

USBE/University of Utah IES Proposal Narrative

Title: Evaluating Utah's Statewide Policy on Meaningful Inclusion for Students with Extensive Support Needs Using Longitudinal DLM and Implementation Data

RFA Topic and Goal: Using Longitudinal Data to Support State Education Policymaking in Special Education, ALN 84.324S (FY 2027)

Purpose: Utah began statewide implementation of its Portrait of Meaningful Inclusion for Students with Disabilities in 2024. The policy defines meaningful inclusion through four elements: engagement with age-appropriate peers; systems promoting high expectations and learner agency; access to age- and grade-appropriate core standards and resources; and individualized supports and services across settings. With the Utah State Board of Education (USBE), this study proposes to investigate the impact of Utah's Meaningful Inclusion for Students with Disabilities framework on access and placement for students with extensive support needs (ESN), and its effects on academic outcomes in language arts and mathematics

This three-year partnership among USBE, the University of Utah Department of Special Education, and the Utah Education Policy Center (UEPC), who maintains a Master Data Share Agreement with the USBE, will use Utah's statewide longitudinal data system (SLDS), Dynamic Learning Maps (DLM) alternate-assessment records, special education enrollment and placement data, and available implementation records. The study will focus on students in grades 3-11 with the most extensive support needs (2% of students who participate in AYP or DLM). We will construct student, school, and LEA cohorts spanning multiple pre- and post-framework years (2019-2026) and measure implementation fidelity using the SWIFT Fidelity of Implementation Tool, participation in USBE supports, and validated SLDS indicators of access to general education.

The project will address four questions: (1) How did educational placements change statewide and across LEAs between 2019 and 2026, and how did implementation of meaningful-inclusion practices vary across schools and LEAs beginning in 2024, (2) How did DLM English language arts and mathematics achievement and growth change after POMI implementation? (3) Are stronger or earlier implementation, increased time with peers, and improved access to general education associated with better DLM outcomes? (4) For whom and under what school and LEA conditions are meaningful inclusion implementation, educational placement, access to general education, and academic outcomes greatest or smallest?

This study will use an explanatory sequential mixed-methods approach in which the statewide longitudinal analysis identifies patterns, variation, and successful sites, and a comparative multi-case qualitative study explains what those sites are doing and how those practices operate. Quantitative analyses will combine descriptive trends with comparative interrupted time-series and multilevel event-study models, including quasi-experimental Difference in Difference (DiD)

models. Models will address repeated observations nested within schools and LEAs, pre-POMI trends, mobility, missingness, and assessment participation.

USBE will co-lead the development of research questions, inform interpretation, and lead decision-making. J. Matt Jameson will lead work on extensive support needs, inclusive education, alternate assessment, and policy. James Gallyer and Andrea Rorrer (UEPC) will lead SLDS preparation, linkage, statistical modeling, analysis, reporting, reproducible workflows, visual reporting, and policy implications. Graduate Research Assistants will work with LEAs to collect LEA and SWIFT-FIA data. Products from the project team will include annual decision briefs and dashboards, a technical report and assistance practice guide, privacy-protective analytic code and documentation, presentations, and manuscripts. Findings will be used to support USBE technical assistance, resource allocation, implementation supports, and policy refinement.

SIGNIFICANCE

The purpose of the proposed study is to explore the impact of a malleable factor that can be changed by educational system policy, meaningful inclusion (i.e., engagement with age-appropriate peers; systems promoting high expectations and learner agency; access to age- and grade-appropriate core standards and resources; and individualized supports and services across settings), on placement and academic outcomes for students grades 3-11 with the most extensive support needs (ESN - defined by the Elementary and Secondary Education Act to include approximately 1% of all students whose progress is measured using the state's alternate assessment due to severe cognitive impairment). As described subsequently, although much has been written, high-quality empirical analysis of the impact of educational placement on academic outcomes for this population has been limited. Research is needed that explores inclusion beyond a simple placement mandate and look at the outcomes of inclusion to ensure it has meaningful benefit for students with ESN. The project is guided by a theory of change in which Utah's Portrait of Meaningful Inclusion (POMI) impacted local inclusion implementation, access to core content area instruction, and the organization of supports for students with ESN (See FIGURE XX, APPENDIX X). It addresses a priority state policy question: whether Utah's POMI framework has a relationship to increased access to inclusive education placements and led to better academic outcomes for students with ESN. The question is a replication of similar research conducted by the USBE related to the POMI and students with mid/moderate support needs placement and outcomes. It is an extension of Institute of Education Sciences, Special Education Policy, Finance and Systems, Goal One: Exploration Grant R324A180024 (Jameson co-PI): Factors Contributing to Academic, Social/Communication, and Behavioral Outcomes for Elementary Students with the Most Significant Cognitive Disabilities which showed that placement structures opportunity (Jackson et al, 2022; Jameson et al., 2022; Kurth et al., 2022; Zogona et al., 2022). Utah's POMI supplies the next standard: opportunity must be converted into engagement with peers, high expectations and agency, access and progress in the general education curriculum, individualized support, and belonging. For students with ESN, the framework's promise is fulfilled when students

with ESN are not merely present in general education, but known, supported, challenged, and making demonstrable progress as members of the school community.

Utah's Portrait of Meaningful Inclusion for Students with Disabilities is a statewide framework developed by the Utah State Board of Education in collaboration with educators, families, students, and other stakeholders. It translates Utah's definition of inclusion into a practical framework to support meaningful participation across schools and educational settings. The POMI organizes meaningful inclusion around four interdependent elements: peers, system, access, and supports and services. The initiative grew from Utah's updated Special Education Rules, which took effect in January 2023 and incorporated a statewide definition of inclusion for students with disabilities. The public rollout of the framework began with a statewide Meaningful Inclusion Conference in June 2023. According to the USBE 2023 strategic plan update, this engaged more than 2,400 participants and was intended to align statewide initiatives, establish common language, and increase awareness throughout Utah's K–12 community. During the summer of 2023, educators and families across the state also received professional learning, resources, and materials about the POMI. This broad awareness phase was followed by the March 2024 Implementation Guide and its June 2024 accessible edition, which combined the POMI, detailed implementation conditions, supporting resources, and a measurement tool in one technical-assistance document.

The passage of the Education for All Handicapped Children Act (P.L. 94-142) in 1975, now known as the Individuals with Disabilities Education Improvement Act (IDEA, 2004), established the right of all children with disabilities to a free appropriate public education (FAPE) which provides the student with some "meaningful benefit." Prior to 1975, millions of children with disabilities were simply excluded from school. IDEA has emphasized that to achieve FAPE, special education and related services should be provided to create "equal opportunity" for students with disabilities to benefit from their education and be sufficiently prepared for "future education, employment, and independent living." As such, the law has consistently stated that special education is specially designed instruction to promote an equal opportunity for educational benefit for students with disabilities. The 1997 and 2004 Amendments to IDEA made clear that each student's educational program, and resultant specially designed instruction, should be based upon two sources: (a) the general education curriculum, defined as the same curriculum as that provided to all other students; and (b) the student's unique learning needs. The "access to the general education curriculum" mandates require that all students receiving special education services have the supports necessary for them to be involved with and progress in the general education curriculum as well as necessary goals and modifications to address unique learning needs. This represented a major shift in curricular focus, particularly for students with ESN, as educational emphasis had historically been placed on unique learning needs and the application of a "functional curriculum" rather than access to general education (Browder, Spooner, & Meier, 2011). The Supreme Court's 2017 decision in *Endrew F. v. Douglas County School District* clarified that the Individuals with

Disabilities Education Act requires more than an educational program designed to produce trivial or barely measurable benefit. Building on *Board of Education v. Rowley*, the Court held that each individualized education program must be reasonably calculated to enable a student to make meaningful progress (not *de minimis*). Endrew shifts the focus from whether a service was delivered, or a goal showed any change, to whether the complete program is designed for meaningful, appropriately meaningful progress. Meaningful progress requires challenging objectives grounded in the student's individual needs and supported by specially designed instruction, communication supports, behavioral and health supports, related services, and ongoing progress monitoring. A student's extensive support needs do not justify a presumption of a program designed for minimal benefit. Instead, those extensive support needs inform the intensity and design of the supports required for the student to participate and progress. This reflects the recognition that access is not sufficient and meaningful inclusion in the content and settings of general education will require these individualized supports to lead to real engagement with age-appropriate peers, school systems that promote high expectations and self-determination, access to age- and grade-appropriate core standards and resources.

Utah's Portrait of Meaningful Inclusion reflects this more demanding, individualized understanding of educational benefit by defining inclusion not simply as placement in a general education setting, but as active participation with age-appropriate peers, high expectations and learner agency, access to age- and grade-appropriate curriculum and resources, and customized supports across educational settings. The POMI therefore connects the location of services to the quality of opportunity, participation, and progress experienced by the student. Utah's Portrait of Meaningful Inclusion provides a state framework for translating this expectation into school practice. Utah defines meaningful inclusion as ensuring that each student is valued as a visible member of the school community and has equal opportunities to contribute through four connected elements. Students should interact and engage with age-appropriate peers. School systems should promote high expectations and learner agency. Students should be taught using age- and grade-appropriate core content standards, curricular materials, and resources. Customized supports, including IEP-team-determined services, should be available across educational settings and extracurricular activities to the maximum extent appropriate in the least restrictive environment. This expanded definition of inclusion reflects Endrew's emphasis on appropriate progress. Access to age- and grade-appropriate standards, materials, and resources gives the IEP team an academically coherent context in which to identify meaningful objectives and measure growth. Engagement with age-appropriate peers adds opportunities for communication, social development, reciprocal relationships, modeling, collaboration, and membership, all of which may be educationally significant for the individual student.

The POMI also moves beyond a narrow placement metric. The percentage of time a student spends in general education remains important under the least restrictive environment requirement because placement shapes opportunity. But, POMI asks a further question: what is the student able to access, contribute, learn, and become within that environment? A student may

be physically present but separated by an adult, given unrelated work, excluded from peer interaction, or provided activities disconnected from grade-level content. Such presence would not fulfill the framework's conception of meaningful inclusion and could also raise concerns under Endrew if the IEP and instruction were not reasonably calculated to produce meaningful progress. POMI should also not be interpreted as making belonging a substitute for academic progress or individualized instruction. Belonging, peer engagement, and agency are central educational conditions and valued outcomes, but like Endrew POMI requires a substantively appropriate educational program. For students with extensive support needs, teams must connect inclusive participation to measurable progress in the general education curriculum.

The DLM functions as an alternate assessment system that translates state academic standards into simplified, grade-level elements, allowing students with CSN to demonstrate learning aligned with the general curriculum. In Utah, DLM and EE results are incorporated into the state accountability framework, contributing to school performance indicators such as academic proficiency, growth, and postsecondary readiness. These summative assessments, including DLM alternate assessments, directly influence school accountability ratings and promote transparency in educational outcomes. The DLM operates using a learning map model that depicts the relationships among skills, knowledge, and understandings required to meet state alternate standards. This structure supports access to EE content at multiple levels of complexity, enabling instruction that is both individualized and standards-based. Within the DLM framework, major claims define overarching learning goals, which are organized into conceptual areas that group related skills for assessment. For example, in mathematics, a major claim such as understanding number structures may encompass EE standards related to place value or counting by tens. The DLM blueprint uses these conceptual areas and EE standards to evaluate student learning across varying levels of complexity. Linkage levels represent a developmental progression of understanding. Initial Precursor (IP) nodes assess foundational skills, while Proximal Precursor (PP) and Target (T) levels measure skills leading directly to the EE standard. Successor nodes assess learning beyond grade-level expectations. DLM alternate assessments are administered by trained professionals using adaptive software, allowing students with CSN to engage with content at appropriate levels of complexity aligned with their instructional goals.. Each DLM testlet targets a specific EE standard and consists of three to five items that adapt based on student responses, ensuring alignment between task difficulty and student ability. The DLM system uses adaptive software (Kite) to adjust testlet complexity in real time and evaluate mastery across linkage levels. Successful performance at higher levels (e.g., Proximal Precursor) indicates mastery of lower levels. Student proficiency scores are calculated based on the total number of nodes mastered across linkage levels, providing an overall measure of assessment performance. DLM assessments report proficiency rather than scaled scores and therefore do not function as growth measures in school accountability systems. Proficiency is determined by mastery of linkage levels for each EE standard using percentage-correct and two-down scoring rules. For instance, mastery is assigned when students answer at least 80% of items correctly; performance below this threshold results in classification two linkage levels below the assessed

level. Because DLM proficiency is based on mastery across different linkage levels rather than an interval scale, students may demonstrate proficiency in varied ways, limiting comparability across linkage levels. T

DLM achievement scores in mathematics, English language arts (ELA), and science are determined by the total number of mastered nodes, assessed through adaptive testlets. Scores are reported using four achievement levels: 1–Emerging, 2–Approaching the Target, 3–At Target, and 4–Advanced. Performance level descriptors specify the degree of mastery associated with each level. For example, a third-grade student scoring 2–Approaching the Target in mathematics may demonstrate skills such as understanding place value and counting by tens. However, students at the same achievement level may show different skill profiles, as performance is based on mastery of different linkage levels tied to Essential Elements (EE) standards. The DLM assessment uses linkage levels (Initial Precursor, Distal Precursor, Proximal Precursor, Target, and Successor) to evaluate mastery of EE standards at increasing levels of complexity. Overall achievement scores are calculated based on the number of linkage levels mastered, with cut points distinguishing performance levels. For instance, a third-grade mathematics student must master 36 of 80 skills to reach 2–Approaching the Target and 71 of 80 skills to attain 4–Advanced. These achievement scores provide meaningful information for educators and families, supporting instructional planning while enabling students with CSN to access the general curriculum through adapted EE standards. DLM alternate assessments undergo ongoing research and evaluation to ensure valid measurement of achievement for students with ESN. The assessments are aligned with EE standards, which link directly to grade-level academic content, and are grounded in an evidence-centered design that ensures alignment among assessment items, scoring procedures, and reported outcomes. Research-based learning maps model students’ academic development over time and support the use of adaptive testlets tailored to individual learning profiles. Reliability evidence, including strong interrater reliability and internal consistency, indicates high accuracy in classifying student mastery, with near-perfect correlations between actual and predicted mastery levels. Although criterion-related validity has not yet been fully established through correlations with other assessments, continuous system evaluation and refinement support the overall effectiveness of the DLM.

The DLM is one part of a recognition that access is not sufficient and meaningful inclusion in the content and settings of general education will require these individualized supports to lead to real engagement with age-appropriate peers, school systems that promote high expectations and self-determination, access to age- and grade-appropriate core standards and resources. While the law has increasingly defined the “what” of education as both the general education curriculum and the student’s unique learning needs, it has largely left decisions related to the “how” and “where” to IEP teams responsible for developing the LRE for a student. This decision (i.e. placement) organizes access to grade-level curriculum, content expertise, academic instruction, peers, and socially significant relationships. More restrictive settings do not provide superior instruction or supports and are more likely to include periods without instruction or interaction. General

education access creates important conditions for progress, but placement alone cannot satisfy Endrew. The student's policy/school structures must convert access to educational benefit. While there are schools and districts in which educational placements for students with ESN are linked to general education curriculum and classrooms, this is not the norm. The practice of placing students with ESN in self-contained settings (with limited consideration of access to general education curriculum despite the IDEA 1997 and 2004 amendments) has remained standard practice over the last four decades (Kurth, Morningstar, & Kozleski, 2014).

Rowley established that IDEA guarantees an appropriate individualized education, not the maximization of each student's potential. Endrew clarified that this guarantee cannot be reduced to trivial benefit. The educational program must be reasonably calculated to enable progress appropriate in light of the student's circumstances, and its objectives must be appropriately ambitious. Utah's Portrait of Meaningful Inclusion reflects that expectation by joining least restrictive environment placement with peer engagement, high expectations, learner agency, grade-appropriate curriculum and resources, individualized supports, belonging, and progress. For students with extensive support needs, the resulting standard is not satisfied by a seat in a classroom or by a small annual gain. It calls for a coherent program in which meaningful access produces active participation and appropriately ambitious educational progress.

Researchers have found that school policies and financing (Tissot, 2011) might influence placement decisions, including availability of specialized instruction across diverse settings (e.g., inclusive, self-contained, separate schools; Kurth & Mastergeorge, 2010b). District and school policy guidance regarding available service options, as well as the dynamics within the IEP team decision-making processes, also impact placement (Zollers, Ramanathan, & Yu, 1999). The presence of a strong and engaged site administrative leadership has been noted to influence the quality of instruction and student outcomes (Ainscow & Sandhill, 2010; Waldron & McLeskey, 2010). Leadership from the school principal in the form of caring about and investing in teachers, providing opportunities for distributed leadership, protecting teachers from the pressures of highstakes accountability (Hoppey & McLeskey, 2010) and school culture (Sailor, 2009) all may shape placement decisions. The POMI framework is intended to make inclusion a shared responsibility rather than an initiative owned only by special education personnel. It asks LEAs and schools to consider students with disabilities when designing school missions, schedules, staffing, resource allocation, instruction, professional learning, extracurricular opportunities, communication systems, and improvement plans.

Almost 40 years after the passage of P.L. 94-142, the field of special education still does not have sufficient data on the impact of educational placement on outcomes for students with ESN. Given that students with ESN experience some of the poorest outcomes after high school (e.g., employment; Carter, Austin, & Trainor, 2012; Test, 2008), this is a critically important topic to examine, and there is a significant need to conduct research that will inform interventions to improve outcomes for this population of students. Specifically, research is needed that fully examines relationships between placement and outcomes, and the mediators and moderators that

impact that relationship, to create an empirically driven theory of change that can inform both placement and instruction decisions. This issue has increased practical importance given the movement toward MTSS, UDL, the access to the general education curriculum mandates, and the ongoing debates about the most effective way to structure supports and services for students with ESN. The project will address four questions: (1) How did educational placements change statewide and across LEAs between 2019 and 2026, and how did implementation of meaningful-inclusion practices vary across schools and LEAs beginning in 2024, (2) How did DLM English language arts and mathematics achievement change after POMI implementation? (3) Are stronger or earlier implementation, increased time with peers, and improved access to general education associated with better DLM outcomes? (4) For whom and under what school and LEA conditions are meaningful inclusion implementation, educational placement, access to general education, and academic outcomes greatest or smallest?

RESEARCH PLAN

To answer our research questions, we will leverage two general analytic approaches: a causal Difference-in-Difference design, and a correlational multilevel modeling approach. How each approaches answer the components of our research questions is displayed in Table 1.

Table 1. *Analytic approach by research-question component*

RQ	Research question component	Approach	Model / estimate
RQ1	Change in placement in general education	Causal DiD	Overall group-time ATT on the inclusion outcome
	Variation in implementation across LEAs and schools	Correlational MLM	Unconditional model; latent-scale ICCs partitioning variance across LEA, school, and student levels
RQ2	Change in DLM achievement (ELA and math)	Causal DiD	Overall group-time ATT on DLM performance
RQ3	Earlier implementation and outcomes	Causal DiD	Cohort and event-study estimates (effects by adoption timing and time since uptake)
	Stronger implementation (fidelity) and outcomes	Correlational MLM	School-level SWIFT fidelity as a predictor of inclusion and DLM performance
	Access to general education and outcomes	Correlational MLM	General-education academic course-access as a student-level predictor of DLM performance
RQ4	For whom, and under what conditions, effects are greatest or smallest	Causal DiD	Subgroup group-time ATTs by student demographics and school characteristics

Note. ATT = average treatment effect on the treated; DiD = difference-in-differences; DLM = Dynamic Learning Maps; ELA = English language arts; ICC = intra-class correlation; LEA = local education agency; MLM = multilevel model; SWIFT = Schoolwide Integrated Framework for Transformation.

Causal analyses

Data. The Utah Education Policy Center (UEPC) will leverage data available through its Master Data Sharing Agreement with the Utah State Board of Education (USBE). These data include enrollment records with student demographics (e.g., race/ethnicity, low-income status, multilingual-learner status, gender, and grade level); English language arts and mathematics Dynamic Learning Maps (DLM) alternate-assessment scores; and Self-Contained Resource Attendance Management (SCRAM) special education records, which contain each student's percent of time spent in the general education environment, primary disability, and the state's significant cognitive disability indicator (i.e. Is one percent). These files are linked using unique student and school-level identifiers. The analytic sample will consist of students in grades 3-11 with the most extensive support needs. Using this data, we will construct student-school-LEA cohorts spanning 2019 through 2026, with school years 2019-2023 as the pre-policy baseline years, and 2024-2026 as the post-policy years.

Treatment definition. Utah's Meaningful Inclusion policy applied statewide beginning in 2024. Our causal identification will derive not from the policy's statewide effective date, but from the differential timing in LEAs' uptake of, or participation in, the state's implementation supports. We will define an LEA's treatment onset as the first school year in which it engaged in at least one of two supports: (1) sending a team, or a team member to the state-run Inclusion Symposium or (2) submitting an inclusion-related request through USBE's Training Request Portal. If the data indicates that it is not LEAs who typically send staff, but individual schools, then treatment will be redefined at the school level. We will define treatment as an intent-to-treat exposure-based treatment. Thus, our treatment will estimate the effect of an LEA's (or in the case of school level exposure, the school) exposure to the policy's supports rather than the effect of fully implementation with fidelity. LEAs that have not yet engaged in these supports in a given year will serve as controls for that year, and any LEAs that never (as of 2026) engaged during the study window will serve as our never-treated comparisons.

Outcomes. We will examine two outcomes. The first, inclusion in general education classrooms, is recorded in SCRAM as a three-level variable indicating the proportion of the school day a student generally spends in the general education setting, corresponding to the federal educational-environment categories for students ages 6-21: general education class time 80% or more of the day, 40-79% of the day, and less than 40% of the day. Because most students in this population will be in the lowest (less than 40% of the day) band, and that causal effects likely differ across these inclusion categories, our primary inclusion outcome will be a binary variable indicating placement in the general education setting above the lowest inclusion band. The second outcome will be academic achievement, as measured by DLM performance in English language arts, and in mathematics.

Estimation and identification. UEPC will estimate the causal effect of the 2024 inclusion policy uptake using a differential-timing difference-in-differences (DiD) design. Due to two-way fixed effects estimators being biased when treatment timing is staggered and effects are heterogeneous (Goodman-Bacon, 2021), we will use the doubly-robust group-time estimator of Callaway and Sant'Anna (2021), which compares each treated cohort to not-yet-treated LEAs,

conditions on observed covariates, and aggregates cohort-by-period effects into event-study and overall summaries. We will assess the conditional parallel-trends assumption through pre-policy onset leads and adjust for student demographics, baseline inclusion placement, and school and LEA characteristics. We will confirm robustness using the interaction-weighted estimator of Sun and Abraham (2021) and the estimator of de Chaisemartin and D'Haultfœuille (2020). To account for the clustering of the data, standard errors will be clustered at the LEA level with wild-cluster bootstrap inference. Students who change LEAs will be assigned treatment status by their LEA of enrollment in each year, and the spring 2020 assessment interruption due to the COVID-19 pandemic will be excluded. Because the policy could shift which students take the DLM rather than the general assessment, UEPC will also test whether assessment participation changes with treatment onset and assess sensitivity to differential attrition using Lee (2009) bounds and inverse-probability-of-participation weighting.

This analytic approach addresses four of the study's research questions:

- **RQ1 (change in placement).** The overall group-time ATT on the inclusion outcome will estimate whether policy uptake changed students' placement in general education.
- **RQ2 (change in achievement).** The overall group-time ATT on DLM performance will estimate whether policy uptake changed academic outcomes in English language arts and mathematics.
- **RQ3 (earlier implementation).** The cohort- and event-study estimates will test whether earlier-adopting LEAs show larger effects and how effects evolve with time since uptake.
- **RQ4 (for whom and under what conditions).** Subgroup group-time ATTs will estimate how effects vary by student demographics and school characteristics.

Association analyses

Data. For this set of association and variance-structure analyses, the UEPC will leverage the same data as the causal analyses through its Master Data Sharing Agreement with USBE, with two additional data sources: course-enrollment records, used to build a student content access measure, and newly collected SWIFT fidelity data from 80 to 100 schools. The analytic sample is the same as the causal analysis, with two constraints: (1) analyses using SWIFT fidelity will be limited to the schools from which those data are collected, and (2) content-access analyses will be limited to grades 6-11, because academic coursework in earlier grades is not consistently recorded as discrete, subject-specific courses.

Measures. The key measures for these analyses are as follows. First, school-level implementation fidelity will be measured using the SWIFT Fidelity of Implementation Tool, capturing both an overall fidelity score and subdomain scores, collected across two years. Using course-enrollment records, we will construct a general-education academic course-access measure with three levels: (1) enrolled in one or more general-education academic courses, (2) enrolled in academic courses but all in the alternate (Essential Elements) curriculum, and (3) enrolled in no identifiable academic courses. This measure is distinct from the placement

measure used in the causal analysis and other association analyses, in that placement reflects the setting in which a student is served, whereas content access reflects the curriculum to which the student is exposed. Outcomes will include student-level inclusion (i.e., placement in the general-education setting above the lowest band) and DLM performance in English language arts and mathematics. Covariates will include student demographics and school-level characteristics (e.g., percent low income).

Analytic approach. The UEPC will use multilevel models with random effects to account for students nested within schools nested within LEAs. We will fit a two-level (students within LEAs) model as the primary specification and a three-level (students within schools within LEAs) model as a secondary specification, given the small number of students with extensive support needs per school. Each research question is addressed by a specific model:

- **RQ1 (how implementation varied).** We will fit an unconditional model of the inclusion outcome and report latent-scale intra-class correlations partitioning variation across the LEA, school, and student levels.
- **RQ3 (implementation strength).** We will use school-level SWIFT fidelity as a predictor of student-level inclusion and DLM performance.
- **RQ3 (access to general education).** We will use the general-education academic course-access measure as a student-level predictor of DLM performance.

Two of these outcomes are categorical and will be modeled accordingly. Student-level inclusion is a binary outcome (i.e., placement in the general-education setting above the lowest band) and will be estimated with multilevel logistic regression models. DLM performance is reported as four ordered levels (Emerging, Approaching the Target, At Target, and Advanced) rather than a continuous score. We will dichotomize this outcome reflecting “At Target or above”, with a cumulative-link ordinal multilevel model serve as a sensitivity analysis.

Dr. Leah Voorheis (USBE Co-PI) will determine the validity, feasibility, and state relevance of the study. She will connect the evaluation to the agency's responsibilities for special education policy, alternate assessment, accountability, data stewardship, technical assistance, and LEA support. A central contribution will be USEB perspective on the Portrait of Meaningful Inclusion, including its theory of action, implementation timeline, statewide supports, policy changes, and relevant contextual events that could affect longitudinal trends. Co-PI will support coordination with LEA superintendents, special education directors, assessment coordinators, and school leaders to support recruitment, clarify expectations, reduce burden, and sustain participation across three years. Finally, the Co-PI will support state dissemination activities, and the integration of findings into guidance, professional learning, technical assistance, and future data-system use.

Dr. Jameson (PI) will provide content and methodological leadership related to students with extensive support needs, inclusive education, and alternate assessment.. He will co-lead the study's conceptual model development for meaningful inclusion. He will support interpretation

of DLM outcomes in English language arts and mathematics, including achievement levels, scale scores or linkage level information. He will coordinate SWIFT Fidelity Integrity Assessment activities, connecting SWIFT FIA findings with classroom observations, teacher reports, placement data, and DLM outcomes. He will also lead translation of findings into actionable recommendations for educator preparation, inclusive service delivery, personnel development, and state and LEA policy.

Dr. Rorrer (CO-PI) will provide leadership for the research practice partnership and for the project's policy and organizational analyses. In this role she would coordinate the partnership between the UEPC, the Department of Special Education, the Utah State Board of Education, participating LEAs, and other state stakeholders, and would guide the theory of action that connects the statewide meaningful inclusion policy to changes in LEA systems, school practices, placement patterns, access to instruction, and academic outcomes. Dr. Rorrer will co-lead dissemination to state policymakers, LEA leaders, national research audiences, and IES through policy briefs, technical reports, presentations, and peer reviewed publications.

James Gallyer (CO-PI) will provide primary leadership for data acquisition, linkage, management, and quantitative analysis. He would develop the data analysis architecture and the detailed data dictionary for student, teacher, classroom, school, LEA, implementation, placement, and DLM records, working with state and local data stewards to establish data use agreements, secure transfer procedures, access, documentation, and data quality checks. He will design and conduct longitudinal analyses such as interrupted time series, comparative trend analyses, multilevel growth models, and subgroup analyses, with the final approach determined by available pre-policy data, implementation timing, and comparison conditions.

Dr. Aiono-Conradi (CO-PI) will provide leadership for field implementation, school and classroom data collection, implementation supports, and qualitative inquiry. She will work with participating LEAs and schools, coordinating recruitment, scheduling, consent and assent procedures, and local data collection logistics, and would organize and conduct SWIFT FIA administration with school leadership teams.

DATA

The Utah Education Policy Center (UEPC) considers the security and protection of data to be of the utmost importance. Encrypted data are stored on secure hardware, maintained by highly trained professionals, and safeguarded by the University of Utah's network security, Virtual Private Network (VPN), and firewall. The UEPC protects data in compliance with the Family Educational Rights and privacy Act, 20 U.S. Code §1232g and 34 CFR Part 99 ("FERPA"), the Government Records and Management Act U.C.A. §62G- 2 ("GRAMA"), U.C.A. §53A-1-1401 et seq, 15 U.S. Code §§ 6501-6506 ("COPPA") and Utah Administrative Code R277-487 ("Student Data Protection Act").

Since 2010, the Utah Education Policy Center has maintained a Master Data Sharing Agreement (MDSA) with the Utah State Board of Education (USBE) for use of education data for evaluation and research purposes. The UEPC adheres to terms of the Master Data Sharing Agreement, including terms of use,

confidentiality and non-disclosure, data security, monitoring, and applicable state and federal laws, and the University of Utah Institutional Review Board provisions, for the purposes of educational evaluations and research. In utilizing the MDSA, the UEPC adheres to FERPA regulations to protect student privacy. Consistent with FERPA and data share agreements, the UEPC does not report data for samples with fewer than 10 students. In addition, the UEPC does not report any personally identifiable information. Moreover, UEPC's use of data is governed by the applicable MDSA agreement, federal and state policies and law, University of Utah policy, and University IRB oversight for research and evaluation studies. The additional information below summarizes documented data-security practices that are consistent with the existing MDSA and data-security best practices.

- **Data to Be Used for This Study.** The study will use the following data:
 - *Student enrollment and demographics.* Annual enrollment records, including grade level, school/LEA of enrollment, race/ethnicity, low-income status, multilingual learner status, and gender.
 - *Special education records (SCRAM).* Percent of time spent in the general education environment, primary disability classification, and the significant-cognitive-disability indicator to identify students with the most extensive support needs.
 - *Alternate assessment results (DLM).* English language arts and math performance levels.
 - *Course-enrollment records.* Course codes, titles, and sections, used to construct the general-education academic course-access measure (grades 6-11).
- **School and LEA characteristics. Locale (e.g., urban/rural), grade span, and enrollment.**
- **Data Availability.** Achievement and demographic data are generally available between November and January each year. Data collection at sites will occur throughout the year.
- **Data Use for Evaluations and Research.** Data are not collected or used beyond the documented evaluation and research purposes. Data linkage with other data sources is documented and will be reported in research reports.
- **Data Privacy and Security Training.** Data privacy, data security, and FERPA training is required by UEPC, and includes University of Utah and USBE training in data privacy and security (e.g., released now annually by USBE).
- **IRB Study Approval.** The UEPC maintains an IRB umbrella protocol at the University of Utah that covers exempt research under category 1 of 45 CFR 46.104(d) (Normal educational practices studied in common educational settings), which is subject to annual reporting and review and oversight by the University IRB.
- **Restricted Access.** Only UEPC authorized personnel with a legitimate need may access the data in a protected environment. All UEPC personnel are trained on data use and sign non-disclosure agreements. UEPC maintains records of authorized personnel and the granting, review, and revocation of access privileges.
- **Secure transfer, storage, and analysis.** Data are transferred through secure methods by the USBE, stored in encrypted form in U.S.-located University systems, and analyzed in a restricted virtual-machine environment. Data are maintained on a virtual machine and are encrypted. Remote access to the virtual machine is provided through a privileged access management system that uses secure connections, multi-factor authentication, a proxy server, and one-time credentials.

Access to the secure environment is limited to authorized UEPC personnel whose responsibilities require access. Access to the SQL Server database is further restricted to designated researchers whose project responsibilities require direct access. This occurs through the use of a separate approved-user authentication layer. Access privileges are documented, reviewed, and revoked when no longer needed, and data are not stored or processed on unencrypted portable devices. UEPC maintains records of authorized users and the granting and revocation of access privileges.

- **Disclosure-protected reporting.** USBE data included in public findings are reported only in aggregate or otherwise disclosure-protected form. Reports use a minimum group size and data suppression procedures. Personally identifiable data are not disclosed or publicly released.
- **No commercial use.** The data may not be used for targeted advertising, sold, or otherwise monetized.
- **Embargo.** As part of the UEPC's established approach to partnerships and through mutual agreement with USBE, UEPC also provides a 10-business-day embargo for research and evaluation that offers USBE staff the opportunity to review and provide feedback on reports and publications prior to their public release.
- **MDSA Acknowledgment.** The MDSA is acknowledged in all reports and publications where data available from the MDSA are used.

DECISION MAKING AND DISSEMINATION

The project team brings complementary experience and expertise, including the ability to communicate research to policy, practice, and scholarly audiences. The research team brings expertise in special education and meaningful inclusion, research methodology, producing decision briefs, technical reports, data visualizations, presentations, technical assistance manuals, professional learning, and peer-reviewed publications. USBE contributes extensive expertise in the subject matter, alternative assessment, implementation knowledge of state decision processes, data governance, technical assistance systems, and LEA networks and practice partners.

The project team's partnership and dissemination activities will be guided by the UEPC's partnership principles, which have informed their long-standing research-practice partnership with USBE and the research collaboration with this project's PI. These principles ensure that the study team maintain the methodological rigor and independence, while also maintaining a focus on creating opportunities to inform decisions and strengthen policy and practice. The partnership principles are:

1. ***Promoting Inquiry and Shared Understanding.*** We promote a culture of inquiry that encourages both our team and partners to ask critical questions that lead to a deeper understanding of the goals and priorities, programs, policies, challenges, and opportunities. We engage in a collaborative process with our partners to explore the evidence, understand the implications of the data, bridge understanding and

opportunities to learn from each other, and support informed decisions and improved outcomes.

2. ***Building and Sustaining Trust.*** We believe trust is a cornerstone for successful interactions and collaborations. To promote trust, we work with our partners to establish clear, shared expectations and transparent, open communication about emerging findings, challenges, and necessary adaptations; deliver on our project commitments; and foster mutual accountability.
3. ***Promoting Effective Communication and Coordination.*** We recognize that consistent communication, coordination, and feedback loops keep the work aligned, responsive, and useful. Regular check-ins, agreed-upon communication protocols, and project-management processes support timely decisions, clarify responsibilities, monitor progress, and ensure accountability for project commitments.
4. ***Respecting the Expertise and Experience of Each Partner.*** We value the expertise and experience that our partners bring to our collaboration. Individuals we work with possess local, in-depth knowledge of their policy and practice context, stakeholders/interested parties, and factors that may impact a program's implementation and outcomes. We bring expertise in research, evaluation, technical assistance, and professional learning. Respecting each partner's strengths fosters a collaborative environment and enhances the quality of the work, ensuring that recommendations are both relevant and actionable.
5. ***Advancing Continuous Improvement through Research Insights.*** Recognizing that each program requires substantial resources (e.g., money, time, personnel), our communications and deliverables are designed to support decisions regarding programs, including adaptations and improvements needed to meet program goals and objectives. In addition to providing considerations for improvements, we focus on building the capacity of our partners to implement and sustain improvements over time. Finally, the UEPC seeks feedback in our interactions and collaborations so that we can also engage in continuous improvement.

These principles will guide this partnership throughout the study, including the translation of evidence into policy, technical assistance, and implementation supports.

The project's dissemination strategy is designed to ensure that findings from this study reach state and local policymakers and practitioners who are positioned to improve educational opportunities and outcomes for students with extensive support needs. Our strategy has three components: presentation of timely and decision-relevant findings with state leadership and decisionmakers to support interpretation and use of findings; producing differentiated dissemination products for policy, practice, research, and public audiences; and meeting IES Open Science requirements while complying with the legal and ethical requirements that govern the study's data use. This dissemination approach draws on the project team's complementary

expertise (i.e., special education policy and practice; state data systems; longitudinal and causal analysis; research-practice partnerships; implementation; and the translation of evidence into policy; technical assistance, preparation, and professional learning).

The first component centers on timely presentation and use of findings. Findings will be presented through scheduled briefings with USBE leadership, statewide directors of special education, and decisionmakers aligned with study milestones and relevant state and local decision cycles. Structured discussions will create an opportunity for state and local leaders to examine the evidence, its application, limitations, and implications for use within Utah's policy and practice contexts.

The second component extends dissemination beyond state agency leadership through products and engagement strategies tailored to multiple audiences. Annual research briefs, data visualizations, and presentations will summarize findings and their implications for policy decisions, data systems, professional learning and technical assistance, and integration into the state's meaningful inclusion support. In addition, to support dissemination of findings, the project team, including USBE partners, will present and publish findings in multiple peer-reviewed and professional venues, including state and national conferences, to maximize dissemination opportunities.

In addition to actively disseminating findings for policy and practice use, the project will meet IES requirements for transparency, reproducibility, and public access within the legal and ethical requirements governing data use. The project will implement the IES Open Science standards through preregistration, transparent documentation of methods and analytic code, and public access to resulting publications following pre-publication embargo reviews with the USBE. Before analyzing outcome data, the research team will register the confirmatory research questions, outcomes, analytic sample rules, models, covariates, subgroup analyses, missing-data procedures, sensitivity analyses, and decision rules in a recognized registry. The team will date and explain any amendment or deviation and will distinguish confirmatory from exploratory findings in all reports and publications.

Due to MDSA and data sharing agreements, the project will not publicly disclose, release or transfer to a public or restricted repository any student-level data (e.g., administrative records, derived student-level files, or identifiable individual-response data), as this is prohibited by the MDSA and applicable IRB requirements, which also require disposing of data upon study completion. The project will provide study protocols, non-disclosure data dictionary, user guide, README, measure and variable-construction documentation, data cleaning and disclosure protection procedures, model specifications, non-disclosure analytic code sufficient to reproduce reported results to the extent legally and technically possible, software and version information for deposit in a durable repository. Access will be open when disclosure risk and data-provider agreements permit and restricted when needed to protect participants or comply with law, IRB

requirements, or contractual limits. Full-text versions of final manuscripts will be submitted to ERIC immediately upon publication.

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