



JULIANNE E. VAN MEERTEN, ERIC C. SCHOUTE, JANNAH FUSENIG, & JENNIFER LLEWELLYN
College of Education, University of Maryland, College Park

1 • AIM & CONTEXT

- Investigate the effect of a **video modeling intervention** on the quality of undergraduate students' **summaries**
- Why? Although written work is the primary means to exhibit their knowledge and understanding (Friend, 2001), students struggle with academic writing tasks
- Video models are (a) effective instructional tools (e.g., van Gog et al., 2014) and (b) provide vicarious experiences that may increase self-efficacy (Pajares et al., 2007)

RESEARCH QUESTIONS:

- What are the effects of **video models** on the quality of students' pre-intervention as compared to post-intervention summaries?
- Are there significant differential effects of either **process-** or **product-**oriented video models?

CONTEXT:

- $N=137$ (56% female); repeated measures **experimental design**; reduced stratified sample for scoring ($n=80$)
- High ecological validity**: intervention as part of coursework in undergraduate general education course

3 • ANALYSIS

Scoring Rubric for Quality Summaries

Component	Performance level		
	0	1	2
Source	No source noted	Source mentioned but incomplete	Fully sourced
Main purpose	No/incorrect identification of purpose	Purpose loosely suggested	Accurate purpose statement
Main argument	No/incorrect identification of main argument	Main argument loosely suggested	Accurate main argument statement
Key ideas	Key ideas unspecified or irrelevant	Key ideas incomplete or inaccurate or partially irrelevant	Key ideas are relevant and well specified
Conciseness	Overly long, wordy	Somewhat wordy	Appropriately condensed
Comprehensibility	Not understandable	Portions unclear or uninterpretable	Fully comprehensible

- High inter-rater reliability: $ICC=.952$ (pre), $.982$ (post)
- Mixed ANOVA: product/process (between subjects), pre/post (within subjects)

4 • FINDINGS

- The quality of students' summaries **improved significantly** from pre- to posttest [$F(1, 78)=14.67, p<.001$]
- All aspects improved significantly** ($ps <.001$), except comprehensibility*. Notably, source, argument, and key ideas improved markedly ($\eta^2s=.43, .26, .24$)
- However, **no differential effect** between the process- and product-oriented video models [$F(1, 78)=0.35, p=.554$]

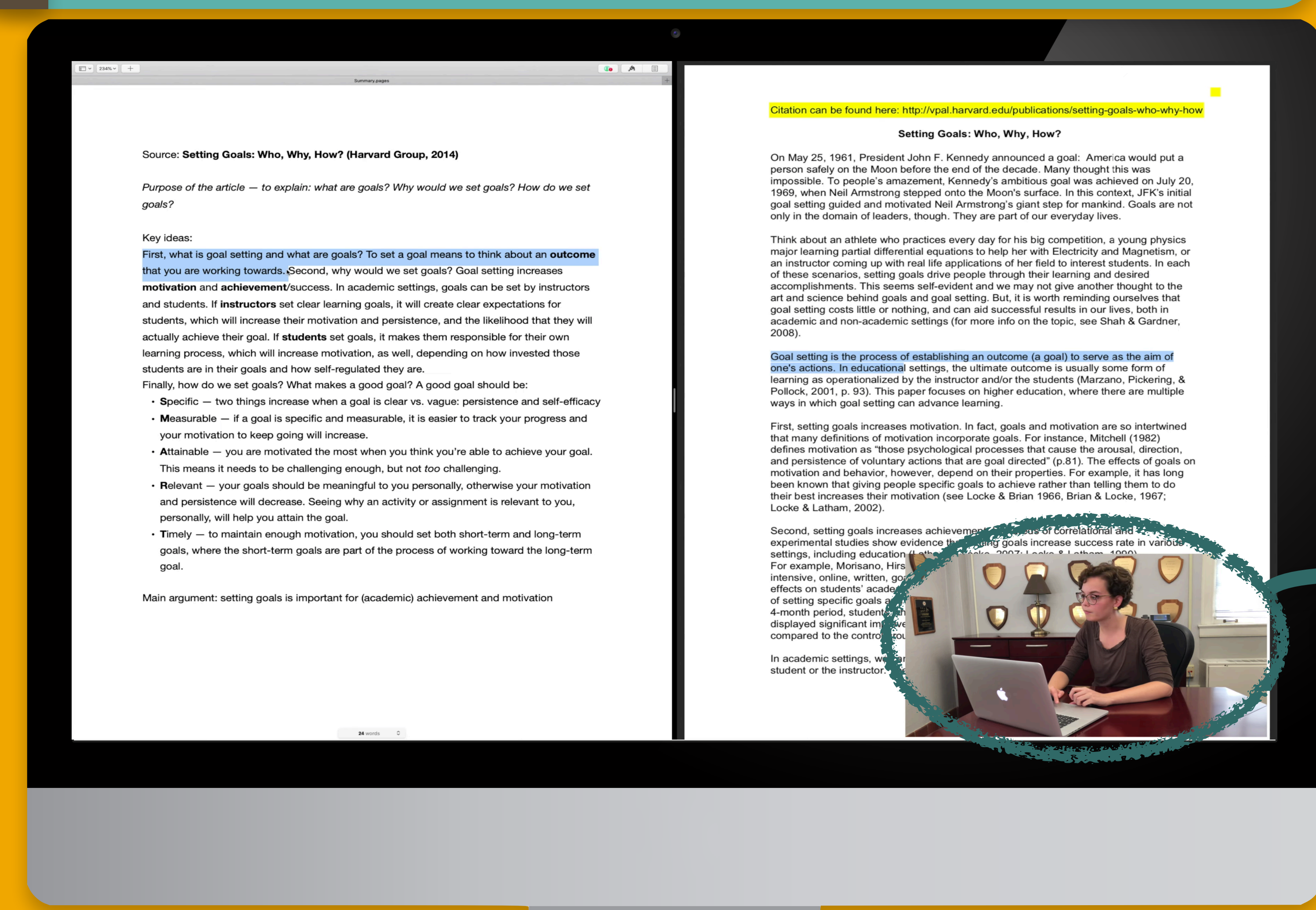
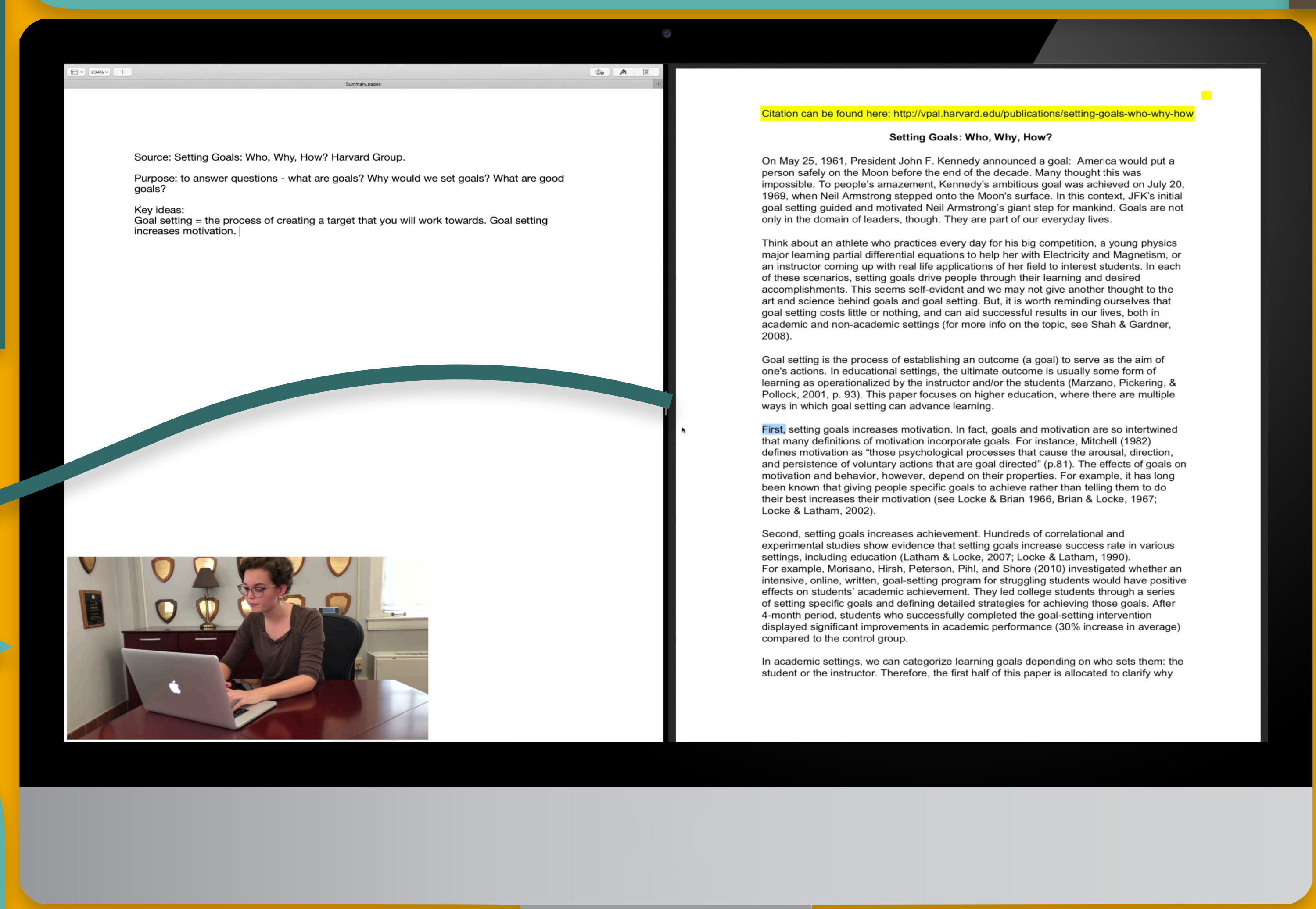
5 • CONCLUSIONS & IMPLICATIONS

- Video modeling:
 - Proves a **simple and effective tool** to significantly increase the quality of students' summaries
 - Can be easily and **seamlessly implemented in course context**
 - Seems to be **equally effective** for students from different class standings and with different genders

2 • VIDEO MODELING INTERVENTION

CONDITION 1: PROCESS (N=38) OR CONDITION 2: PRODUCT (N=42)

What students saw: The model **summary** is displayed on the left half of the screen, the **course reading** on the right



What students saw: Teaching Assistant **explains** and **demonstrates** the steps of writing a quality summary (*Process*) and what a quality summary **looks like** (*Product*)

Pretest
(Summary of Turkey, 2014)

Posttest
(Summary of Alexander, 1997)

*References/appendix: <https://bit.ly/3f9ZRVj>

References

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Appendix

Total and Component Summary Scores Pre and Post by Condition

Component	Time			
	Pretest		Posttest	
	Process	Product	Process	Product
Source	0.58	0.83	1.37	1.40
Main purpose	0.47	0.33	0.97	0.81
Main argument	1.08	1.26	0.68	0.76
Key ideas	1.18	1.29	1.55	1.67
Conciseness	1.68	1.67	1.84	1.81
Comprehensibility	2.00	2.00	1.79	1.83
Total	6.97	7.38	8.21	8.29