

# IMPROVING STUDENTS' SUMMARY WRITING THROUGH VIDEO MODELING



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### 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 postintervention summaries?
- \* Are there significant differential effects of either processor **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

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		
Comprehensiblity	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)

## 2 • VIDEO MODELING INTERVENTION

#### 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 ( $\eta^2$ s=.43, .26, .24)
- \* However, no differential effect between the processand product-oriented video models [F(1, 78)=0.35,p = .554

### 5 • CONCLUSIONS & IMPLICATIONS

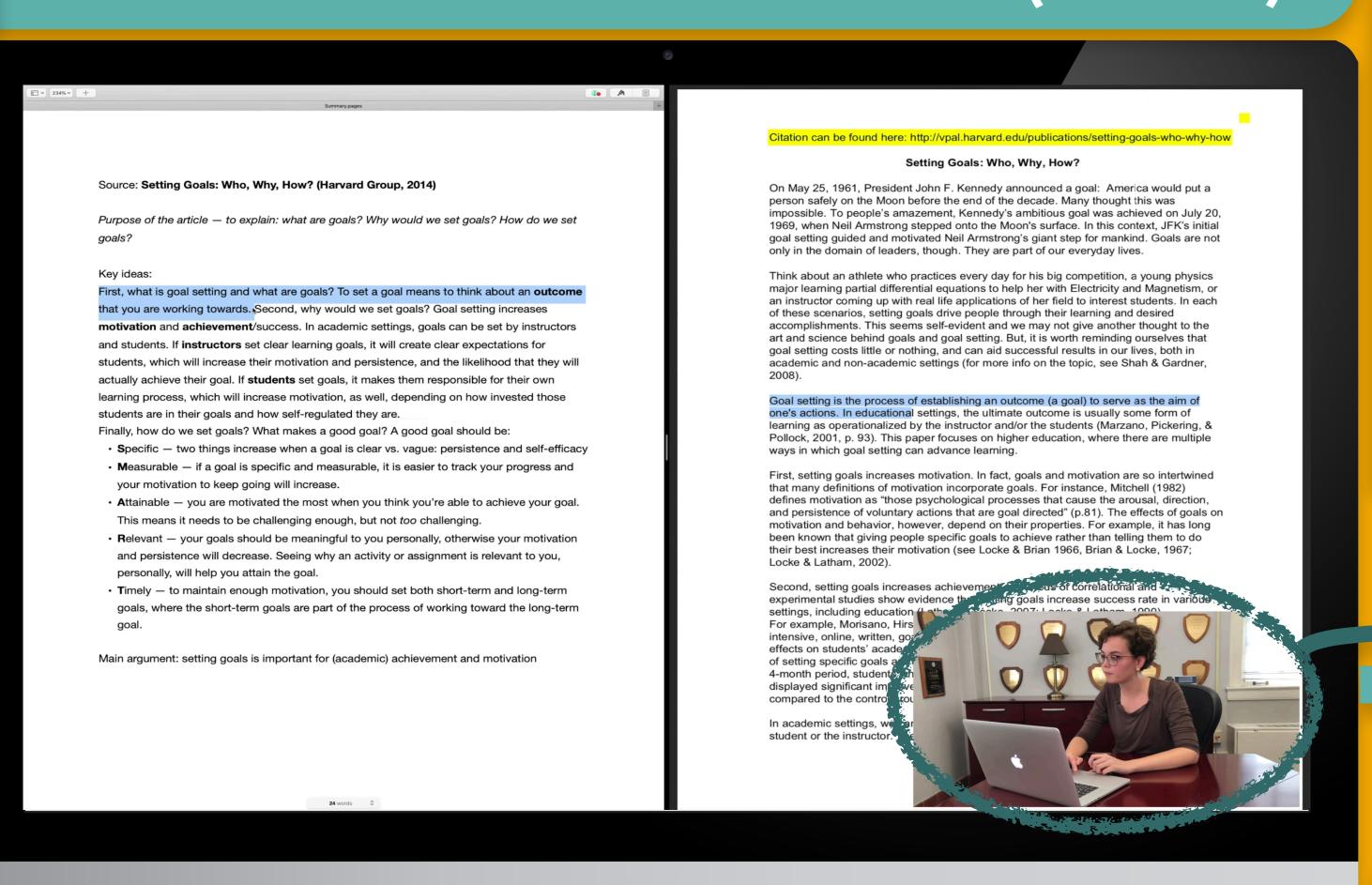
- \* Video modeling:
- \* Proves a simple and effective tool to significantly increase the quality of students' summaries
- \* Can be easily and seamlessly implemented in course context
- \* Seems to be **equally effective** for students from different class standings and with different genders

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

Setting Goals: Who, Why, How? Source: Setting Goals: Who, Why, How? Harvard Group. On May 25, 1961, President John F. Kennedy announced a goal: America would put a person safely on the Moon before the end of the decade. Many thought this was Purpose: to answer questions - what are goals? Why would we set goals? What are good impossible. To people's amazement, Kennedy's ambitious goal was achieved on July 20, 1969, when Neil Armstrong stepped onto the Moon's surface. In this context, JFK's initial goal setting guided and motivated Neil Armstrong's giant step for mankind. Goals are not only in the domain of leaders, though. They are part of our everyday lives. Goal setting = the process of creating a target that you will work towards. Goal setting Think about an athlete who practices every day for his big competition, a young physics major learning partial differential equations to help her with Electricity and Magnetism, or an instructor coming up with real life applications of her field to interest students. In each of these scenarios, setting goals drive people through their learning and desired accomplishments. This seems self-evident and we may not give another thought to the art and science behind goals and goal setting. But, it is worth reminding ourselves that goal setting costs little or nothing, and can aid successful results in our lives, both in academic and non-academic settings (for more info on the topic, see Shah & Gardner, Goal setting is the process of establishing an outcome (a goal) to serve as the aim of one's actions. In educational settings, the ultimate outcome is usually some form of learning as operationalized by the instructor and/or the students (Marzano, Pickering, & Pollock, 2001, p. 93). This paper focuses on higher education, where there are multiple ways in which goal setting can advance learning. First, setting goals increases motivation. In fact, goals and motivation are so intertwined that many definitions of motivation incorporate goals. For instance, Mitchell (1982) defines motivation as "those psychological processes that cause the arousal, direction, and persistence of voluntary actions that are goal directed" (p.81). The effects of goals on motivation and behavior, however, depend on their properties. For example, it has long been known that giving people specific goals to achieve rather than telling them to do their best increases their motivation (see Locke & Brian 1966, Brian & Locke, 1967; Locke & Latham, 2002) Second, setting goals increases achievement. Hundreds of correlational and experimental studies show evidence that setting goals increase success rate in various settings, including education (Latham & Locke, 2007; Locke & Latham, 1990). For example, Morisano, Hirsh, Peterson, Pihl, and Shore (2010) investigated whether an intensive, online, written, goal-setting program for struggling students would have positive effects on students' academic achievement. They led college students through a series of setting specific goals and defining detailed strategies for achieving those goals. After 4-month period, students who successfully completed the goal-setting intervention displayed significant improvements in academic performance (30% increase in average) compared to the control group. In academic settings, we can categorize learning goals depending on who sets them: the student or the instructor. Therefore, the first half of this paper is allocated to clarify why

CONDITION 1: PROCESS (N=38)

OR CONDITION 2: PRODUCT (N=42)



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 Turkay, 2014)

Posttest

(Summary of Alexander, 1997)

\*References/appendix: https://bit.ly/3f9ZRVj

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#### References

- Alexander, P. A. (1997). Mapping the multidimensional nature of domain learning: The interplay of cognitive, motivational, and strategic forces. In M. L. Maehr & P. R. Pintrich (Eds.), *Advances in motivation and achievement*, Vol. 10 (pp. 213-250). JAI Press Inc.
- Friend, R. (2001). Effects of strategy instruction on summary writing of college students. *Contemporary Educational Psychology*, 26(1), 3-24. https://doi.org/10.1006/ceps.1999.1022
- Pajares, F., Johnson, M. J., & Usher, E. L. (2007). Sources of writing self-efficacy beliefs of elementary, middle, and high school students. *Research in the Teaching of English, 42*(1), 104-120. https://doi.org/10.2307/40171749
- Turkay, S. The Harvard Group. (2014). *Setting goals: Who, why, how?* Academia.edu. https://www.academia.edu/10363659/Setting\_goals\_who\_why\_how?auto=download
- Van Gog, T., Verveer, I., & Verveer, L. (2014). Learning from video modeling examples: Effects of seeing the human model's face. *Computers & Education*, 72, 323–327. https://doi.org/10.1016/j.compedu.2013.12.004

#### **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		
Comprehensiblity	2.00	2.00	1.79	1.83		
Total	6.97	7.38	8.21	8.29		