

IMPROVING TEACHING: REFLECTIONS OF HIGH SCHOOL AND COMMUNITY COLLEGE FACULTY

Gabrielle Carmona, Brynn Wallentine, Anton Tolman
Behavioral Science Department, Utah Valley University

METACOGNITION IN THE CLASSROOM

- Student success in introductory-level college courses is key to future success and academic development
- The lack of metacognitive instruction in high school leaves students without the metacognitive skills and scholarly identity to succeed and persist in college
- It is vital to understand how faculty practices in the classroom affect student motivation, engagement, and learning, particularly immediately before and after this transition
- The Transtheoretical Model (TTM) of behavior change can be applied to measure faculty readiness to adopt metacognitive practices as a theory of instruction

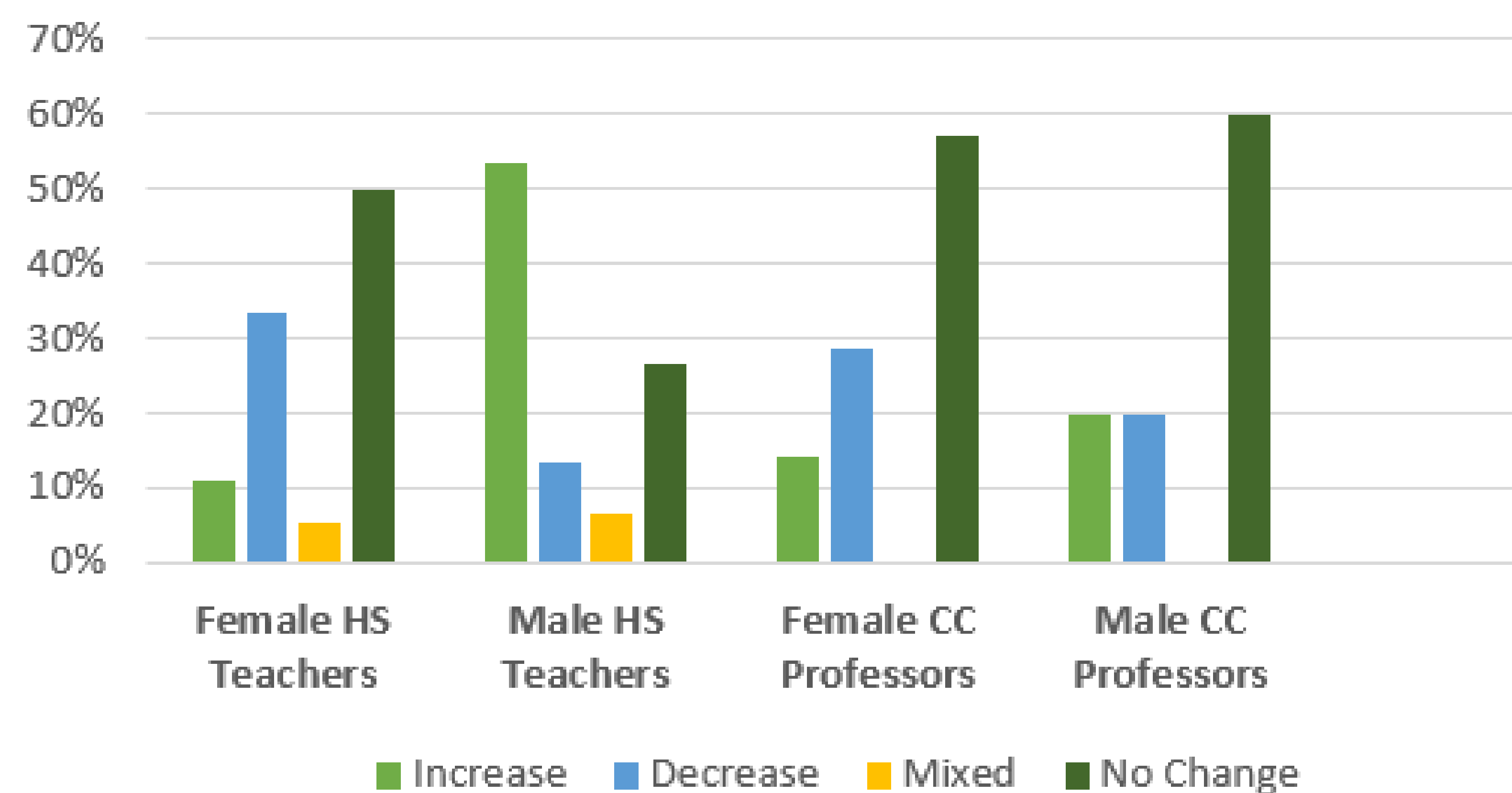
METHODS

- Spring 2021, 87 high school and community college teachers were administered two surveys, once at the beginning of semester and once at the end
- Surveys measured readiness to change in two areas:
 - 1) Readiness to adopt new teaching/metacognitive strategies
 - 2) Readiness to adopt collaborative learning approaches with students
- Open-response questions asked teachers to reflect on their strengths and weaknesses and their use of engaged teaching strategies

OPEN-RESPONSE QUESTIONS

1. "How would you describe your overall strengths and weaknesses as a teaching professor? What items or strategies could you focus on to improve next semester?"
2. "What other specific teaching methods and pedagogical strategies do you apply in your classroom?"
3. "Which strategies are you explicitly using with students where their mastery of those specific strategies are part of your learning expectations for them?"
4. "Please describe how often in the past six months you engaged in reading published articles or books about teaching methods or pedagogy and/or specifically discuss these issues with colleagues."

TTM Stage Change From Start of Semester to End



"Knowledge base is a strength. Letting students take control of the class is a weakness."

-High School Teacher, Survey 1

"I have been trying to make my classes more centered around student-centered questioning and less on me just lecturing, but it's definitely something I can continue to improve upon. I want students to rediscover their own curiosity and then work to answer questions that actually deepen their own knowledge."

-High School Teacher, Survey 1

"...I could spend more time talking about and teaching metacognition and cognitive abilities as well."

-High School Teacher, Survey 2

"...[A]t end of class, the student assess how well they demonstrated each outcome and where they did so. I reinforce that learning to perform the outcome is their responsibility (regardless of how poor a teacher I am) and that they should not leave the class that day without an understanding (though perhaps a muddled understanding) of the necessary concepts or skills for that outcome."

-Community College Teacher, Survey 1

"I begin every class session with a student-led lesson on a topic of their choosing (within the theme of the class). I also do projects like rabbit-hole research where the students are encouraged to explore a topic without worrying about U-turns and dead ends."

-Community College Teacher, Survey 2

"I occasionally mention results from educational psychology but my lack of expertise makes me hesitate to delve deep. Also, it's hard enough to get through content required for a physics course without adding more."

-Community College Teacher, Survey 2

BELIEFS AND PRACTICES: HS AND CC FACULTY

High School Teachers

- View role of teacher as organizer, guide, mentor
- Want to give students more authority over learning, but have concern about losing control of the classroom
- Reported using a wider variety of teaching methods at the end of the semester compared to beginning (esp. male teachers)
- Group learning strategies most implemented

Community College Professors

- Concern about having time or skill to implement changes in teaching methods
- Examined ways to give students more decision in learning process: create own rubric, choose from multiple assignment options, apply mindfulness and self-regulation in coursework, self-assessments
- Expressed desires to learn and develop as educators

IMPLICATIONS

- High school teachers may not be sufficiently exposing their students to metacognitive pedagogy to prepare them for college
- Key area of intervention is facilitating greater readiness to change in high school teachers
- Source of resistance is different in high school teachers than community college professors (control vs lack of time/skill) – understanding why is vital for effective intervention
- Why did male HS teachers report significant increases in TTM stage from start of semester to end? Area for future study

REFERENCES

- Gute, B.D. & Wainman, J.W. (2019). Factors influencing student engagement, motivation, and learning: Strategies to enhance student success and retention. In S.K. Hartwell & T. Gupta (Eds). *From General to Organic Chemistry: Courses and Curricula to Enhance Student Retention: ACS Symposium Series*. Washington, DC: American Chemical Society.
- Perry, J., Lundie, D., & Golder, G. (2019). Metacognition in schools: What does the literature suggest about the effectiveness of teaching metacognition in schools? *Educational Review*, 71(4), 483-500. <https://doi.org/10.1080/00131911.2018.1441127>
- Prochaska, J. O., & Prochaska, J. M. (1999) Why don't continents move? Why don't people change? *Journal of Psychotherapy Integration*, 9(1), 83-102. <https://doi.org/10.1023/A:1023210911909>
- Tolman, A. O. (2021, Jan 12). Using metacognition to facilitate scholarly identity. *ImprovewithMetacognition.com* (Guest Editor Mini-Series). <https://www.improvewithmetacognition.com/metacognition-to-facilitate-scholarly-identity/>