The promise of tutoring

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The COVID-19 pandemic has facilitated significant disruptions in student access to and retention of learning in the United States. The realities of decreased instruction time, the remote learning format, and limited opportunities for personalized interactions between teachers and students have created a recipe for "learning loss."

These risk factors are most concerning for students of color, those who were already in need of additional supports, and low-income students. Research has found that tutoring may be one of the most effective methods to combat this "learning loss." Policy and education officials should consider employing tutoring to stymy the growth of preexisting educational inequities and close gaps that are present in educational access and achievement[1].

Components of tutoring interventions[2]

Tutoring programs are present in many forms. Nickow et al. (2020a) conducted a review and meta-analysis of 96 studies on tutoring. The list below detail some of the key components that differentiate different tutoring interventions:

Tutor types
- Four broad categories are present in tutor types and include teachers, paraprofessionals, non-professionals and parents.
- Programs utilizing teacher tutoring yielded the largest impacts on student learning outcomes, followed closely by tutoring programs utilizing paraprofessionals. Interventions led by paraprofessionals exhibit very consistent effects and are only slightly less effective than those led by teachers.
- Both nonprofessional and parent tutoring programs tended to have positive impacts that were smaller but still significant.

Mode of Delivery
Tutoring programs employ various modes of delivery including student to tutor ratio, timing, and location, curriculum characteristics, and frequency and duration.
- <u>Timing</u>: Tutoring programs taking place during the school day tend to be more effective than those that are after-school programs.

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[1] (J-PAL North America, 2020)

[2] (Nickow, A., Oreopoulos, P., & Quan, V., 2020a)

- Student to tutor ratio: The impact of the tutoring group's size on student learning differs by grade level from preschool to 5th grade. One-on-one tutoring was more beneficial than paired and small groups for students in Pre-K through first grade, while 2nd through 5th grade students benefited from groups of three or more paired with a tutor.
- The majority of parent and nonprofessional tutoring programs utilized one-on-one group size and could not be compared effectively.
- Frequency: Overall, as the number of tutoring sessions per week increases, tutoring interventions appear to be more effective.
- Duration: Short-term interventions appear to have larger impact than longer term ones (longer than twenty weeks). Researchers believe this is most likely due to teacher tutoring programs having relatively shorter durations as a norm while longer durations are normally utilized by nonprofessional tutoring programs.
- Curriculum Characteristics: It has been found that tutoring programs improve learning outcomes for students overall. However, program effectiveness varies by both subject and grade level. Tutoring programs focusing on literacy have a tendency to become less effective as students get older while as students advance through the fifth grade, math programs become more effective. Significant trends could not be determined for PreK and K students.

N.B. Additionally, effective characteristics of tutoring programs for middle and high school students could not be determined due to the limited number of programs for this age group.

What exactly is "learning loss?"

Learning loss is thought of in a few different ways:
- The difference between the current reality and a certain idea or normal condition, rather than a reduction in one's existing skills or knowledge.
  - Learning loss should not be limited to large-scale events, such as school closures as a result of COVID-19. Reformers in the field of education highlight gaps between where students are currently and where they are meant to be and use markers of at and above proficiency. This shines a light on learning loss not just at the individual or school level but in systems that are performing below their full potential[3].

- Reversals in student academic progress or to the specific or general loss of knowledge and/or skills.
  - This loss is commonly a result of discontinuities or extended gaps in the students' educational career. Although learning loss can show up in a variety of ways and for a range of reasons, widely recognized forms of learning loss are often the following: summer break, interrupted formal education, returning dropouts, senior year, school absences, ineffective teaching, course scheduling, and COVID-19 school closures.[4]

Areas of promise for tutoring disadvantaged students

RITE tutoring process[5]
- The Regional Institute of Tutorial Education (RITE), located at the University of Missouri-St. Louis, focuses on counteracting influences of poverty, low tax funding, crime, and poorly

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[3] (Lorié, 2020)
[4] (The Great Schools Partnership, 2014)
[5] (Cochran, 2020)

resourced schools for children who are unable to achieve both academically and socially due to these conditions, through the building of community support.

- RITE hires university students and community members to mentor and tutor students who are enrolled in school districts that are provisionally and or unaccredited.
- RITE trains, places, and supervises tutors during support of students in K-12 classrooms, mostly in the academic subject areas of math and reading.
- After-school programs and schools supply the neediest students and the particular subject area content.
- Results have been successful when student attendance is consistent.

Mismatch Hypothesis[6]
- One method of tutoring that has been successful with disadvantaged students comes from Northwestern's Institute for Policy Research's working paper and corresponding study (Cook et al., 2015). These posited the hypothesis of "mismatch," or the difference between what schools are delivering and the needs of students, particularly those who are far behind grade level. School-based interventions were used in providing intensive and individualized academic instruction to disadvantaged youth.

Two examples of large-scale programs

Number Rockets[7]
- Tutors received 10 hours of training, including how to use a scripted curriculum that was designed for first graders who struggle in math.
- Tutors work over 17 weeks, in three sessions a week of 40 minutes, with 2-3 students at a time.
- Originally implemented utilizing graduate students who were in training to become general and special education teachers.
- Was found to significantly improve the foundational math skills of first graders.
- Replicated utilizing retired teachers and substitutes in place of graduate students and achieved the same positive results.

Saga Education[8]
- Nonprofit that works with a specific tutoring model that targets secondary students who have fallen behind in math.
- Model utilizes five main characteristics: delivery in-school, tutoring sessions on a daily basis, instruction that is personalized, research-based curriculum, and supportive relationships between tutors and students.
- Model employs paraprofessional tutors who work with students two at a time. Tutors are typically individuals changing careers, recent college graduates, and retirees.
- Upon evaluation of the program in Chicago Public Schools, tutored students had learned an additional one to two years' worth of math beyond what their peers learned during a typical academic year.

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[6] (Cook et al., 2015)
[7] (Edgerton, 2021)
[8] (Nickow, A., Oreopoulos, P., & Quan, V., 2020a)

What we know works[9]:

The literature has shed light on elements of effective tutoring programs that support success in the classroom. Rather than reviving past attempts and making the same errors, policymakers and practitioners should look to research-supported conclusions when supporting and creating tutoring programs. Edgerton (2021) offers four useful insights below.
Effective tutoring:

1) Is provided for at least half an hour, at least 3 days per week, utilizing groups of 5 or fewer, and is a part of the regular school day;

2) Supports and invests in the building of staff capacity. This is done by providing both quality training and support;

3) Utilizes certified classroom teachers or paraprofessionals. Teachers may be used whether they are currently teaching or not. Examples of paraprofessional staff are teacher candidates who are enrolled in preparation programs, existing paraprofessionals, or tutors who are well-trained who earn a stipend, such as AmeriCorps members; and

4) Builds strong relationships among tutors, teachers and students. This is done during structured time that is made to be well-aligned with the regular classroom curriculum.

Room for exploration and policy implications[10]

Nickow et al.'s meta-analysis confirms that tutoring programs are able to have significant impacts across a wide array of tutoring program types and learners. This research also uncovers several opportunities that should be further explored.
Opportunities for growth with paraprofessional tutoring
- Teacher tutoring programs present a barrier of importance when thinking of scaling programs. There are a limited number of qualified teacher tutors and the cost of employing them is high.
- Does the differential in effectiveness between paraprofessional and trained teachers outweigh the potential differentials in cost? This remains unclear.
- However, paraprofessional tutoring offers the education community an extensive avenue for growth due to the opportunity for significant effects at relatively low costs and logistical efficiency. Recent graduates who are in professional fellowship or service programs along with non-teacher school staff are potential pools for future tutors.

Expansion of tutoring programs at the secondary level
- The impacts of tutoring programs at the secondary level show potential for significantly improving learning outcomes for students.
- Research on secondary level tutoring programs is limited, there have been promising interventions that have been identified.
- Saga Education's program presents one model that may be expanded.

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[9] (Edgerton, 2021)
[10] (Nickow, A., Oreopoulos, P., & Quan, V., 2020a)

Concentration on during-school tutoring
- Tutoring that occurs during the school day, notably in the case of public schools, may offer an option that is more accessible for low-income families whose students may be behind.
- This type of tutoring decreases the number of steps that students and families need to undertake to access additional instruction.
- This would allow for tutoring programs to function more as they were intended and work to advance equity in the education system.
- It offers the most effective option in terms of timing and may be more successful in ensuring that tutoring really occurs, making this option more cost effective.

What does this mean for the education community?

Let us picture the following scenario for a moment that is laid before us by The Brookings Institution (2016). Based on existing knowledge and research, tutoring has been shown to be effective for promoting student learning outcomes. However, those who seek to create, support, and implement tutoring programs must be aware of and promote best practices. In the past, education reforms focused their attention on improving the quality of grade-level material instruction and/or the incentives that students had to learn said material, in order to fill learning gaps. However, these efforts often do not take into account the student diversity present in classroom, including knowledge, learning styles, and learning rates. Thus, in spite of best efforts, students who fall behind their peers and grade level material have the tendency to remain behind. As students miss the development of integral foundational skills, they most likely will have serious challenges in understanding of subsequent learning tasks. This inevitably widens the gap further between them and their peers as they move forward through schooling. Now that we have more information on what tutoring is capable of achieving, successful characteristics, and formative questions, the community should take these into account when in the creation and promotion of tutoring programs.

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