COLLEGE OF EDUCATION

# Instructional Strategies to Support Students' Motivation


**Lisa Linnenbrink-Garcia**
llgarcia@msu.edu


KOREA UNIVERSITY bMRI Brain & Motivation Research Institute

MICHIGAN STATE UNIVERSITY College of Education

# What is motivation?

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**Complete this sentence:**

"Students who are motivated to engage in learning...”

Record what you think in the chat

# What is motivation?

Motivation is the process of initiating and sustaining goal-directed behaviors.

- It's a process, **not** a product. It has influences and outcomes
- It gets us going
- It keeps us going
- It's goal-directed ("motivated toward what?")
- It's an internal state that is influenced by the learning environment

Schunk et al., 2014

# Which aspects of this definition do you see (or not see) in the responses in the chat?

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Schunk et al., 2014

# What is motivation?

A student's internal motivational state is reflected in their answer to these questions:

- Can I do this?
- Do I want to do this, and why?

A motivationally supportive learning environment helps students answer these questions in a positive way:

- I can do XXX
- I want to do XXX

# Example of a Motivational Theory:

## Situated Expectancy-Value Theory

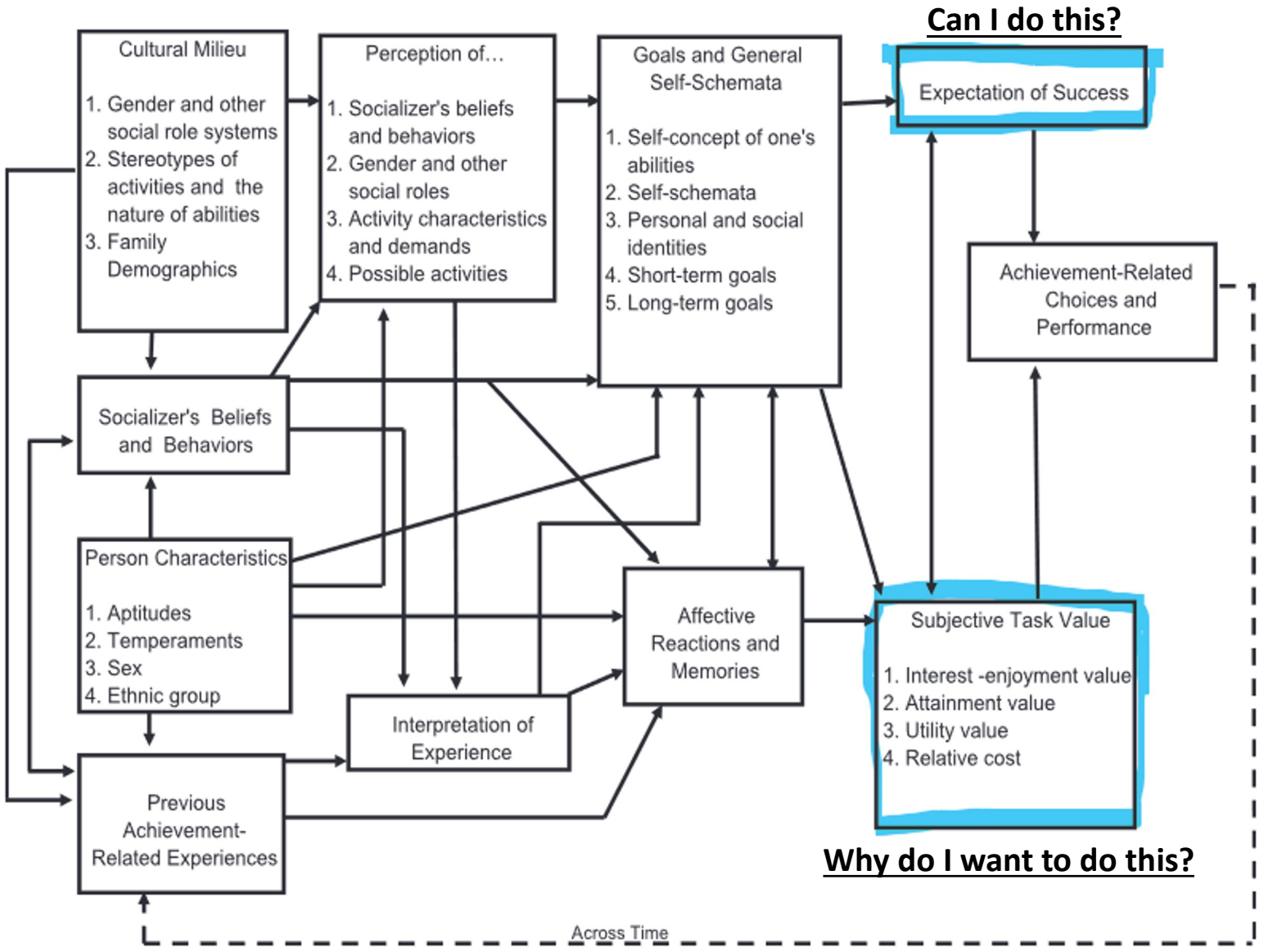



**Fig. 1.** Eccles Expectancy value model of achievement choices.

(Eccles & Wigfield, 2020)

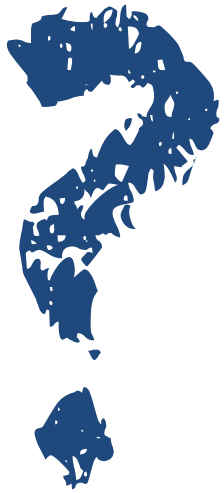
# WHY IS MOTIVATION IMPORTANT?

Motivational beliefs are linked to….

- Engagement/Persistence
- Higher-order strategy use
- Learning/achievement
- Identity development
- Emotional well-being
- Career choice

(For a comprehensive review, see Linnenbrink-Garcia & Patall, 2016; Patall et al., 2022)

# Question for you



**What are some challenges that you face in motivating your students?**

Take a minute to reflect on this and write one down.

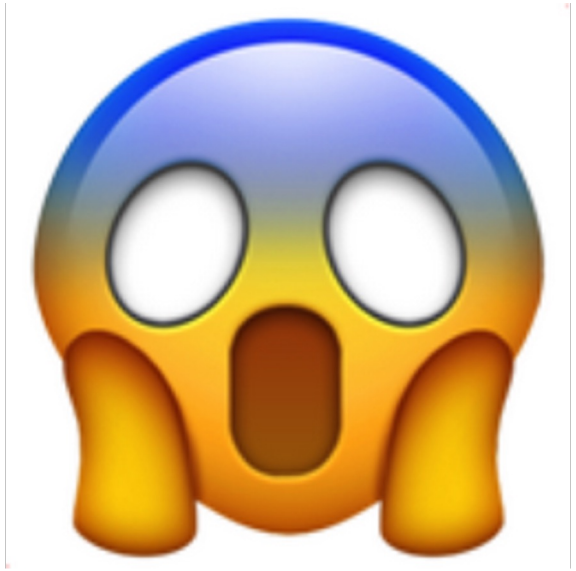
Then let’s learn how to potentially address a few!

# YOUR MOTIVATION TOOLKIT:
## 5 MOTIVATIONAL DESIGN PRINCIPLES (MDPS)

- How do we support students' motivation?

# Theories, theories, and theories!

- Self Determination Theory (SDT, Ryan & Deci, 2017)
- Belongingness Motivation (Baumeister & Leary, 1995)
- Social Cognitive Theory (Bandura, 1997)
- Situated Expectancy-Value Theory (SEVT, Eccles & Wigfield, 2020)
- Attribution Theory (Weiner, 2010)
- Achievement Goal Theory (Ames, 1992)
- Theories of Intelligence (Dweck, 1999)
- Stage-Environment Fit (Eccles et al., 1993)
- Interest Theory (Hidi & Renninger, 2006)
- Culturally Relevant Pedagogy (Ladson-Billings, 1995)



# Theoretically- and Evidence-Based Strategies for Supporting Adaptive Motivational States

## Motivation Design Principles (MDPS)

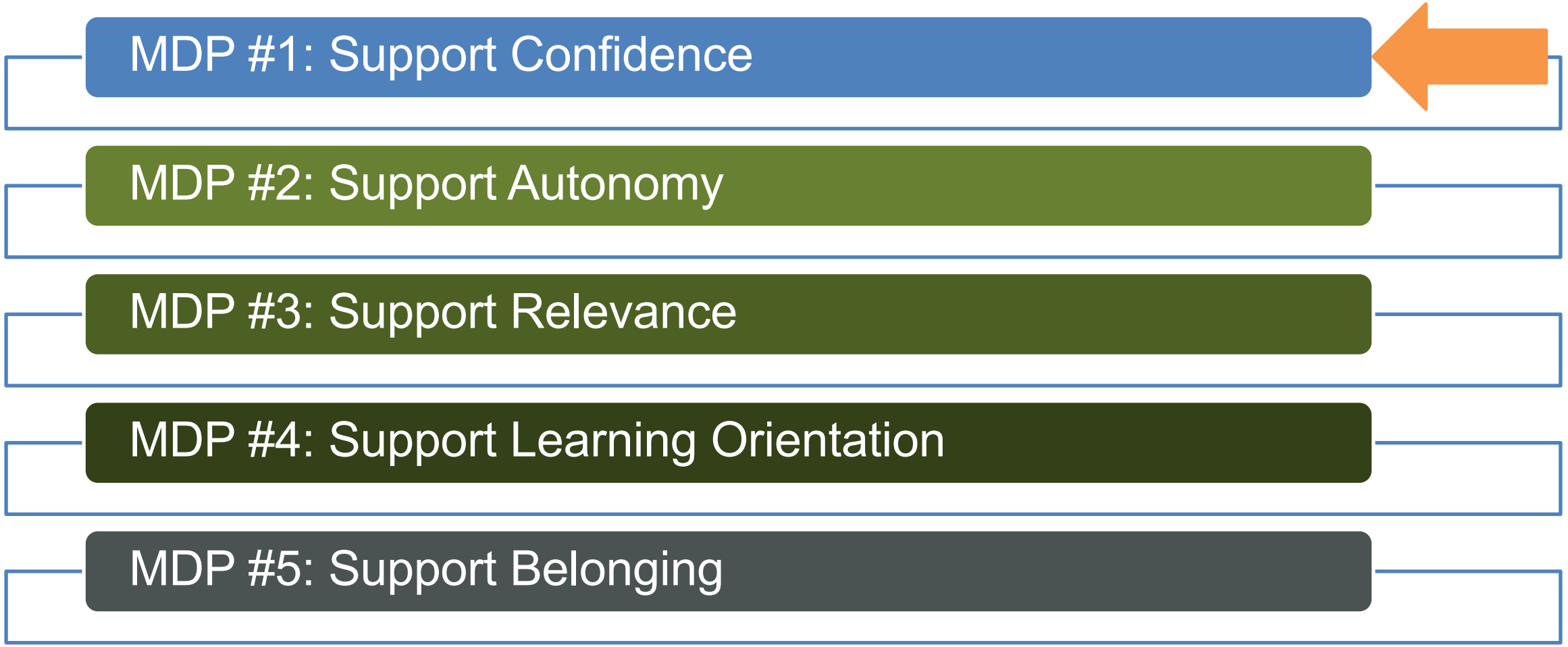
- MDP #1: Support Confidence
- MDP #2: Support Autonomy
- MDP #3: Support Relevance
- MDP #4: Support Learning Orientation
- MDP #5: Support Belonging

(Linnenbrink-Garcia, Patall, & Pekrun, 2016)

# YOUR MOTIVATION TOOLKIT:
## 5 MOTIVATIONAL DESIGN PRINCIPLES (MDPS)

How can I do this in my own teaching?

# Motivational Design Principles



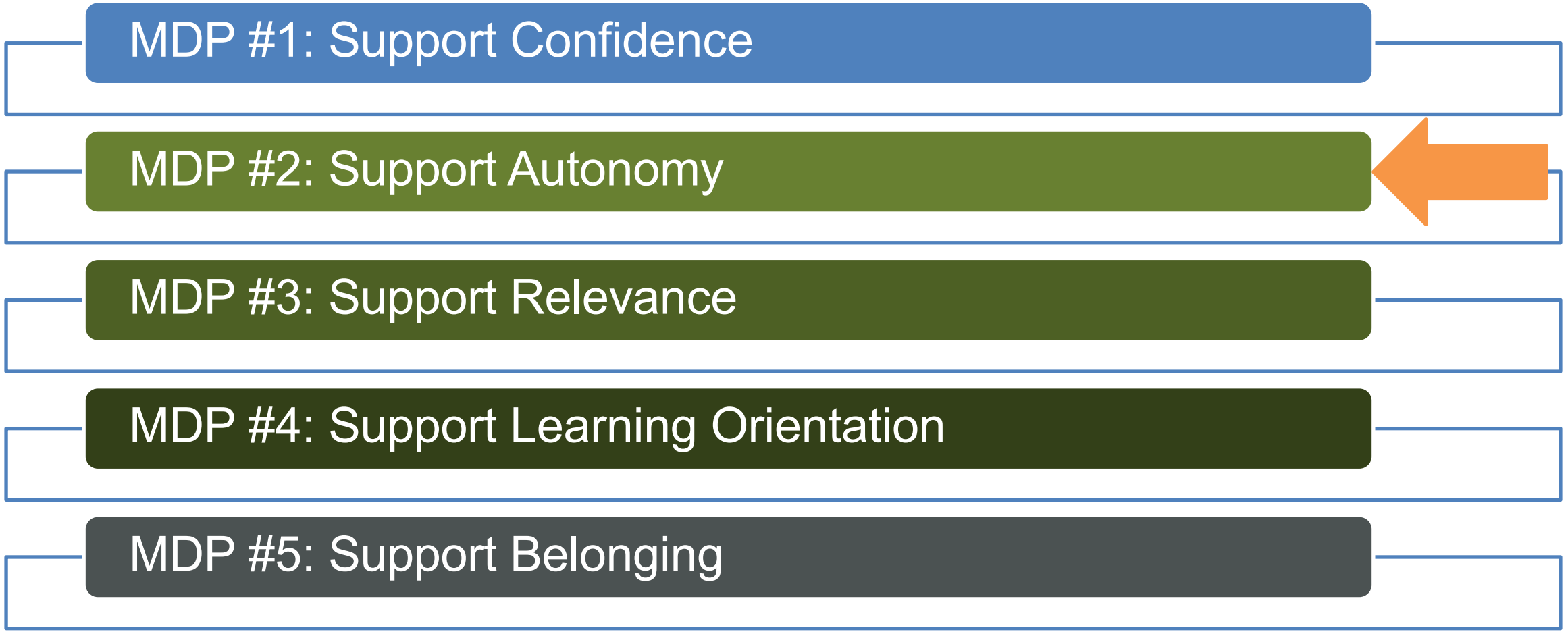

(Linnenbrink-Garcia, Patall, & Pekrun, 2016)

## MDP #1: Support students' feelings of confidence (self-efficacy) through instruction that provides

- Clear expectations for assignments/exams
- Informational and encouraging feedback focused on effort/strategy use (not ability)
- **Challenging work that is calibrated to the knowledge, skills, and abilities of students**

(Linnenbrink-Garcia, Patall, & Pekrun, 2016)

# Motivational Design Principles



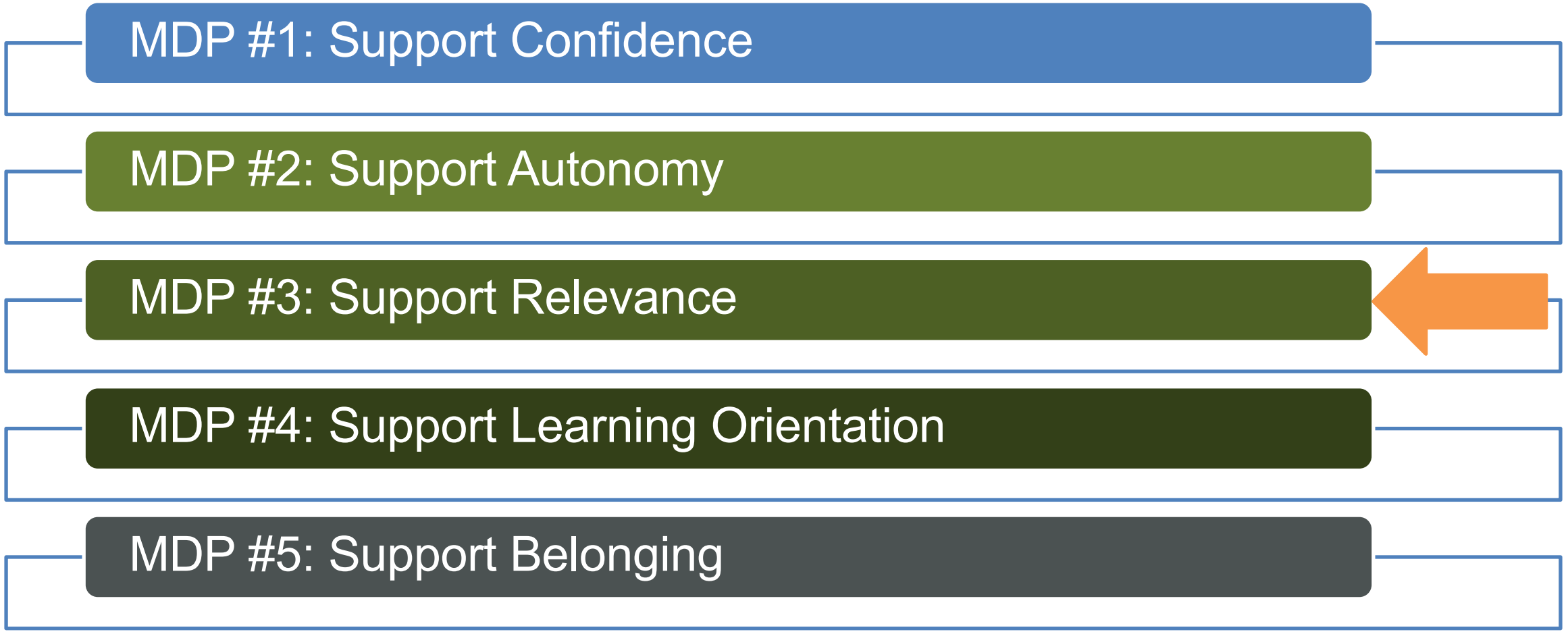

(Linnenbrink-Garcia, Patall, & Pekrun, 2016)

## MDP #2: Support students' autonomy (self-direction) through opportunities for student decision making and direction

- Allow students to make choices that are meaningful to them and their learning
- **Avoid controlling language/actions – use informational language rather than judgments**
- Acknowledge students' perspectives

(Linnenbrink-Garcia, Patall, & Pekrun, 2016)

# Motivational Design Principles



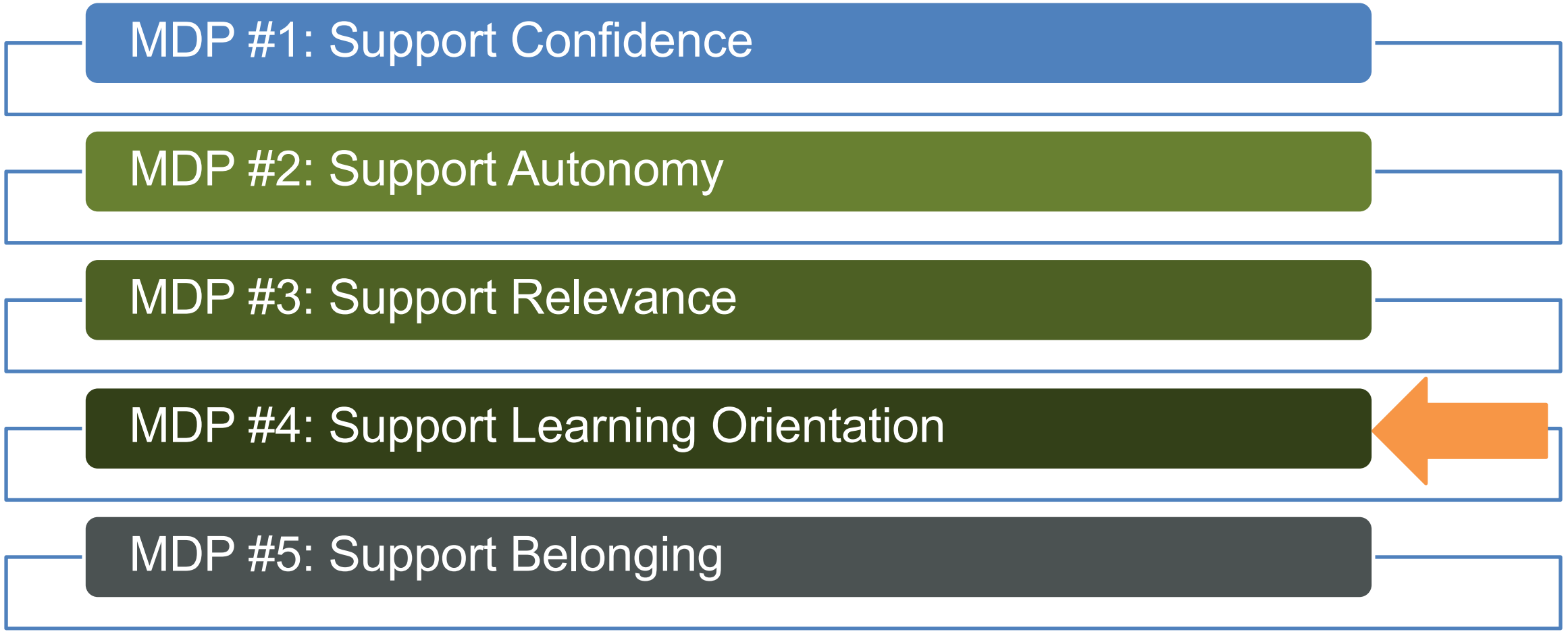

(Linnenbrink-Garcia, Patall, & Pekrun, 2016)

# MDP #3: Select personally relevant, interesting activities that provide opportunities for identification and active involvement

- Express enthusiasm for the topic
- Choose novel/fun activities
- Connect with students' interest and real life
- **Design activities that engage students in meaning making and authentic disciplinary experiences**

(Linnenbrink-Garcia, Patall, & Pekrun, 2016)

# Motivational Design Principles



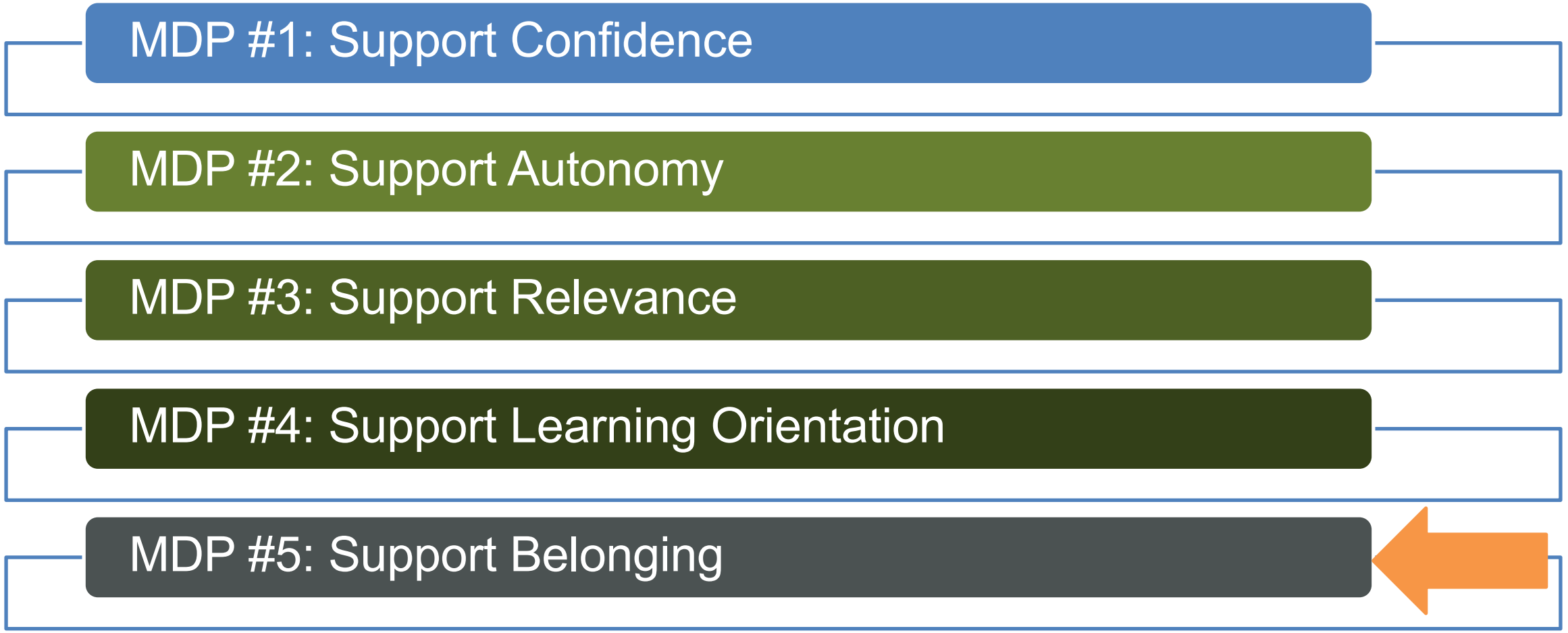

(Linnenbrink-Garcia, Patall, & Pekrun, 2016)

# MDP #4: Emphasize learning and developing understanding and de-emphasize grades, competition, and social comparison

- **Recognize growth towards goals and learning objectives (rather than grades and social comparisons)**
- Provide specific feedback and opportunities to revise
- **Recognize students' efforts and strategy use**
- Focus on competence/ability as changeable through hard work, not fixed

(Linnenbrink-Garcia, Patall, & Pekrun, 2016)

# Motivational Design Principles




(Linnenbrink-Garcia, Patall, & Pekrun, 2016)

## MDP #5: Support feelings of relatedness and belonging among students and with teachers

- Develop warm, caring relationships
- Provide opportunities for peer connection
- **Think about implicit (or explicit) messages that students may be receiving about who belongs in your field**

(Linnenbrink-Garcia, Patall, & Pekrun, 2016)

# YOUR MOTIVATION TOOLKIT:
## 5 MOTIVATIONAL DESIGN PRINCIPLES (MDPS)

Do these design principles work?

# Evidence of Success

- Developed 2-week summer course + fall research experience (FRE) for rising 2nd year college students
- Provided introduction to biomedical and biobehavioral science
- Program designed based on 5 motivational design principles
- Evaluated motivation (8 months later) and persistence outcomes at graduation and post-graduation

Supported by grants from the National Institute of General Medical Sciences of the National Institutes of Health under award number R01GM094534 & R35GM136263 (PI: Linnenbrink-Garcia).

Participation in program associated with:

**MOTIVATION**
- Expectancies (Can I do this?)
- Values (Why do I want do this?)

**PERSISTENCE IN SCIENCE**
- Graduating with Science Degree
- Science career pursuit two- & seven-years post-graduation
- Mediated via increase in values

Linnenbrink-Garcia et al., 2018; Perez et al., in preparation


- Scholarship program for high-talent, high-financial need undergraduate engineering students
- Students received scholarship as 2nd and 3rd year students
- Faculty mentors trained in five MDPs; met individually with each student several times per year

Funded by the National Science Foundation, grant numbers 1643723 and 1830269 (PI: Walton)

# Evidence of Success

**High success rate of supporting SEE Scholars to graduate:** 37 of 38 received engineering degrees (37 from MSU)

Compared to matched comparison sample, SEE Scholars had:

↑ Engineering Identity/Value
Learning Orientation

↓ Perceived effort costs of studying engineering
Performance-avoidance goals
(to avoid appearing incompetent)

What does this look like for your students?

# APPLICATION

Sounds easy, right?

## Potential Barriers to Supporting Motivation

- Can be hard to remember or use strategies effectively
- Teaching is often very spontaneous
- Sometimes strategies don’t work
- Takes a lot of trial, error, and practice

# Tips for Remembering the MDPs


Belonging
Confidence
Learning Orientation
Autonomy
Relevance

# How can I apply the MDPs in my own teaching?

Take a few minutes to think about the motivational challenge you identified earlier.

1. What are strategies from the MDPs that you could use to potentially address this challenge?
2. Are there any problems that these MDPs might not be able to address?

- Syllabus
- Class Activities
- Assignments
- Grading/Evaluation System
- Instructional Climate
- Interactions with Students

Thank you!
Please contact me at llgarcia@msu.edu with additional questions/comments