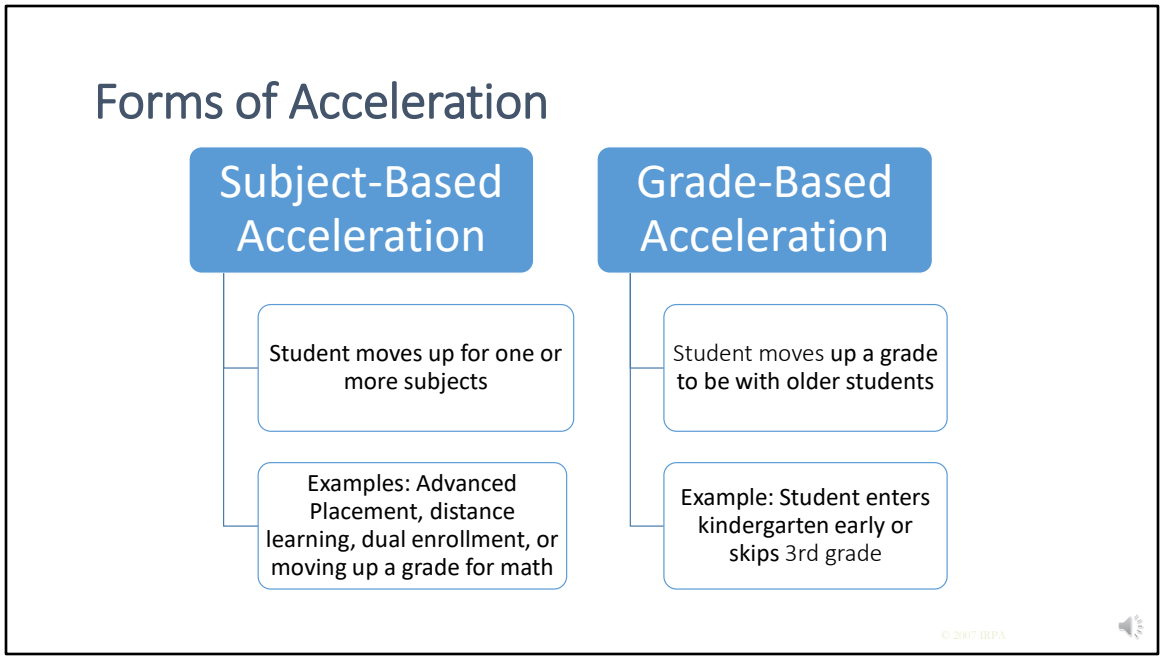
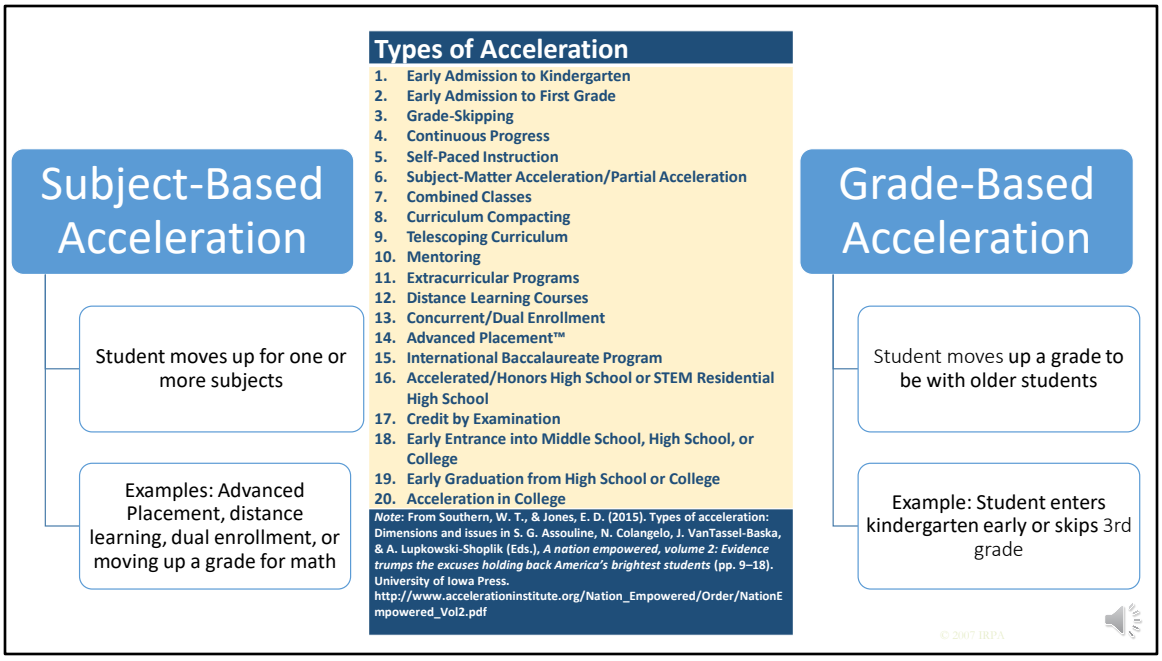
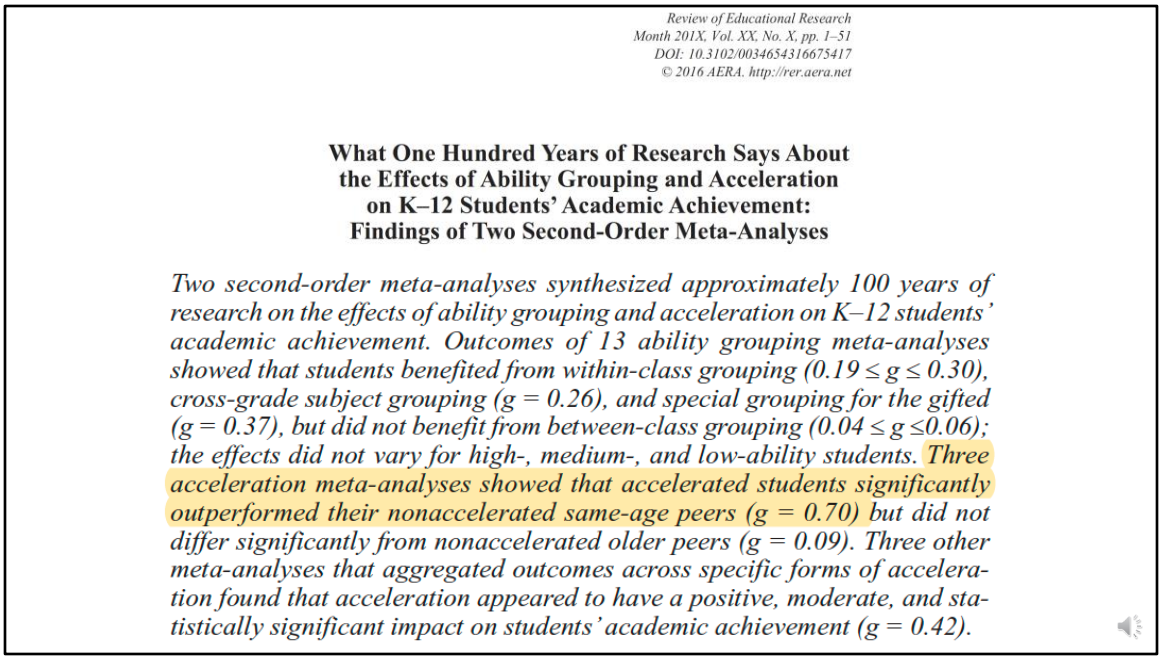


[Slide 1] There are two broad categories of approaches to acceleration that we will be talking about in this section. One is *subject-based acceleration,* which captures approaches that advance a student in one or more subjects for part of their school experience, while keeping them with age peers for other parts of the school day. The other is *grade-based acceleration,* which describes approaches that advance a student to be in a learning environment with older students full time. Subject-based approaches may be employed with students who show a high level of achievement and aptitude and need for more challenge in one subject area but not necessarily in others, while grade-based approaches tend to be used for students who show high levels of achievement, aptitude, and ability across multiple areas and may not be experiencing much challenge at all in their current placement.



[Slide 2] As you learn more about acceleration, you will find that there are at least 20 different types of accelerated practices students might experience, but generally these may all be captured under the broad umbrellas of *subject-based* and *grade-based* acceleration. Grade-based approaches may be more what you typically think of when you hear the term *acceleration,* because these include when a student skips over an entire grade or enters kindergarten or college a year early. Subject-based approaches are a little messier to define, because they can include things like Advanced Placement courses, which introduce college-level content to

students in high school, or curriculum compacting, which allows students to skip over content they already know in their general education classroom and work on more advanced learning activities. The approaches to subject-based acceleration we will be emphasizing are those that formally engage students in content for a more advanced grade level in a particular subject. For example, a third grade student might go to a fourth grade class for math every day, while spending the rest of the day in third grade. Or, a fourth grade team might have a group of students who come together daily to engage in fifth grade math instruction. These approaches go beyond just providing occasional extensions on grade level content, because they specifically engage students in consistently working toward content and standards at a higher grade level.

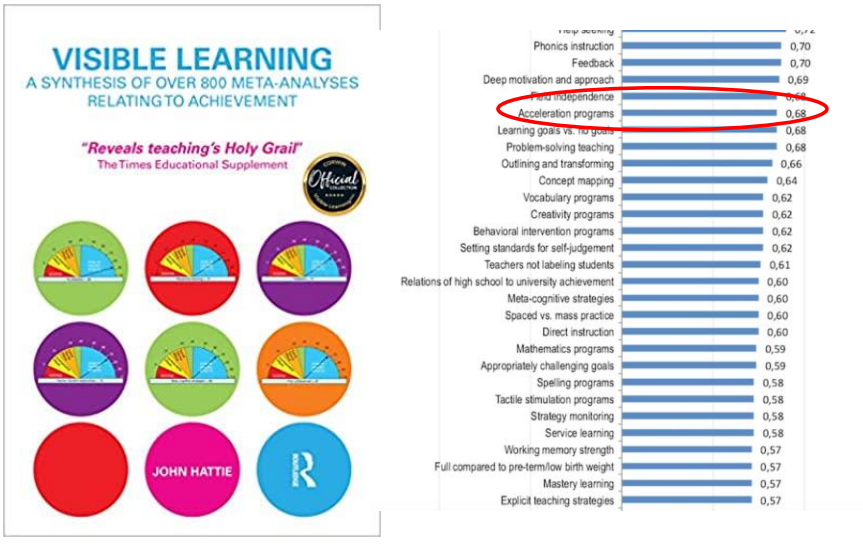


Review of Educational Research
Month 201X, Vol. XX, No. X, pp. 1–51
DOI: 10.3102/0034654316675417

What One Hundred Years of Research Says About the Effects of Ability Grouping and Acceleration on K–12 Students' Academic Achievement: Findings of Two Second-Order Meta-Analyses

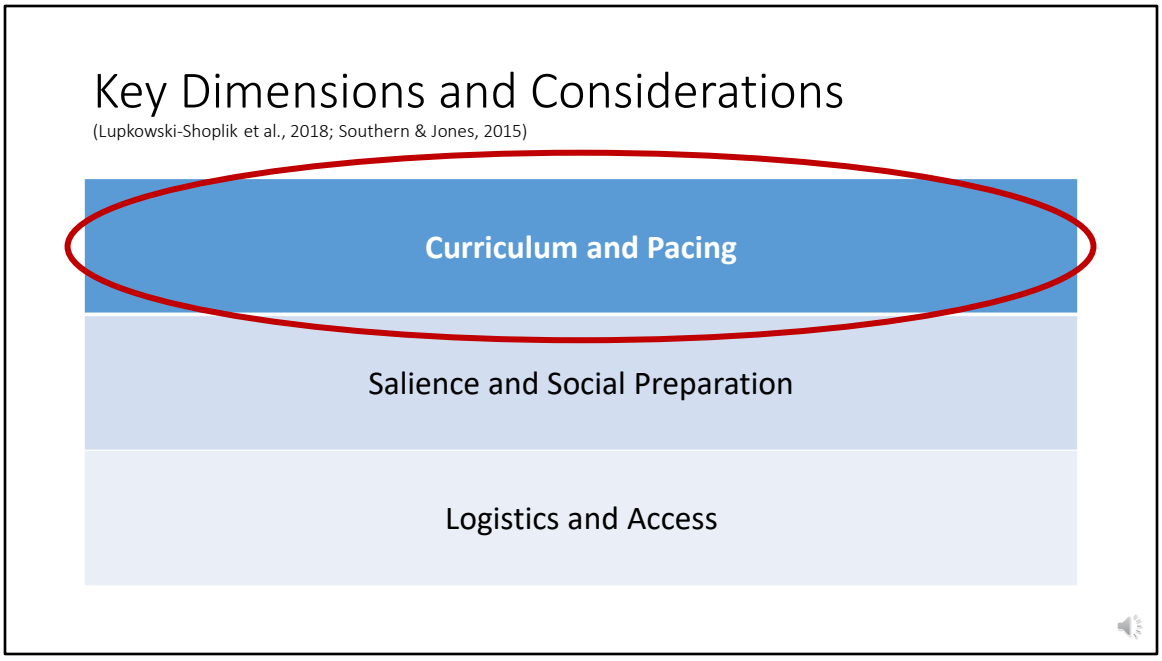
Two second-order meta-analyses synthesized approximately 100 years of research on the effects of ability grouping and acceleration on K–12 students' academic achievement. Outcomes of 13 ability grouping meta-analyses showed that students benefited from within-class grouping ($0.19 \le g \le 0.30$), cross-grade subject grouping ($g = 0.26$), and special grouping for the gifted ($g = 0.37$), but did not benefit from between-class grouping ($0.04 \le g \le 0.06$); the effects did not vary for high-, medium-, and low-ability students. Three acceleration meta-analyses showed that accelerated students significantly outperformed their nonaccelerated same-age peers ($g = 0.70$) but did not differ significantly from nonaccelerated older peers ($g = 0.09$). Three other meta-analyses that aggregated outcomes across specific forms of acceleration found that acceleration appeared to have a positive, moderate, and statistically significant impact on students' academic achievement ($g = 0.42$).

[Slide 3] Research on acceleration consistently shows positive academic outcomes for accelerated students. The study whose abstract appears here was a large-scale analysis of multiple other studies (and studies of studies), and the highlighted statement emphasizes the overall finding that accelerated students outperformed their non-accelerated peers academically across multiple studies, with an effect size of .70. To put that effect size of about .70 into context, let's look at it in the context of some other educational interventions for comparison.

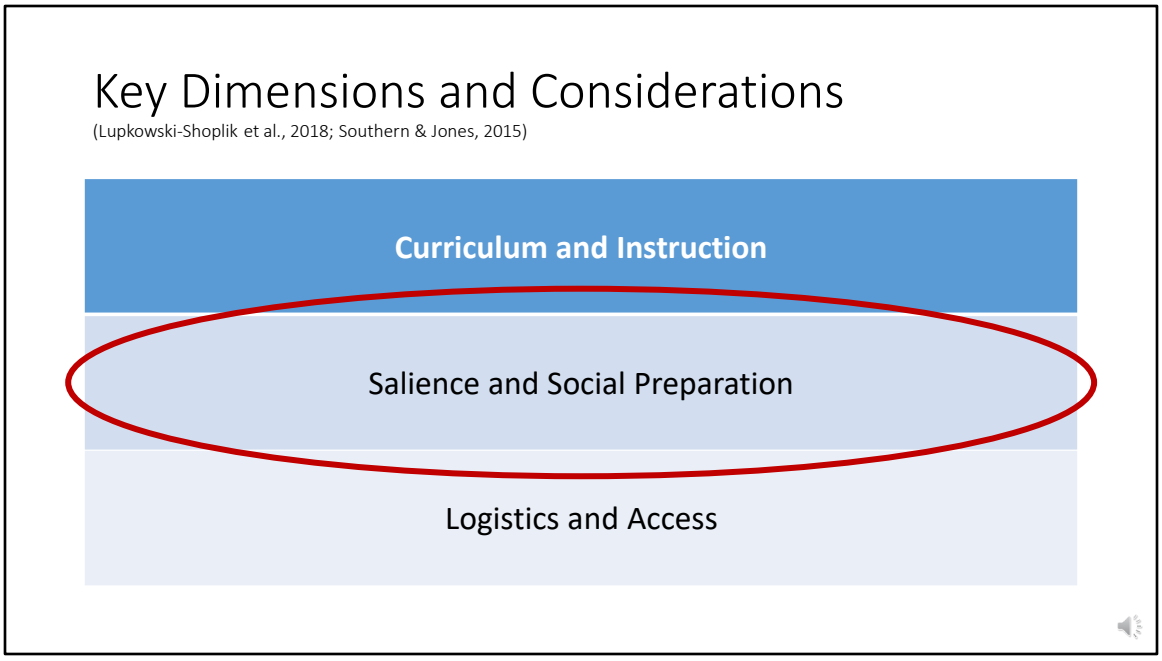


[Slide 4] A lot of teachers may be familiar with John Hattie's "visible learning." What that book does is show the "effect sizes" for a number of really common educational practices. Here you can see acceleration listed as .68, slightly lower than the study noted on the previous slide, which was published later than this book from Hattie. But notice that there are a lot of approaches that we use all the time in schools that have much lower effect sizes than acceleration on academic achievement. Other studies, including longitudinal studies that followed students well into adulthood, have found other positive academic and other effects of acceleration, including positive effects for educational and occupational achievements. Further, longitudinal studies have found that most students who were accelerated later view the experience as positive.

[Slide 5] Starting from a recognition of likely positive effects for students, there are some further questions to think about. Both grade-based acceleration and subject-based acceleration require attention to some key questions at a broad level of the school or district, and at the individual level for individual students. A substantial part of modules 2 and 3 will focus on key questions to examine with regard to individual students. Here, let's talk briefly about some of the broader-level dimensions and considerations that help us think about acceleration in context. Acceleration is a relatively low-cost strategy for schools to use in responding to the needs of advanced learners. At the same time, implementing acceleration effectively and consistently does require careful thought around policies and procedures. The resource pictured here is available to you in the "go deeper" section of this module, but we will touch on just a few big-picture points here.

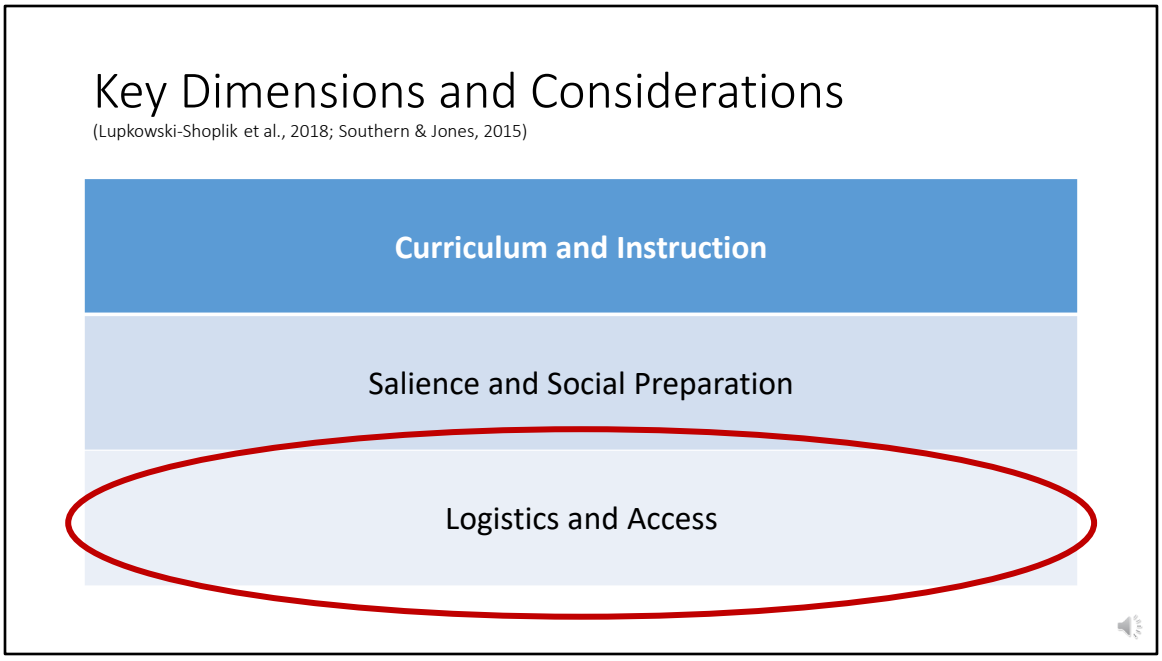


[Slide 6] As part of an effective approach to acceleration, all school staff involved in acceleration decisions and implementation should have a good working knowledge of the standards and expectations across several grade levels. A student who skips from third to fifth grade will miss instruction on some aspects of fourth grade content, but any resulting gaps are generally easy for the receiving fifth grade teacher to fill in for a student who showed the necessary aptitude to warrant acceleration. In addition, students who are accelerated often quickly adjust to the grade-level content at the new grade and may need further advanced content and pacing to provide sufficient challenge. Next, along with awareness around students' curricular needs, schools also need to establish a process for decision-making around which grade-level assessments accelerated students will take, and how student progress will be monitored and supported across not only the time immediately surrounding the acceleration decision, but over the longer term.

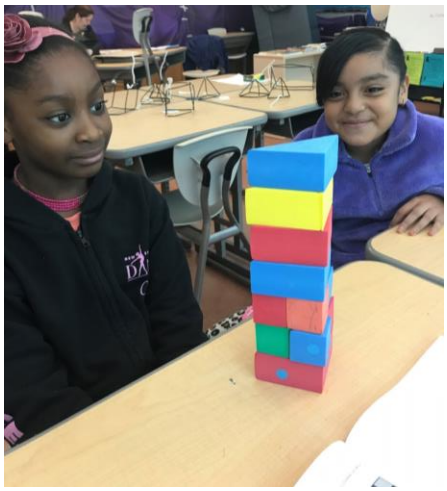


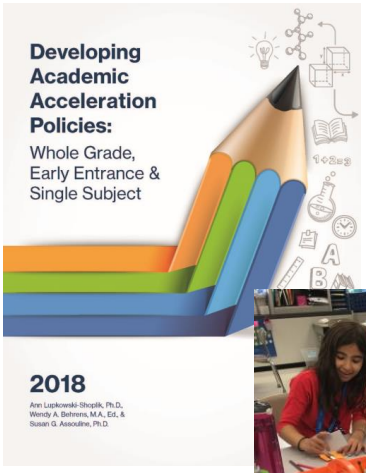
[Slide 7] Next, we will talk about the issue of *salience* when it comes to acceleration, and related questions about peers. Salience refers to how obvious the acceleration decision and related actions are likely to be. Students will obviously recognize when one of their peers leaves the classroom for part of a day, or when a younger student starts coming to class during reading every day, or when someone who was a classmate in second grade is now in fourth grade when everyone else has moved up to third. It is important for school staff to be sensitive to the needs of the accelerated student and to other students as well, and to provide supports for social and emotional needs as well as academic needs. Transition planning is an important part of acceleration, which we will examine further in module 4. The salience of acceleration decisions can be managed somewhat through attention to timing, and through supportive efforts from the receiving teacher. It is important to recognize and respond to student needs as they arise, but also to recognize that a transition may be easier for a student early in the year rather than later, or a decision may be made at the end of one school year to plan for the next. For example, a student might finish second grade and then start fourth grade right at the beginning of the following school year, if the best decision appears to be grade acceleration. Also, whenever there are opportunities for groups of students to participate in an accelerated approach, that can also help with management. For instance, if there are five or six

students at a grade level who would benefit from subject acceleration in math, this can provide a lot of peer support and sometimes also simplify logistics.



[Slide 8] Building on these other considerations, we will also talk about *logistics* and *access.* When we consider acceleration decisions within a single school building, such as the question of whether to send some third graders over to fourth grade for math every day, there are a few logistical questions to consider to support the students' success. Are third grade and fourth grade math classes held at the same time every day? If not, could they be? How might the schedule be adjusted to facilitate this kind of movement, and to limit how disruptive it would be? Also, what barriers might there be for some students to be moved ahead? Sometimes, acceleration approaches might involve having students participate in learning activities that are outside of regular school time. For example, they might include special summer or Saturday classes, or arriving at school a little earlier than other students. How can schools support an equitable approach to acceleration that responds to the needs of all the learners who would benefit from it? Another key consideration in the long term is what happens when it is time for students to transition to another level of school, and questions of equity and access arise there as well. If students need to go to the middle school every morning for an advanced math class and then return to the elementary school, what resources are needed to make that work?





[Slide 9] Once again, this resource can be helpful for schools in thinking about big-picture questions regarding acceleration management, along with the resources we will be discussing to support decisions about individual students. In the next section, we'll look further at some of the questions educators and families tend to raise about acceleration and what the research has shown us about how acceleration works.