

Interpersonal Relationships and Student Development (Motivation, Engagement, Buoyancy, Achievement):

What Outcomes Peers, Parents, and Teachers Do and Do Not Impact

Keynote Address

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Today

- ✓ **Why interpersonal relationships are important**
 - ✓ **How relationships assist outcomes**
- ✓ **Relationships as a lens to understand educational phenomena**
- ✓ **Interpersonal relationships in salient motivation theory**
 - ✓ **Findings from a research program**
- ✓ **Connective Instruction as an approach to integrating relationships and pedagogy**



Why Interpersonal Relationships are Important

Martin, A.J., & Dowson, M.
(2009). *Review of Educational Research*, 79,
327-365.



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Why Relationships are Important

- Buffer against stress and risk
- Instrumental help for tasks
- Emotional support in daily life
- Companionship in shared activities
- Social and emotional development



How Interpersonal Relationships Assist Outcomes

Martin, A.J., & Dowson, M.
(2009). *Review of Educational Research*, 79,
327-365.



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How Relationships Assist Outcomes

- In high quality relationships, individuals not only learn that particular beliefs are useful for functioning in particular environments, but they actually internalize the beliefs valued by significant others.
 - In the academic context, for example, good relationships with a particular teacher are likely to lead students to internalize at least some of that teacher's core beliefs and values.
- Relatedness is an important self-system process in itself. As such, it has an energizing function on the self, working through the activation of positive affect and mood.
- This intrapersonal energy, gained from interpersonal relationships, provides a primary pathway towards motivated engagement in activities.



How Relationships Assist Outcomes

- A complementary perspective on these processes is provided by the 'need to belong' hypothesis.
- This hypothesis suggests “human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships” (Baumeister & Leary, 1995, p. 497).
- When the need for belongingness is fulfilled, this fulfillment produces positive emotional responses.
- In the academic domain, these emotional responses are said to ‘drive’ students’ achievement behaviors including their responses to challenge, self-regulation, participation, and strategy use.



How Relationships Assist Outcomes

- Relatedness impacts individuals' motivation and behavior by way of positive influences on other self-processes relevant to achievement motivation.
 - For example, in the context of a student's life, positive emotional attachments to peers, teachers, and parents promote not only healthy social, emotional and intellectual functioning, but also positive feelings of self-worth and self-esteem.



Interpersonal Relationships as a Lens to Understand Educational Phenomena

Martin, A.J., & Dowson, M.
(2009). *Review of
Educational Research*, 79,
327-365.



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Yields of a Relationship Lens

- Relatedness serves as an explanatory construct through which diverse theories of achievement motivation can be integrated.
- Relatedness provides a useful diagnostic tool with which to view and understand adaptive behavior in the classroom and to treat achievement motivation problems in the classroom that are 'other'-related.
 - For example, adjustment and adaptation problems in school have been linked to the failure of learning environments to meet students' need to belong.



Yields of a Relationship Lens

- Relatedness recognizes and actively accommodates the interconnectedness of the social, academic, and affective dimensions of the self, and the need for educational programs to recognize this interconnectedness.
 - Thus, the concept of relatedness can act as an impetus and explanation for educational programs that accommodate ‘the whole self’.
- Finally, positive relationships are valued outcomes in their own right.
 - Thus, whatever their value for clarifying human motivation and achievement, relationships and relatedness are critical for understanding human functioning more widely.



Interpersonal Relationships in Salient Motivation Theory

Martin, A.J., & Dowson, M.
(2009). *Review of
Educational Research*, 79,
327-365.



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Salient Motivation Theories

- *Attribution theory* focuses on the causes ascribed to outcomes and events in one's life and the impact of these causal attributions on behavior, affect, and cognition.
 - Personal attributions may be learnt from, or modeled on, the attributional 'styles' or patterns of others.
 - Specific consequences of attributions (such as a sense of personal control) can also be developed through feedback from and observation of significant others.
- *Goal theory* focuses on the 'why' of behavior, or reasons for doing what one does.
 - The 'why' can be communicated through the values and expectations of significant others (working at individual, group, and organizational levels).



Salient Motivation Theories

- *Self-efficacy* refers to a belief in one's capacity and agency to achieve a desired outcome.
 - This sense of capacity and agency can be instilled through direct or vicarious influence, modeling, and open communication from others.
- Related to this, *Expectancies* and *Values* have also been substantively linked to socializers' beliefs, attitudes, and behaviors.



Salient Motivation Theories

- *Self-determination theory* focuses on the psychological need for relatedness which is satisfied through the warmth, support, and nurturance of significant others.
 - Hence, SDT has relatedness as a pillar.
- *Self-worth motivation theory* focuses on the link between worth and achievement.
 - It demonstrates that this link is in part determined by relationships in the child's life in which worth, affirmation, and approval are communicated in either conditional or unconditional ways.



Summary of Theories

Theory	Key Constructs Relevant to Relationships	Relatedness Mechanisms/Conduits
Attribution theory	<ul style="list-style-type: none"> • Perceived Control • Perceived Locus • Helplessness 	<ul style="list-style-type: none"> • Feedback to students • Reward contingencies • Observation of and identification with relevant others
Expectancy-value theory	<ul style="list-style-type: none"> • Expectancy for success • Valuing of school, subjects etc. 	<ul style="list-style-type: none"> • Communication of expectancies • Communication of valuing • Modeling of valuing • Responses to or treatment of students in class
Goal theory	<ul style="list-style-type: none"> • Mastery goals • Performance goals • Social goals • Motivational climate • (Approach /Avoidance extensions) 	<ul style="list-style-type: none"> • Tasks set • Development of climate • Reasons for learning valued by relevant others



Summary of Theories

Theory	Key Constructs Relevant to Relationships	Relatedness Mechanisms/Conduits
Self-determination theory	<ul style="list-style-type: none"> • Relatedness/belonging • Autonomy • Competence 	<ul style="list-style-type: none"> • Warmth, support, and nurturance • Nurturing independence
Self-efficacy	<ul style="list-style-type: none"> • Self-efficacy • Control 	<ul style="list-style-type: none"> • Modeling • Positive communication from relevant others • Vicarious influence
Self-worth motivation theory	<ul style="list-style-type: none"> • Self-worth • Fear of failure • Disengagement 	<ul style="list-style-type: none"> • Approval, affirmation • Conditions of love, approval • Intergenerational transfer of love • Reward contingencies



Findings from Our Research Program



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Projects

- **Teachers in the Educational Ecology – Show Me the Variance!**
- **Appropriate Analysis of Teacher Effects**
- **Teachers, Parents, Same-sex Peers, Opposite-sex Peers – links with academic and non-academic outcomes**
- **Teachers and Parents – unique effects on engagement and self-concept**
- **Teachers, Parents, and Peers – unique effects on broader (eg. school) engagement**
- **Same-sex and Opposite-sex peer relationships – mediating role of engagement on achievement and self-esteem**
- **Teacher's Interest in Me vs. Teacher's Interest in Class**
- **Does Absence Make the Heart Grow Fonder?**



TEACHER-STUDENT RELATIONSHIPS IN THE EDUCATIONAL ECOLOGY – SHOW ME THE VARIANCE!

Martin, Bobis, Anderson, Way & Vellar
(2011) *Zeitschrift für Pädagogische
Psychologie (German Journal of
Educational Psychology)*, 25, 49-61.

How much variance in teacher-student relationships is there from student-to-student, class-to-class, and school-to-school?



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The Education Ecology

- Education is a domain that is hierarchically structured, with students nested within classes that are nested within schools
- Recent research explored variance for different psycho-educational phenomena at different levels of hierarchical education structure
- N = 4,383 middle school students in Year 5 (22%), Year 6 (22%), Year 7 (28%), and Year 8 (28%), located in 257 classrooms, from 47 Australian schools
- Multilevel analyses conceptualized as a three-level model:
 - student/residual at the first level (Level 1, L1)
 - class at the second level (Level 2, L2)
 - school at the third level (Level 3, L3)



	Student/Residual			Class			School			Deviance
	Est	SE	%	Est	SE	%	Est	SE	%	
Self-efficacy	0.962*	0.021	96	0.026	0.009	3	0.012	0.007	1	12391
Valuing	0.951*	0.021	95	0.029	0.009	3	0.020	0.008	2	12367
Mastery orient	0.961*	0.021	96	0.009	0.007	1	0.030*	0.009	3	12371
Planning	0.947*	0.021	95	0.029	0.009	3	0.024	0.009	2	12353
Task manage	0.957*	0.021	96	0.015	0.008	2	0.029	0.009	3	12367
Persistence	0.940*	0.021	94	0.031*	0.009	3	0.030	0.010	3	12337
Anxiety	0.952*	0.021	95	0.041*	0.010	4	0.006	0.006	1	12373
Failure avoid	0.946*	0.021	94	0.026	0.009	3	0.030	0.010	3	12354
Uncertain cont	0.928*	0.020	93	0.072*	0.013	7	0.002	0.007	<1	12328
Self-handicap	0.952*	0.021	95	0.045*	0.011	5	0.004	0.006	<1	12380
Disengagement	0.950*	0.021	95	0.039*	0.010	4	0.011	0.007	1	12373
Homework	0.885*	0.019	87	0.060*	0.012	6	0.053*	0.015	5	12167
Tch-Stu R'ship	0.874*	0.019	88	0.120*	0.015	12	0.001	0.001	<1	12149
Test score	0.730*	0.016	72	0.280*	0.033	28	0.004	0.018	<1	11568



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APPROPRIATE ANALYSIS OF TEACHER EFFECTS – CROSS- CLASSIFICATION MODELS

Marsh, Martin & Cheng.
(2008). *Journal of
Educational Psychology*,
100, 78-95.



To what extent does teacher contribute to motivation and
to what extent does class composition contribute to
motivation?

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IMPACT OF RELATIONSHIPS WITH TEACHERS, PARENTS, AND PEERS

Martin, A.J. et al. (2009).
Teachers College Record,
March,
<http://www.tcrecord.org>



Do different stakeholders have different links to different
academic and non-academic outcomes?

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Good Relationships

	CFA Correlations			
	Teacher	Parent	Same-sex Peers	Opposite-sex Peers
ACHIEVEMENT				
Literacy	.16*	.07*	.18*	-.08*
Numeracy	.15*	.06*	.12*	-.13*
NON-ACADEMIC SELF-CONCEPT				
Physical ability	.18*	.24*	.36*	.43*
Appearance	.19*	.22*	.36*	.51*
Honesty	.39*	.37*	.31*	.09*
Poor mental health	-.09*	-.22*	-.36*	-.37*

N=3,450 high school students; CFA $\chi^2=27,497.96$, $df=4,878$, CFI=.98

* Statistically significant at $p<0.001$



IMPACT OF RELATIONSHIPS WITH TEACHERS AND PARENTS – UNIQUE EFFECTS USING SEM

Martin, A.J. et al. (2007).
*Australian Journal of
Guidance and
Counselling*, 17, 109-125.



Controlling for shared variance, what is the differential impact of teachers and parents on academic and non-academic outcomes?

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Good Relationships (unique effects)

	PREDICTOR: Teacher-Student R'ship β ↓	PREDICTOR: Parent- Child R'ship β ↓
Adaptive academic cognitions	.50***	.19***
Adaptive academic behaviours	.47***	.17***
Impeding/maladaptive acad cognitions	-.18***	-.13***
Maladaptive academic behaviours	-.41***	-.27***
Academic self-concept	.45***	.17***
General self-esteem	.39***	.27***



(UNIQUE) IMPACT OF TEACHERS, PARENTS, AND PEERS – ON BROADER (EG. SCHOOL) ENGAGEMENT FACTORS

Martin, Ginns, Liem, &
Papworth (In Progress)

Controlling for shared variance, what is the differential
impact of teachers, parents, and peers on broader
engagement outcomes?



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Relationships and Broader Engagement (Unique Effects)

	Teachers (β) ↓	Parent (β) ↓	Peers (β) ↓
<u>SCHOOL ENJOY</u>			
Total	<u>.47*</u>	.13*	.30*
- Girls	<u>.47*</u>	.14*	.30*
- Boys	<u>.45*</u>	.13*	.31*
<u>CLASS PARTICIPATE</u>			
Total	<u>.38*</u>	.11*	.30*
- Girls	<u>.38*</u>	.11*	.31*
- Boys	<u>.38*</u>	.11*	.29*
<u>ABSENTEEISM</u>			
Total	<u>-.09*</u>	Not sig	Not sig
- Girls	<u>-.11*</u>	Not sig	Not sig
- Boys	<u>-.07*</u>	Not sig	Not sig



IMPACT OF RELATIONSHIPS WITH PEERS – ON ENGAGEMENT, ACHIEVEMENT, AND SELF-ESTEEM

Liem & Martin (2011).
*British Journal of
Educational Psychology*,
81, 183-206

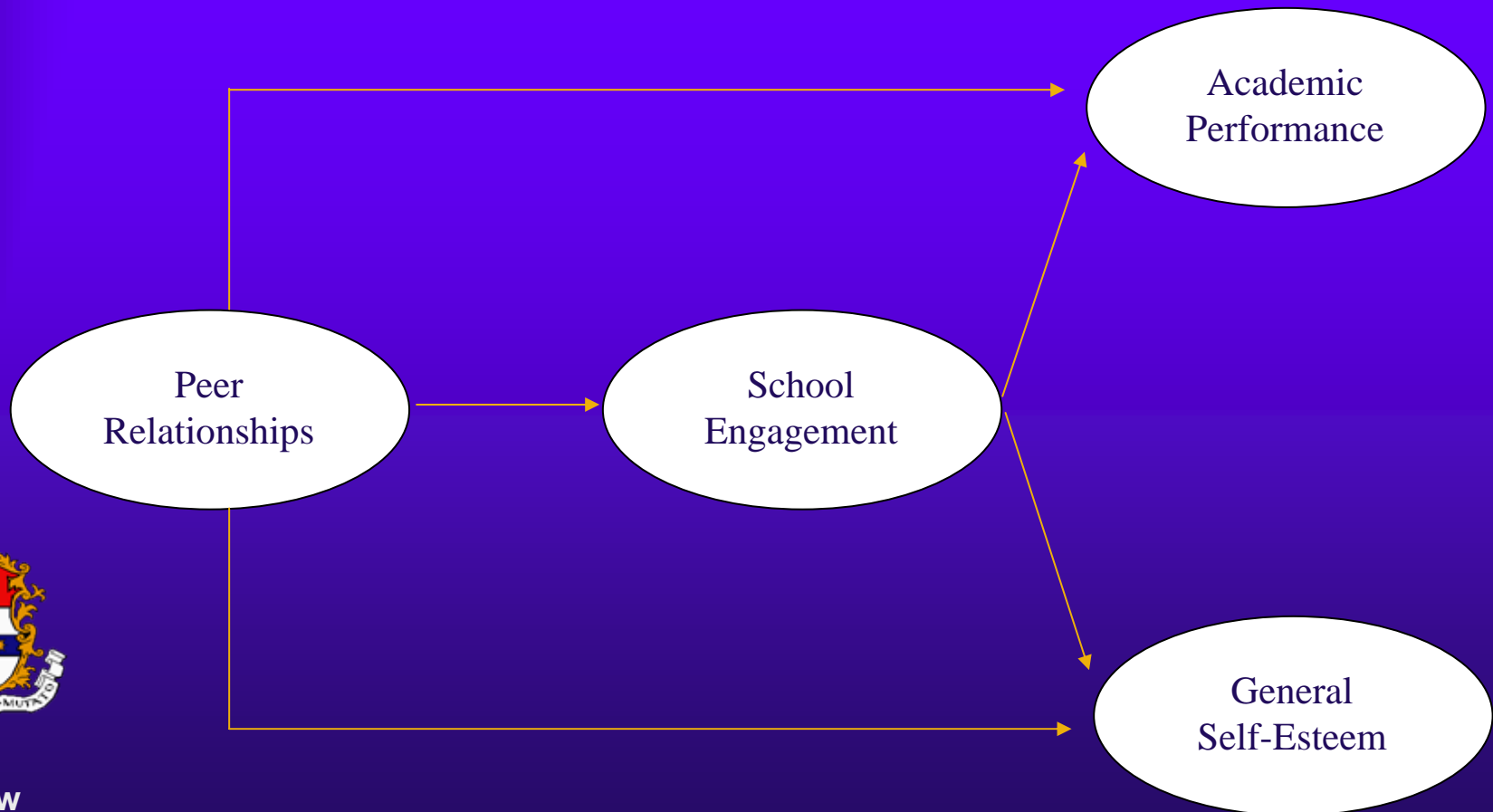
Does engagement mediate the link between peer relationships and academic and non-academic outcomes?
Are there different effects for same-sex vs. opposite-sex peers?



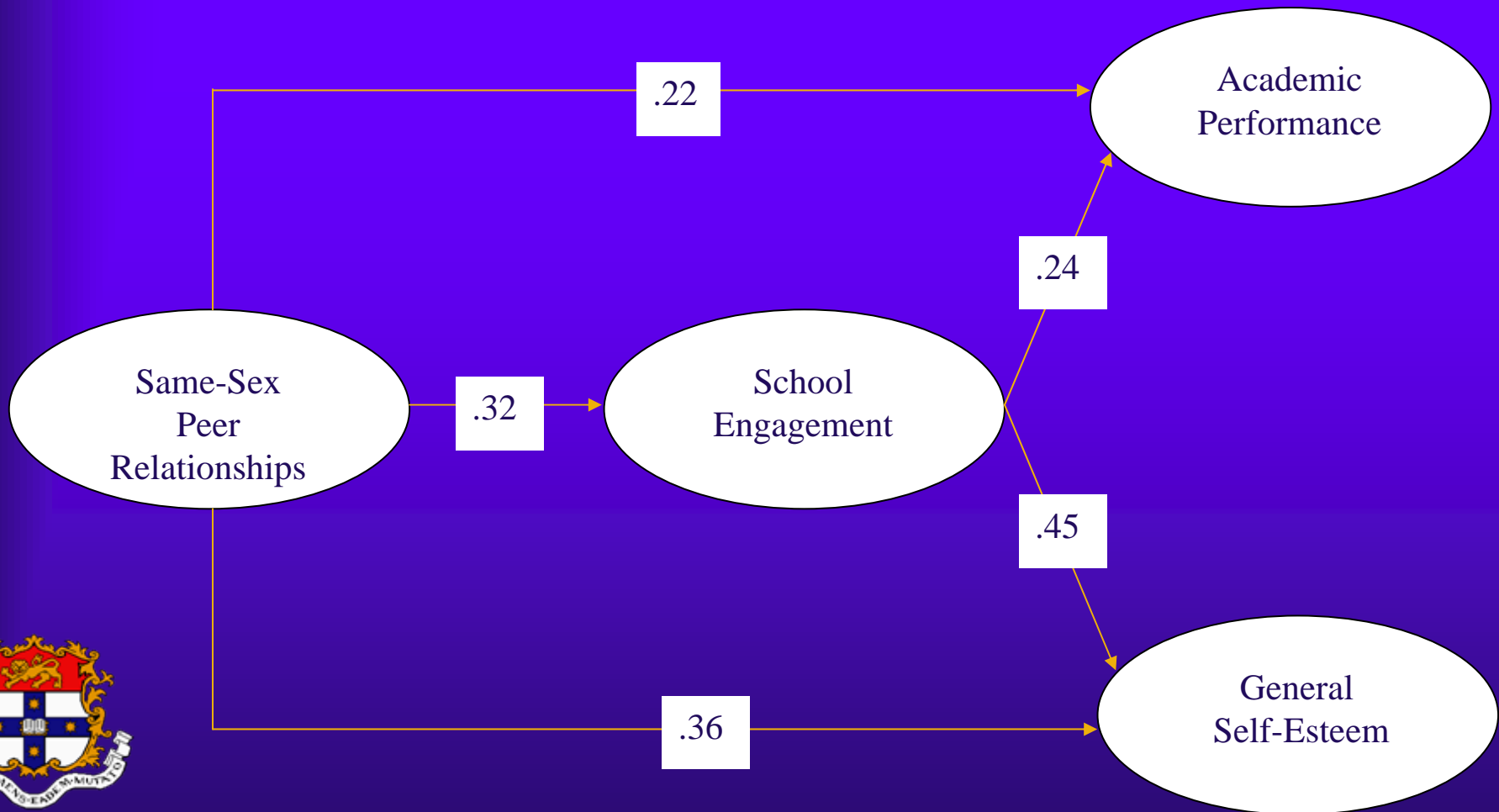
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Peers, Engagement, Achievement, and Self-esteem



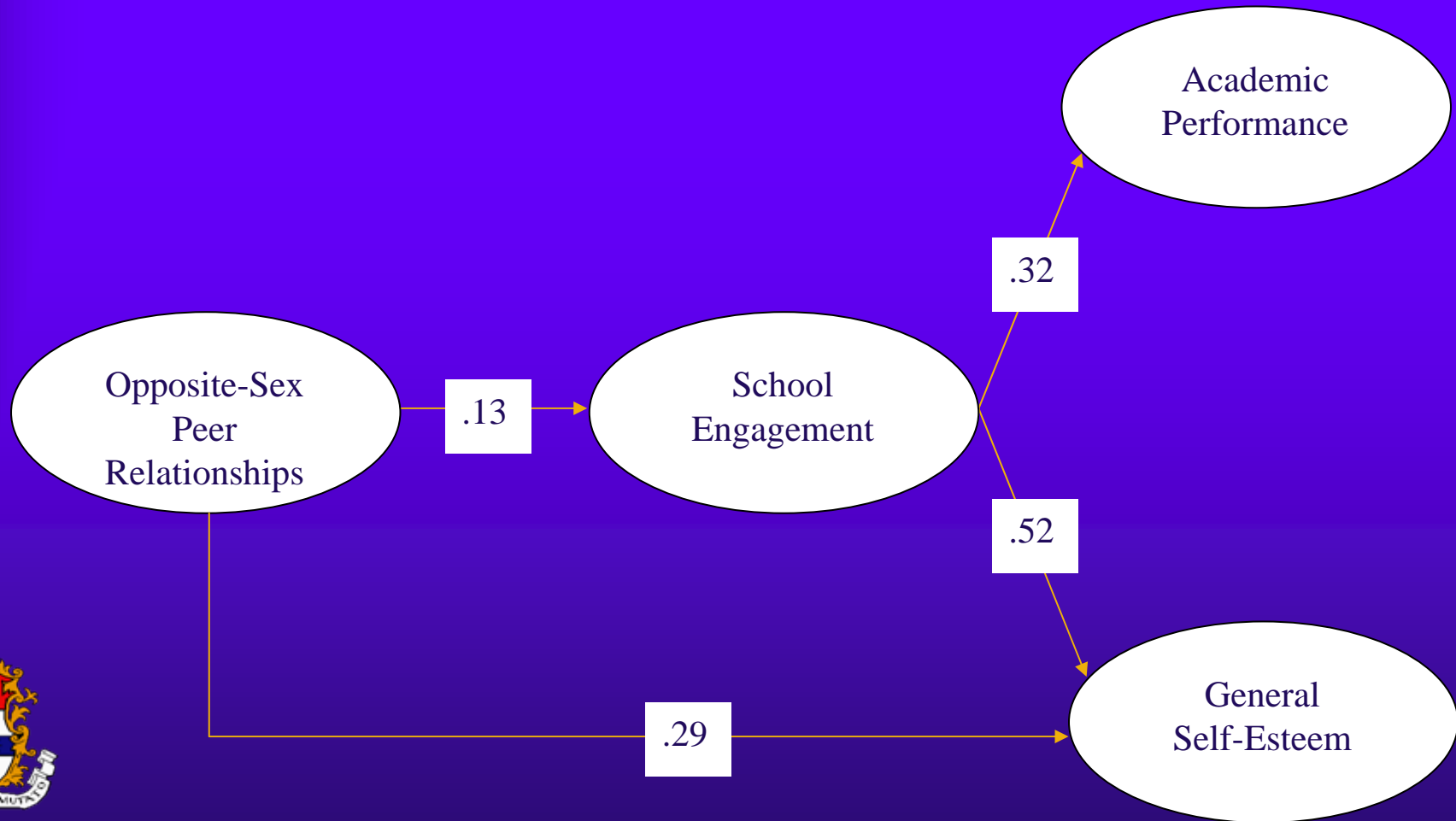
Peers, Engagement, Achievement, and Self-esteem



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N=1,436 high school students; SEM $\chi^2 = 2268.77$, CFI = .98, RMSEA = .05

Peers, Engagement, Achievement, and Self-esteem



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N=1,436 high school students; SEM $\chi^2 = 2144.51$, CFI = .98, RMSEA = .05

Teacher Interested in ME vs. Teacher Interested in CLASS – impact on mathematics engagement

In Progress



To what extent does the teacher's interest in me impact my engagement? To what extent does the teacher's interest in the class impact my engagement?

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Interested in ME vs. Interested in CLASS

	Teacher Interested in ME β ↓	Teacher Interested in CLASS β ↓
Adaptive motivation	.44*	.03
Maladaptive motivation	-.33*	-.02
Class participation	.40*	.03
Positive future intent	.34*	.04
Enjoy maths	.38*	.06*
Maths homework completion	.28*	.03
Maths-related career/job	.24*	.03



Does Familiarity Breed Contempt and Absence Make the Heart Grow Fonder?

Papworth, B.A., Martin, A.J., Ginns, P., Liem, A.D.L.,
& Hawkes, T.F. (2012). *The role of boarding school
in the academic and non-academic outcomes of high
school students*. Paper presented at the American
Educational Research Association (AERA) Annual
Meeting, Vancouver, Canada



Teacher-student relationships, parent-child relationships,
and boarding school
(+ role of Personality in relationships)

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Familiarity and Absence

DAY vs BOARDING ($\beta=.14^{*}$);** *covariates – Gender ($\beta=.07$), Age ($\beta=-.10$), Agreeableness ($\beta=.31$), Conscientiousness ($\beta=.20$), Neuroticism ($\beta=-.07$)*

Parent
Relations

DAY vs BOARDING (ns); *covariates – Student Achievement ($\beta=.09$), Agreeableness ($\beta=.26$), Conscientiousness ($\beta=.22$), Openness ($\beta=.10$)*

Teacher
Relations



Integrating Relationships and Pedagogy



How can we build relationships and relatedness into the everyday course of pedagogy?

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CONNECTIVE INSTRUCTION (or, 'Pastoral Pedagogy')

(following from centrality of teacher-student
relationships)

Martin, A.J. & Dowson, M. (2009).
Review of Educational Research,
79, 327-365

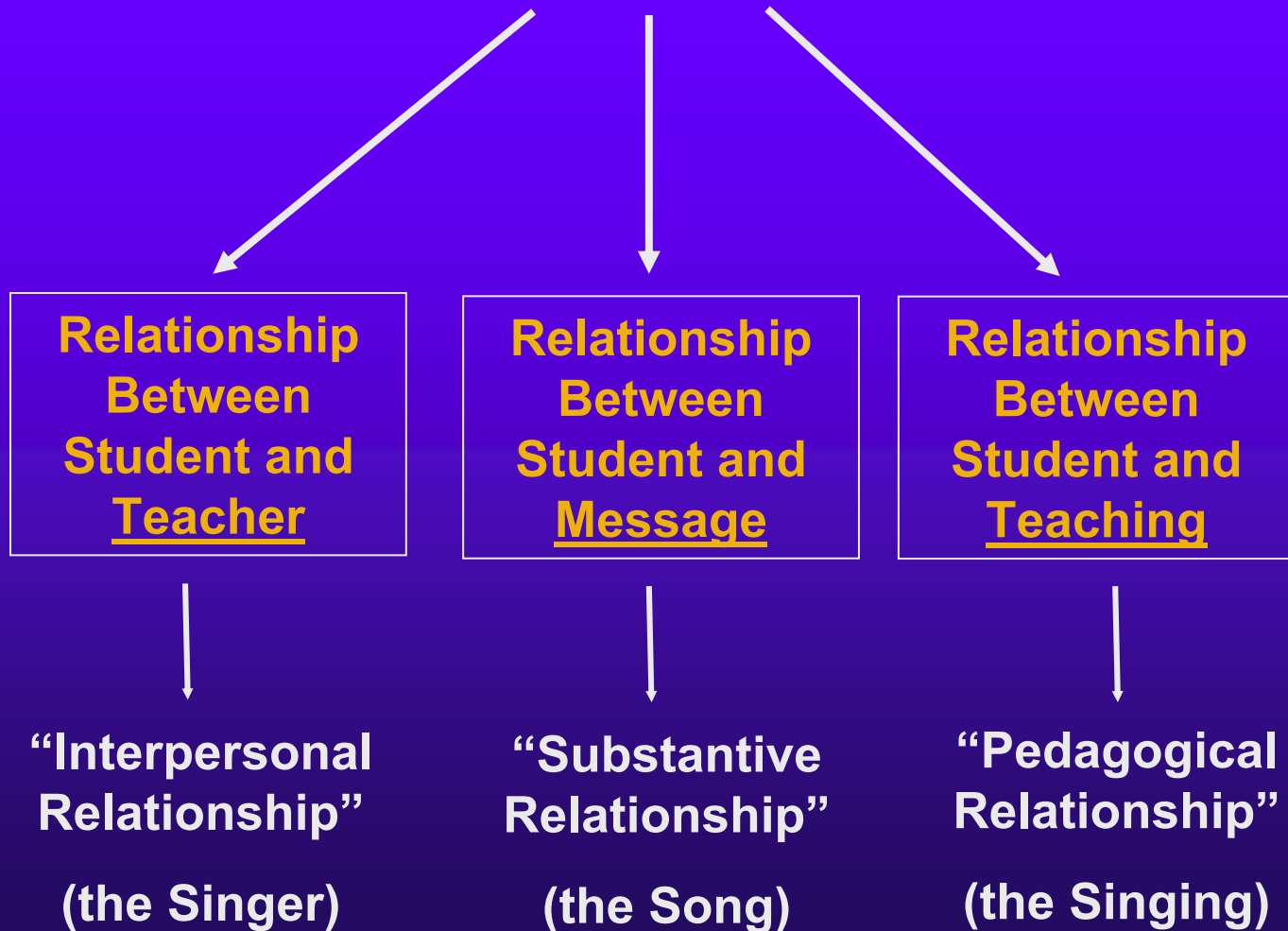
Martin, A.J. (2010). *Building
classroom success: Eliminating
academic fear and failure*.
London: Continuum.



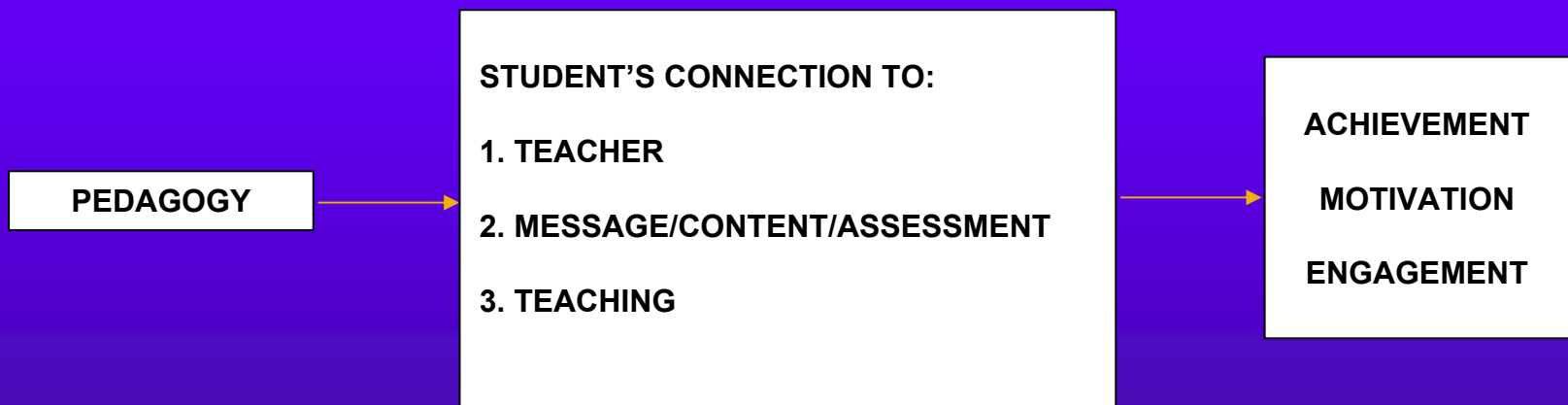
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Connective Instruction



How Pedagogy Impacts Achievement, Motivation, and Engagement



Relationship with Teacher (the Singer – ‘Top 10’)

1. I make an effort to listen to my students' views
2. A good teacher-student relationship is one of my priorities
3. I try to give my students input into things & decisions that affect them
4. I enjoy working with young people
5. Where appropriate I try to have a sense of humour with my students
6. I try to get to know my students
7. I explain the reasons for rules that are made and enforced
8. I try to show no favouritism
9. I accept my students' individuality
10. I have positive but attainable expectations for students



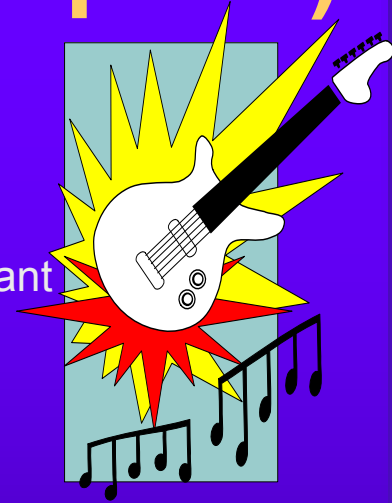
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Relationship with Message (the Song – ‘Top 10’)

1. I aim to set work that is challenging but not too difficult
2. Where possible, I aim to set work that is important or significant
3. I aim to inject variety into my teaching content
4. I aim to inject variety into my assessment tasks
5. I aim to provide students with interesting work
6. I use broad and authentic (relevant and meaningful) assessment
7. I try to ensure that my teaching content is not boring to young people
8. In class and assigned work, I reduce monotony as much as possible
9. Where possible I draw on material that is fun to learn
10. Where possible I use material that arouses my students' curiosity



Relationship with Teaching (the Singing – ‘Top 10’)

1. I try to get students to do something well as much as possible and provide support needed for them to do this
2. I have multiple indicators of success in schoolwork (marks, effort, reaching goals, improving)
3. I provide clear feedback to students focusing on how they can improve
4. I try to make sure all students keep up with the work and give opportunities to catch up or go over difficult work
5. I make an effort to explain things clearly and carefully
6. I aim to inject variety into my teaching methods and reduce repetition or monotony
7. I encourage my students to learn from their mistakes
8. I aim for mastery by all students
9. I show students how schoolwork is relevant and/or meaningful
10. I don't rush my lessons or my explanations



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