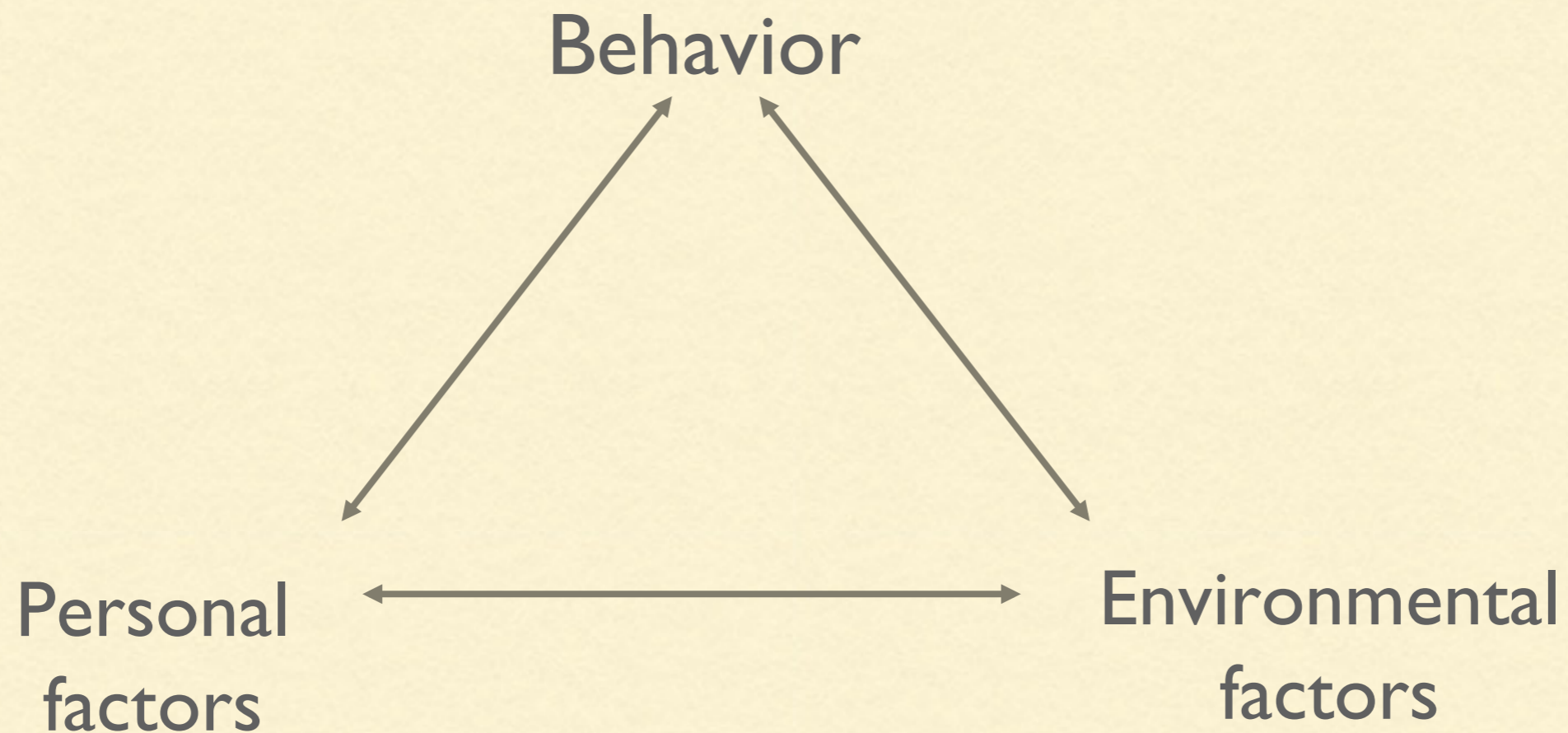

PRESERVICE TEACHERS' SELF-EFFICACY FOR PREPARING AND IMPLEMENTING MATHEMATICAL TASKS: A CASE STUDY

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SOCIAL COGNITIVE THEORY



Bandura (1997)

SELF-EFFICACY

- “The belief in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997)



I can do
this!

SOURCES OF SELF-EFFICACY



Mastery experience



Vicarious experience

Self-Efficacy



Social persuasion



Physiological state

TEACHERS' SELF-EFFICACY

The belief of a teacher in her capability to bring about student learning and achievement.



Teacher's self-efficacy is related to their own teaching, as well as students' motivation, achievement, and self-efficacy beliefs (Tschannen-Moran & Hoy, 2001).

STATEMENT OF PROBLEM

- The importance of preservice teachers' self-efficacy



STATEMENT OF PROBLEM

- The importance of preservice teachers' self-efficacy
- Lack of research on sources of (preservice) teachers' self-efficacy



STATEMENT OF PROBLEM

- The importance of preservice teachers' self-efficacy
- Lack of research on sources of (preservice) teachers' self-efficacy
- Role of worthwhile tasks in mathematics education



GOALS



- To examine preservice teachers' self-efficacy for preparing and implementing mathematical tasks after enrolling in a methods course
 - To describe factors related to methods course that were responsible for any change in preservice teachers' self-efficacy
-

METHOD

- Qualitative case study
- One female (Ashley) and one male (Brad) senior preservice teacher
- Elementary Mathematics Education program
- Semi-structured interviews

“How confident are you that you can prepare and implement mathematical tasks effectively?”

“During methods course, what factors affected your confidence? e.g. group work, your peers’ presentations, feedbacks”

METHODS COURSE

- Methods of Teaching Mathematics

- Theoretical: Lectures

“Elementary and Middle School Mathematics: Teaching Developmentally” (Van de Walle, Karp & Bay-Williams, 2012)

- Practical: Lab hours



DATA ANALYSIS

- Constant-comparative method
 - 92% coder agreement
-

FINDINGS

- Background of participants:
 - Graduates of teacher training high schools
 - Different intentions
 - No teaching experience
-

FINDINGS

- Themes:
 - Self-efficacy for preparing and implementing tasks
 - Factors influenced self-efficacy
-

FINDINGS

- Self-efficacy for preparing and implementing tasks

“I feel confident... But I cannot do it all the time, I mean, I wouldn’t. I already have 6 or 7 hundreds of them and I would probably use them, if I work as a teacher, of course.”

Brad

“I definitely think that I can [prepare and implement tasks effectively] because I enjoy it!”
Ashley

FINDINGS

- Factors influenced self-efficacy:
 - Professor
 - Group work
 - Peers' presentations
 - Feedbacks
-

FINDINGS

- Professor

“Considering her knowledge and experience, the professor was always one step ahead of my friends.” Ashley

“She is the only professor to teach this course... both her personality and teaching style fit well [to methods course].” Brad

FINDINGS

- Group work



“Since we worked in groups, tasks [we prepared and implemented] were effective through the way my peers affected each other” Brad

“We had so much fun when preparing and implementing tasks. This had a great effect on the way I wanted to teach, what kind of teacher I wanted to be” Ashley

FINDINGS

- Peers' presentations

“We also enjoyed working on our friends' tasks” Ashley

“When it comes to my friends' presentations, we were always criticizing their presentations and tasks during lab hours. This was how we improved our tasks. For example, we had some friends we called 'task person' who prepared really good tasks, but some couldn't prepare well”
Brad

FINDINGS

- Feedbacks

“The professor and everyone in other groups commented [on our tasks]. This was how we improved our tasks.” Brad

“When you receive feedbacks, you realize your mistakes. This is a way of self-assessment” Ashley

CONCLUSION

	MASTERY EXPERIENCE	VICARIOUS EXPERIENCE	SOCIAL PERSUASION	PHYSIOLOGICAL STATES
Professor	✓	✓	✓	✓
Group work	✓	✓		✓
Peers' presentations		✓		✓
Feedbacks		✓	✓	

CONCLUSION

- Suggestions to teacher educators
- Future research



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THANK YOU!

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