# The Role of AT/AAC in the Next Generation Assessment

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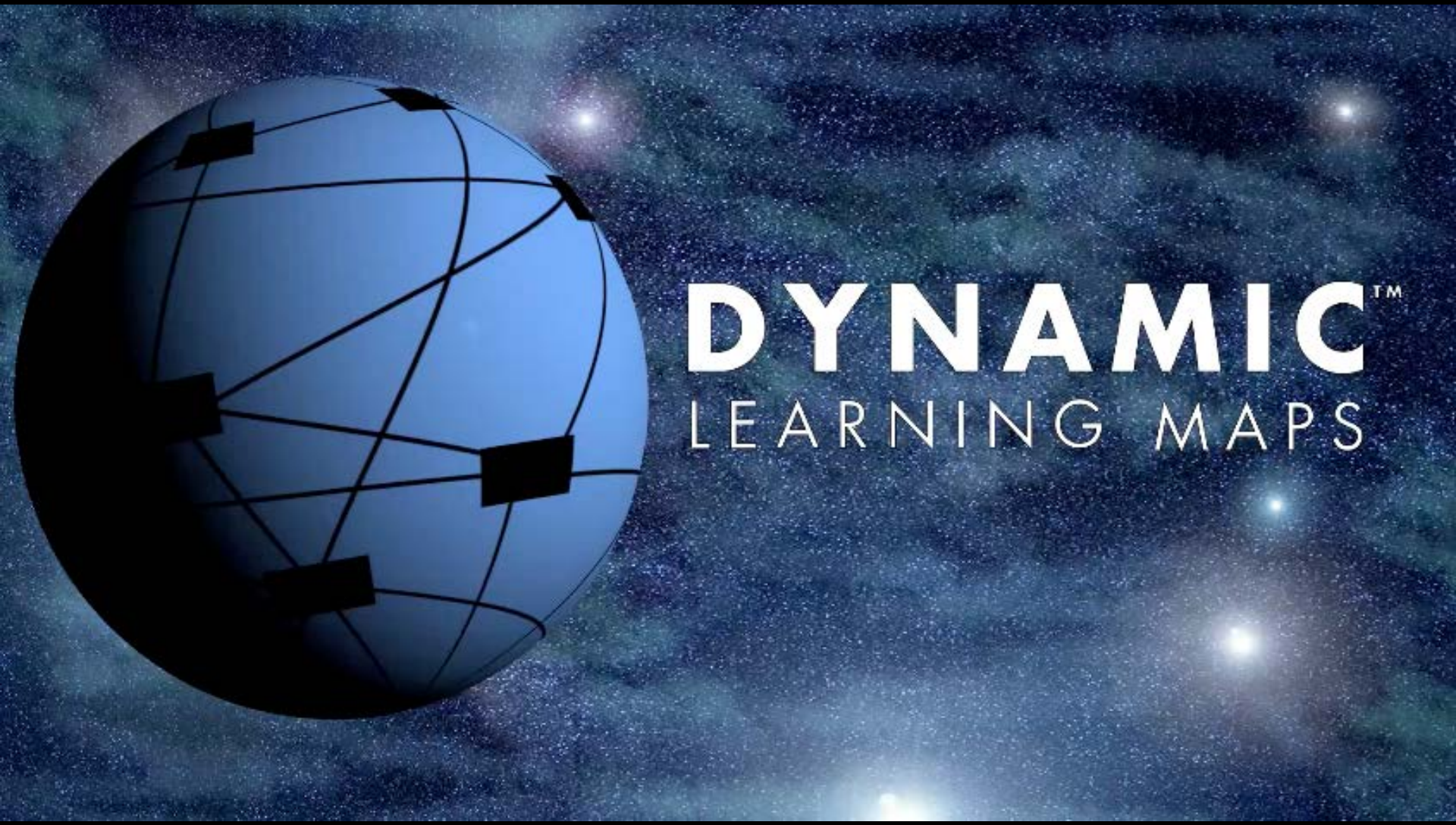
The present publication was developed under grant 84.373X100001 from the U.S. Department of Education, Office of Special Education Programs. The views expressed herein are solely those of the author(s), and no official endorsement by the U.S. Department should be inferred.

DYNAMIC LEARNING MAPS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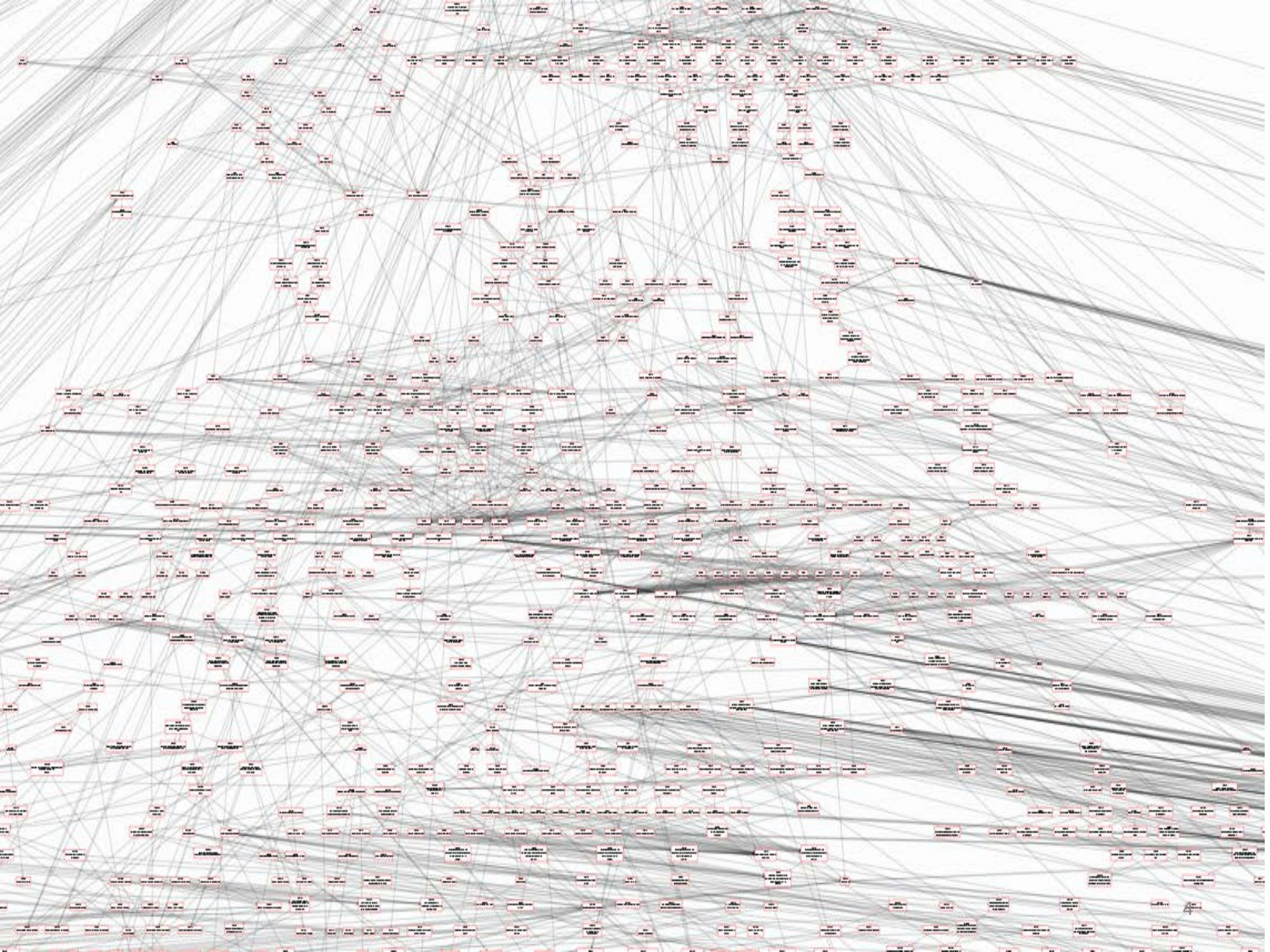

The Dynamic Learning Maps **Essential Elements** are specific statements of content and skills that are linked to the college and career readiness grade level expectations.

DYNAMIC LEARNING MAPS

# Features and Goals of the DLM Alternate Assessment

- Map student learning across the year
- Instructionally relevant assessment items
- Two Formats:
  - Instructionally Embedded Assessment
  - End of the Year Summative Assessment
- GOAL: Allow student with significant cognitive disabilities to show what they know and can do.

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If we are going to accomplish our goal, we must support the needs of students who require assistive technology.

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# Assistive Technology will Support Students in the DLM Assessment

- Children with severe and multiple disabilities have trouble accessing AT/AAC (Brodin, 2010; Hoppestad, 2007)
- However, AT/AAC has been shown to assist students access the curriculum (Calculator, 2009; Weng et al., 2014)

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# What is Assistive Technology?

- The Technology-Related Assistance Act for individuals with disabilities defined assistive technology (AT) as:
- "…any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities."(PL 100-407)

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# Examples of Assistive Technology

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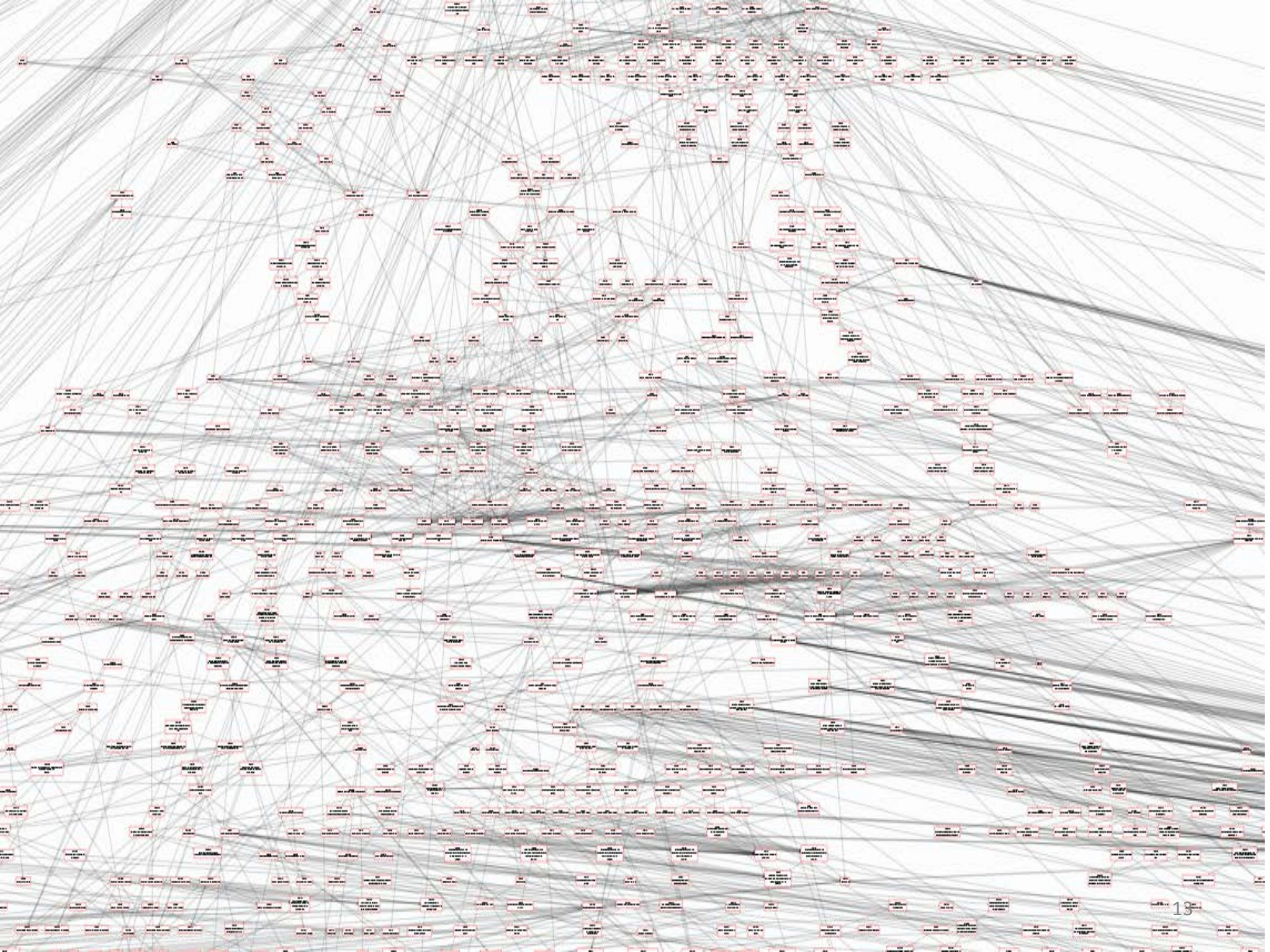

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# Research Questions

- What type of AT/ AAC are used by students?
- What type of AT/AAC usage is reported by state administrators?

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# Methodology/Case Selection

- Two surveys were conducted.
- The first asked states to identify AT and AAC systems frequently used in their states.
- The second survey asked teachers to identify the AT and AAC systems used by their individual students who take the AA-AAS.

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# Student Race/Ethnicity

| | Number | Percent |
|---|---|---|
| White | 29371 | 58.5 |
| Black/African American | 11408 | 22.7 |
| American Indian/ Native Alaskan | 856 | 1.7 |
| Asian | 1045 | 2.1 |
| Native Hawaiian/ Pacific Islander | 142 | .3 |
| Other | 3227 | 6.4 |

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# Student Gender

| | Number | Percent |
|---|---|---|
| Female | 15832 | 35.4 |
| Male | 28835 | 64.6 |
| Total | 44667 | 100 |

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# Student Grade of Record

| Grade of Record | Number | Percent |
|---|---|---|
| 3 | 5872 | 13.1 |
| 4 | 5835 | 13.0 |
| 5 | 5925 | 13.2 |
| 6 | 5964 | 13.3 |
| 7 | 5831 | 13.0 |
| 8 | 5677 | 12.6 |
| 9 | 1498 | 3.3 |
| 10 | 2824 | 6.3 |
| 11 | 4055 | 9.0 |
| 12 | 1040 | 2.3 |
| Uncertain | 428 | 1.0 |
| Total | 44949 | 100% |

| Primary Disability | Number | Percent |
|---|---|---|
| Autism | 10416 | 23.3 |
| Deaf-blindness | 68 | 0.2 |
| Developmental delay | 1475 | 3.3 |
| Emotional disturbance | 547 | 1.2 |
| Hearing impairment | 287 | 0.6 |
| Intellectual disability | 19571 | 43.8 |
| Multiple disabilities | 6244 | 14 |
| Orthopedic impairment | 288 | 0.6 |
| Other health impairment | 2825 | 6.3 |
| Specific learning disability | 1931 | 4.3 |
| Speech or language impairment | 278 | 0.6 |
| Traumatic brain injury | 370 | 0.8 |
| Visual impairment | 120 | 0.3 |
| Noncategorical | 218 | 0.5 |
| Total | 44638 | 100 |

# Special Education Placement

| | Number | Percent |
|---|---|---|
| General Education Class (at least 80% of school day) | 1635 | 3.7 |
| Resource Room (60- 80% in General Education class) | 7425 | 16.6 |
| Separate Class (less than 40% in General Education) | 29844 | 66.9 |
| Separate Public School | 4881 | 10.9 |
| Residential Facility | 367 | 0.8 |
| Homebound/hospital Environment | 486 | 1.1 |
| Total | 44638 | 100 |

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# Student Use of Computers

| | Number | Percent |
|---|---|---|
| Accesses a computer independently | 25012 | 56.3 |
| Uses a computer with support (human or assistive technology) | 17889 | 40.3 |
| No opportunity to access a computer | 1538 | 3.5 |
| Total | 44439 | 88.6 |

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# SEA Reported Frequency of AT/AAC Devices Used

| Frequency | Type of Device | Examples |
|---|---|---|
| 6/6 | Dynamic AAC | Springboard, Vanguard, ECO, Teen Tango, AMDI, Vantage, Dynavox product |
| 6/6 | Tablets | Apple iPad, iPod/Touch |
| 5/6 | Switches | Jellybean switch, Big Red switch, Light-up/vibrate buttons, pressure switches. |
| 5/6 | Static AAC devices | GoTalk, GoTalk 32, Tech Talk, CheapTalk, Communication Builder, Super Talker |
| 4/6 | No tech/ low tech AAC systems | Picture Exchange Communication system (PECS) with Boardmaker symbols, PODD book, Topic specific communication boards |
| 4/6 | Interactive Whiteboards | SmartBoard |
| 4/6 | Alternate/ adapted computer access | Touch Window, AlphaSmart, Intellikeys, Trackballs, keyguards, adapted mouse |
| 3/6 | Text to speech/ speech to text | Screen reader software,text to speech software for alternative reading, speech to text software. |

# FCS Reported Use of AT for Computer Access

| AT Device | Number |
|---|---|
| Touchscreen | 15,005 |
| Computer keyboard using pointer | 3,546 |
| Switches | 3,422 |
| Keyboard with large keys | 2,024 |
| Alternative keyboards | 1,252 |
| Head mouse | 335 |
| Eyegaze technology | 342 |
| Voice recognition software | 277 |
| Total | 26,203 |

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# FCS How Students Communicate

| Communication Modalities | Number | Percentage |
|---|---|---|
| Student uses expressive speech for communication | 33811 | 75.9 |
| Student does not use expressive speech for communication | 10759 | 24.1 |
| Total | 44,570 | 100% |
| For Students who do not use expressive speech for communication | | |
| Student uses AAC to augment or replace speech | 8438 | 18.9 |
| Student uses Sign Language to augment or replace speech | 3435 | 7.9 |
| Total | 11,872 | 26.8% |

# FCS AAC System Used 9 or fewer Symbols

| AAC system | Number |
|---|---|
| Symbols offered in groups of 1 or 2 | 4114 |
| Low tech communication board with 8 or fewer symbols | 2406 |
| Eye-gaze board w/ 5 or fewer symbols. | 83 |
| VOCA 9 or fewer symbols | 2692 |
| Total | 9,295 |

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# FCS AAC System more than 9 symbols

| AAC system | Number |
|---|---|
| VOCA 10-40 Symbols | 464 |
| Low tech communication book with 8 or fewer symbols per page | 732 |
| Low tech communication board with 9 or more symbols | 782 |
| Dynamic Display including tablets | 1925 |
| Dynamic Display icon sequencing | 350 |
| Total | 4,253 |

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# FCS Expressive Speech

| Expressive Speech | Number | Percentage | Symbols used | Number | Percentage |
|---|---|---|---|---|---|
| 3 or more words | 23736 | 70.7 | 3 or more words | 830 | 10.1 |
| 2 or more words | 6694 | 19.9 | 2 or more words | 1690 | 20.6 |
| 1 word | 3141 | 9.4 | 1 word | 5683 | 69.3 |
| Total | 33,572 | 100 | Total | 8203 | 100 |

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# Conclusion

- Items identified by SEA's were not identified as widely used for students within this population.
- The majority of students used speech for communication, however some students used only 1-2 words.
- When students did have access to AAC then they generally used 9 symbols or less.
- However, almost all of the students had access to computers.

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# THANK YOU!

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