Motivating Gifted and Talented Students

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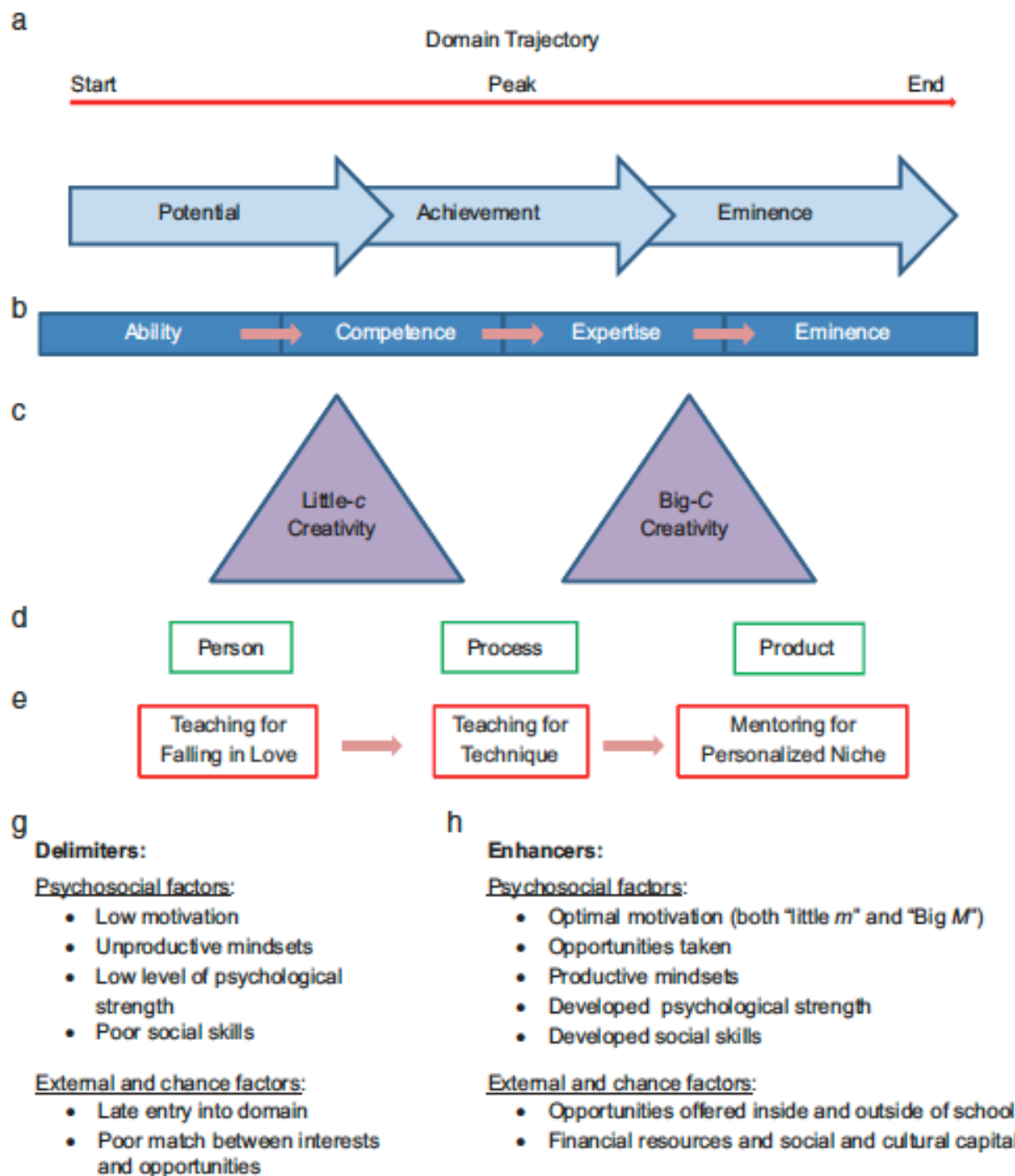
Gifted Education Policy Symposium and Conference

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Overview

- Defining giftedness

- Defining motivation

- Motivation constructs

- Motivation in non-traditional groups

- Motivating students

What is giftedness?

a

Domain Trajectory

Start   Peak   End

| Potential | Achievement | Eminence |

b

| Ability | → | Competence | → | Expertise | → | Eminence |

c

Little-*c* Creativity

Big-*C* Creativity

d

| Person | | Process | | Product |

e

| Teaching for Falling in Love | → | Teaching for Technique | → | Mentoring for Personalized Niche |

g

Delimiters:

Psychosocial factors:
- Low motivation
- Unproductive mindsets
- Low level of psychological strength
- Poor social skills

External and chance factors:
- Late entry into domain
- Poor match between interests and opportunities

h

Enhancers:

Psychosocial factors:
- Optimal motivation (both "little *m*" and "Big *M*")
- Opportunities taken
- Productive mindsets
- Developed psychological strength
- Developed social skills

External and chance factors:
- Opportunities offered inside and outside of school
- Financial resources and social and cultural capital

Defining Motivation

- A process or internal state of an organism that *impels* or *drives* the organism to action.
- Motivation is complex – an interaction…
  - Need or drive
  - Incentive value of the goal
  - Expectations
  - Availability of appropriate responses
  - Conflicting or contradictory motives

Defining Motivation II

- A **set of psychosocial constructs** that are affected by social environments (home, school, peers).
  - Affected by individual personality/temperament variables.
  - Affected by messages that individuals receive or perceive.
  - Affected by reward structures.
- High motivation is often associated with high achievement or superior performance.

Motivation: A Critical Level for Talent Development (Worrell, 2018)
In *Talent Development as a Framework for Gifted Education*

Table 11.1

Motivational Factors Related to Positive Outcomes

Push Factors	Pull Factors	Outcomes
Attributions	Autonomy and Choice	Competence
Interest	Belonging	Effort
Intrinsic Motivation	Competition and Cooperation	Engagement
Mastery Orientation	Extrinsic Motivation	Persistence
Self-Efficacy	Parent Expectations	
Self-Regulation	Teacher Expectations	
Time Constructs	Performance Orientation	

Motivation: A Critical Lever for Talent Development (Worrell, 2018)

Figure 11.1. The role of motivation in talent development.
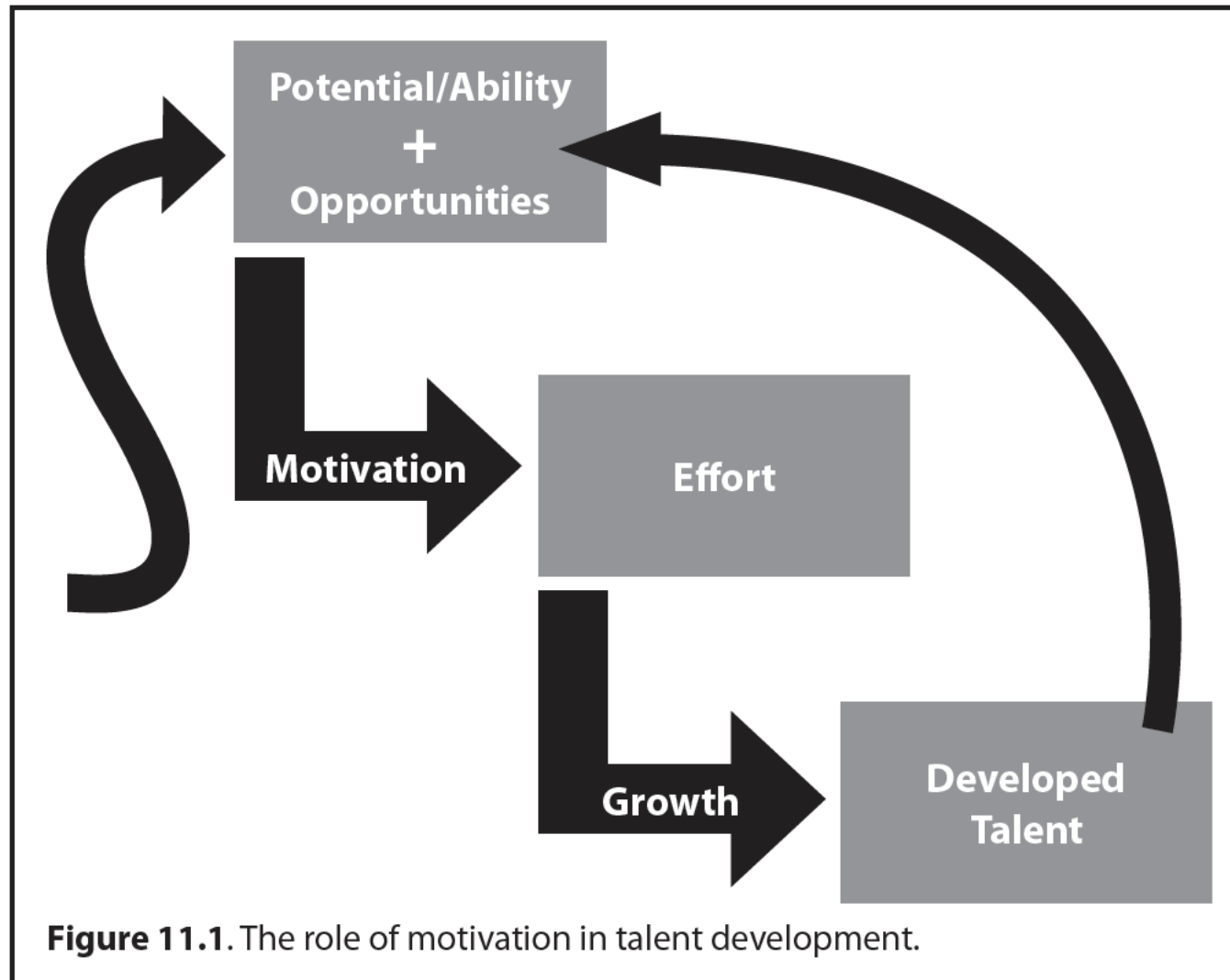
Motivation Constructs

- Feeling of Belonging
- Intrinsic and extrinsic motivation
- Classroom orientations: Performance or mastery
- Entity (fixed) versus incremental (malleable) views of intelligence
  - Dweck's mindsets
- The quadripolar theory of motivation
- Big-fish-little-pond effect
- Protection of self-worth
- Time constructs: hope, time attitudes
- Cultural factors

Belonging

- Welcoming a new class of students.
  - The tone that a teacher sets at the beginning of the year will help or hinder engagement and a sense of belonging.
  - How does the teacher make each student in the class feel that they belong?
  - What are the beliefs that students are bringing with them about school and their ability to be successful in this environment or subject?
- In a more selective environment, anxieties may be higher.
- Is message one of learning together or weeding out?

Intrinsic Motivation

- Engaging in activities for their own sake—out of interest, or for the enjoyment that they derive from engaging in the activity.
  - I feel most successful in class when I learn something that I did not know before.
- Humans possess a basic need to feel competent, and to be able to affect their environment.
- Activities from which individuals derive a sense of competence and autonomy will enhance their intrinsic motivation.

Extrinsic Motivation

- Engage in activities for ***instrumental*** or other reasons, such as receiving a reward.
- Extrinsic rewards are often unrelated to the activity, itself.
  - The main reason I do my work is because we get grades.
  - A purely extrinsic approach to tasks can lead to underachievement.

Intrinsic versus Extrinsic Motivation

- Is one type of motivation "good" and one "bad"?
- Extrinsic rewards <u>perceived as controlling</u> can decrease an individual's intrinsic motivation for engaging in an activity – overjustification.
- Extrinsic rewards <u>that provide information about individuals' competence</u>—such as verbal praise for a job well done—can increase intrinsic motivation.
- The two orientations are not always contradictory.
- Most of the time, both play a role in behavior.

Intrinsic and Extrinsic Motivation by Gender
(1= *Not at all true*, 5 = *Very true*)
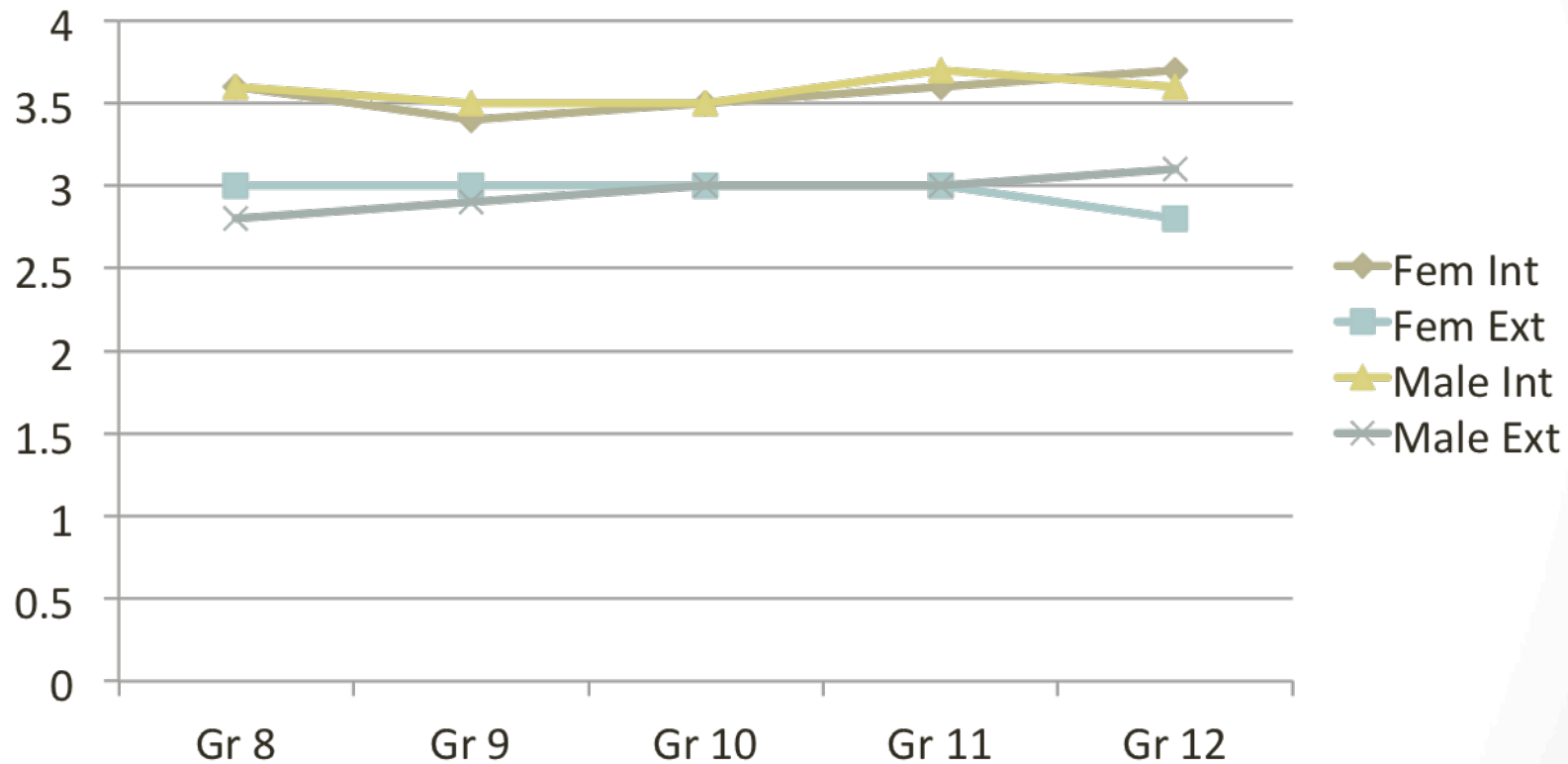
Mastery versus Performance Orientations

- Can be environmental or personal
- Mastery Orientation
  - Concern with learning and mastering material.
    - Our teacher really wants us to enjoy learning new things.
- Performance Orientation
  - Concern with competition and doing better than others.
    - In this class, only a few kids are praised for their schoolwork.

Academics vs. Sports in Middle School
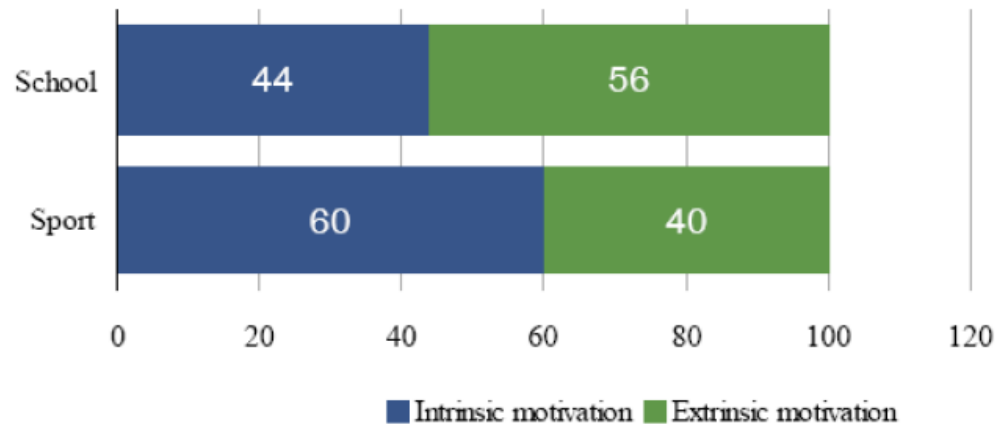
Figure 1: Percentage of Students who are Intrinsically versus Extrinsically Motivated by Domain (Fisher's Exact Test, p = 0.0006***)
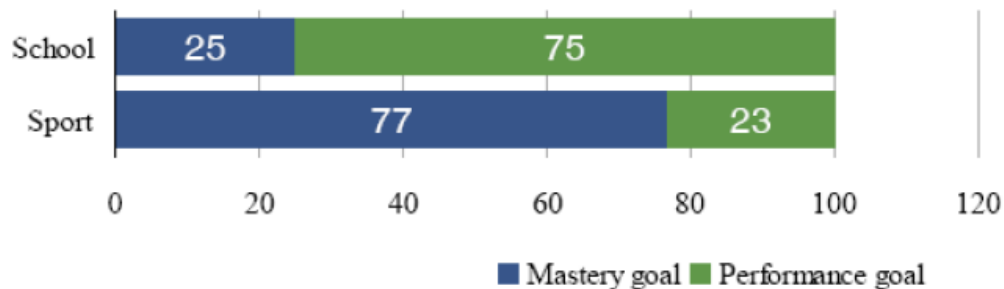
Figure 2: Percentage of Students who Express a Preference for Mastery vs Performance Goals by Domain (Fisher's Exact Test, p = 9.661^{-31}***)

Entity versus Incremental Views of Intelligence (Dweck, 2006)

- Entity View
  - Intelligence is fixed. I either have high intelligence or I do not. Work should always be easy for me.
- Incremental View
  - Intelligence is malleable or changeable. I can increase my intelligence by hard work/concentrated effort.
- Individuals with entity views of intelligence are <u>less likely to persist</u> when tasks are difficult and/or as they move higher in the educational system.

Academic/Sports Task Choice (GT)
I would choose
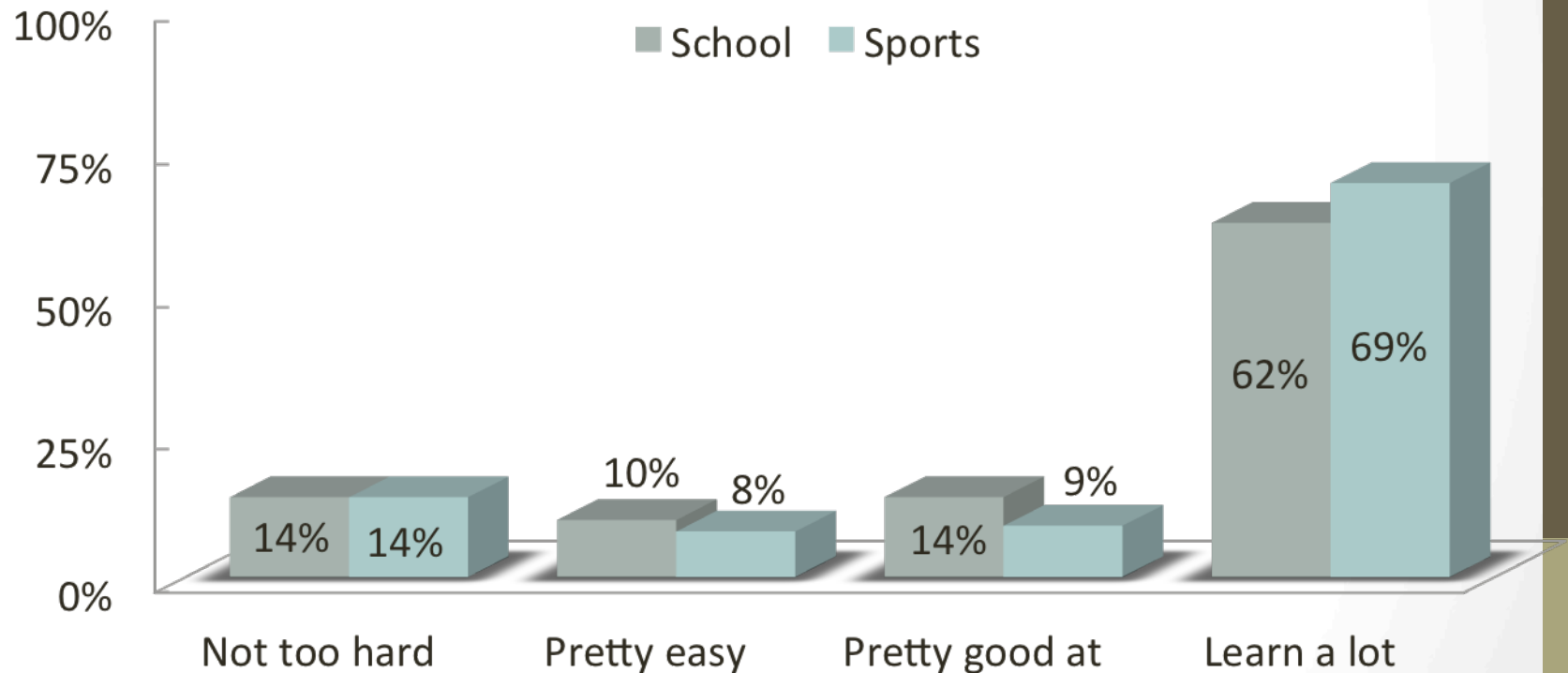
Academic/Sports Goal Choice 4 (GT) I would choose
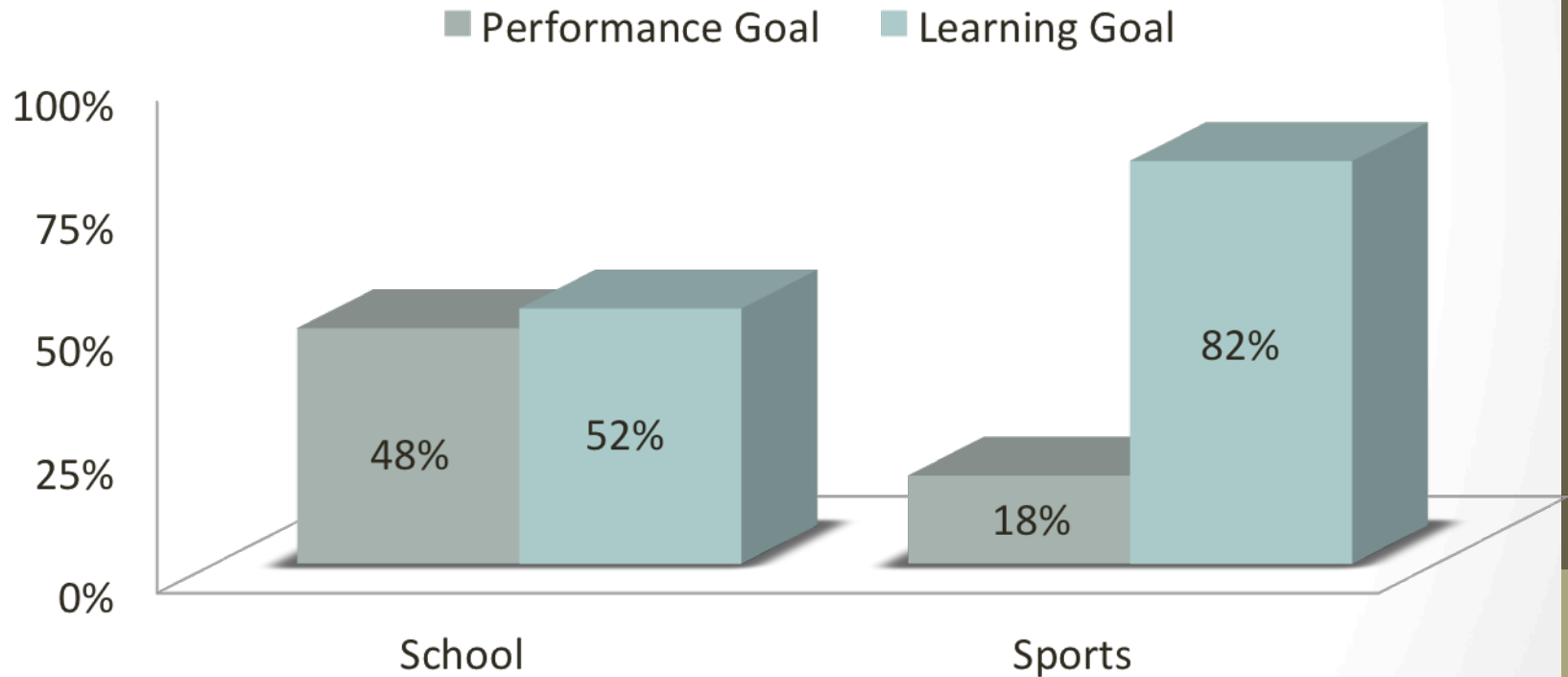
Differences in Outcomes
$p < .006$

Variable	M (SD) Good Grade	M (SD) Being Challenged	d (corr)
School GPA	3.86 (.34)	3.89 (.24)	.10
Summer Program GPA*	3.56 (.64)	3.67 (.57)	.18
School Academic Self-Concept*	5.32 (.68)	5.45 (.61)	.21
Summer Program Academic Self-Concept	5.08 (.73)	5.19 (.65)	.16
Ability Comparison Relative to Summer Prog	3.48 (.91)	3.62 (.89)	.16
How challenging was course?	3.31 (.90)	3.31 (.86)	.00
How much did you learn in course?*	3.67 (.84)	3.91 (.82)	.29
How much did you enjoy course?*	3.72 (.94)	4.12 (.84)	.45

Summary

- When the choice is between learning and not learning, a majority of GT students choose learning goals (LGs) in both academic and athletic domains.

- In academics, when choice is between a good grade and being challenged, GT students are evenly split between learning and performance goals.

- In sports, the majority of GT students choose LGs.

- Students choosing LGs report greater enjoyment of courses than those choosing performance goals.

- For some GT students, the instrumental aspects of schooling (e.g., getting into a good college) may outweigh other considerations.

Quadripolar Theory of Motivation
(Covington, 1992)

- Individuals are either inclined to *approach* success or *avoid* failure (Atkinson, 1957).

- Some individuals are driven to seek out success (related to intrinsic motivation, mastery orientation).

- Others are driven by avoiding the shame and humiliation connected to failure (related to performance orientation).

The Quadripolar Model

	Low Approach to Success	High Approach to Success
Low Avoidance of Failure	**Failure Accepters**	**Success Oriented**
High Avoidance of Failure	**Failure Avoiders**	**Overstrivers**

Big-Fish-Little-Pond Effect (BFLPE)

- The BFLPE is a drop in academic self-concept associated with going into a more selective environment.

- It is a robust phenomenon in the literature.

- There has been some questions about if and how it applies to gifted youth.

- Here are some data suggesting that it exists in this population, although the data also suggest that it does not affect performance.

Table 2   *Descriptive Statistics for Major Variables by Setting*

Variables	N	Home School	Summer Program	$d^{corrected}$
Academic Self-Concept*	944	5.40 (.64)	5.15 (.69)	-0.38
Self-Rating of Ability*	989	4.31 (.73)	3.56 (.90)	-0.92
Grade Point Average*	744	3.88 (.29)	3.63 (.61)	-0.52

Note. The internal consistency estimate for Academic Self-Concept scores was .91 for home school and .89 for the summer program. On both Academic Self-Concept and Self-Rating of Ability students rated themselves relative to students in their home school and their summer program class.

*p < .001

BFLPE Data
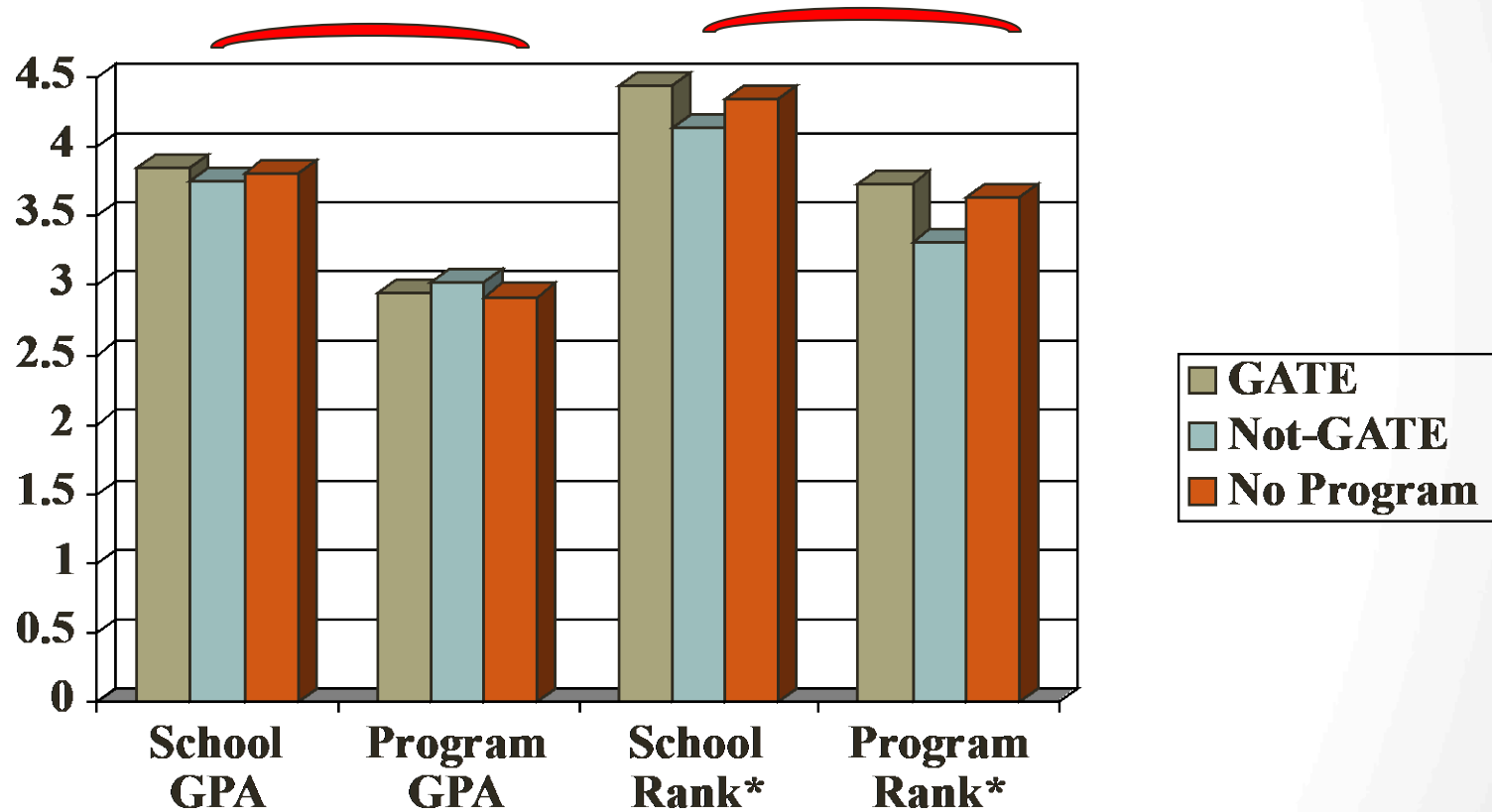
Protection of Self-Worth
How Am I Viewed if…

- 1. I work hard and I succeed?

--HARD WORKER

- 2. I do not try and I succeed?

--LUCKY or BRILLIANT

- 3. I do not try and I fail?

--LAZY or SLACKER

- 4. I work hard and I fail?

--STUPID, UNINTELLIGENT

- If I am not sure that I will succeed, which strategy best protects my self-worth?

Time Constructs: Hope

- Pathways
  - One's perceived capacity to envision and produce a roadmap to a better future, irrespective of one's current circumstances.

- Agency
  - the belief that you can to accomplish your goals, as well as the motivation to do the work that will propel you along the goal-achievement pathway.

Dixson et al. (2017)
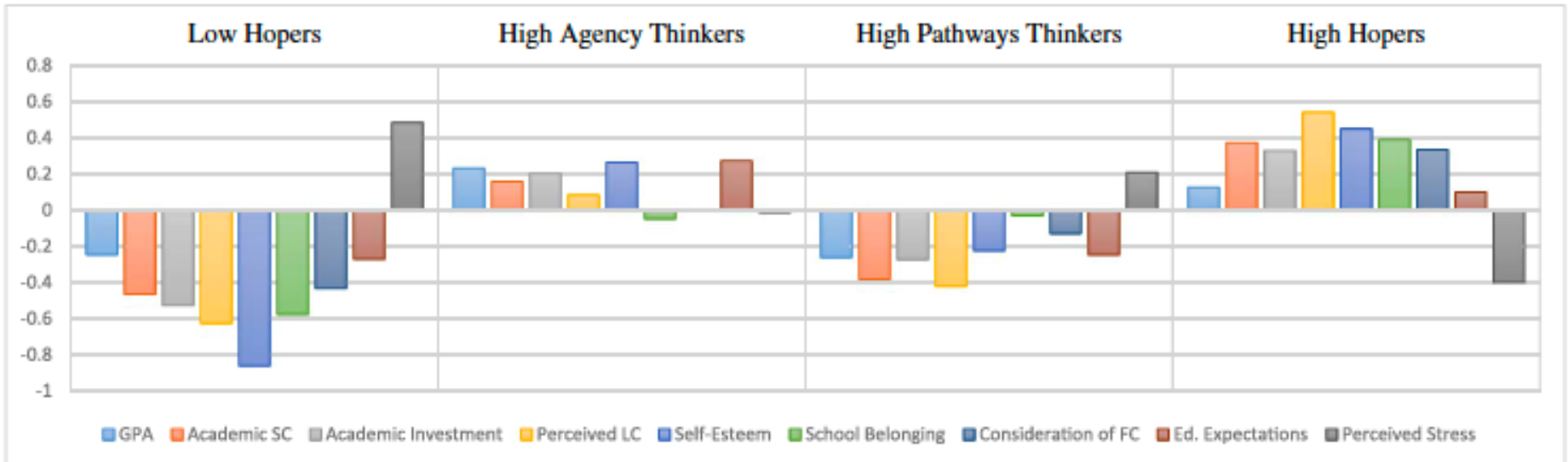
Fig. 2. Mean z-scores for outcome variables by hope cluster.

Time Constructs: Attitudes

- Positive and negative feelings towards the past, present, and future
  - Past Positive
  - Past Negative
  - Present Positive
  - Present Negative
  - Future Positive
  - Future Negative

Worrell, Andretta, & Juriševič (2019)

TIME ATTITUDE PROFILES IN GIFTED STUDENTS

Participants

- 307 gifted students in Slovenia ranging in age from 14 to 18.

- 61.6% female (n = 189).

- Attending middle elementary and upper secondary schools in 7 of the 12 statistical regions of Slovenia.

- Identified using several strategies:
  - Teacher nomination, the Progressive Raven's Matrices, and the Torrance Test of Creativity
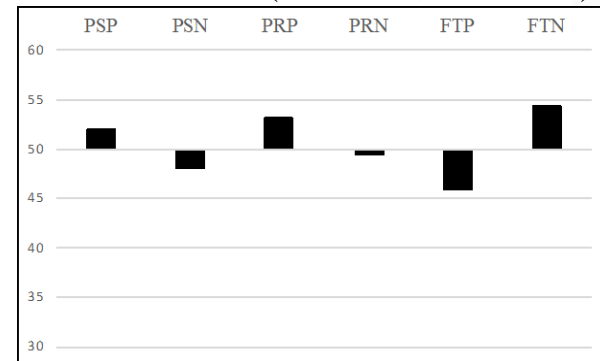
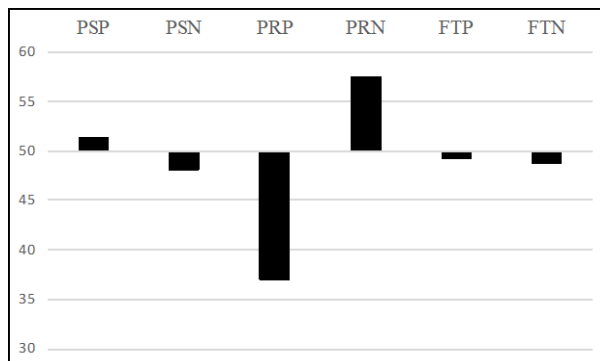# Negatives ($n = 30, 9.8\%$)
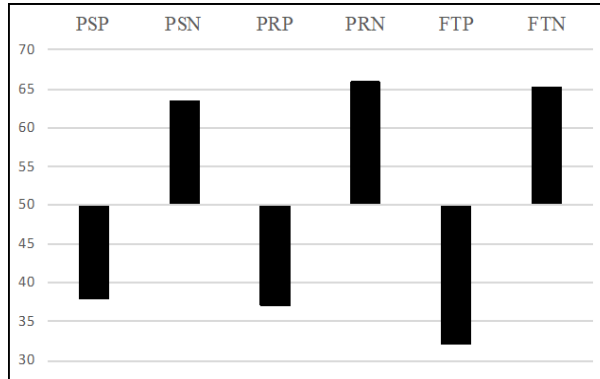
Positives ($n = 120, 39.1\%$)
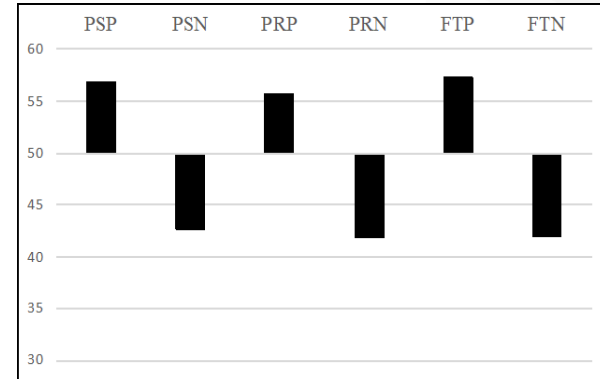
Past Negatives ($n = 40, 13\%$)
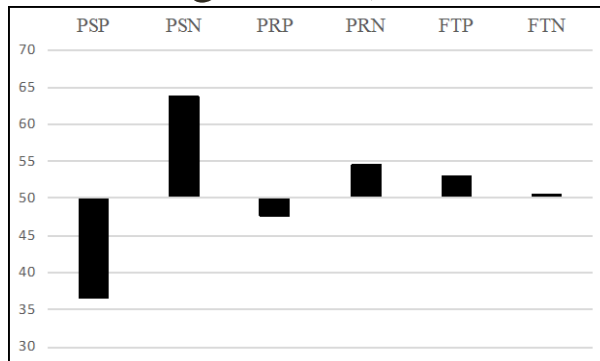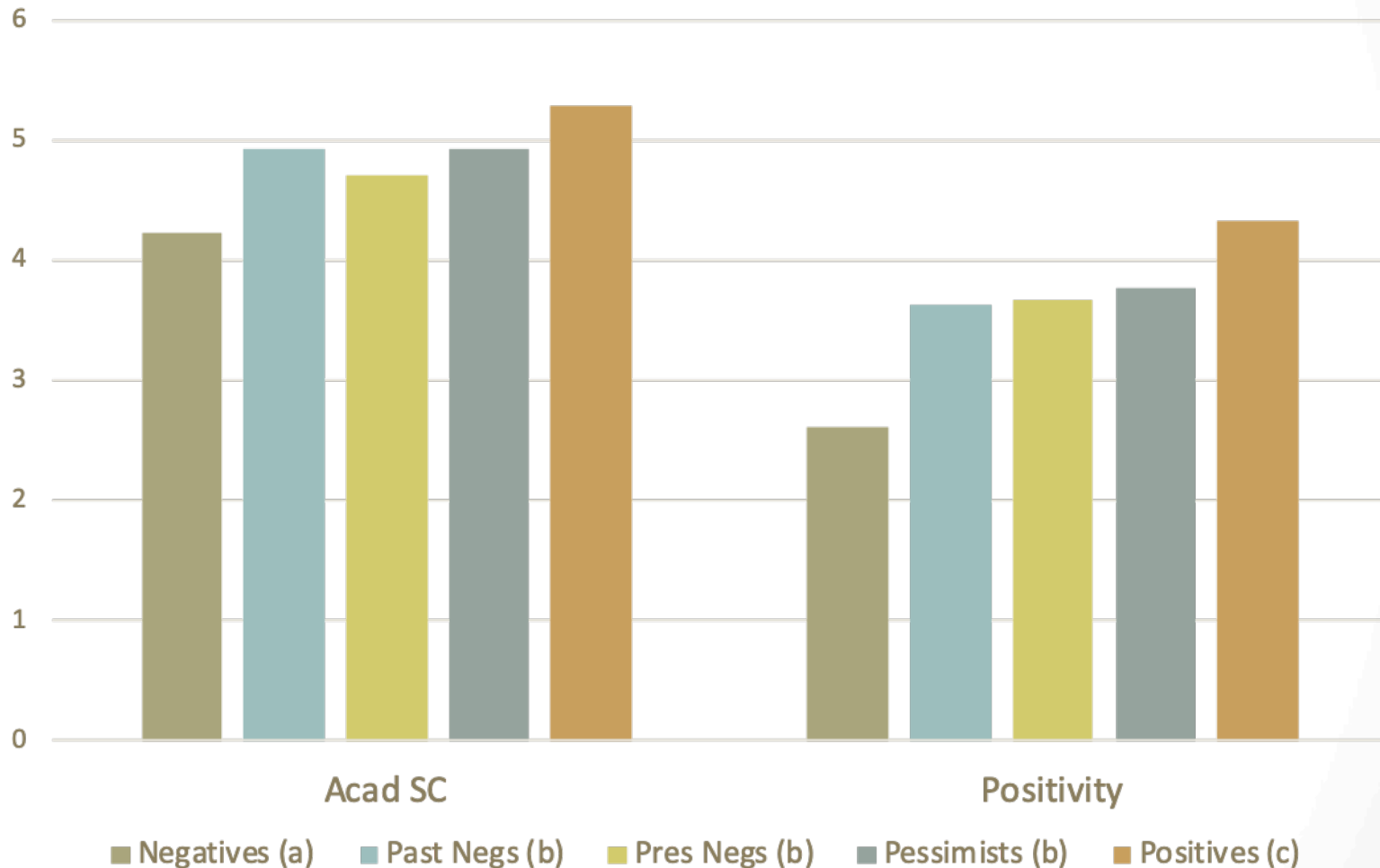

Pessimists ($n = 87, 28.3\%$)

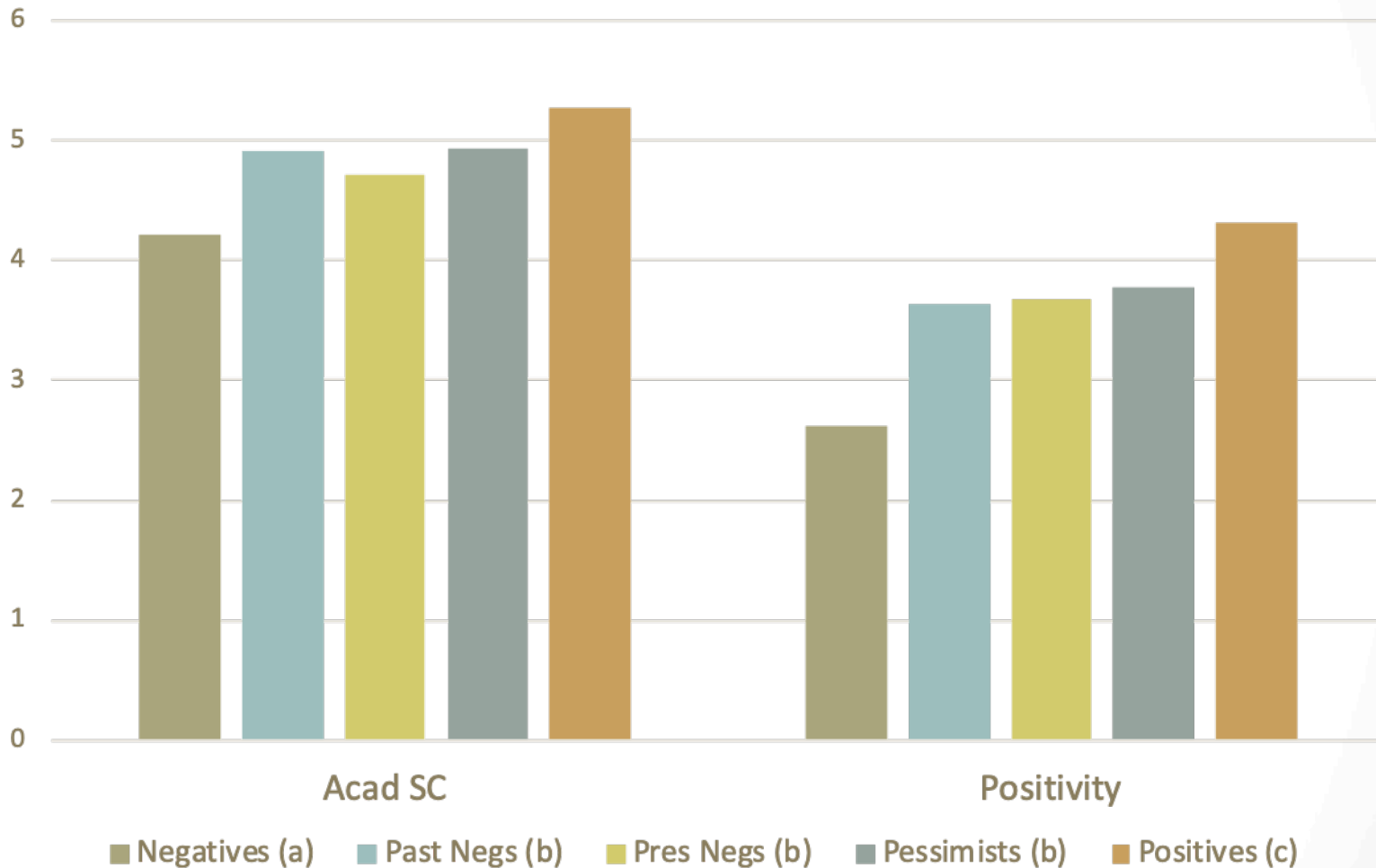# Present Negatives ($n = 30, 9.8\%$)

We identified 5 profiles.

d_{corr} (ASC): a to b = 0.56+, a to c = 1.61, b to c = 0.56+

Academic SC and Positivity

Academic SC and Positivity

d_{corr} (Pos): a to b = 1.65+, a to c = 3.67, b to c = 1.33+

The American Cultural Context

- Race, ethnicity, country of origin, and facility with the English language, among other variables, play a role in who we are and how others respond to us, including in schools.

- The devaluing of individuals due to group membership is communicated clearly and regularly via stereotypes and interactions.

Cultural Constructs

- Stereotype threat
  - Negative stereotypes of my group inhibit my performance
    - Women and STEM
    - Latinx and effort
    - African Americans and intelligence
- Cultural mistrust
  - Attributions, belonging, Expectations

# Social Identities in K-12
McKown & Weinstein (2003)

- Students in Grades 1 to 6 can differentiate between teachers' behaviors with high-achieving versus low-achieving students.
- 64% of 8-year olds, 83% of 9-year olds, and 93% of 10-year olds "were able to infer an individual's [group] stereotype" from vignettes.
- McKown and Weinstein (2003) also found that African American & Latinx children performed significantly worse under diagnostic testing conditions.

Messages to Marginalized Groups

- Research suggests that members of marginalized minority groups are more likely to interpret teachers' messages about low ability.
- Additionally, when providing feedback, minorities are more likely to take critical feedback as a message of lack of competence rather than as a way to improve.
- Important to convey one's belief in student's capacity to do the work when providing feedback
  - Wise feedback

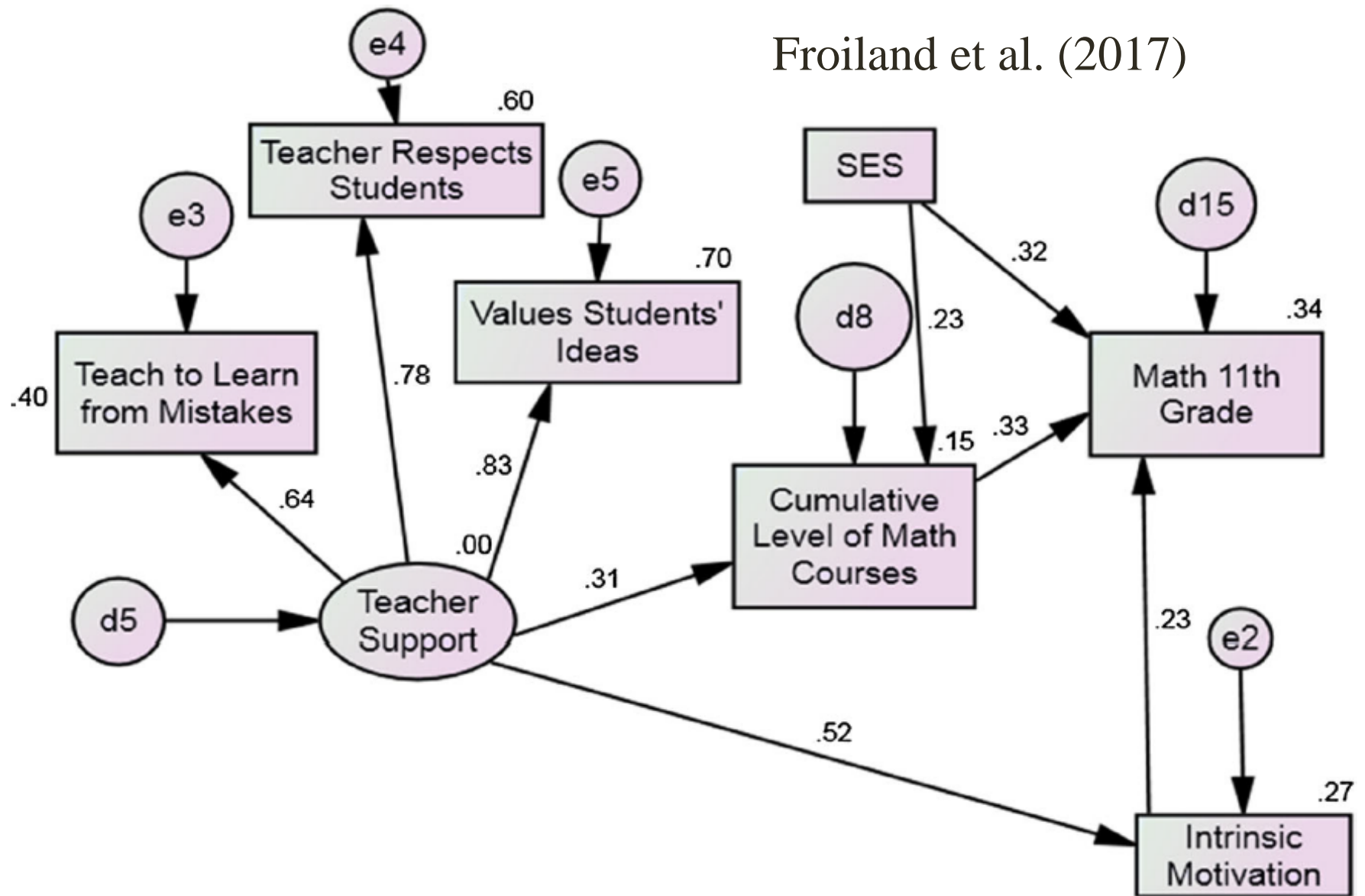# MOTIVATION THEORIES APPLY ACROSS ALL DEMOGRAPHIC GROUPS

Froiland & Worrell (2016)
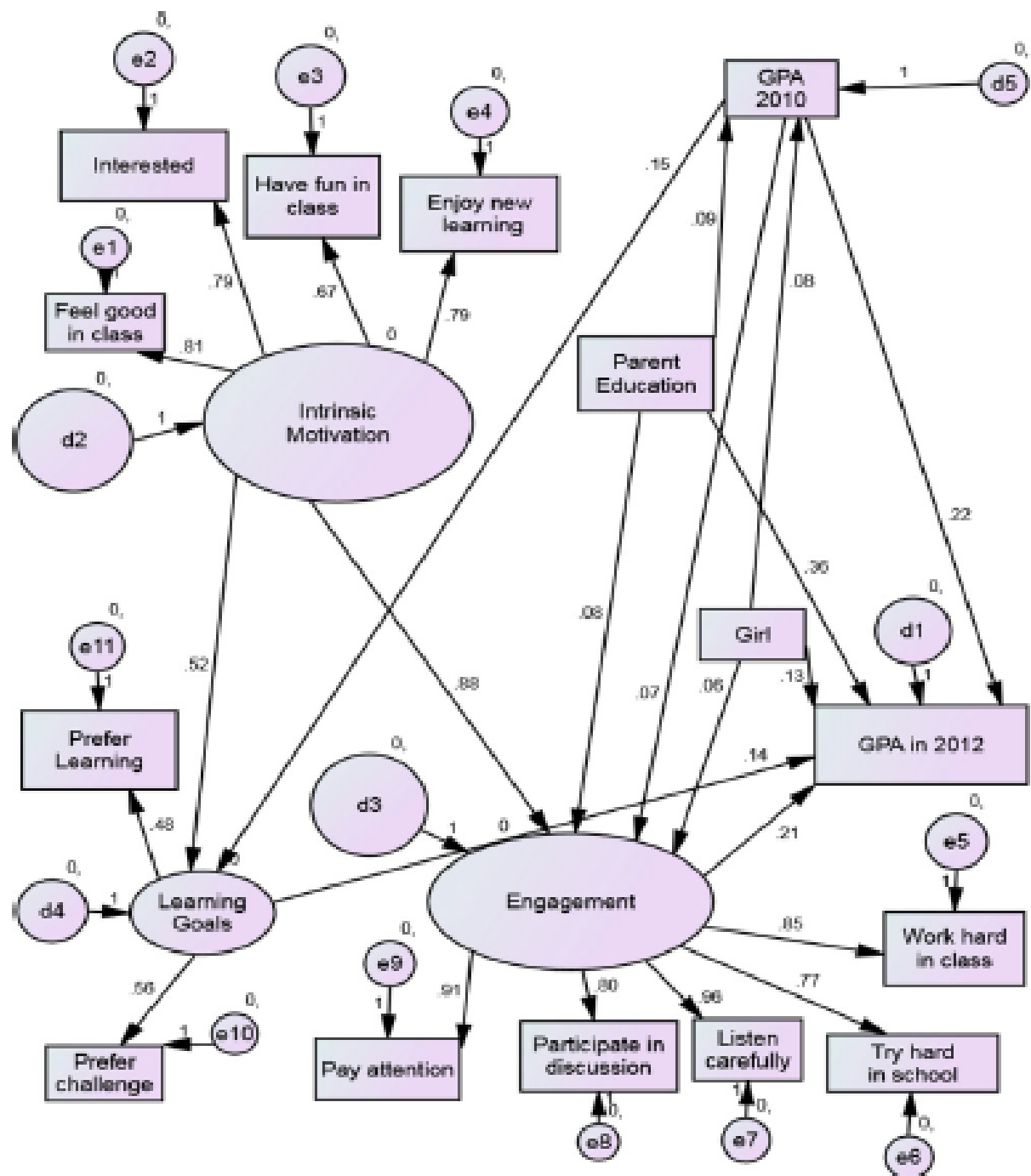
Fig. 1 Predictors of math development among Native Hawaiians and Pacific Islanders. CFI = 1.00; TLI = 1.05, IFI = 1.02, RMSEA = .00, χ^2 = 9.19, $p > .05$. All coefficients are significant at $p < .05$. Standardized indirect effect of teacher autonomy support on achievement is .22, $p < .05$

Group Work: Choose 1

1. Student with a poor sense of belonging in your class.
2. Student with a strong performance orientation (wants to look good to you and other students).
3. Student who is refuses to put out effort when a task is difficult and he is not sure he will succeed.
4. Latina student who is an English language learner and very strong in math who is not participating and engaging in Calculus class.
5. Student who is convinced that he cannot write well (I am a jock who is good in sports).

What Can We Do

- Make students feel that they *belong* in the classroom, the school, the GATE program.

- Stress dual identities.

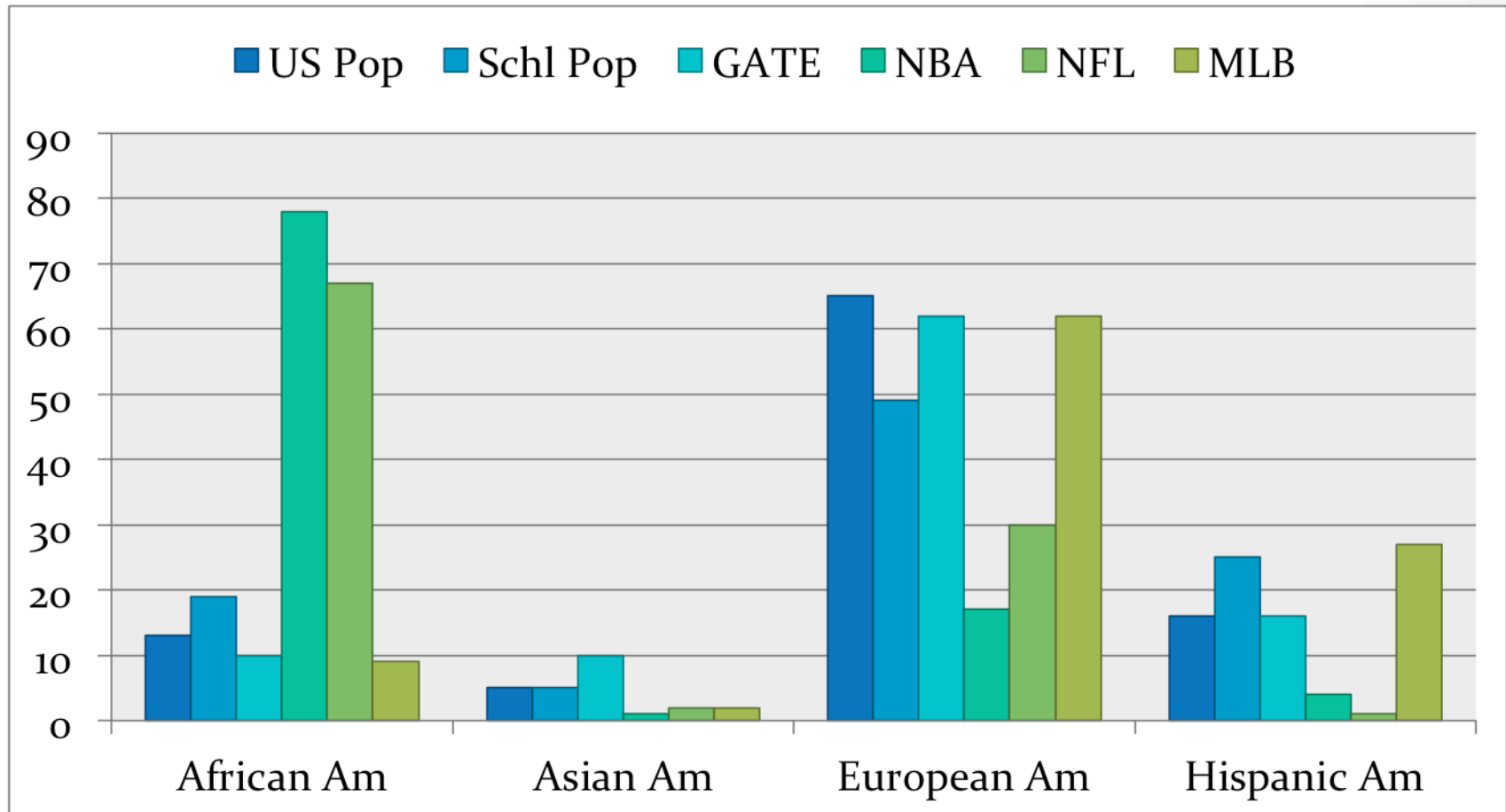- Use appropriate role models.

What Can We Do - II

- Deal openly with issues related to underachievement that undermine motivation and performance
  - Unfair practices, oppositional identity self-sabotage)
- The relationship with the teacher is crucial.
  - Students are more likely to work for teachers that they feel respect and care for them.
- Contextualize feedback in terms of improvement and clear message about competence.
- Avoid performance orientations; focus on mastery.

What Can We Do - III

- Make sure that schools are safe physically and emotionally.
  - A sense of belonging will not develop, however warm teachers are, if bullying, teasing, disrespect among students is the norm.
- Allow space for mistakes, re-doing assignments, and asking questions.
- Focus on developing academic identities.
- Value **effort and trying** alongside valuing successful outcomes.
- Be sensitive to skill deficits and maladaptive perfectionism.

Domain Comparisons

Thank you for your attention.