with Disabilities." *Perspectives on Language and Literacy*, 33:1, Winter 2007. Accessed via ProQuest

[4] "Individuals with Disabilities Education Act." 2004. sec. Part B, Section 612(5)(B). http://idea.ed.gov/download/statute.html

[5] Álvarez, B. "Promising Changes for Special Education Under ESSA." *NEA Today*, June 30, 2016. http://neatoday.org/2016/06/30/special-education-essa/

setting. Integrated instruction uses a combination of instruction in the general education classroom and in separate classrooms.[6]

Figure 1.1: Special Education Delivery Models



Source: Dixon[7] and Unruh et al.[8]

Hanover's examination of the literature on the models of special education and the academic achievement of students with disabilities suggests that there is no specific model proven to increase student achievement. Rather, researchers have come to mixed conclusions regarding the results of the research comparing inclusive teaching to isolated resource classrooms. Proponents of inclusive education argue that instruction of students with disabilities in alternative settings has led to poor social, academic, and employment outcomes and that the higher expectations of general education classrooms will improve those outcomes. Critics of inclusion, however, argue that "general education is unprepared to meet the unique needs of students with disabilities and that inclusion is primarily a cost-cutting effort."[9] Special education researchers and experts have come to many different conclusions regarding the efficacy of different service delivery models for special education, alternately claiming that students with disabilities (1) have better outcomes in alternate settings; (2) have better outcomes in inclusive settings; or (3) have similar outcomes regardless of setting.[10]

Due to the inconclusive research about the best delivery model for special education, some scholars suggest that an integrated approach, combining elements of the inclusion and "pull-out" models, may be optimal.[11] While the advocates of a traditional "pull-out" approach

[6] [1] Unruh, D. et al. "Programs and Practices for Special Education Students in Alternative Education Settings." National Center on Secondary Education and Transition, January 2007. http://www.ncset.org/publications/viewdesc.asp?id=3448 [2] Dixon, S. "Inclusion - Not Segregation or Integration Is Where a Student with Special Needs Belongs." *The Journal of Educational Thought*, 39:1, Spring 2005. Accessed via ProQuest

[7] Dixon, Op. cit.

[8] Unruh et al., Op. cit.

[9] Rea, McLaughlin, and Walther-Thomas, Op. cit., p. 204.

[10] Fore III, C. et al. "Academic Achievement and Class Placement in High School: Do Students with Learning Disabilities Achieve More in One Class Placement Than Another." *Education and Treatment of Children*, 31:1, 2008. p. 56. http://www.catea.gatech.edu/scitrain/kb/FullText_Articles/Fore_Academic.pdf

[11] Marston, D. "A Comparison of Inclusion Only, Pull-Out Only, and Combined Service Models for Students with Mild Disabilities." The Journal of Special Education, 1996. p. 129. Accessed via EBSCOhost

argue that self-contained classrooms allow special needs students to learn at their own pace, others feel that the practice unnecessarily segregates these students from the general population.[12] In fact, **an "inclusive" or "mainstreaming" approach to special education should not remove the specialized support systems that characterize self-contained instruction.** Rather, it places students in a natural learning environment in their home community.[13] Schools and districts may still provide support services such as "a specially trained classroom or one-on-one paraprofessional, [altered] testing environments or expectations, [adapted] curriculum, [and…] visual supports or adaptive equipment."[14]

Figure 1.2 below outlines the necessary components for the successful inclusion of special education students developed by the Virginia Department of Education, as well as the strategies and skills associated with these components.

Figure 1.2: Components of Successful Inclusion

Component for Successful Inclusion	Strategies and Skills
Teachers are trained in a wide variety of teaching methods to address diverse student needs	Priming, prompt delivery, daily schedules, mini-schedules, systematic instruction, peer mediated interventions, Augmentative and Alternative Communication (AAC)
Adequate supports are provided so skill development is integrated into the general education classroom activities	Environmental modifications, visual supports, schedules, structured activities, small group instruction, self-management strategies
Adequate supports are provided to the student to foster peer interaction	Peer mediated interventions, peer buddies, Lunch Bunch, visual supports, integrated related services personnel, adult support
Team members collaborate and support the inclusion opportunity	Parent involvement, parent-teacher conferences, homeschool communication book, team meetings, parent training, paraprofessional training

Source: Virginia Department of Education[15]

Co-Teaching

Frequently associated with integrated and fully inclusive education, **co-teaching is an instructional approach in which general and special education teachers work together** to plan and deliver instruction to a group of students. Co-teaching usually occurs in the general classroom setting with students with mild to moderate disabilities.[16] Co-teaching can take

[12] "Inclusion vs. Self-Contained Education for Children with ASD Diagnoses." Center for Autism Research - The Children's Hospital of Philadelphia. p. 2. http://www.carautismroadmap.org/inclusion-vs-self-contained-education-for-children-with-asd-diagnoses/?print=pdf

[13] "How Might a Child with Special Needs Be Part of Our School?" Autism Speaks. p. 2. https://www.autismspeaks.org/docs/family_services_docs/sk/Being_Part_of_Our_School.pdf

[14] Ibid., p. 3.

[15] "Models of Best Practice in the Education of Students with Autism Spectrum Disorders," Op. cit., p. 28.

[16] Sileo, J.M. "Co-Teaching: Best Practices for Education." Inclusive and Supportive Education Congress, August 2005. http://www.isec2005.org.uk/isec/abstracts/papers_s/sileo_j.shtml

various forms.[17] For example, the general education teacher may take the lead, while the special education teacher supports the lead teacher, or vice versa. Alternately, teachers may co-teach by sharing instruction equally. In other classrooms, one teacher may work with a small group of students while the other teacher instructs a larger group. Types of co-teaching models, as defined by expert Marilyn Friend, are displayed in Figure 1.3 on the following page.

Similar to the research evidence for integrated and inclusive classrooms, the evidence supporting co-teaching is mixed. A 2001 meta-analysis of six studies of co-teaching found that effect sizes ranged from low to high. Just three studies found that co-teaching had positive academic and social outcomes for students with disabilities, and the authors concluded that further research was necessary to determine whether co-teaching was an effective delivery model for special education students.[18]

A more recent review of co-teaching research also found that further research is needed to determine the efficacy of co-teaching.[19] Although co-teaching is generally associated with positive outcomes such as academic achievement, few studies have been methodologically rigorous enough to establish a causal relationship between co-teaching and student outcomes. The authors of this review recommend that educators ensure that principles of special education—such as intensive, individualized instruction and progress monitoring—be used when co-teaching.[20]

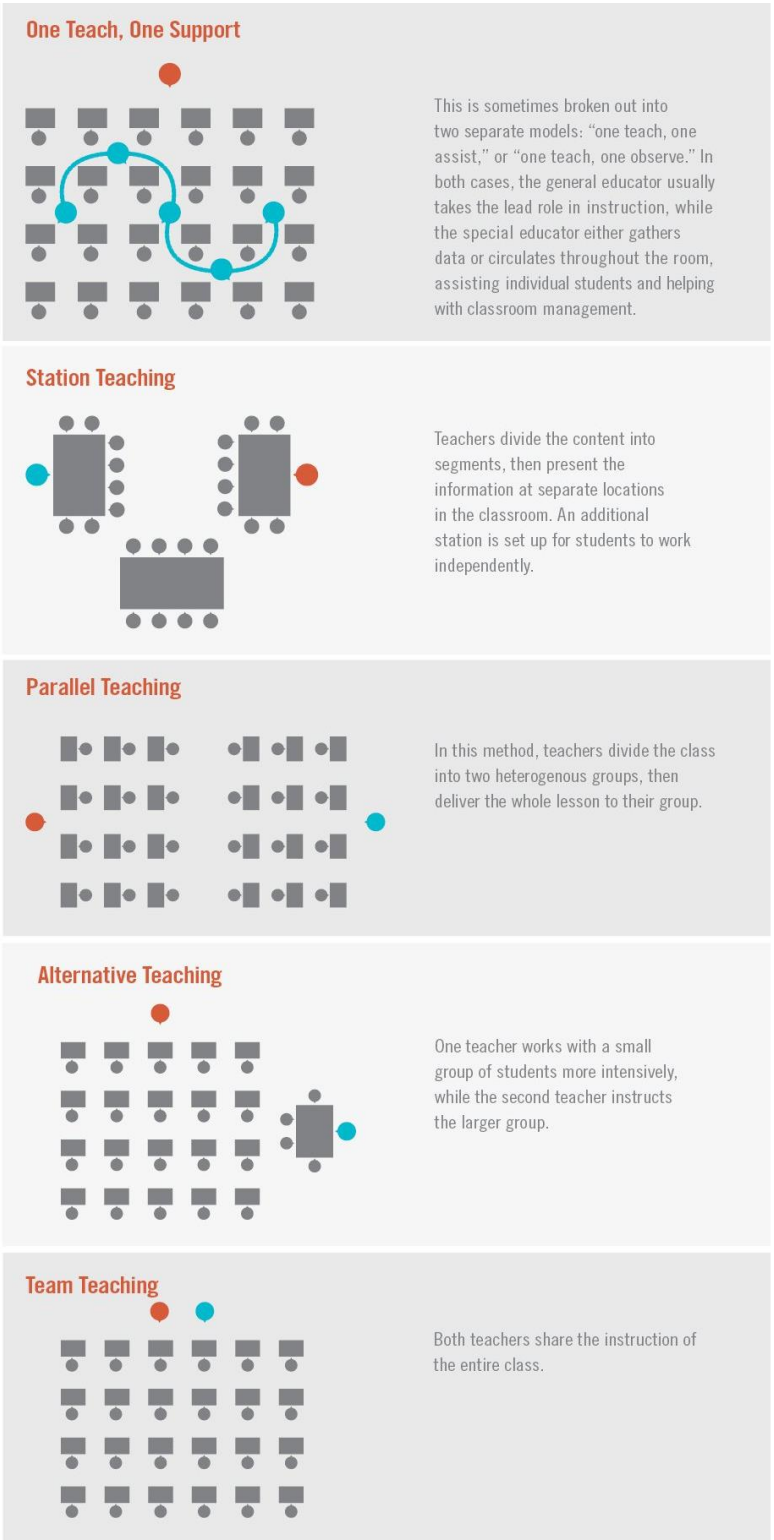
[17] Samuels, C.A. "Hurdles in Pairing General, Special Education Teachers." *Education Week*, June 9, 2015. http://www.edweek.org/ew/articles/2015/06/10/hurdles-in-pairing-general-special-education-teachers.html

[18] Murawski, W.W. and H.L. Swanson. "A Meta-Analysis of Co-Teaching Research - Where Are the Data?" *Remedial and Special Education*, 22:5, October 2001. p. 258,264. https://www.researchgate.net/profile/Wendy_Murawski/publication/249833696_A_Meta-Analysis_of_Co-Teaching_Research/links/551d92fa0cf213ef063e71ba.pdf

[19] Cook, B.G. et al. "Co-Teaching for Students with Disabilities - A Critical Analysis of the Empirical Literature." In *Handbook of Special Education*, (Routledge, 2011). pp. 147–159. https://books.google.com/books?id=7gjJBQAAQBAJ&dq=The+Handbook+of+Special+Education

[20] Ibid., pp. 155–159.

Figure 1.3: Co-Teaching Models



Source: Samuels[21]

[21] Samuels, Op. cit.

While co-teaching can be a way to encourage inclusion, it is not always an efficient use of staff. A literature review from the *Journal of Educational and Psychological Consultation* found that several studies suggest that the special educator may take on more of an assistant role in co-teaching, working only with the students with disabilities rather than working with all students as a full co-teacher.[22] Additionally, other studies have found that the presence of a special educator in the classroom significantly decreases the amount of time general education teachers spend with students with disabilities.[23] As with paraprofessionals, districts need to be careful that special educators are being utilized efficiently and not being given responsibilities that do not align with their qualifications. Co-teaching is not an efficient or appropriate staffing practice if it results in special educators essentially taking on the role of a paraprofessional.

Educators recommend that schools provide adequate training and planning time when using co-teaching as an instructional approach:[24]

- **Training and professional development**. Teachers and administrators need to be familiar with working with general and special education students and understand different models and strategies for co-teaching. Teachers also should have opportunities to develop their communication and collaboration skills in order to work effectively with their co-teachers.
- **Planning time**. Common planning time ideally should occur once a week and allow teachers to develop lesson plans, evaluate students, and develop and share strategies for addressing students' learning needs or behavioral issues.

SPECIAL EDUCATION AND RESPONSE TO INTERVENTION

Response to Intervention (RTI)—a multi-tiered framework for identifying and assisting students struggling in school[25]—is relevant to special education service delivery because it can be a method for identifying students with learning disabilities and referring these students to special education evaluation or services. The screening, monitoring, and intervention process used in an RTI framework helps determine whether a student is making adequate progress for their age and grade level, and indicates whether or not students are responding to a particular educational intervention.[26]

[22] Friend, M. et al. "Co-Teaching: An Illustration of the Complexity of Collaboration in Special Education." *Journal of Educational and Psychological Consultation*, 20:1, February 26, 2010.

[23] Ibid.

[24] [1] Murawski, W.W. and P. Bernhardt. "Co-Teaching: Making It Work: An Administrator's Guide to Co-Teaching." *Educational Leadership*, December 2015. http://www.ascd.org/publications/educational_leadership/dec15/vol73/num04/An_Administrator's_Guide_to_Co-Teaching.aspx [2] Ripley, S. "Collaboration between General and Special Education Teachers." ERIC Digest, 1997. pp. 3–6. http://files.eric.ed.gov/fulltext/ED409317.pdf

[25] "Essential Components of RTI." Center on Response to Intervention, American Institutes for Research. http://www.rti4success.org/essential-components-rti

[26] "RTI Action Network Position Statement on Determination of Specific Learning Disabilities." RTI Action Network, National Center for Learning Disabilities. http://www.rtinetwork.org/about-us/position-statement-on-determination-of-specific-learning-disabilities

However, experts encourage states and schools to use caution when using RTI as a method for identifying learning disabilities. First, **RTI should not be the sole method of identifying learning disabilities**.[27] Although RTI is designed to identify low-achieving students, low achievement does not necessarily correlate with a learning disability. Learning disabilities must be identified through comprehensive evaluations that, as mandated by IDEA 2004, use a variety of assessment tools; observe students in the learning environment; consider other factors such as visual or hearing disabilities, cultural factors, environmental or economic disadvantage, or limited English proficiency; and determine that low achievement is not due to lack of appropriate instruction.[28]

Second, **RTI should not delay services for those with disabilities**.[29] The RTI process can provide information regarding a student's progress. However, students suspected of having a disability should not be required to go through all tiers of the RTI framework before being referred to special education services. Insufficient progress in targeted or intensive interventions within RTI can be one factor that may trigger referral for evaluation; however, it is not the only means of referring students. In addition, the U.S. Department of Education issued a memo in 2011 clarifying that RTI cannot be used to "deny timely evaluation" for students suspected of having a disability.[30]

[27] [1] Hughes, C. and D.D. Dexter. "The Use of RTI to Identify Students With Learning Disabilities: A Review of the Research." RTI Action Network, National Center for Learning Disabilities. http://www.rtinetwork.org/learn/research/use-rti-identify-students-learning-disabilities-review-research [2] Fletcher, J.M. "Identifying Learning Disabilities in the Context of Response to Intervention: A Hybrid Model." RTI Action Network, National Center for Learning Disabilities. http://www.rtinetwork.org/learn/ld/identifyingld [3] "Response to Intervention (RTI)." Learning Disabilities Association of America. https://ldaamerica.org/advocacy/lda-position-papers/response-to-intervention-rti/ [4] Hoover, J.J. et al. "National Implementation of Response to Intervention (RTI): Research Summary." University of Colorado, Boulder, August 2008. p. 10. https://www.nasdse.org/Portals/0/NationalImplementationofRTI-ResearchSummary.pdf

[28] "RTI Action Network Position Statement on Determination of Specific Learning Disabilities," Op. cit.

[29] [1] "RTI Action Network Position Statement on Determination of Specific Learning Disabilities," Op. cit. [2] "CEC's Position on Response to Intervention (RTI): The Unique Role of Special Education and Special Educators." Council for Exceptional Children, October 2008. p. 1. https://www.cec.sped.org/~/media/Files/Policy/CEC%20Professional%20Policies%20and%20Positions/RTI.pdf

[30] "MEMO: A Response to Intervention (RTI) Process Cannot Be Used to Delay-Deny an Evaluation for Eligibility under the Individuals with Disabilities Education Act (IDEA)." Center on Response to Intervention, American Institutes for Research. http://www.rti4success.org/resource/memo-response-intervention-rti-process-cannot-be-used-delay-deny-evaluation-eligibility

SECTION II: SPECIAL EDUCATION PROGRAM ADMINISTRATION

This section describes administrative considerations for special education program delivery, including staffing, student grouping, scheduling, and evaluation.

SPECIAL EDUCATION STAFFING

Instruction is consistently the largest cost in education, and personnel accounts for as much as 85 percent of special education spending.[31] A report from the Thomas B. Fordham Institute found that high-performing special education programs typically spend more on instruction and teachers and less on administrative costs.[32] However, the Fordham report suggests that quality, not just quantity, of teachers is important, as many low-performing districts had as many or more special education professionals than high-performing districts. Directing funding towards more effective general and special education teachers, rather than simply more teachers, may improve student outcomes. Additionally, investing in full-time educators rather than paraprofessionals increases instruction time and may reduce pupil loads for teachers.[33]

In other words, special education programs must find a balance between ensuring that students needs are being met but that staff are being used efficiently given the resources available. Inefficiency can lead to perceptions that a district is understaffed, even when in reality there is an adequate staff-to-student ratio.[34] Rather than using a simple formula to calculate the quantity and distribution of staff, the administration may instead focus on the following guiding principles:

- *Sufficiency*: Is there an adequate number of individuals according to the provisions in Free Appropriate Public Education (FAPE)?
- *Efficiency*: How does the system in place organize the delivery of special education services? Does this system maximize the district's use of time, talent, and resources?
- *Effectiveness*: Is the staff successfully meeting the needs of learners?

[31] [1] "Fast Facts." National Center for Education Statistics. https://nces.ed.gov/fastfacts/display.asp?id=66
[2] Scull, J. and A.M. Winkler. "Shifting Trends in Special Education." The Thomas B. Fordham Institute, May 2011. https://edex.s3-us-west-2.amazonaws.com/publication/pdfs/ShiftingTrendsinSpecialEducation_7.pdf

[32] See, e.g., "Examination of Resource Allocation in Education: Connecting Spending to Student Performance." Southwest Educational Development Laboratory. p. 2. http://www.sedl.org/pubs/policyresearch/policydocs/Executive-summary.pdf

[33] Levenson, Op. cit., p. 7.

[34] "A Review of Staffing Practices for Students with Disabilities." Austin Independent School District, July 2009. p. i. http://archive.austinisd.org/academics/docs/sped_Review_Staffing_Practices_Children_Disability.pdf

- *Appropriateness*: Does the training and certification of staff members align with the services they are delivering? Are paraprofessionals providing support to more qualified professionals?[35]

USE OF PARA-EDUCATORS

Para-educators (also called paraprofessionals) provide valuable assistance to special and general education teachers. All para-educators working in a Title I funded program must hold a high school diploma or equivalent. Para-educators who provide instructional support must also meet one of the following requirements:[36]

- Completed at least two years of post-secondary study at an institution of higher education;
- Obtained an associate's (or higher) degree;
- Met a rigorous standard of quality and demonstrated through a state or local academic assessment, knowledge of and the ability to assist in teaching reading, writing, and mathematics (or, as appropriate, reading readiness, writing readiness, and mathematics readiness).

Paraprofessionals can provide vital support to students, teachers, and families through a variety of tasks such as providing instructional assistance in the classroom or in specific settings, acting as a translator, or conducting parental involvement activities.[37] The number of paraprofessionals employed in special education services across the country has increased since 2000, while the number of teachers in the field has fluctuated. The overall number of special education professionals – teachers and paraprofessionals – has increased during this time, going from a ratio of 117 professionals per 1,000 students to 129 professionals per 1,000 students, surpassing the ratio of teachers per 1,000 students in the 2007-08 school year.[38] According to the same data, Georgia employs an above-average number of professionals (169 per 1,000 students) when compared to the rest of the nation and has a higher-than-average spending index as well (1.28).[39]

However, issues with efficiency and appropriateness of staffing practices can arise when paraprofessionals are viewed as "*the way* rather than *a way* to operationalize inclusive education for students with disabilities."[40] While paraprofessionals in the past were responsible for primarily non-instructional tasks, such as supervision during recess or materials preparation, they are increasingly assuming instructional roles. The result of this shift may be that individuals with the least training are working with the students with the

[35] Adapted from: Ibid.
[36] Bulleted text copied verbatim from: "Being Aware of Laws and Regulations Affecting Paraeducators." National Education Association. http://www.nea.org/home/20787.htm
[37] Ibid.
[38] Scull and Winkler, Op. cit., p. 11.
[39] Ibid., pp. 11-12.
[40] Giangreco, M.F., C.S. Smith, and E. Pinckney. "Addressing the Paraprofessional Dilemma in an Inclusive School: A Program Description." *Research & Practice for Persons with Severe Disabilities*, 31:3, Fall 2006. p. 216.

highest needs. This misalignment of training and responsibilities may even result in legal concerns, as paraprofessionals are not certified to make decisions about students' individualized education programs (IEPs) or behavioral interventions.[41]

Additionally, heavy use of paraprofessionals may be an indicator of other issues within a school or program. Paraprofessionals may be used as a solution to large class sizes or caseloads and low levels of teacher engagement and supervision.[42] As a result, attempting to address this issue by providing paraprofessionals with more training may actually aggravate the issue, as disengaged teachers may hand off more responsibility to paraprofessionals as they receive more training. In this scenario, students with disabilities are still spending more time with paraprofessionals while students without disabilities are receiving instruction from a certified teacher.[43]

The successful use of paraprofessionals depends on clear definitions of roles and responsibilities and a collaborative relationship between teachers and paraprofessionals. Figure 2.1 provides further guidelines for the use of paraprofessionals.

Figure 2.1: Foundation for Successful Paraprofessional Services

KEYS OF SERVICE DELIVERY MODEL
Administrative understanding of the benefits and restrictions of using paraprofessionals
Availability of qualified teachers or service providers with an understanding and commitment to the training, use, and supervision of paraprofessionals
Provision of sufficient resources and empowerment of teachers or service providers to decide whether to use paraprofessionals
Provision of sufficient time for teachers or service providers to adequately train and supervise paraprofessionals
Availability of qualified people to work as paraprofessionals
Sufficient education for all personnel on the role, use, and supervision of paraprofessionals
Availability of ongoing and appropriate professional development programs for paraprofessionals used in programs serving individuals with learning disabilities

Source: LD Online[44]

EXAMPLE: WILLISTON SCHOOL DISTRICT

Over the course of five years, Williston School District, a small district in Vermont, experienced a three percent growth in students with disabilities and a concurrent increase in the number of paraprofessionals. The primary policy when students were identified as having

[41] Ibid.
[42] Ibid., p. 215.
[43] Ibid., pp. 216–217.
[44] Table text taken verbatim from: Joint Committee on Learning Disabilities. "Learning Disabilities: Use of Paraprofessionals." LD Online. http://www.ldonline.org/article/Learning_Disabilities%3A_Use_of_Paraprofessionals

a disability was to assign them a paraprofessional who would work with them one-on-one. In addition to these individually-assigned paraprofessionals, the district also employed classroom-assigned paraprofessionals.[45]

However, administrative leadership raised concerns about the financial sustainability of this policy as well as its impact on distribution of resources across schools. Other concerns focused on the impact of this practice on students' education and social growth, thinking about the impact of the one-on-one pairing on a student's ability to socialize and be part of the classroom community. The issue that paraprofessionals were taking on too much of the instruction and curriculum design was raised as well.[46]

To address these issues, the leadership team worked with other stakeholders to change the supervision policy for paraprofessionals. Instead of special educators supervising all paraprofessionals, classroom-assigned paraprofessionals began reporting to general education classroom teachers. This change allowed special educators to devote more time and attention to the individually-assigned paraprofessionals, who were working with the students with the most severe disabilities, and increased collaboration between general educators and classroom-assigned paraprofessionals.[47] This collaboration fostered a sense of shared responsibility and gave general educators the opportunity to make sure that the special education services their students received were in line with their classroom's policies and standards. Overall, the percentage of paraprofessionals assigned to a classroom, rather than individual students, went from 12 percent to 72 percent over the course of three years.[48]

The district also aimed to reduce the number of children unnecessarily classified as needing special education services by ensuring that rigorous and objective screening methods were being used to identify disabilities. It also implemented several interventions for students in general education who were not meeting standards. Additionally, it gradually phased out individually-assigned paraprofessionals for many students with mild or moderate disabilities.[49]

The savings resulting from this reduction in paraprofessionals were used to hire another full-time special educator, further lightening caseloads for the other special educators and increasing the amount of instruction students received from highly qualified special educators.[50] To facilitate all of these changes, the leadership team created a model of service delivery, which ensured that teachers, administrators, and parents were all following the same policies.[51]

[45] Giangreco, Smith, and Pinckney, Op. cit., p. 219.
[46] Ibid.
[47] Ibid., p. 222.
[48] Ibid.
[49] Ibid., p. 224.
[50] Ibid., p. 223.
[51] Ibid., p. 225.

GROUPING STUDENTS WITH DISABILITIES

Figure 2.2 displays Georgia's required special education classroom sizes with and without para-educators, as well as the maximum caseload. Notably, only certain special education classrooms require para-educators (i.e., self-contained classrooms for students with moderate, severe, and profound intellectual disabilities; visual impairments; orthopedic impairments; and deaf-blind students). Georgia counts para-educators as equivalent to one-third of a teacher in terms of caseloads; therefore, schools may not use more than three para-educators to increase class sizes.[52]

Figure 2.2: Georgia Department of Education's Rules for Special Education Personnel

Program Area	Delivery*	Maximum Class Size		Caseload
		Without Para	With Para	
Intellectual Disabilities - Mild	SC	10	13	14
	R	10	13	26
Intellectual Disabilities - Moderate	SC	N/A	11	11
Intellectual Disabilities - Severe	SC	N/A	7	7
Intellectual Disabilities - Profound	SC	N/A	6	6
Emotional and Behavioral Disorders	SC	8	11	12
	R	7	10	26
Specific Learning Disabilities	SC	12	16	16
	R	8	10	26
Visual Impairments	SC	N/A	6	7
	R	3	4	13
Deaf/Hard of Hearing	SC	6	8	8
	R	3	4	11
Deaf-Blind	SC	N/A	6	7
Speech-Language Impairments	SC	11	15	15
	R	7	N/A	55
Orthopedic Impairments	SC	N/A	11	11
	R	4	5	15

*SC = Self-contained classroom; R = Resource room
Source: Georgia Department of Education

Other districts have additional guidelines and regulations for grouping together students with different disabilities. The United Federation of Teachers (UFT) recommends **functional grouping, or grouping students together based on their educational needs**. This approach means considering academic achievement and learning styles as well as social and physical development.[53] The UFT also recommends keeping the achievement level in reading and math to a three-year range. For instance, students reading at the Grade 2 and Grade 4 level could be in a class together, but students reading at the Grade 2 and Grade 6 level should not be grouped. Additionally, it recommends that the age range for students under 16 years of age be less than 36 months, i.e., even if a student who is 9 years old and one who is 13 years old have similar education needs and skill sets, they should be placed in different classes.

[52] "Personnel, Facilities, and Caseloads." Georgia Department of Education. http://archives.doe.k12.ga.us/_documents/doe/legalservices/160-4-7-.14.pdf
[53] "Special Classes," Op. cit.

Similarity in these areas ensures that all students in a self-contained class can benefit from the instruction provided.[54]

SELF-CONTAINED CLASSES

Although inclusive education is always the goal, it may not be realistic for some students to be in the general education classroom. Self-contained or small group classes may be a good fit for students who are performing two to three grade levels below where they should be or for students who require such heavy modification to the curriculum that it is difficult to teach it in the general education classroom.[55] These classes provide students with curriculum that works towards grade level standards and improving deficit skills, taught with a level of specialized instruction that would not be possible in the general education classroom.[56]

When considering whether self-contained classes may be a good fit for a student, the IEP team should consider the following questions:[57]

- Have all possible accommodations and modifications to support the student in the general education classroom been considered, including aids or special education teacher support?
- Does the student require so much of the teacher's time that the teacher cannot give adequate attention to the needs of other students in the classroom?
- Is the student so disruptive that it significantly impacts the education of other students?
- Does the student require the curriculum to be modified so significantly that it bears little relation to the instruction in the classroom?

SCHEDULING

CREATING AN IEP

Scheduling for students with disabilities is guided by their Individualized Education Plan (IEP). The requirements of a student's IEP take precedence over general education course and graduation requirements.[58] In order to create schedules that fit students' needs and enable inclusive education, the IEP team – which includes a district official, general and special educators, and the parent – work together to understand what the coming year should look like for the student. The IEP team may use the Needs Checklist outlined below to determine the intensity of student needs during the IEP development process, especially when assigning para-educators to support students with disabilities. The checklist is designed to provide an "overview of the student's needs in direct relation to the classroom environment."

[54] Ibid.
[55] "Special Education Supplement: Glossary." Georgia Department of Education. p. 11. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Special-Education-Services/Documents/Supplement%20-%20Glossary.pdf
[56] Ibid.
[57] Adapted from: "Special Classes." http://www.uft.org/teaching/special-classes
[58] Bugaj, S.J. "Making Everything Fit." *Principal Leadership: Middle Level Edition*, 5:5, January 2005. p. 22. EBSCO.

Information from this list may help determine the focus of IEP development discussion, particularly on critical issues.[59]

Figure 2.3: Intensive Needs Checklist

QUESTION	YES	NO
Is there a safety concern for self or others? Please describe.		
Does the student require continual teacher prompts during and/or after instruction (e.g., during independent work)?		
Does the student require assistance with basic functional skills (e.g., mobility, feeding, toileting)?		
Is the student's performance consistent with his or her aptitude?		
Do his or her peers include the student in classroom activities?		
Is the student receptive to peer tutoring and support?		
Is the student currently receiving specialized small group or individual instruction in specific academic areas? Please describe.		
Please note what interventions or program changes you have tried and describe their rate of success.		
Has an administrator observed the student?		
Does the team recommend that this position be job-shared? If yes, why?		

Source: Teaching Exceptional Children

Based on the intensity of student needs, the IEP team then determines the appropriate placement of students (e.g., general education with support, self-contained classrooms). The IEP team must make this determination based on a holistic evaluation of the individual student, not based exclusively on the student's diagnosis (e.g., moderate intellectual disability) or existing programs (e.g., self-contained classroom for students with autism).[60] Particular individual needs that should be considered when determining the appropriate student placement may include the following:[61]

- Goals and objectives of the student;
- Nature of skills targeted;
- Socialization opportunities;
- Student's ability to attend and focus; and
- Amount of direct instruction required.

The Individuals with Disabilities Education Act (IDEA) requires that local education agencies "provide a full continuum of options in the least restrictive environment whenever possible to meet a student's individual needs," **with the goal of including students in the regular**

[59] Mueller, P. and F. Murphy. "Determining When a Student Requires Paraeducator Support." Teaching Exceptional Children, 2001. p. 24. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.201.3328&rep=rep1&type=pdf

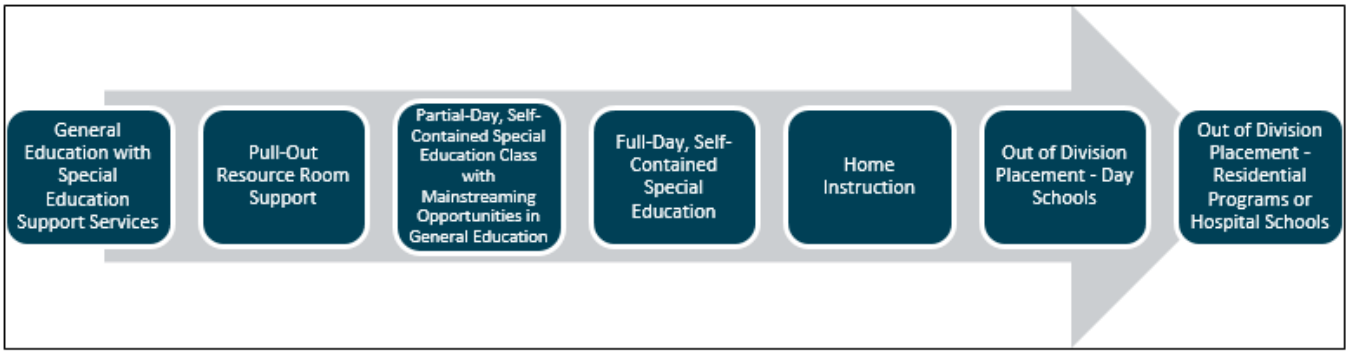
[60] Rebhorn, T. and A. Smith. "IDEA Training Curriculum." U.S. Department of Education, 2008. p. 30. http://www.parentcenterhub.org/wp-content/uploads/repo_items/legacy/15-trainerguide.pdf

[61] Bulleted text copied verbatim from: "Models of Best Practice in the Education of Students with Autism Spectrum Disorders." Virginia Department of Education, Office of Special Education and Student Services, May 2011. p. 27. http://www.doe.virginia.gov/special_ed/disabilities/autism/technical_asst_documents/autism_models_of_best_practice.pdf

educational environment as much as possible.[62] The U.S. Department of Education defines a regular educational environment as "regular classrooms and other settings in schools such as lunchrooms and playgrounds in which children without disabilities participate."[63]

Figure 2.4 below displays the least restrictive environment continuum for students with disabilities outlined by the Virginia Department of Education, demonstrating placement options from the least to the most restrictive environment. Students should be allowed to move between placements based on their needs. However, individualized supports to students are needed, regardless of the placement option. [64]

Figure 2.4: Least Restrictive Environment Continuum



Source: Virginia Department of Education[65]

As shown in the figure above, schools include special education students in some or all subjects in the following classroom settings:[66]

- In general education classrooms with general education teachers and special education teachers co-teaching;
- In general education classrooms with para-educators or instructional aides;
- Outside of special education classrooms with resource specialists; or
- In self-contained classrooms with special education teachers.

When creating schedules for students with IEPs, the IEP team may run into issues with space, time, and student ability. While issues of space and time are especially relevant for high school students, who will likely have certain courses and credits they need to complete, these limitations, particularly student ability, can apply to students at the elementary and middle school levels as well. Figure 2.5 details some examples of common scheduling challenges, what limitation they result from, and what a solution might look like.

[62] Posnick-Goodwin, S. "Is Your District Breaking Special Education Law?" California Teachers Association, May 8, 2012. https://www.cta.org/en/Professional-Development/Publications/2012/05/May-Educator-2012/Spec-main.aspx

[63] Rebhorn and Smith, Op. cit., p. 21.

[64] "Models of Best Practice in the Education of Students with Autism Spectrum Disorders," Op. cit., p. 27.

[65] Ibid.

[66] Bulleted text adapted from: Posnick-Goodwin, Op. cit.

Figure 2.5: Challenges in Creating IEP-Compatible Schedules and Possible Resolutions

PROBLEM	LIMITATIONS	RESOLUTION
A Grade 10 student needs resource room support daily, as well as speech, language, and occupational therapy. The school is having difficulty scheduling these services and the other subjects that are required during the student's sophomore year	▪ **Space** – the student has too many courses and not enough schedule slots ▪ **Time** – the student needs to complete 10th grade requirements so she can continue progressing towards graduation	▪ Defer a course to next year or exempt student from course (i.e., Driver's Education) ▪ Reduce number of periods for a course (i.e., gym twice a week instead of three times a week) ▪ Grant course credit for non-credit courses (i.e., time in the resource room)
A parent raises concerns that their child cannot handle a general academic course, particularly assignments relating to reading and understanding the textbook	▪ **Student Ability** – the student cannot handle a necessary course at an unmodified level	▪ Offer an accommodation, which gives students a chance to access information in a new way without changing curriculum (i.e., providing an audiobook of the textbook) ▪ Offer an adaptation, which changes the student's course of study (i.e., allow a student to retake 9th grade English in 10th grade or move the student to a pull-out English class)
A student repeating Grade 12 has completed the goals of their IEP, but has not yet finished their general education requirements	▪ **Time** – the student is not on track to graduate at the end of the year	▪ Plan a formal IEP conference to discuss the possibility of granting the student a diploma based on the completion of IEP goals rather than general education credits

Source: Making Everything Fit[67]

DELIVERING SERVICES

In addition to meeting a student's current IEP goals, administrators should consider the extent to which students can continue to move along the continuum of services, progressing to less restrictive environments as time goes on. This may require school-wide planning, as it requires thinking about a student's path from the time they start until they leave the school or graduate. While planning scheduling for one school year, administrators can be proactive in thinking about how they might structure future programming for students as their IEP requirements and goals change and progress.[68] For example, administrators can use parallel schedules, in which the same content area is taught across a grade or school at the same time. Parallel schedules make it easier for students to move between special education services and general education without missing content instruction. [69]

Parallel schedules may be difficult to implement at the elementary school level since most content is taught by the classroom teacher. Similarly, having special education services in the

[67] Bugaj, Op. cit.
[68] "Guide to Flexible Programming," Op. cit., p. 8.
[69] Ibid.

general education classroom whenever possible can ensure that students become part of the classroom community. It also gives them a chance to more easily apply the skills learned through these services to the social and academic environment of the classroom. Finally, some schools have found that placing grades together in one hallway can make transitions between classrooms smoother.[70]

Administrators must also consider how teachers impact the scheduling process. Teacher licensure and preference sheets, for example, help determine where teachers can and would like to be placed.[71] The element of preference is especially important for some special education services, such as co-teaching.[72] Additionally, administrators should keep in mind that in keeping with the flexible programming model, special educators do not have to teach only in a contained classroom or remain within one service delivery model.[73]

Though the requirements of a student's IEP must be considered in planning their schedule, schools should also keep in mind the need to place students in the least restrictive environment (LRE) and aim to integrate students into general education settings whenever possible.[74] **Flexible programming** means that schools utilize a combination of all available services to create a unique plan that meets each students' needs in the LRE.[75] Figure 2.6 provides an overview of the continuum of services available to students with IEPs.

Figure 2.6: Continuum of Placements for Students with IEPs

GENERAL EDUCATION	
Support Services	*Direct Special Education Services*
▪ Personnel supports from paraprofessionals, interpreters, or others ▪ Peer support	▪ Consultative services ▪ Co-teaching or collaborative teaching
ALTERNATE PLACEMENT OPTIONS	
Within School	*Alternate Location*
▪ Special Education pull-out classes	▪ Specialized or private schools ▪ Home instruction ▪ Instruction while hospitalized or homebound

Source: Georgia Department of Education[76]

[70] Ibid., p. 23.
[71] "Guide to Flexible Programming," Op. cit.
[72] Friend et al., Op. cit.
[73] "Guide to Flexible Programming," Op. cit.
[74] "An Administrator's Guide to the Instruction of Students with Disabilities in the Least Restrictive Environment," Op. cit.
[75] "Guide to Flexible Programming." NYC Department of Education. p. 4. http://www.uft.org/files/attachments/flexible-programming-guide.pdf
[76] Adapted from: "Special Education Rules Implementation Manual: Part I." Georgia Department of Education. p. 100. http://www.gadoe.org/Curriculum-Instruction-and-Assessment/Special-Education-Services/Pages/Implementation-Manual.aspx

Another common approach to creating student and teacher schedules is using a **grid** to help visualize the distribution of students and teachers. This approach, which is recommended by the Georgia Department of Education, aligns with the principles behind flexible programming and inclusivity and has four major steps:[77]

- **Step One:** On a grid (paper or electronic) place the number of daily segments across the top of the page. Create a column for each segment throughout the school day. Allow one more column than segments in the day, for example, if the school day has six segments, create seven columns
- **Step Two:** The grid should have one row for each special education teacher and paraprofessional. Allow one extra row for headers of "teacher", “first period” etc. This allows the person scheduling to put together a schedule that works for all students and then assign the teachers to a row on the grid
    - *Suggestion:* Refer to the teachers by number and assign the names after the schedule is complete
- **Step Three:** From the list of student names and courses generated from the projections, begin placing each class on the grid. Write the names of the students in the blocks on the grid. This will allow everyone to see exactly which students are scheduled into each class
- **Step Four:** Schedule each teacher a segment of planning time
- **Further Considerations:**
    - Each student must spend at least one segment per day with a special education teacher certified in his or her disability area
    - Follow special education class size regulations for collaborative and co-taught classes
    - Assign paraprofessionals to special education classes as needed

Further considerations specific to elementary and secondary school schedules will be discussed in more detail later in this report.

EVALUATING PROGRAM SUCCESS

When creating indicators for success, districts should consider what elements of their programming they want to improve and what their strengths are. Using a checklist can help track what initiatives are going well or need work.[78] Figure 2.7 below provides an example of an assessment with several indicators, broken into different categories, that districts can use to track their progress. The administrator could add columns on the right with categories such as “in place,” “developing,” “needs improvement,” and “not in place,” to track progress.

[77] Adapted from: “An Administrator’s Guide to the Instruction of Students with Disabilities in the Least Restrictive Environment,” Op. cit., p. 27.

[78] “Assessment of School Practices Related to Inclusive Education.” Stetson and Associates. https://drive.google.com/file/d/0B1Cip7cPAzHrYUFqUW9JZE9yakk/view?pref=2&pli=1

Figure 2.7: Sample Inclusive School Practices Assessment

CATEGORY	INDICATOR
Effective Inclusion Practices	Faculty members consider how accommodations, modifications, and other supports can be used to ensure that the student can be educated in the general education classroom whenever appropriate.
	Special education instructional settings (when located outside of the general education classroom) are placed throughout the school building within age, grade, or department appropriate areas.
Effective Collaboration Practices	Special populations personnel are members of grade level and department/content teams.
	School teams openly discuss such issues as teaching styles and philosophies, instructional and behavioral expectations, and shared ownership to enhance the success of their collaboration.
Effective Instructional Practices	There is a single curricular framework for all students, rather than a parallel curriculum for special needs students; access to the general curriculum is assured.
	A campus-wide behavioral support system is in place, resulting in a positive, proactive learning environment for all students.
Effective In-Class Support Practices	No single approach, such as co-teaching, is selected as *the* model for inclusive education.
Effective Peer and Family Relationships	Parents feel that they are welcome and valued partners in the educational process.
Effective Use of Existing Resources	Before additional staff are requested, scheduling strategies that result in an efficient use of staff are employed.
	There is effective use of paraprofessionals that positively impacts personnel needs.

Source: Stetson and Associates[79]

[79] Adapted from: Ibid.

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Best Practices for Special Education Delivery and Interventions

February 2014



In the following report, Hanover Research examines literature on the delivery of special education services. The report evaluates best practices in special education delivery and interventions, and considers the impact of high expectations on the academic achievement of students with disabilities. The report concludes by reviewing the benefits of extended learning and preschool services for students with disabilities.

HANOVER RESEARCH

TABLE OF CONTENTS

EXECUTIVE SUMMARY AND KEY FINDINGS

INTRODUCTION

Traditionally, students with disabilities have been educated in separate facilities from general education peers or "pulled out" of the classroom for special instruction. In the past 30 years, however, research and legislation have supported a movement toward the education of students with disabilities in inclusive classroom environments. The reauthorization of the Individuals with Disabilities Education Improvement Act (IDEA) in 2004 included components of the No Child Left Behind Act (NCLB), ensuring that students with disabilities receive equal access to the general education curriculum.[1]

The provisions of IDEA have led to debate over the optimal method for delivering special education services and interventions to students with disabilities. In the following report, Hanover Research evaluates literature on models of disability education service delivery and examines best practices for special education delivery and interventions. The report is divided into three sections:

- **Section I: Delivery of Service to Students with Disabilities** compares the various models of special education service delivery and evaluates the effects of the models on student achievement.
- **Section II: Subject Area Interventions** provides best practices for increasing student achievement through interventions in reading and math, and considers the interventions most appropriate for students at different grade levels.
- **Section III: Extended Learning Opportunities and Preschool Services** assesses the effects of summer and after school programs on students with disabilities. The section examines the benefits of early interventions on preschool-aged students with disabilities.

KEY FINDINGS

- **Authors of studies on disability service delivery models have come to different conclusions on the best model for increasing student achievement.** Recent research supports more inclusive models of disability service delivery, though there is limited evidence that inclusive models increase the academic achievement of all students with disabilities.
- **Due to the limited evidence that inclusive models most effectively improve student achievement, some scholars recommend that districts use a combined service delivery model in which students with disabilities learn in general education classrooms while still receiving additional instructional support.** Direct

[1] Hall, S."NCLB and IDEA: Optimizing Success for Students with Disabilities." *Perspectives on Language and Literacy,* Winter 2007, 33:1, p. 35. http://search.proquest.com/education/docview/200216715/fulltextPDF/1433FD83754A84D0F/13?accountid=132487

instruction by a disability specialist may be especially beneficial to students with moderate to severe disabilities. Research indicates that students with mild disabilities benefit more from inclusive models than students with moderate or severe disabilities.

- **While teachers and students respond positively to co-teaching models, there is limited research on the effects of the model on student achievement.** Educators may take a variety of approaches to co-teaching, and typically use it as a method to support the learning of all students.
- **Students with disabilities benefit from math interventions that include explicit, systematic instruction and use visual representations extensively.** These methods have a moderate to large effect on student achievement and help students implement step-by-step solutions, rather than working through problems impulsively. Other effective math interventions include student "think-alouds" and peer-assisted learning activities.
- **Effective reading interventions for students with disabilities include direct instruction, modeling and demonstrations, prompting, correcting errors, providing opportunities to respond, and repeated reading practice.** These methods help students develop fluency and reading strategies that improve comprehension. Interventions that focus on reading comprehension strategies are especially important for older students with disabilities, while younger students benefit from direct instruction in basic skills and fluency.
- **Students with disabilities benefit from high expectations set by the curriculum and assessments.** Recent legislation ensures that students with disabilities are held to the same state assessment standards as general education students. By including students with disabilities in large-scale assessments, educators can ensure that all students receive equal quality of instruction.
- **Extended learning opportunities and early interventions for preschool-aged students with disabilities have positive effects on student achievement.** Students with disabilities who participate in summer learning programs or after school programs demonstrate academic and behavioral improvements. Similarly, early intervention for preschool students with disabilities can contribute to academic success in later years and may mitigate some developmental effects of the disability.

SECTION I: DELIVERY OF SERVICE TO STUDENTS WITH DISABILITIES

OVERVIEW

In recent years, legislation and research have supported the increased inclusion of students with disabilities in general education classrooms. A 2002 study by Rea, McLaughlin, and Walther-Thomas published by the Council for Exceptional Children attributes the movement toward inclusion to a "lack of satisfactory academic performance by students with disabilities, combined with growing demands for social equity and civil rights, increasing identification of students requiring services, and ballooning costs of special education."[2] The Wisconsin Education Association Council defines inclusion as the:

> ...commitment to educate each child, to the maximum extent appropriate, in the school and classroom he or she would otherwise attend. It involves bringing support services to the child (rather than moving the child to the services) and requires only that the child will benefit from being in the class (rather than having to keep up with the other students).[3]

Legislative support for increased inclusion came from the reauthorization of the Individuals with Disabilities Education Act (IDEA) in 1997 and 2004. IDEA requires that disabled students receive Free Appropriate Public Education (FAPE) in the 'least restrictive environment' (LRE). According to the legislation, the least restrictive environment is meant:

> To assure that, to the maximum extent appropriate, handicapped children… are educated with children who are not handicapped and that…removal of handicapped children from the regular educational environment occurs only when the nature or severity of that handicap is such that education in regular classes with the use of supplemental aids and services cannot be achieved satisfactorily. [4]

Proponents of inclusive education suggest that the instruction of students with disabilities in alternative settings has led to poor social, academic, and employment outcomes and that the higher expectations of general education classrooms will improve those outcomes. Critics of inclusion, however, argue that "general education is unprepared to meet the unique needs of students with disabilities and that inclusion is primarily a cost-cutting effort."[5] In considering the optimal model of special education services, school districts should consider the impact of inclusion efforts on student achievement, and may benefit from offering a range of services to students with disabilities.

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[2] Rea, P., V. McLaughlin, and C. Walther-Thomas. "Outcomes for Students with Learning Disabilities in Inclusive and Pullout Programs." Council for Exceptional Children, 68:2, 2002. p. 203. http://search.proquest.com/education/docview/201226375/14343F5D4AF7CCA737D/1?accountid=132487

[3] "Special Education Inclusion." Wisconsin Education Association Council, 2007. http://www.weac.org/Issues_Advocacy/Resource_Pages_On_Issues_one/Special_Education/special_education_inclusion.aspx

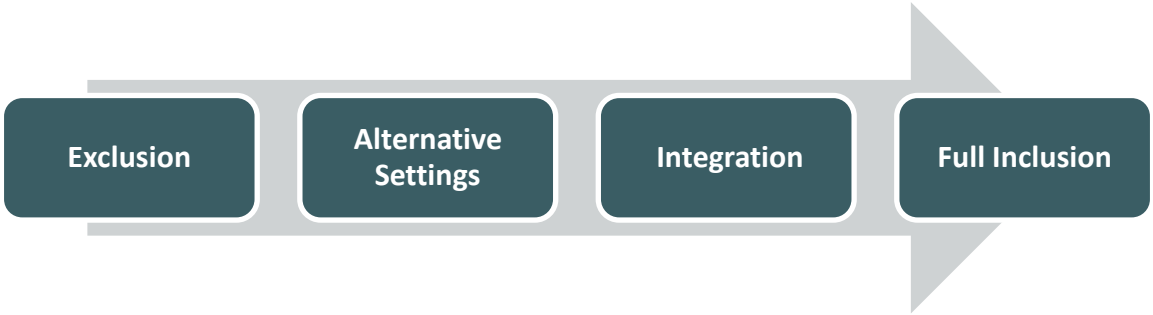
[4] Individuals with Disabilities Education Act, 2004. Part B, Section 612(5)(B) http://idea.ed.gov/download/statute.html

[5] Rea, P., V. McLaughlin, and C. Walther-Thomas. Op. cit., p. 204.

COMPARISON OF SERVICE DELIVERY MODELS

Models of special education service delivery range from inclusive, in which students with disabilities are fully included in general education classrooms, to exclusive, in which students with disabilities are instructed entirely separately from general education students. The following figure displays a continuum of the level of inclusiveness of students with disabilities in general education classrooms for each special education service delivery model.

Figure 1.1: Continuum of the Level of Inclusion of Special Education Delivery Models



The most prevalent models of special education delivery include instruction in alternative settings, integration, and full inclusion. Instruction in alternative settings involves the separation of students with disabilities from general education classrooms, while integration involves the participation of students with disabilities in general education classrooms for part of the day, with students being "pulled out" of the classroom for special education instruction. Full inclusion involves the participation of all students, regardless of disability type, in general education classrooms. Figure 1.2 displays the three prevailing models of special education delivery.

Figure 1.2: Special Education Delivery Models

Alternative Settings	Integration	Full Inclusion
•Students with disabilities are fully separated from regular students in either a separate classroom or separte school	•Some students with disabilities spend at least part of their day in regular classrooms	•All students, regardless of disability type, spend the entire day in a general education classroom

Hanover's examination of literature on the models of disability education and the academic achievement of students with disabilities suggests that there is no one model that is linked to increased student achievement. Rather, authors have come to differing conclusions regarding the results of the research comparing inclusive teaching to isolated resource

rooms, variously asserting that inclusive settings produce better academic achievement, non-inclusive settings produce better academic achievement, or neither setting produces better academic achievement than the other.[6]

While there is no consensus among researchers about the best special education service delivery model for student achievement, multiple studies have shown that students with disabilities benefit from more inclusive classroom settings. For example, Rea, McLaughlin, and Walther-Thomas found that students with learning disabilities in inclusive classrooms achieved higher grades in language, arts, math, science, and social studies, and had a higher attendance rate than their peers in non-inclusive settings.[7] Similarly, a 1998 study by Waldron and McLeskey published in *Exceptional Children* found that elementary students with mild learning disabilities in inclusive classrooms made more progress in reading than their counterparts in non-inclusive settings, though students with severe disabilities achieved at a similar level in both settings.[8]

Other studies contest the assertion that full inclusion settings are more effective at improving student achievement than traditional pull-out settings, and that there is only a "small-to-moderate effect size favoring inclusive education." [9] A study by Baker and Zigmond, for example, reviewed five inclusive classrooms and found that "some elements of effective instruction were missing or infrequent, including adaptations directed at a single student, progress monitoring for individual students, and individual attention to specific student needs in the classroom."[10] Furthermore, Cole, Waldron, and Majd found no significant statistical difference in the reading and math achievement of students with disabilities educated in inclusive or traditional pull-out settings. However, the authors observed a pattern in favor of inclusive settings and support the provision of IDEA that students with disabilities should be educated in the least restrictive environment.[11]

Cole, Waldron, and Majd found no significant statistical difference in the reading and math achievement of students with disabilities educated in inclusive or traditional pull-out settings.

[6] Fore, C. and S. Hagan-Burke, et al. 2008. "Academic Achievement and Placement in High School: Do Students with Learning Disabilities Achieve More in One Class Placement than Another? *Education and Treatment of Children,* 31:1, pp. 55-72.
[7] Rea, Patricia., V. McLaughlin and C. Walther-Thomas. Op. cit., p. 219.
[8] Waldron, N.L. and J. Lloyd. "The Effects of an Inclusive School Program on Students with Mild and Severe Learning Disabilities." *Exceptional Children,* 64:3, 1998, pp. 402-403.
[9] Marston, D. "A Comparison of Inclusion Only, Pull-Out Only, and Combined Service Models for Students with Mild Disabilities." *The Journal of Special Education,* 30:2, 1996. p. 122.
[10] Ibid., p. 122.
[11] Cole, C., N. Waldron, and M. Majd. "The Academic Progress of Students Across Inclusive and Traditional Settings." Indiana Special Education Administrators' Services, 23:4, April 2002. p. 4. http://mdestream.mde.k12.ms.us/sped/ToolKit/Articles/Inclusion_General/Cole.pdf

Due to the limited evidence that inclusive programming is superior to traditional pull-out special education service delivery, Manset and Semmel suggest that it is important for districts to maintain the provision of direct services by a specialist. Special programming and intensive, individualized instruction on basic skills may prove particularly beneficial to students with special needs.[12]

Due to the inconclusive research regarding the best special education delivery model for student achievement, some scholars suggest that an integrated approach, combining elements of the inclusion and pull-out models, is optimal.

Due to the inconclusive research regarding the best special education delivery model for student achievement, some scholars suggest that an integrated approach, combining elements of the inclusion and pull-out models, is optimal. According to Holloway, students may learn best when the inclusive and pull-out models are combined, rather than offered as mutually exclusive programs.[13] Douglas Marston of Minneapolis Public Schools supports this assertion, claiming that "the combined services approach is superior," as "the reading gains of the students with disabilities served in combined services were significantly greater than those observed for the pull-out only and inclusion only groups. Similarly, special education research teachers in the district promoted a model that allows each student to get "what he or she needs to succeed in school, whether that is pull-out, inclusion, or a mixture of services." **Marston concluded that the optimal model is a combined model that allows students with disabilities to learn in general education classrooms, while still receiving special instructional opportunities.**[14]

Models by Student Characteristics

While inclusive models are prevalent and the education of students with disabilities in a "least restrictive environment" is mandated by law, some students may benefit from aspects of the traditional pull-out model. An examination of inclusive special education models by Manset and Semmel found that while inclusive programming is effective for some students with disabilities, it may not improve the academic achievement of all students.[15] **According to the National Dissemination Center for Children with Disabilities (NICHCY), inclusionary practices for severely disabled students are preferable if a student can be educated sufficiently with push-in services.** However, if severely disabled students cannot receive adequate instruction in an inclusive environment, they may experience greater benefits from instruction in an alternative setting.[16]

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[12] Manset, G. and M. Semmel. "Are Inclusive Programs for Students with Mild Disabilities Effective? A Comparative Review of Model Programs." *The Journal of Special Education*, 31:2, 1997. pp. 177-178.
[13] Holloway, J. "Inclusion and Students with Learning Disabilities." *Educational Leadership,* 58:6, 2001. pp. 86-88. http://www.ascd.org/publications/educational-leadership/mar01/vol58/num06/-Inclusion-and-Students-with-Learning-Disabilities.aspx
[14] Marston, D. Op. cit., pp. 128-129.
[15] Manset, G. and M. Semmel. Op. cit., pp. 155-180.
[16] "Considering LRE in Placement Decisions." National Dissemination Center for Children with Disabilities. http://nichcy.org/schoolage/placement/placement-lre

CO-TEACHING MODEL

Co-teaching is a method of instruction typically practiced in inclusive classrooms in which two teachers collaborate to deliver instruction. Co-teaching can be defined as "a service delivery option for providing special education or related services to students with disabilities in a general education classroom with two or more professionals in a single physical space."[17] Co-teaching involves two teachers with equal licensure status and full responsibility for the delivery of instruction. The educators have different but equal responsibilities, with general educators focusing on the content of instruction and special educators focusing on the facilitation of the learning process. Both teachers have responsibility for *all* students in the class, including both those with and without disabilities.[18]

The New Mexico Public Education Department identifies six methods for co-teaching and describes the appropriate use of each method. Figure 1.3 describes each co-teaching method and identifies its most appropriate time of use.

Figure 1.3: Methods and Appropriate Uses of Co-Teaching

METHOD	DESCRIPTION	WHEN TO USE
One Teach, One Observe	One teacher observes specific characteristics while the other teaches.	▪ New co-teaching situations ▪ When questions arise about students ▪ To monitor student progress ▪ To compare target students to others in class
One Teach, One Drift	One teacher presents material to the class while another circulates through the room and provides unobtrusive assistance to students.	▪ When the lesson lends itself to delivery by one teacher ▪ When one teachers has particular expertise for the lesson ▪ In new co-teaching situations ▪ In lessons emphasizing a process in which student work needs close monitoring

[17] Smith, D.B. "An Examination of a Co-Teaching Service Delivery Model and a Non Co-Teaching Model for the Provision of Reading Instruction for Students with Disabilities." A Dissertation for the Degree of Doctor of Education. Arcadia University, 2008. p. 20. http://search.proquest.com/education/docview/304472756/143403EDF3660C7C900/1?accountid=132487

[18] Friend, M. and D. Hurley-Chamberlain. "Is Co-Teaching Effective?" Council for Exceptional Children. http://oldsite.cec.sped.org/AM/Template.cfm?Section=Support_for_Teachers&template=/CM/ContentDisplay.cfm&ContentID=7504

METHOD	DESCRIPTION	WHEN TO USE
Parallel Teaching	Two teachers present material to the class simultaneously by dividing the class group.	▪ When a lower teacher-student ratio is needed to improve instructional efficiency ▪ To foster student participation in discussions ▪ For activities such as drill and practice, re-teaching and test review
Station Teaching	Teachers divide class group and content, and teach one group first, then the other.	▪ When content is complex but not hierarchical ▪ In lessons in which part of planned instruction is review ▪ When several topics comprise instruction
Alternative Teaching	One teacher instructs the larger group while another works with a smaller group needing more specialized attention.	▪ When students' mastery of concepts taught or about to be taught varies tremendously ▪ When extremely high levels of mastery are expected for all students ▪ When enrichment is desired ▪ When some students are working in a parallel curriculum
Team Teaching	Both teachers work together to deliver content to the class at the same time.	▪ When teacher experience is comparable ▪ During a lesson in which instructional conversation is appropriate ▪ In situations in which the teachers have considerable experience and a high sense of comfort ▪ When a goal of instruction is to demonstrate some type of interaction to students

Source: Cook, L.[19]

While research exists on the optimal methods for co-teaching, there is limited research on the effects of co-teaching on student achievement. Friend notes that studies of co-teaching have focused on perceptions of students and teachers, who typically respond positively to the method. However, more research into the impact on student achievement and appropriateness for different students is necessary.[20] School leaders focused on student

[19] Cook, L. "Co-Teaching: Principles, Practices, and Pragmatics." New Mexico Public Education Department, April 29, 2004. pp. 16-21. http://www.lilieonline.com/courses/inclusion/co-teaching.pdf
[20] Friend, M. and D. Hurley-Chamberlain. Op. cit.

achievement may view co-teaching as another method by which the school supports the learning of all students.[21]

TEACHER EXPECTATIONS

Both research and legislation support the standard of high expectations for students with disabilities. With the reauthorization of IDEA in 2004, Congress noted that the law had previously been "impeded by low expectations," and that "having high expectations for such children and ensuring their access to the general education curriculum in the regular classroom, to the maximum extent possible" would make the law more effective and improve the experience of students with disabilities. According to IDEA, the provision of disability services in schools should help students "meet developmental goals and, to the maximum extent possible, the challenging expectations that have been established for all children."[22] According to Carnine and Granzin, high expectations are critical both to raise the achievement of students with disabilities and ensure the successful implementation of IDEA.[23]

One of the ways in which schools maintain high expectations for students with disabilities is by including them in large-scale assessments. No Child Left Behind and IDEA require students with disabilities to take state and local assessments and participate in the general education curriculum. Research suggests that "students with disabilities accrue positive benefits when they are included in school accountability systems," and that educators' expectations increase.[24] The inclusion in assessments underscores the importance of high expectations and rich curricula for students with disabilities.[25] Furthermore, Individualized Education Plans (IEPs) that set high expectations for students by identifying their unique needs and setting realistic goals significantly improve student achievement.[26]

The following practices have been shown to improve the achievement of students with disabilities in a general education curriculum:

- **Standards-based IEPs** are an "opportunity to construct a specialized instruction program by analyzing student data from both formative and State assessments in relation to the impact of the student's disability to determine what the student has learned and needs to learn." A standards-based IEP "lays the foundation for an instructional program that ensures access to the general education curriculum."

[21] Stowe, M. and L. Sulzberger. "Collaborative Leadership: Setting Expectations for Student Achievement in Co-Taught Classes." College of William and Mary Training & Technical Assistance Center, 2008. http://education.wm.edu/centers/ttac/resources/articles/consultcollaborate/setexpectation/index.php
[22] "Building the Legacy: IDEA 2004." U.S. Department of Education. http://idea.ed.gov/explore/view/p/,root,statute,I,A,601,
[23] Carnine, D. and A. Granzin. "Setting Learning Expectations for Students with Disabilities." *School Psychology Review,* 30:4, 2001. http://search.proquest.com/education/docview/219652349/1433FF46FB134ED2BAD/10?accountid=132487#
[24] Hall, S. Op. cit., p. 35.
[25] Cole, C., N. Waldron, and M. Majd. Op. cit., p. 5.
[26] Marston, D. Op. cit., p. 131.

- **Professional development** ensures that all instructional staff are aware of current State content standards, assessments, and other curricula, and that this knowledge can be used to inform instruction, classroom evaluations, and the creation of IEPs.
- **Strategies-based instruction** provides students with "explicit instruction in learning strategies," and teaches students with disabilities the "techniques, principles, or rules that enable a student to learn to solve problems and complete tasks independently."
- **Assistive technologies** are used to "increase, maintain, or improve functional capabilities" of students with disabilities, and may include portable note-taking devices, graphic organizer software, speech recognition software, word prediction software, or talking word processors.
- **Accommodations for instruction and assessment** are required by NCLB and IDEA, and may include changes or enhancements to the presentation, timing, or scheduling of these activities. Accommodations should be consistent during instruction and assessment, and should be modified over time depending on changing student needs.[27]

[27] Bulleted points adapted from: Hall, S. Op. cit., pp. 36-38.

SECTION II: SUBJECT AREA INTERVENTIONS

In this section, Hanover reviews the instructional strategies used for students with varying disabilities in the specific core academic areas of mathematics and language arts. The Council for Exceptional Children (CEC) supports a multi-step Response to Intervention (RTI) approach to supporting students with disabilities struggling in the areas of math and reading. CEC defines Response to Intervention as a process in which:

> Teachers provide instruction and interventions…at increasing levels of intensity. They also monitor the progress students make at each intervention level and use the assessment results to decide whether the students need additional instruction or intervention in general education or referral to special education.[28]

Most RTI models involve three or four tiers in which the classroom teacher administers tiers one and two through general instruction, and special education teachers administer tiers three and four if students continue to struggle. Students requiring tier three or four interventions typically receive small group and individualized instruction and are referred for special education.[29] The reauthorization of the Individuals with Disabilities Act in 2004 supports the use of RTI to help schools identify students with disabilities and provide them with the necessary support.[30]

MATH INTERVENTIONS

While many states have introduced RTI initiatives in reading, fewer states have implemented intensive math interventions in schools. The Institute for Education Sciences published a practice guide for mathematics interventions for the U.S. Department of Education's What Works Clearinghouse. According to the guide, special education teachers and school psychologists are typically involved in tier 3 mathematics interventions, though students receive interventions from a wide range of personnel, including their classroom teacher.[31]

The practice guide offers eight recommendations for supporting students struggling with mathematics with an RTI framework. The recommendations, and level of evidence for each recommendation, are as follows:

- Screen all students to identify those at risk for potential mathematics difficulties and provide interventions to students identified as at risk. (Moderate)
- Instructional materials for students receiving interventions should focus intensely on in-depth treatment of whole numbers in kindergarten through grade 5 and on

[28] "Tiered Intervention Systems." Council for Exceptional Children, 2014. http://www.cec.sped.org/Special-Ed-Topics/Specialty-Areas/Tiered-Intervention-Systems
[29] Ibid.
[30] "Assisting Students Struggling with Mathematics: Response to Intervention (RtI) for Elementary and Middle Schools." Institute of Education Sciences, April 2009. p. 4. http://ies.ed.gov/ncee/wwc/pdf/practice_guides/rti_math_pg_042109.pdf
[31] Ibid., p. 5.

rational numbers in grades 4 through 8. These materials should be selected by committee. (Low)

- Instruction during the intervention should be explicit and systematic. This includes providing models of proficient problem solving, verbalization of thought processes, guided practice, corrective feedback, and frequent cumulative review. (Strong)
- Interventions should include instruction on solving word problems that is based on common underlying structures. (Strong)
- Intervention materials should include opportunities for students to work with visual representations of mathematical ideas and interventionists should be proficient in the use of visual representations of mathematical ideas. (Moderate)
- Interventions at all grade levels should devote about 10 minutes in each session to building fluent retrieval of basic arithmetic facts. (Moderate)
- Monitor the progress of students receiving supplemental instruction and other students who are at risk. (Low)
- Include motivational strategies in tier 2 and tier 3 interventions. (Low)[32]

The practice guide distinguishes some differences in the types of intervention used for students in different grade levels. For example, the guide notes that though there are more research-based screening measures available for students in kindergarten through grade 2, it is also important to screen students in more advanced grades. Furthermore, interventions should typically focus on foundational concepts that students learn early in their career, but links should be made to grade-level material. For example, systematic interventions for younger students that focus on operations and counting strategies are likely to help students make connections among math concepts beyond fact retrieval.[33] Similarly, Kroesbergen and Van Luit note that interventions should be tailored to focus on a certain step of the learning process based on the child's age and specific learning challenges. **Younger students may benefit from a focus on preparatory arithmetic interventions such as number sense and counting skills, while older students may benefit from interventions that focus on problem-solving strategies.**[34]

A research brief by the National Council of Teachers of Mathematics evaluated six common math interventions and their effect on the achievement of students with disabilities. Figure 2.1 displays the intervention and associated effect size. The authors note that a "small" effect may raise students' standardized test scores by eight percentile points, while a "large" effect may raise students' scores by 25 percentile points.[35]

[32] Bulleted points taken verbatim from: Ibid., p. 6.
[33] Ibid., p. 7.
[34] Kroesbergen, E.H., and J.E.H. Van Luit. "Mathematics Interventions for Children with Special Needs." *Remedial and Special Education,* 24:2. http://nichcy.org/research/summaries/abstract25
[35] "Effective Strategies for Teaching Students with Difficulties in Mathematics." National Council of Teachers of Mathematics, 2007. p. 1. http://www.nctm.org/uploadedFiles/Research_News_and_Advocacy/Research/Clips_and_Briefs/Research_brief_02_-_Effective_Strategies.pdf

Figure 2.1: Math Interventions and Effect on Student Achievement

Instructional Strategy	Effect Size for Special Education Students	Size (Small, Moderate, or Large)
Visual and graphic depictions of problems	0.5	Moderate
Systematic and explicit instruction	1.19	Large
Student think-alouds	0.98	Large
Use of structured peer-assisted learning activities involving heterogeneous ability groupings	0.42	Moderate
Formative assessment data provided to teachers	0.32	Small to Moderate
Formative assessment data provided directly to students	0.33	Small to Moderate

Source: National Council of Teachers of Mathematics[36]

The Council found that visual and graphic depictions of problems, systematic and explicit instruction, student think-alouds, and the use of peer-assisted learning activities have the largest impact on student achievement. Using visual and graphic depictions of problems was an effective method for both younger students and students at the middle and high school levels.[37] The report also emphasized the importance of systematic and explicit instruction and the benefits of student think-alouds in improving student achievement. Systematic instruction involves the use of specific models of steps and processes or questions to ask when solving problems. This intervention is effective because students with disabilities typically have difficulty with basic math procedures, and struggle with more complex problems as a result. In addition, student think-alouds require students to verbalize each step of their thinking when solving a problem. This method helped students implement a step-by-step solution strategy rather than taking an impulsive approach to problem-solving.[38]

Overall, the Council recommends that interventionists working with special education students use "explicit, systematic instruction that involves extensive use of visual representations," and that they encourage students to think aloud while they work. These interventions help students who work quickly and impulsively through problems, ignoring the math concepts required for the solution.[39] According to Kroesbergen and Van Luit, interventions that focus on basic math skills, rather than problem-solving skills, may be most effective for students with special needs.[40]

[36] Ibid., p. 1.
[37] Ibid.
[38] Ibid., p. 2.
[39] Ibid.
[40] Kroesbergen, E.H., and J.E.H. Van Luit. Op. cit., pp. 110-111.

In addition to the type of intervention, the duration of math interventions may impact student achievement. Kroesbergen and Van Luit found that the duration of intervention correlated negatively with effect size, or the longer the intervention, the smaller the effect. This negative correlation may be attributed to the fact that shorter interventions focus on a single topic or a small domain of knowledge. Students are better able to learn the concept and score well, while longer interventions that cover more topics may be more difficult for students to learn.[41]

The Council recommends that interventionists working with special education students use "explicit, systematic instruction that involves extensive use of visual representation."

READING INTERVENTIONS

Research has shown that targeted interventions in reading can improve the comprehension of students with disabilities.[42] Interventions that have been shown to boost student achievement include direct instruction in model/demonstration, prompting, correcting errors, providing opportunities to respond, repeated practice, and shaping and reinforcing responses.[43] A study by Edmonds, et al. on reading interventions for older students found that explicit instruction that specifically targeted students with learning disabilities was linked to the highest gains in student achievement.[44]

According to a study by Laurice Joseph of Ohio State University on best practices in reading interventions for students with reading problems, **the modeling and demonstration of appropriate reading behavior by adults can help students learn to read proficiently.** Students improved their reading skills after listening attentively and following along as a teacher or peer read.[45] Prompting and error correction also help students read specific words correctly. This intervention can be used to scaffold, or gradually teach appropriate reading behaviors. Prompting students can help them correct mistakes and attempt difficult or advanced content. After correcting errors, students should repeatedly practice words correctly to avoid repeating a miscue.[46]

The National Reading Panel (NRP) emphasizes the importance of repeated oral reading practice or independent recreational reading to enhance literacy skills.[47] When students practice reading repeatedly, they are more likely to acquire and develop reading skills.[48]

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[41] Ibid., p. 111.
[42] Edmonds, M.S. et al. "A Synthesis of Reading Interventions and Effects on Reading Comprehension Outcomes for Older Struggling Readers." National Institutes of Health, January 2010. p. 11. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2804990/
[43] Joseph, L. M. "Best Practices on Interventions for Students with Reading Problems." *Best Practices in School Psychology V*, 72:4. pp. 1167-1168. http://www.nasponline.org/publications/booksproducts/bp5samples/1163_bpv66_72.pdf
[44] Edmonds, M.S. et al., Op. cit., p. 12.
[45] Joseph, L. M. Op. cit., p. 1167.
[46] Ibid., pp. 1167-1168.
[47] Chard, D. et al. "Repeated Reading Interventions for Students with Learning Disabilities: Status of the Evidence." Council for Exceptional Children, 75:3, Spring 2009. p. 265. http://eric.ed.gov/?id=EJ842535
[48] Joseph, L.M. Op. cit., p. 1168.

Similarly, Greenwood, Delquadri, and Hall found that active student responding can lead to increased academic achievement. Teachers must ensure, however, that students provide correct responses so that they develop appropriate habits. Students benefit from reading interventions that involve student responding and the repeated practice of a reading skill.[49]

According to Dr. H. L. Swanson of University of California at Riverside, **the best approach to improving reading achievement of students with learning disabilities is a combination of direct instruction and strategy instruction.** Direct instruction involves teaching skills explicitly through a process of drill, repetition, and practice. Strategy instruction involves teaching students a strategy to improve reading comprehension skills, such as searching for patterns in words and identifying the main ideas of key passages. The following figure summarizes the instructional practices most effective for students with disabilities and their associated activities and techniques.[50]

Figure 2.2: Instructional Practices and Activities that Improve Reading Comprehension

Instructional Practice	Activities and Techniques
Directed response/questioning	The teacher: ▪ Asks questions. ▪ Encourages students to ask questions.
	The teacher and student(s): ▪ Engage in dialogue.
Control difficulty of processing demands of task	The teacher: ▪ Provides assistance (as needed). ▪ Gives a simplified demonstration. ▪ Sequences tasks from easy to difficult. ▪ Presents easy steps or concepts first and moves on to progressively more difficult steps or concepts (a technique called task analysis). ▪ Allows student to control level of difficulty.
	The activities: ▪ Are short.
Elaboration	The activities: ▪ Provide student with additional information or explanation about concepts, steps, or procedures. ▪ Use redundant text or repetition within text.
Modeling of steps by the teacher	Teacher demonstrates the processes and/or steps the students are to follow.
Group instruction	Instruction and/or verbal interaction takes place in a small group composed of students and teacher.

[49] Greenwood, C.R., J. Delquadri, and R.V. Hall. "Opportunity to Respond and Student Academic Performance." *Behavior Analysis in Education,* 1984. Cited in: Joseph, L.M. Op. cit., p. 1168.
[50] Stanberry, K. and L. Swanson. "Effective Reading Interventions for Kids with Learning Disabilities." Reading Rockets, 2013. http://www.readingrockets.org/article/33084

INSTRUCTIONAL PRACTICE	ACTIVITIES AND TECHNIQUES
Strategy cues	The teacher: ▪ Reminds the student to use strategies or multiple steps. ▪ Explains steps or procedures for solving problems.
	The activities: ▪ Use "think aloud" models. ▪ List the benefits of strategy use or procedures.

Source: Stanberry, K. and L. Swanson

GRADE LEVEL INTERVENTIONS

Edmonds, et al. examined the differences in reading interventions by grade level and found that older students benefit from different interventions than those that are used for elementary students. Effective interventions for elementary students require students to summarize, use graphic organizers, and ask questions,[51] while explicit instruction in comprehension benefits older students with disabilities. Because students in the upper elementary grades develop strategies for comprehension beyond word recognition and fluency, interventions for older students should develop their reading strategy knowledge. Older students who did not develop basic word recognition skills may benefit from interventions that focus on word-level skills and comprehension strategies to prepare them for more complex levels of text. Researchers found that word-level interventions for older students have a small to moderate effect on improved comprehension. [52]

[51] Edmonds, M.S. et al. "A Synthesis of Reading Interventions and Effects on Reading Comprehension Outcomes for Older Struggling Readers." National Institutes of Health, January 2010. p. 3. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2804990/

[52] Ibid., p. 12.

SECTION III: EXTENDED LEARNING OPPORTUNITIES AND PRESCHOOL SERVICES

Extended learning opportunities for students with disabilities before or after school or during the summer vacation offer students the opportunity to make academic progress. According to Caryl Frankenberger, a psycho-educational evaluation and school placement counselor, "There are many ways to boost reading and academic skills. It can be anything from tutoring to reading for 30 minutes a day at home to attending a residential summer program."[53] This section examines the effects of extended learning opportunities and preschool services on students with disabilities.

EXTENDED LEARNING OPPORTUNITIES

Opportunities for extended learning during the summer can offer all students academic and social benefits. Schools, colleges, and universities offer summer school programs designed to help students maintain the skills they learned during the school year, remediate areas in which students have fallen behind, provide extended school year activities for students with disabilities, and increase positive attitudes and self-confidence. A study on the effects of summer school programs on students with disabilities found that programs which successfully improved student achievement ranged from less than 60 hours to more than 120 hours, and were designed to prevent delinquency, promote students who had failed, remediate learning deficiencies, prevent future academic problems, develop underachievers' performance, improve attitudes toward school, provide academic enrichment, and accelerate the academic progress of advanced students. Students with learning disabilities, emotional or behavioral problems, physical or mental impairments, and children otherwise identified as at-risk improved in academic achievement after the program, though programs for students with learning disabilities had the most positive effects. Programs for students with severe disabilities had more mixed results or were less effective. Overall, students who received individualized attention at summer school programs experienced the greatest academic benefits. [54]

Students with disabilities who participate in after school programs demonstrate benefits in key areas and commonly have higher academic achievement, improved school attendance, higher aspirations, improved social competence, and improved behavior.

After federal legislation requiring students with disabilities to have access to after school programming, after school programs are increasingly moving toward the inclusion of

[53] "Summer Programs." The Yale Center for Dyslexia & Creativity, 2014. http://dyslexia.yale.edu/PAR_summerprograms.html

[54] Cooper, H., et al. "Making the Most of Summer School: A Meta-Analytic and Narrative Review." Monographs of the Society for Research in Child Development, 65:1, 2000. http://nichcy.org/research/summaries/abstract78

students with disabilities.[55] Students with disabilities who participate in after school programs demonstrate benefits in key areas and have higher academic achievement, improved school attendance, higher aspirations, improved social competence, and improved behavior.[56] In addition, students with disabilities who participate in after school programs receive social benefits. After school programs give students with disabilities the chance to interact with non-disabled peers in ways that they may not during the hours of the school day.[57] The social benefits of afterschool programs include the following:

- The opportunity to assume responsibilities and demonstrate talents that are not always apparent during the regular day.
- A place to truly integrate with peers and friends, even after they have been mainstreamed in educational classrooms.
- Improved relationships with children of all abilities.
- The chance to be included in a wide variety of activities with their non-disabled peers.[58]

PRESCHOOL SERVICES

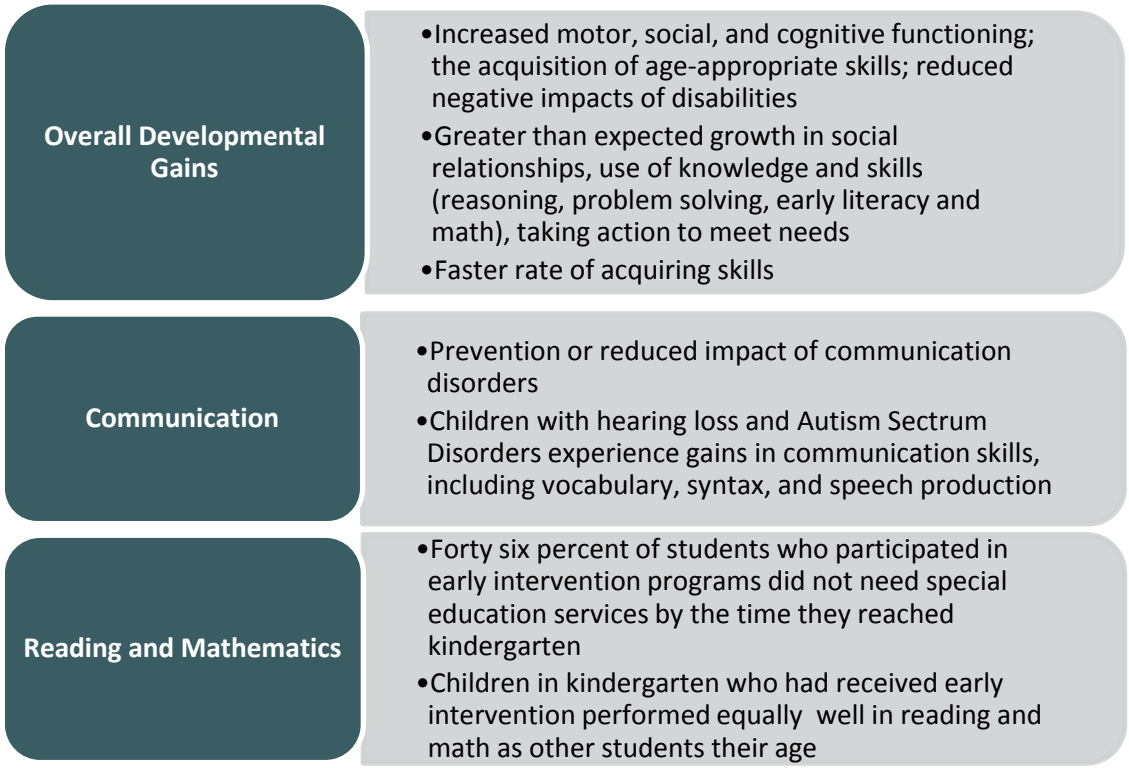
Early intervention services for preschool aged children with developmental disabilities can be critical for students' long-term development. The passage of IDEA mandates that all students ages three through five with developmental delays receive access to preschool services free of charge through the public school system.[59] Early intervention programs for young students help them develop skills in the following areas: physical, cognitive, communication, social/emotional, and self-help. Intervention services are typically tailored to a student's needs and may include any of the following:

- Assistive technology (devices a child might need)
- Audiology or hearing services
- Speech and language services
- Counseling and training for a family
- Medical services
- Nursing services
- Nutrition services
- Occupational therapy
- Physical therapy
- Psychological services[60]

[55] "Afterschool and Students with Special Needs." Afterschool Alliance, 34: October 2008. p. 2. http://www.afterschoolalliance.org/Special%20Needs%20IB34%20final.pdf
[56] Ibid., p. 3.
[57] Ibid., pp. 4-5.
[58] Bulleted points taken verbatim from: Ibid., p. 3.
[59] "Special Education Services for Preschoolers with Disabilities." National Dissemination Center for Children with Disabilities, 2010. http://nichcy.org/schoolage/preschoolers
[60] "Overview of Early Intervention." National Dissemination Center for Children with Disabilities, December 2012. http://nichcy.org/babies/overview

Though outcomes of an early intervention program differ depending on the child's age and disability, programs can help to delay the impact of a student's disability. Students with severe or degenerative disabilities may progress more slowly than students with mild or moderate disabilities. The Infant and Toddlers with Disabilities Program through IDEA aims to help children develop skills equal to their peers by age three.[61] The following figure summarizes the positive effects of early interventions on both young children with disabilities and their families.

Figure 3.1: Effects of Early Intervention Services on Students with Disabilities



Source: National Early Childhood Technical Assistance Center

[61] "The Outcomes of Early Intervention for Infants and Toddlers with Disabilities and their Families." The National Early Childhood Technical Assistance Center, July 2011. p. 1. http://www.nectac.org/~pdfs/pubs/outcomesofearlyintervention.pdf

PROJECT EVALUATION FORM

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