Interpersonal Relationships and Student Development
(Motivation, Engagement, Buoyancy, Achievement):
What Outcomes Peers, Parents, and Teachers Do and Do Not Impact

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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

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

How Relationships Assist Outcomes

• Ongoing social interactions teach individuals about themselves and about what is needed to fit in with a particular group.

• Individuals develop beliefs, orientations, and values that are consistent with their relational environment.

• Hence, relatedness in the academic domain teaches students the beliefs, orientations, and values needed to function effectively in academic environments.

• In turn, these beliefs (if positive and adaptive) direct behavior in the form of enhanced persistence, goal striving, and self-regulation.
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

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

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.
<table>
<thead>
<tr>
<th>Theory</th>
<th>Key Constructs Relevant to Relationships</th>
<th>Relatedness Mechanisms/Conduits</th>
</tr>
</thead>
</table>
| Attribution theory     | • Perceived Control  
• Perceived Locus  
• Helplessness                                                                                           | • Feedback to students  
• Reward contingencies  
• Observation of and identification with relevant others                                               |
| Expectancy-value theory | • Expectancy for success  
• Valuing of school, subjects etc.                                                                                      | • Communication of expectancies  
• Communication of valuing  
• Modeling of valuing  
• Responses to or treatment of students in class                                                      |
| Goal theory            | • Mastery goals  
• Performance goals  
• Social goals  
• Motivational climate  
• (Approach /Avoidance extensions)                                                                 | • Tasks set  
• Development of climate  
• Reasons for learning valued by relevant others                                                                  |
## Summary of Theories

<table>
<thead>
<tr>
<th>Theory</th>
<th>Key Constructs Relevant to Relationships</th>
<th>Relatedness Mechanisms/Conduits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-determination theory</td>
<td>• Relatedness/belonging</td>
<td>• Warmth, support, and nurturance</td>
</tr>
<tr>
<td></td>
<td>• Autonomy</td>
<td>• Nurturing independence</td>
</tr>
<tr>
<td></td>
<td>• Competence</td>
<td></td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>• Self-efficacy</td>
<td>• Modeling</td>
</tr>
<tr>
<td></td>
<td>• Control</td>
<td>• Positive communication from relevant others</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Vicarious influence</td>
</tr>
<tr>
<td>Self-worth motivation theory</td>
<td>• Self-worth</td>
<td>• Approval, affirmation</td>
</tr>
<tr>
<td></td>
<td>• Fear of failure</td>
<td>• Conditions of love, approval</td>
</tr>
<tr>
<td></td>
<td>• Disengagement</td>
<td>• Intergenerational transfer of love</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Reward contingencies</td>
</tr>
</tbody>
</table>
Findings from Our Research Program
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?
How much variance in teacher-student relationships is there from student-to-student, class-to-class, and school-to-school?
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)
<table>
<thead>
<tr>
<th></th>
<th>Student/Residual</th>
<th>Class</th>
<th>School</th>
<th>Deviance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Est</td>
<td>SE</td>
<td>%</td>
<td>Est</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>0.962*</td>
<td>0.021</td>
<td>96</td>
<td>0.026</td>
</tr>
<tr>
<td>Valuing</td>
<td>0.951*</td>
<td>0.021</td>
<td>95</td>
<td>0.029</td>
</tr>
<tr>
<td>Mastery orient</td>
<td>0.961*</td>
<td>0.021</td>
<td>96</td>
<td>0.009</td>
</tr>
<tr>
<td>Planning</td>
<td>0.947*</td>
<td>0.021</td>
<td>95</td>
<td>0.029</td>
</tr>
<tr>
<td>Task manage</td>
<td>0.957*</td>
<td>0.021</td>
<td>96</td>
<td>0.015</td>
</tr>
<tr>
<td>Persistence</td>
<td>0.940*</td>
<td>0.021</td>
<td>94</td>
<td>0.031*</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0.952*</td>
<td>0.021</td>
<td>95</td>
<td>0.041*</td>
</tr>
<tr>
<td>Failure avoid</td>
<td>0.946*</td>
<td>0.021</td>
<td>94</td>
<td>0.026</td>
</tr>
<tr>
<td>Uncertain cont</td>
<td>0.928*</td>
<td>0.020</td>
<td>93</td>
<td>0.072*</td>
</tr>
<tr>
<td>Self-handicap</td>
<td>0.952*</td>
<td>0.021</td>
<td>95</td>
<td>0.045*</td>
</tr>
<tr>
<td>Disengagement</td>
<td>0.950*</td>
<td>0.021</td>
<td>95</td>
<td>0.039*</td>
</tr>
<tr>
<td>Homework</td>
<td>0.885*</td>
<td>0.019</td>
<td>87</td>
<td>0.060*</td>
</tr>
<tr>
<td>Tch-Stu R’ship</td>
<td>0.874*</td>
<td>0.019</td>
<td>88</td>
<td>0.120*</td>
</tr>
<tr>
<td>Test score</td>
<td>0.730*</td>
<td>0.016</td>
<td>72</td>
<td>0.280*</td>
</tr>
</tbody>
</table>
APPROPRIATE ANALYSIS OF TEACHER EFFECTS – CROSS-CLASSIFICATION MODELS


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

- 964 high school students
- Students reported motivation in Mathematics, English, Science
- 62 teachers

“Findings suggest that the composition of the class is relevant to students’ motivation and engagement. Indeed, in recent years where there has been substantial focus on teacher effectiveness and the development of taxonomies and criteria of effective teaching, it might now be important to revisit the class composition. In particular, there is now a need for research focusing on the characteristics of effective classrooms (including but not restricted to characteristics of effective teaching), the students collected together in the classroom, and the bases upon which they are collected together” (p. 92)
IMPACT OF RELATIONSHIPS WITH TEACHERS, PARENTS, AND PEERS


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

**CFA Correlations**

<table>
<thead>
<tr>
<th></th>
<th>Teacher</th>
<th>Parent</th>
<th>Same-sex Peers</th>
<th>Opposite-sex Peers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACHIEVEMENT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literacy</td>
<td>.16*</td>
<td>.07*</td>
<td>.18*</td>
<td>-.08*</td>
</tr>
<tr>
<td>Numeracy</td>
<td>.15*</td>
<td>.06*</td>
<td>.12*</td>
<td>-.13*</td>
</tr>
<tr>
<td><strong>NON-ACADEMIC SELF-CONCEPT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical ability</td>
<td>.18*</td>
<td>.24*</td>
<td>.36*</td>
<td>.43*</td>
</tr>
<tr>
<td>Appearance</td>
<td>.19*</td>
<td>.22*</td>
<td>.36*</td>
<td>.51*</td>
</tr>
<tr>
<td>Honesty</td>
<td>.39*</td>
<td>.37*</td>
<td>.31*</td>
<td>.09*</td>
</tr>
<tr>
<td>Poor mental health</td>
<td>-.09*</td>
<td>-.22*</td>
<td>-.36*</td>
<td>-.37*</td>
</tr>
</tbody>
</table>

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

* Statistically significant at p<0.001
Controlling for shared variance, what is the differential impact of teachers and parents on academic and non-academic outcomes?
## Good Relationships (unique effects)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Teacher-Student R’ship</th>
<th>Parent-Child R’ship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptive academic cognitions</td>
<td>0.50***</td>
<td>0.19***</td>
</tr>
<tr>
<td>Adaptive academic behaviours</td>
<td>0.47***</td>
<td>0.17***</td>
</tr>
<tr>
<td>Impeding/maladaptive acad cognitions</td>
<td>-0.18***</td>
<td>-0.13***</td>
</tr>
<tr>
<td>Maladaptive academic behaviours</td>
<td>-0.41***</td>
<td>-0.27***</td>
</tr>
<tr>
<td>Academic self-concept</td>
<td>0.45***</td>
<td>0.17***</td>
</tr>
<tr>
<td>General self-esteem</td>
<td>0.39***</td>
<td>0.27***</td>
</tr>
</tbody>
</table>

N=3,450 high school students; SEM $\chi^2=27,128.53$, df=1,794, CFI=.95, NNFI=.94, RMSEA=.06

*** Statistically significant at p<0.001
(UNIQUE) IMPACT OF TEACHERS, PARENTS, AND PEERS – ON BROADER (EG. SCHOOL) ENGAGEMENT FACTORS

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

Martin, Ginns, Liem, & Papworth (In Progress)
### Relationships and Broader Engagement (Unique Effects)

<table>
<thead>
<tr>
<th></th>
<th>Teachers (β)</th>
<th>Parent (β)</th>
<th>Peers (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SCHOOL ENJOY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.47*</td>
<td>.13*</td>
<td>.30*</td>
</tr>
<tr>
<td>- Girls</td>
<td>.47*</td>
<td>.14*</td>
<td>.30*</td>
</tr>
<tr>
<td>- Boys</td>
<td>.45*</td>
<td>.13*</td>
<td>.31*</td>
</tr>
</tbody>
</table>

| **CLASS PARTICIPATE**|              |            |           |
| Total                | .38*         | .11*       | .30*      |
| - Girls              | .38*         | .11*       | .31*      |
| - Boys               | .38*         | .11*       | .29*      |

| **ABSENTEEISM**      |              |            |           |
| Total                | -.09*        | Not sig    | Not sig   |
| - Girls              | -.11*        | Not sig    | Not sig   |
| - Boys               | -.07*        | Not sig    | Not sig   |

N=8,300 high school students; * Statistically significant at p<0.001
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?
Peers, Engagement, Achievement, and Self-esteem

- Peer Relationships
- School Engagement
- Academic Performance
- General Self-Esteem
Peers, Engagement, Achievement, and Self-esteem

Same-Sex Peer Relationships → School Engagement → Academic Performance

Same-Sex Peer Relationships → School Engagement → General Self-Esteem

N=1,436 high school students; SEM $\chi^2 = 2268.77$, CFI = .98, RMSEA = .05
Peers, Engagement, Achievement, and Self-esteem

Opposite-Sex Peer Relationships → .13 → School Engagement

School Engagement → .52 → General Self-Esteem

General Self-Esteem → .32 → Academic Performance

N=1,436 high school students; SEM χ² = 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?
### Interested in ME vs. Interested in CLASS

<table>
<thead>
<tr>
<th></th>
<th>Teacher Interested in ME</th>
<th>Teacher Interested in CLASS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptive motivation</td>
<td>0.44*</td>
<td>0.03</td>
</tr>
<tr>
<td>Maladaptive motivation</td>
<td>-0.33*</td>
<td>-0.02</td>
</tr>
<tr>
<td>Class participation</td>
<td>0.40*</td>
<td>0.03</td>
</tr>
<tr>
<td>Positive future intent</td>
<td>0.34*</td>
<td>0.04</td>
</tr>
<tr>
<td>Enjoy maths</td>
<td>0.38*</td>
<td>0.06*</td>
</tr>
<tr>
<td>Maths homework completion</td>
<td>0.28*</td>
<td>0.03</td>
</tr>
<tr>
<td>Maths-related career/job</td>
<td>0.24*</td>
<td>0.03</td>
</tr>
</tbody>
</table>

N=4,383 Relationship with Maths Teacher and Maths Motivation and Engagement
* p < .001

Correlation between Interested in ME and Interested in CLASS: r = .59*
Does Familiarity Breed Contempt and Absence Make the Heart Grow Fonder?


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

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

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

N=5,198 high school students; CFI = .90, RMSEA = .04
Integrating Relationships and Pedagogy

How can we build relationships and relatedness into the everyday course of pedagogy?
CONNECTIVE INSTRUCTION (or, ‘Pastoral Pedagogy’)

(following from centrality of teacher-student relationships)


Connective Instruction

- **Relationship Between Student and Teacher**
  - “Interpersonal Relationship” (the Singer)

- **Relationship Between Student and Message**
  - “Substantive Relationship” (the Song)

- **Relationship Between Student and Teaching**
  - “Pedagogical Relationship” (the Singing)
How Pedagogy Impacts Achievement, Motivation, and Engagement

PEDAGOGY

STUDENT'S CONNECTION TO:
1. TEACHER
2. MESSAGE/CONTENT/ASSESSMENT
3. TEACHING

ACHIEVEMENT
MOTIVATION
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
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.
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
THANKYOU

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