

Primacy-Recency Effect

- During a learning episode, we remember best that which comes first, second best that which come last, and least that which come just past the middle

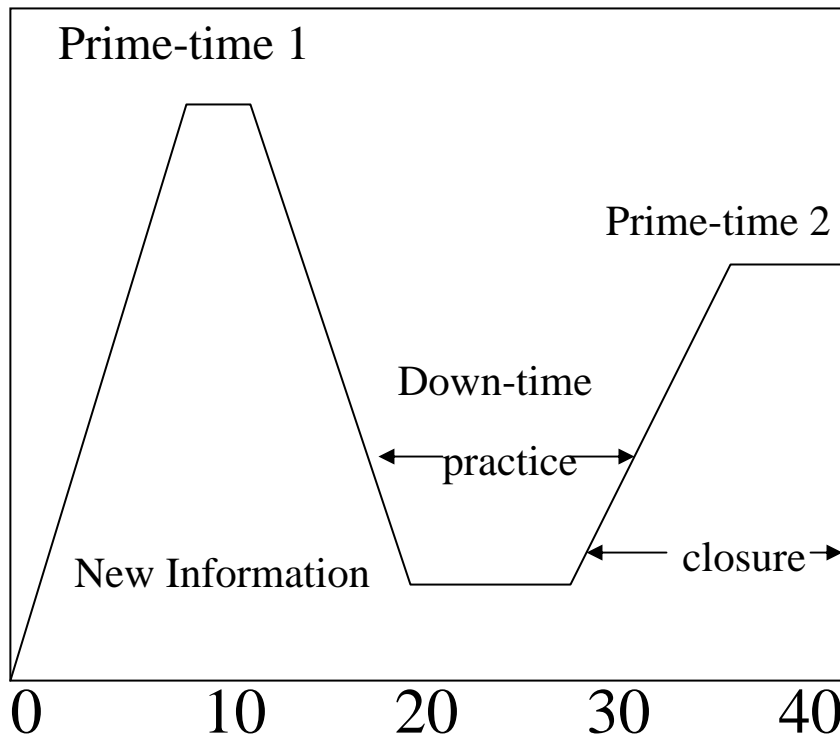
Retention During a Learning Episode

Stare at the word list for 12 seconds. Now cover the list and write
The words you remember on lines to the right -listed 1 - 10

KEF
LAK
MIL
NIR
VEK
LUN
NEM
BEB
SAR
FIF

- Turn to your list again and circle the words that were correct. To be correct, they must be spelled correctly and be in the proper position on the list. Look at the circled words. Chances are you remembered the first 3 to 5 words (lines 1-5) and the last 1 to 2 words (lines 9 and 10, but had difficulty with the middle words (lines 6-8)
- This is the Primacy Recency effect

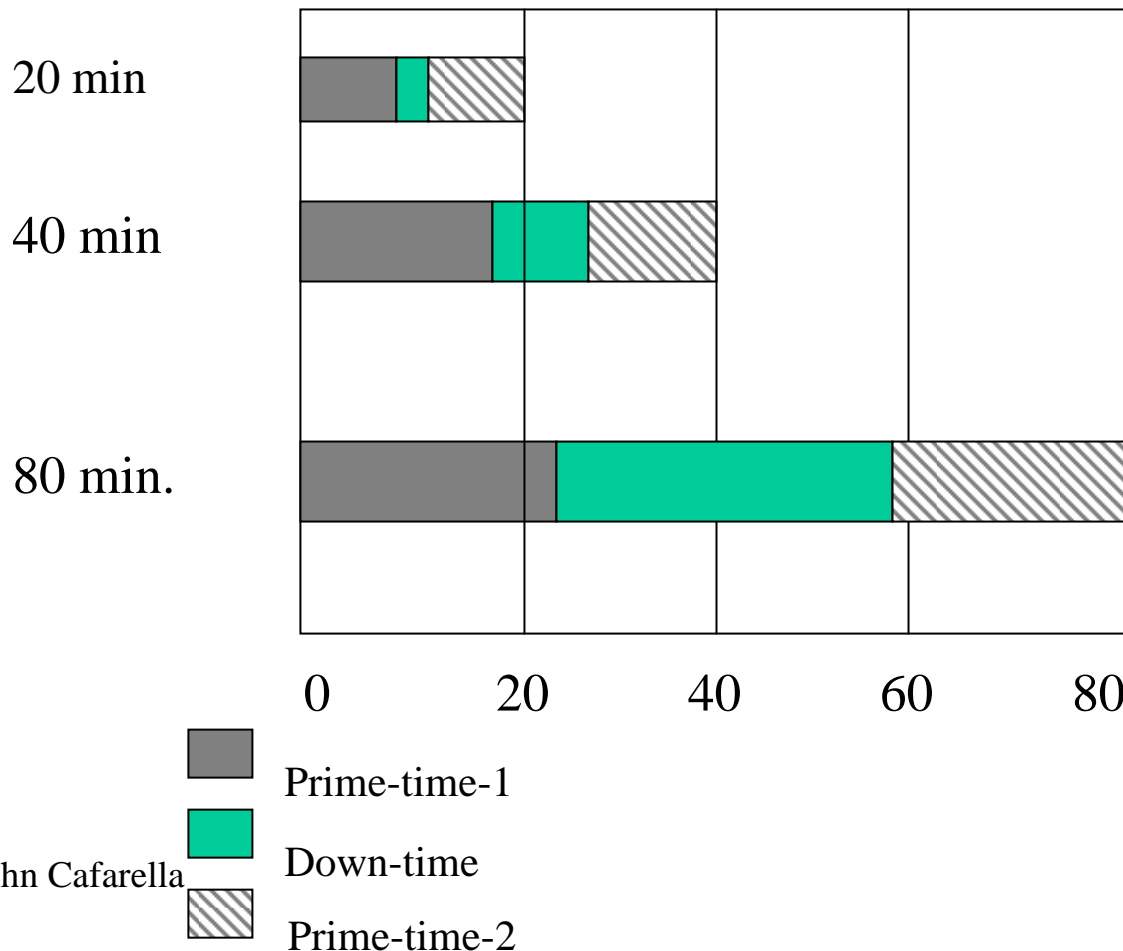
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New information and closure are best presented during the Prime-time periods. Practice (labs/activity) is appropriate For the down-time segment.

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Approximate Ratio of Prime-Times to Down-Time During Learning Episode



Note that during the 40 minute lesson, the two Prime times total about 30 minutes, or 75% of the teaching time. The down time is about 10 minutes or 25% of the lesson time. If we double the length to 80 minutes, the down-time increases to 30 minutes or 38% of the total time period.

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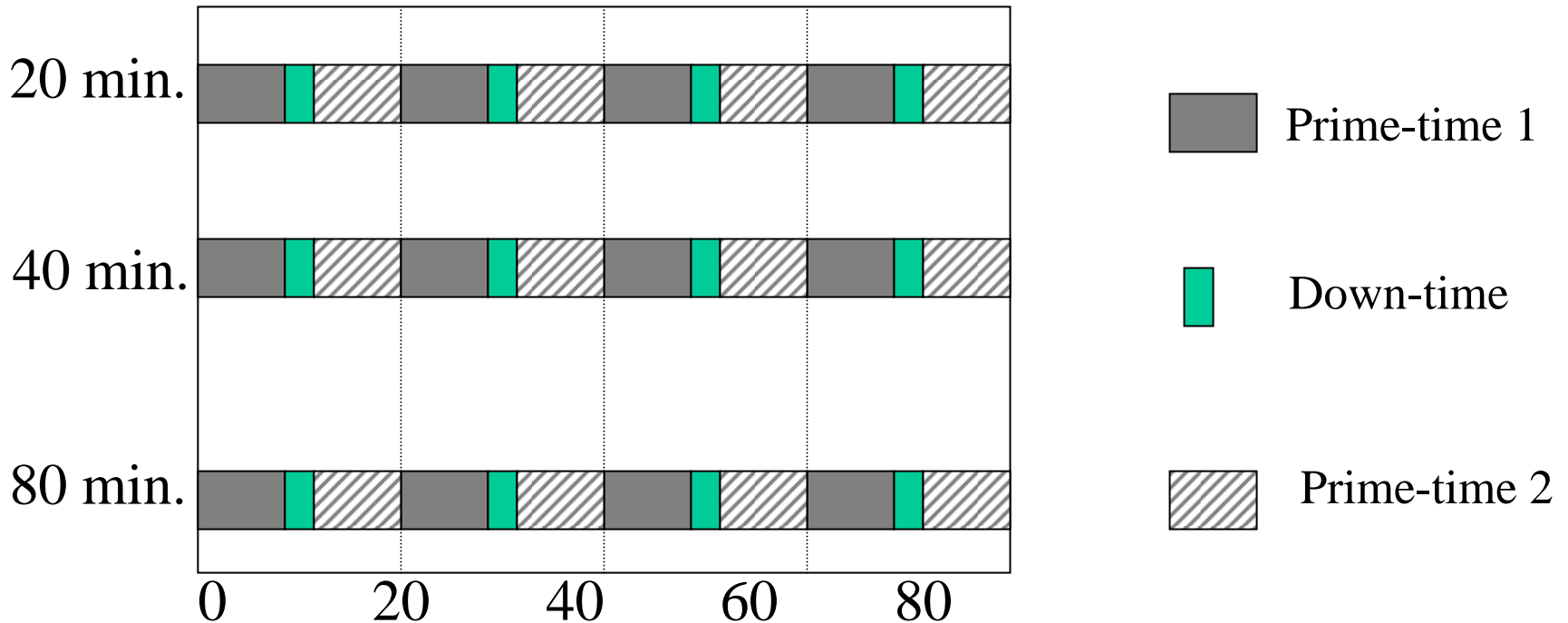
| Prime Times | | | Down Times | |
|--------------|-------------------------|-----------------|-------------------|-----------------|
| Episode Time | Total Number of minutes | % of Total Time | Number of minutes | % of Total Time |
| 20 minutes | 18 | 90 | 2 | 10 |
| 40 minutes | 30 | 75 | 10 | 25 |
| 80 minutes | 50 | 62 | 30 | 38 |

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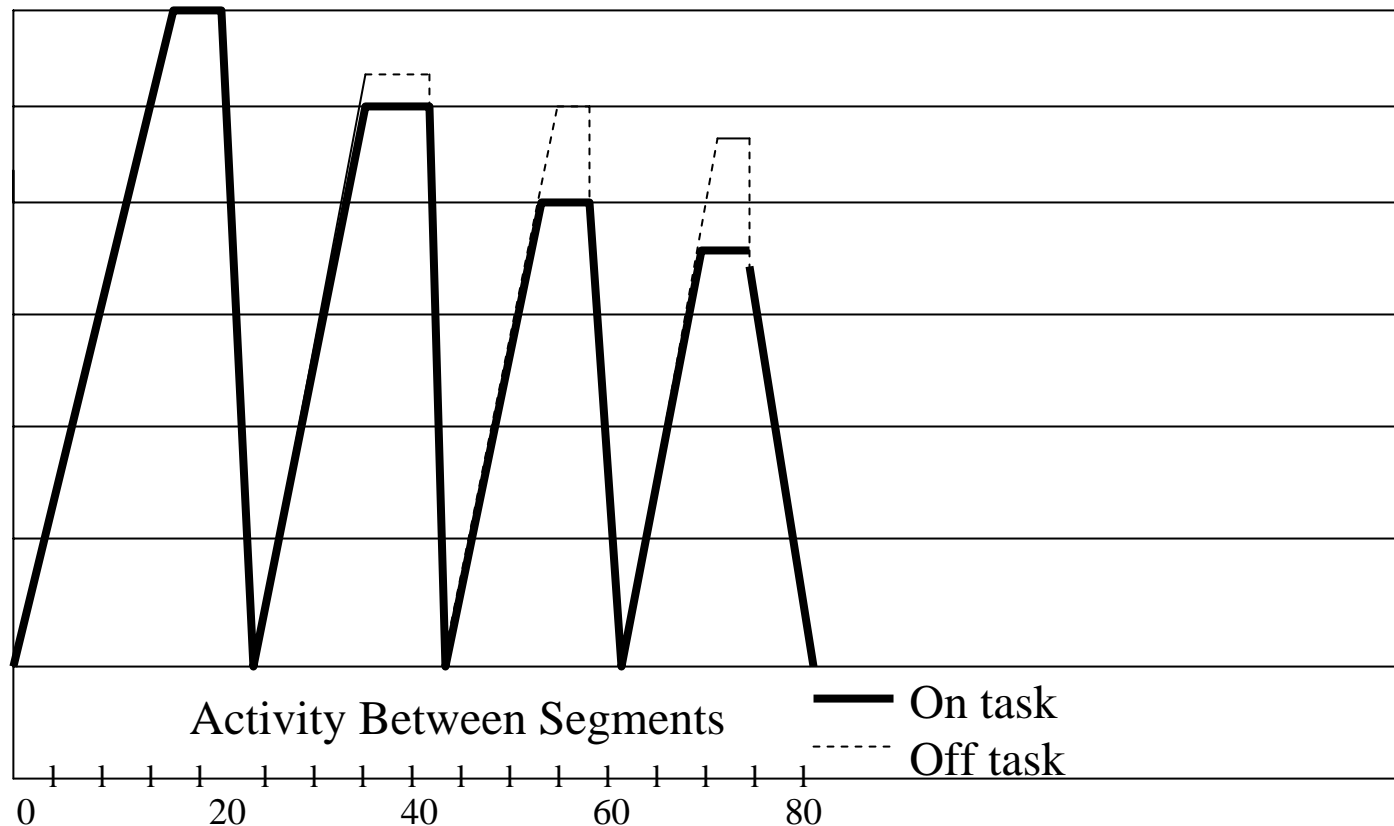
As we shorten the learning episode, the down-time decreases faster than the prime times. This indicates that there is a higher probability of effective learning taking place if we can keep the learning episodes short and meaningful. Thus, teaching two 20-minute lessons provides 20% more prime time (approximately 36 minutes) than one 40 minute lesson (approximately 30 minutes). Note, however, that a time period shorter than 20 minutes may not give the learner sufficient time to determine the pattern and organization of the new learning, and is thus of little benefit. The data confirm that more retention occurs when lessons are shorter. **Lessons divided into 20 minute segments are more productive than one continuous lesson.**

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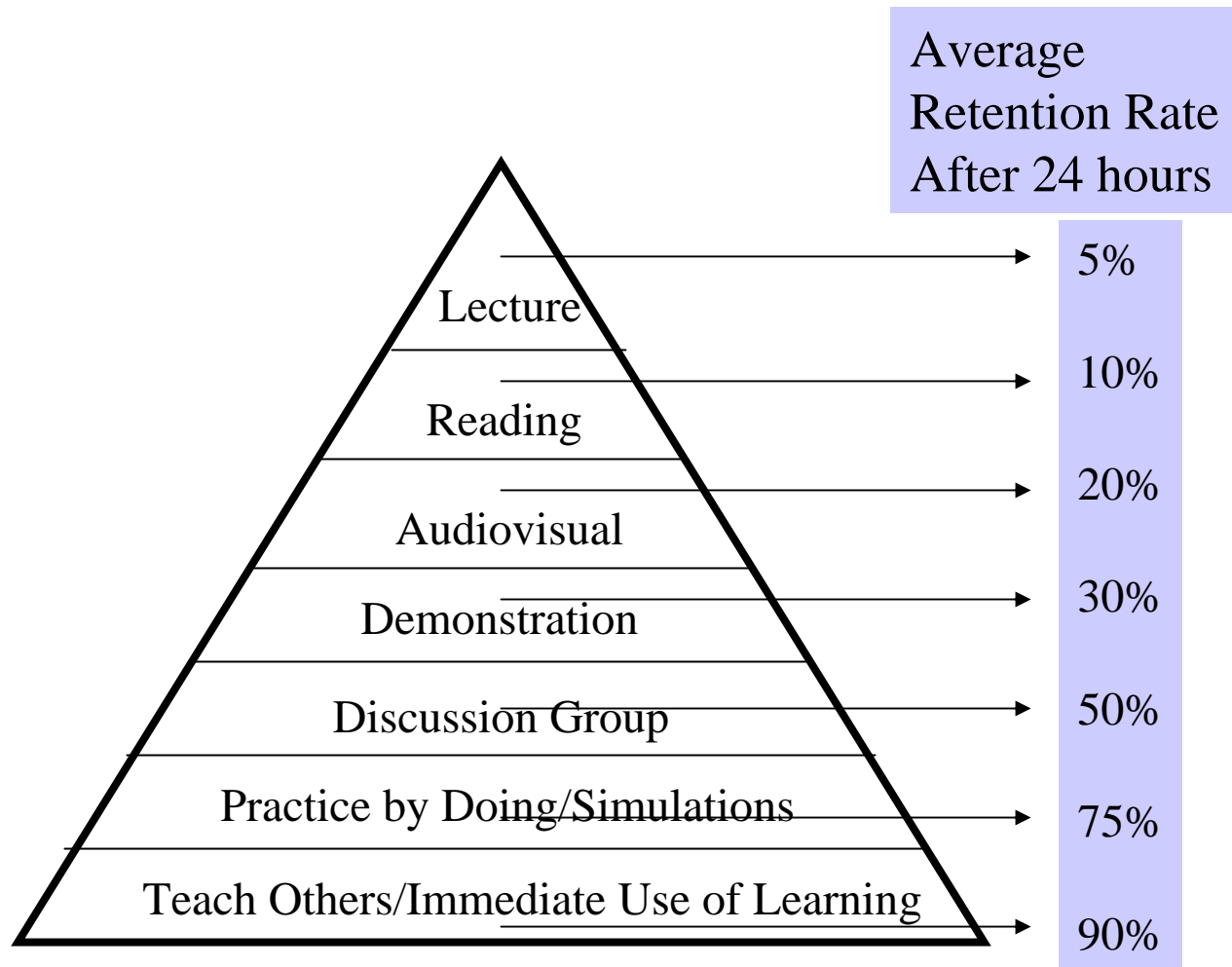
By dividing each learning episode into 20 minute segments, there is proportionately more prime-time to down-time.



Primacy-Recency Effect



Compilation of 18 action research studies in secondary School classrooms comparing the degree (focus) to on task And off-task behavior between lesson segments of a double period



The Learning Pyramid, devised by the NTL Institute of Alexandria VA (formerly the National Training Laboratories of Bethel, Maine), comes from studies on retention of learning after students were exposed to different teaching methods. The pyramid shows the % of new learning that students can recall after 24 hours as a result of being taught primarily by the teaching method indicated. Note: Information recalled after 24 hours is presumed to be in long-term memory storage.