

Flipped Programming Course

1st passing

2nd passing

1st failing

2nd failing

active-participation-weekly-vid

$$\frac{\text{\# total watched video}}{\text{\# loaded videos}}$$

freq-play-vid

ratio of the video play event
in student sessions

watch-ratio-v

1 = student opens video and
completely watches it;
0 = student opens video and
watches none of it

num-submit-quiz

avg(# of submissions for
a quiz)

check-check-check-quiz

of check-check-check quiz
action sequences

avg-len-seek-vid

avg(seek length)

Play-stop-play-vid

of play-stop-play video
action sequences

hourly-freq-regular

high = the user acts during the
same hour(s) everyday

speed-vid

avg(playback speed)

distinct-probs-q

of distinct problems
attempted

correct-time-quiz

$$\frac{\text{total time spent}}{\text{\# of correct problems}}$$

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action sequences**avg-len-seek-vid**

avg(seek length)

Play-stop-play-vid# of play-stop-play video
action sequences**hourly-freq-regular**high = the user acts during the
same hour(s) everyday**distinct-probs-q**# of distinct problems
attempted**correct-time-quiz**
$$\frac{\text{total time spent}}{\text{\# of correct problems}}$$
speed-vid

avg(playback speed)

AN Course: more videos than problems

1st passing

2nd passing

1st failing

2nd failing

freq-pause-vid
$$\frac{\text{ratio of video.pause actions}}{\text{all actions}}$$
ratio-clicks-weekend
$$\frac{\text{weekday clicks}}{\text{weekend clicks}}$$
eager-view-quiz

of problems attempted
by the student that are
due in later weeks

**check-check-check-
quiz**

of check-check-check quiz
action sequences

total-time-vid

Total time spent on videos(s)

std-time-session

std(duration of session)

distinct-probs-q

of distinct problems
attempted

std-correct-time-q
$$\text{std} \left(\frac{\text{total time spent}}{\text{\# of correct problems}} \right)$$

Geo Course: more problems than videos

1st passing

2nd passing

1st failing

2nd failing

freq-pause-vid
$$\frac{\text{ratio of video.pause actions}}{\text{all actions}}$$
ratio-clicks-weekend
$$\frac{\text{weekday clicks}}{\text{weekend clicks}}$$
eager-view-quiz

of problems attempted
by the student that are
due in later weeks

**check-check-check-
quiz**

of check-check-check quiz
action sequences

total-time-vid

Total time spent on videos(s)

std-time-session

std(duration of session)

distinct-probs-q

of distinct problems
attempted

std-correct-time-q
$$\text{std} \left(\frac{\text{total time spent}}{\text{\# of correct problems}} \right)$$

