Arlin, M. (1984). Time variability in mastery learning. *American Educational Research Journal*, *21*(1), 103-120.

Summary
Arlin investigated the Bloom proposal that mastery will reduce the variability among learners. Arlin has conducted his own research and cites other research to conclude that this does not happen. Mastery may reduce the time to learn of less capable learners, but the differences in the rate of learning do not change. I think this makes sense as more able learners are being held back in systems that do not allow them to advance as quickly as they might.

According to **mastery learning theory**, **between-student variability of learning time will progressively decrease under conditions of mastery**

Unclear to me who Arlin is talking about. The position of mastery advocates that possible to bring achievement of all to the same level in the same amount of time is not referenced. Later seems to focus on Bloom's book.

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Arlin (1973, 1984) argues that because achievement variability reduction is well documented, the claim of time variability reduction is the crucial tenet of mastery learning to be put to empirical

MASTERY POSITIONS ON TIME VARIABILITY

Bloom (1971) argues that student time di are "artifacts" of nonmastery procedures of schooling. Some stud to new units lacking adequate entry behaviors (e.g., inadequate p knowledge, low motivation from previous fai

To the extent that mastery procedures en cognitive entry behaviors of slower students become similar t faster students, their learning rates also will become similar

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Bloom (1976) suggested that under mastery learning "the differentiation between good and poor learners or fast and slow learners, tends to be reduced to a point where it is difficult to measure in hours or minutes
Elsewhere he argued that mastery procedures can progressively reduce time variability until a "vanishing point" is reached (Bloom, 1971).

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Cox and Dunn (1979) suggest these claims represent a "psychological trap" because they entice teachers with unfeasible goals of reduction in time variability

Note: This seems to miss the possibility that time required by low performing students could reduce time to learn when contrasted with other low performing students not allowed to achieve mastery. I was unaware that Bloom had suggested all variability among students would be drastically reduced.

Resnick (1977) criticized the mastery model be- cause of its potential effects on more capable students in class-paced instruction

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STUDY 1

participants were four elementary school teachers and their students in four classrooms, from three sch

All lesson plans were developed to accommodate total-class instruction (rather than indi- vidualized instruction) followed by group or individualized remediation

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Results

To answer the questions related to time, four measures were used. The first measure was the number of students who needed extra time for remediation in each lesson. This included students needing one, two, or more help sessions before achieving a final achievement score at a mastery level

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At least during the period in the first experiment, **a reduction of individ- ual differences in learning time was not evident**. But because the teaching period was only 2 weeks, it is possible that reduction of time differences did not have sufficient opportunity to occur. Because of this potential limitation, it is necessary to consider the following longitudinal study.

STUDY 2

The **second study was a post hoc, longitudinal examination learning time of students who learned arithmetic in a mastery program from first to fourth grade.**

Method Sample.

All students wh first grade in September 1976 or September 1977 and who wer mastery learning program for the next 4 years (September 197 1980 or September 1977 to June 1981) were selected.

Mastery procedure. The school district had divided the element (grades 1-6) arithmetic curriculum into 76 units for mastery t

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Results

Page image 14
the **ratio of time to mastery of the slowest 25 percent of students to the fastest 25 percent did not appear to decrease across the 4 years of mastery learning**

Page image 15
First, the differences between fast and slow learners remained stable across time. Second, the extra time needed to bring slower students to mastery remained stable across the course of
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The results of these two studies conflict with claims of mastery theorists such as Bloom (1971, 1976) and Block (1974) that mastery learning procedures will minimize achievement differences and time differences simultaneously

While it was possible to minimize achievement differences in both studies by ensuring that most students achieved at similar, mastery levels, it was not possible to minimize the differences between students in the time needed to achieve this mast