INVESTIGATING STUDENTS' USE OF LECTURE VIDEOS:
STUDENT USAGE DATA VS.
SELF-EVALUATION SURVEYS

Ying-Ying Kuo, Ed.D., Office of Digital Learning

Juan Luo, Ph.D., Information Technology Services

Jennifer Brielmaier, Ph.D., Psychology Dept.

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Research Question

How were students' learning outcomes (e.g. satisfaction and final grades) associated with their video usage?

Data Collection: Surveys vs. Real Usage

INTERNAL_HANDLE	TITLE	DATA	TIMESTAMP	ACCESS_DATE	SESSION_ID
content	Course Orientation	Course Orientation	8/20/2014 3:06:35 PM	AUG-20-2014	676864628
content	Syllabus and Grading Breakdown	Syllabus and Grading Breakdown	8/20/2014 3:08:35 PM	AUG-20-2014	676864628
content	Assignments	Assignments	8/20/2014 3:08:45 PM	AUG-20-2014	676864628
content	Orientation	Orientation	8/20/2014 3:10:07 PM	AUG-20-2014	676864628
content	Course Orientation	Course Orientation	8/20/2014 3:10:29 PM	AUG-20-2014	676864628
content	Course Orientation	Course Orientation	8/20/2014 3:11:17 PM	AUG-20-2014	676864628
content	Blackboard Collaborate Setup	Set Up: First time Collaborate users	8/20/2014 3:11:29 PM	AUG-20-2014	676864628
content	Course Orientation	Course Orientation	8/20/2014 3:12:45 PM	AUG-20-2014	676864628
content	Orientation	Orientation	8/20/2014 3:13:29 PM	AUG-20-2014	676864628
content	Syllabus and Grading Breakdown	Syllabus and Grading Breakdown	8/20/2014 3:14:16 PM	AUG-20-2014	676864628
content	Assignments	Assignments			
content	Unit 1: Foundations	Unit 1: Foundations			
content	Course Schedule	Course Schedule			
content	Schedule at a Glance	Schedule at a Glance			
content	Unit 1: Foundations	Unit 1: Foundations			
content	Chapter Quizzes	Chapter Quizzes			
content	Course Schedule	Course Schedule			

Student's Use of Lecture Videos: Ask Questions

Question 1:

I watched/reviewed videos by following the pre-design sequence in each lesson.

Question 2:

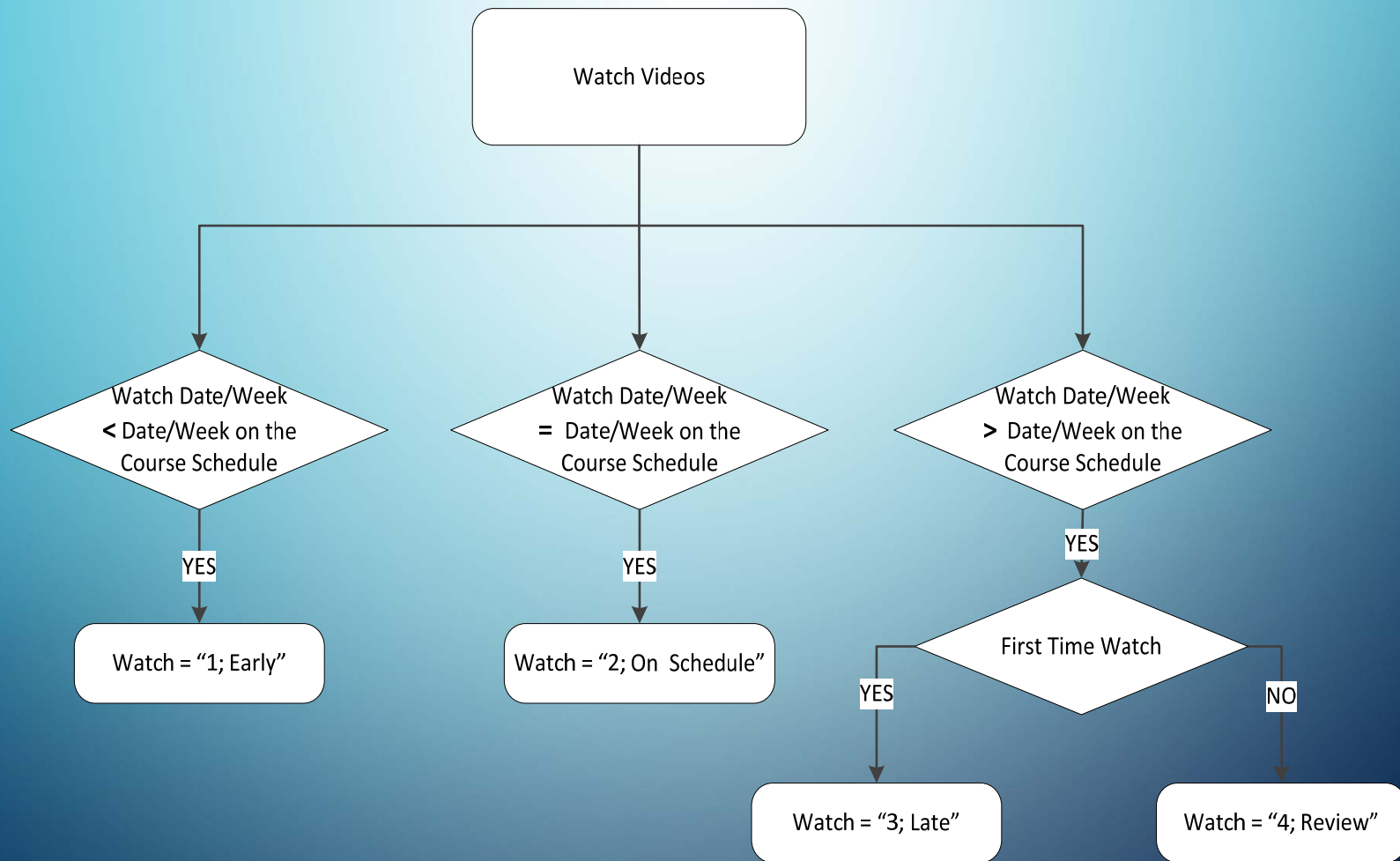I watched lecture videos based on my schedule.

Question 3:

I skipped some lecture presentations in a lesson.

Question 4:

I reviewed some lecture videos in order to work on activities and/or prepare for quizzes.

Student's Use of Lecture Videos: Real Usages

Learner Behaviors	n	On Time (Hits)	Early (Hits)	Late (Hits)	Review (Hits)	Quiz Reviews
Proactive	4	72	25	24	55	80
Schedule-Oriented	28	84	6	5	9	41
Passive	21	16	3	5	3	30
Grade-Oriented	9	33	3	15	6	86

Kuo, Y., Luo, J., & Brielmaier, J. (2016). *Learner control of streaming video-based environments: Understanding learner behaviors via the learning analytics.* Paper session presented at the 2016 American Educational Research Association (AERA) Annual Meeting (Washington DC, U.S.)

Video Usage vs. Learning Outcomes

Learners	n	Satisfaction* Mean (SD)	Final Grades** Mean (SD)
Proactive	4	5.75 (.71)	94.8 (7.6)
Schedule-Oriented	28	5.36 (.51)	89.0 (7.7)
Passive	21	4.75 (.72)†	83.1 (8.7)
Grade-Oriented	9	5.00 (.71)	90.8 (5.8)

Note: * $p < .05$, ** $p < .01$

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Survey Data vs. Learning Outcomes

Questions	Answer Range	Satisfaction (r, p value)	Final Grades (r, p value)
Question 1 (*n*=41)	1-6	.661, < .001	-.049, .76
Question 2 (*n*=41)	1-6	.587, < .001	.272, .09
Question 3 (*n*=42)	1-6	-.522, < .001	-.177, .26
Question 4 (*n*=42)	1-6	.301, = .053	.084, .60

How can data support us ?