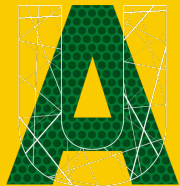


Lia Daniels, PhD

Harnessing Motivation & Emotion to Transform Educational Experiences

Prepared for Thompson Rivers' University
March 27, 2025



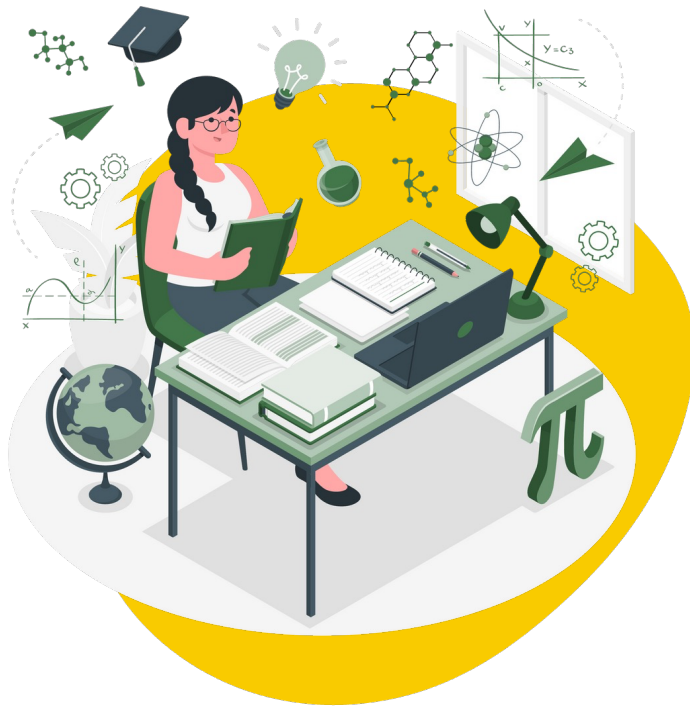


Abstract

Understanding motivation and emotion is pivotal to transforming educational experiences for both students and educators. In this presentation, Lia M. Daniels, PhD, will use robust social psychological theories to explain how motivation and emotions impact academic outcomes, shape learning environments, and are central to a scholarly conceptualization of well-being. Drawing across more than 15 years of research and practical insights, she will discuss evidence-based strategies for fostering adaptive motivation and emotions in classrooms. Special attention will be given to new research on how motivational principles can inform effective classroom assessment practices as one of the most persistent sources of ill-being reported by post-secondary students.

Agenda

- 1 impact on student outcomes
- 2 shape learning environments
- 3 wellbeing and assessment



01 Student Outcomes



Available online at www.sciencedirect.com

ScienceDirect

Contemporary Educational Psychology 33 (2008) 584–608

www.elsevier.com/locate/cedpsych

Contemporary
Educational
Psychology

Individual differences in achievement goals: A longitudinal study of cognitive, emotional, and achievement outcomes ☆

Lia M. Daniels ^{a,*}, Tara L. Haynes ^a, Robert H. Stupnisky ^a,
Raymond P. Perry ^a, Nancy E. Newall ^a, Reinhard Pekrun ^b

^a Department of Psychology, University of Manitoba, P404 Duff Roblin Building,
190 Dysart Road, Winnipeg, MB, Canada R3T 2N2

^b Institute of Educational Psychology, University of Munich, Leopoldstrasse 13, D-80802 Munich, Germany

Available online 24 October 2007

Abstract

Within achievement goal theory debate remains regarding the adaptiveness of certain combinations of goals. Assuming a multiple-goals perspective, we used cluster analysis to classify 1002 undergraduate students according to their mastery and performance-approach goals. Four clusters emerged, representing different goal combinations: high mastery/performance (i.e., multiple goals), dominant mastery, dominant performance, and low mastery/performance (i.e., low motivation). In a longitudinal analysis over one academic year, the clusters were compared on cognitive appraisals (expected achievement, perceived success), achievement-related emotions (enjoyment, boredom, anxiety), and objective measures of academic achievement (final grade in Introductory Psychology, GPA). The low-motivation cluster demonstrated the least adaptive profile across all outcomes. The multiple-goals, mastery, and performance clusters showed equivalent levels of achievement; however, students in the performance cluster were more psychologically and emotionally vulnerable than the multiple-goals and mastery clusters. Our discussion focuses on the immediate and potentially long-term implications of specific goal combinations for students and educators, with particular

☆ This research was supported by a Social Sciences and Humanities Research Council (SSHRC) of Canada doctoral fellowship to the first author, SSHRC Canadian Graduate Scholarships to the second and third authors, a CIHR Canadian Graduate Scholarship to the fifth author, and research Grant 410-88-0435 from the Social Science and Humanities Research Council of Canada to the fourth author. Parts of this research were presented at the annual meeting of the American Educational Research Association (2007) in Chicago, IL.

* Corresponding author. Fax: +1 204 474 7599.

E-mail address: lia_daniels@umanitoba.ca (L.M. Daniels).

Journal of Educational Psychology
2008, Vol. 101, No. 4, 584–608

© 2007 American Psychological Association
0022-0665/08/\$12.00 DOI: 10.1037/0022-0665.101.4.584

A Longitudinal Analysis of Achievement Goals: From Affective Antecedents to Emotional Effects and Achievement Outcomes

Lia M. Daniels
University of Alberta

Robert H. Stupnisky
University of Manitoba

Reinhard Pekrun
University of Munich

Tara L. Haynes, Raymond P. Perry,
and Nancy E. Newall
University of Manitoba

Affect and emotions are frequently seen as outcomes of mastery and performance goals, but affective experiences may also predict goal adoption. In a predictive study ($N = 669$ first-year college students), the authors used structural equation modeling to estimate relationships from 2 initial affective experiences to mastery and performance-approach goals, from goals to discrete emotions, and from discrete emotions to final grades in a university course while controlling for prior achievement. Representing initial affective experiences, helplessness positively predicted mastery and performance goals, whereas helplessness negatively predicted mastery goals. Mastery goals positively predicted enjoyment, which in turn positively predicted achievement, and negatively predicted boredom, which in turn negatively predicted achievement. Anxiety was negatively predicted by mastery goals, positively predicted by performance goals, and exerted a negative predictive influence on achievement. The findings suggest that predictive relationships between goals and achievement are mediated by students' emotions. Results are discussed with regard to the importance of affect and emotions for achievement goal theory.

Keywords: achievement goals, emotion, first-year college students, achievement, structural equation modeling

Considerable evidence shows that achievement goals and affect are intricately related. However, within the literature, researchers have conceptualized affect as both an outcome of goal pursuit (e.g., Pekrun, Elliot, & Maier, 2006) and as an antecedent of goal adoption (e.g., Elliot & Thrash, 2002; Seifert, 1995). The relationships are further complicated by the multitude of definitions and operationalizations of affect and emotions (e.g., Frijda, 1993; Rosenberg, 1998). In response, several models detailing possible relationships between goals, affect, and discrete emotions have been proposed (e.g., Linenbach & Pintrich, 2002; Pekrun et al., 2006; Pekrun, Elliot, & Maier, in press; Seifert, 1995).

The concepts of affect and emotions used in these models pertain to general positive and negative affect, discrete emotions, and individual dispositions. Emotions are defined as multiple component processes composed of affective, cognitive, physiological, and behavioral elements (Scherer, 2000; e.g., for anxiety: feeling

nervous, worried, increased activation, anxious facial expression). Compared with emotions, moods are of lower intensity and lack a specific referent (Rosenberg, 1998). Different emotions and moods are compiled in the more general constructs of positive versus negative affect (Tellegen, Watson, & Clark, 1999); positive affect being an omnibus variable composed of emotions such as enjoyment, pride, and satisfaction, and negative affect as an omnibus variable composed of emotions such as anxiety, frustration, and sadness (e.g., Pintrich, 2000).

These types of affective variables, and their relationships with goals, may be particularly relevant to first-year university students who find themselves in a new achievement setting that differs markedly from high school. The pressure in such novel, highly competitive learning environments is appreciable. At the extreme, approximately 27% of college freshmen do not complete their first year (Cravatta, 1997; Feldman, 2005; Geraghty, 1996). Economic and personal issues surely explain some of the attrition; however, the characteristics of a new achievement setting, such as increased pressure to excel, high demands for autonomy, and emotional instability, also contribute (Perry, 1991, 2003). Under these conditions, students' goals may be particularly susceptible to the influence of affective experiences. Likewise, students' emotions may be readily shaped by the goals they endorse in their new achievement setting. Trying to capture this sequence of events, we focused on both antecedent and outcome relationships between goals and affect or emotions in the present study (Linenbach & Pintrich, 2002; Pekrun et al., 2006), and their subsequent effects on first-year university students' achievement (Pekrun et al., in press).

Lia M. Daniels, Department of Educational Psychology, University of Alberta, Edmonton, Alberta, Canada; Robert H. Stupnisky, Tara L. Haynes, Raymond P. Perry, and Nancy E. Newall, Department of Psychology, University of Manitoba, Winnipeg, Manitoba, Canada; Reinhard Pekrun, Department of Psychology, University of Munich, Munich, Germany.

Correspondence concerning this article should be addressed to Lia M. Daniels, Department of Educational Psychology, University of Alberta, 6-102 Education North, Edmonton, Alberta, Canada, T6G 2G5. E-mail: lia_daniels@ualberta.ca



Social Sciences and Humanities
Research Council of Canada

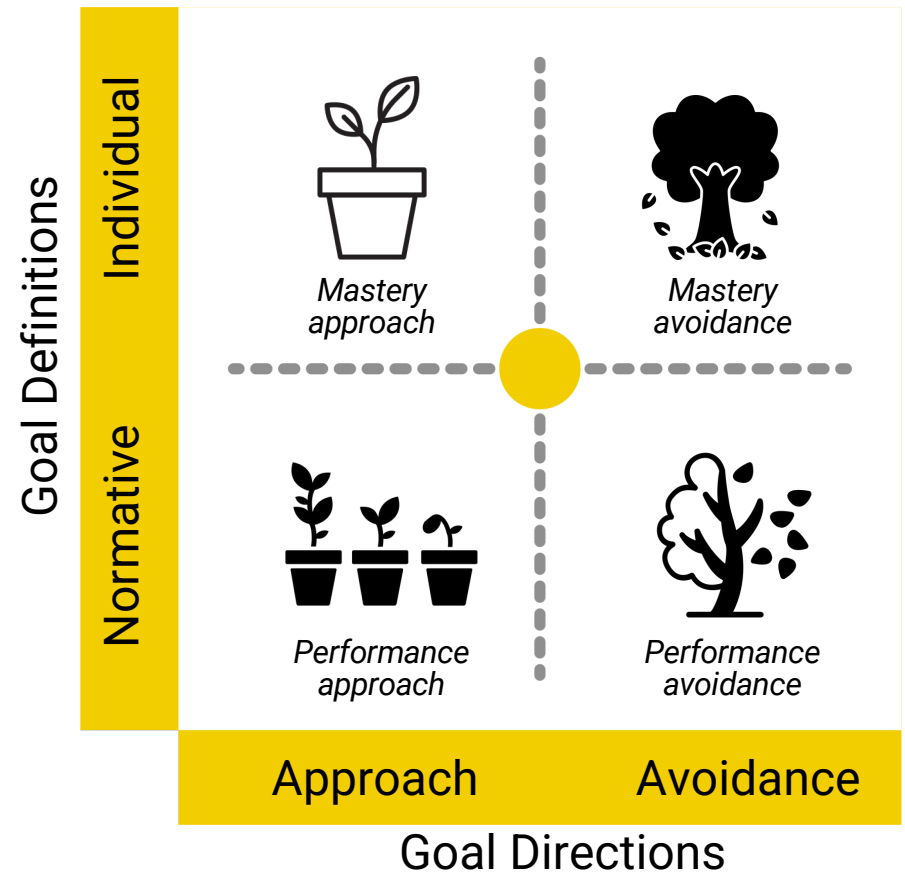
Conseil de recherches en
sciences humaines du Canada

Canada

Achievement Goal Theory

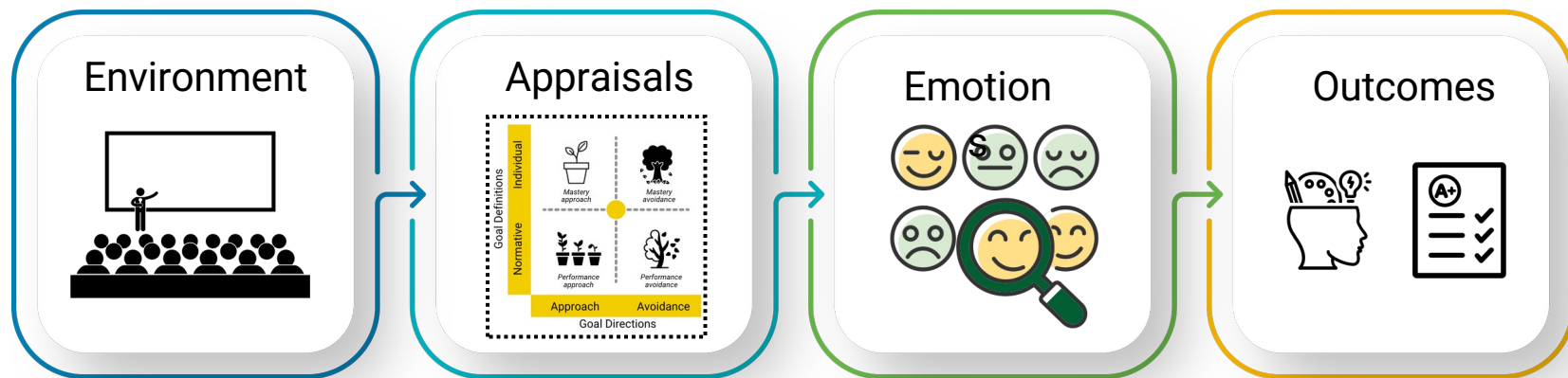
“the purpose for which a person engages in achievement behaviour”

Elliot & Thrash, 2001, p. 140

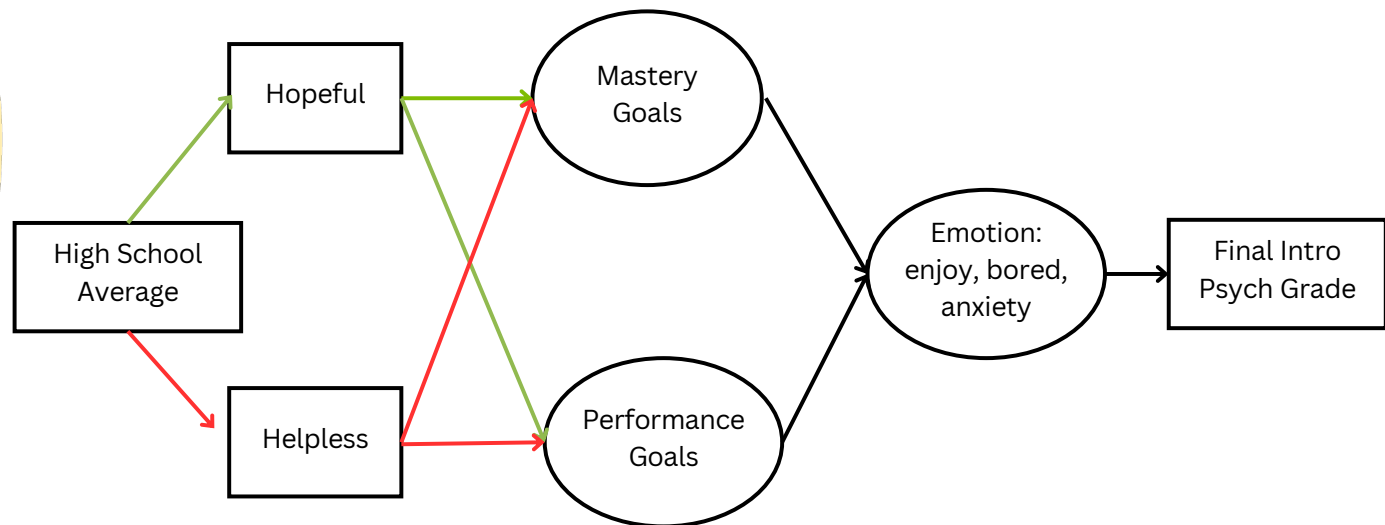


Control-Value Theory of Emotions

“Within contemporary perspectives on the psychology of emotion, self-related and situational appraisals are assumed to be important proximal determinants of human emotions” Pekrun, 2006, p. 317

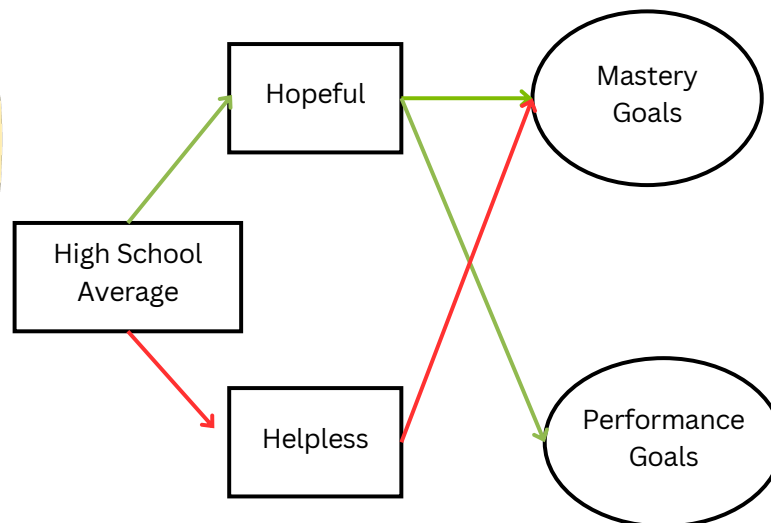


Longitudinal data
n = 699
first year students
age 17-22 years
68% women
70% White



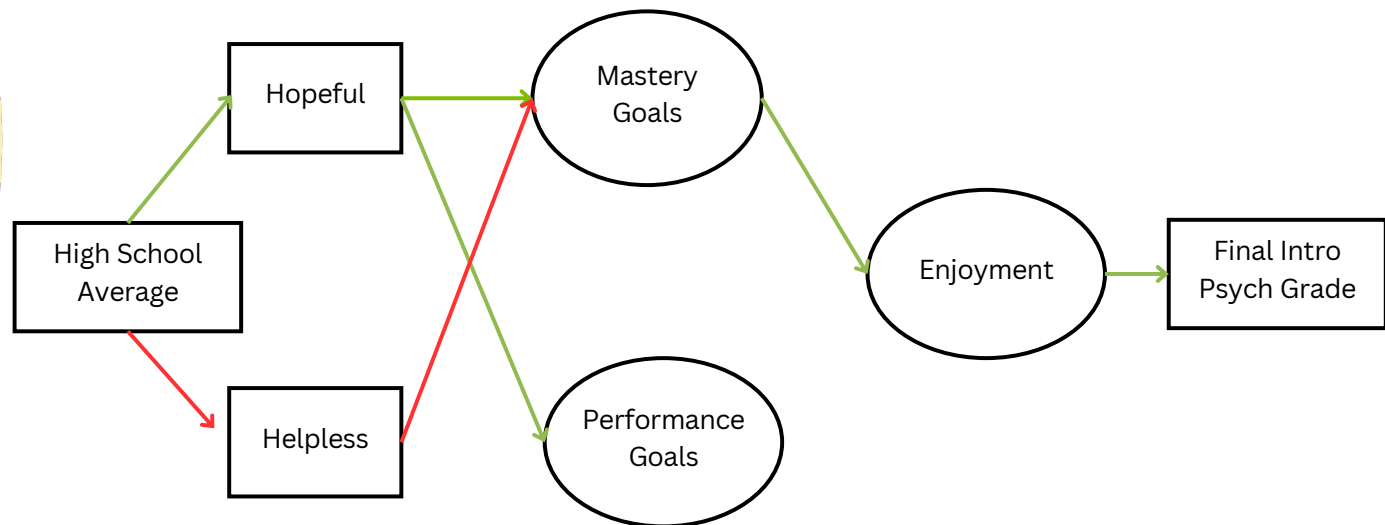
Daniels, L. M., Stupnisky, R. H., Pekrun, R., Haynes, T. L., Perry, R. P., & Newall, N. E. (2009). A longitudinal analysis of achievement goals: From affective antecedents to emotional effects and achievement outcomes. *Journal of Educational Psychology*, 101(4), 948.

Longitudinal data
n = 699
first year students
age 17-22 years
68% women
70% White



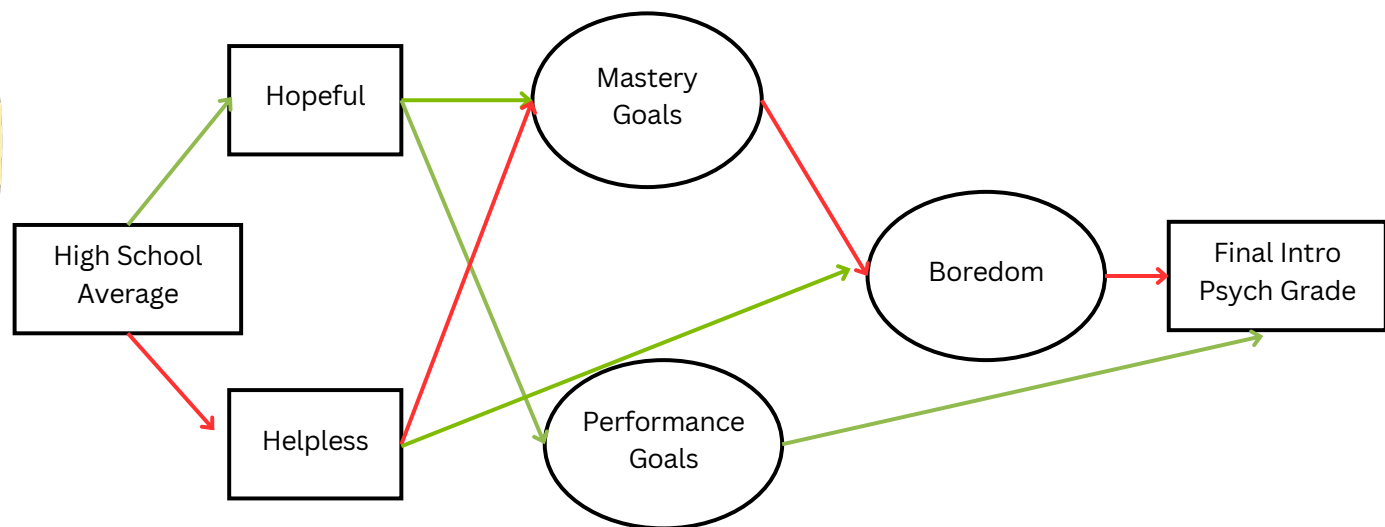
Daniels, L. M., Stupnisky, R. H., Pekrun, R., Haynes, T. L., Perry, R. P., & Newall, N. E. (2009). A longitudinal analysis of achievement goals: From affective antecedents to emotional effects and achievement outcomes. *Journal of Educational Psychology*, 101(4), 948.

Longitudinal data
n = 699
first year students
age 17-22 years
68% women
70% White



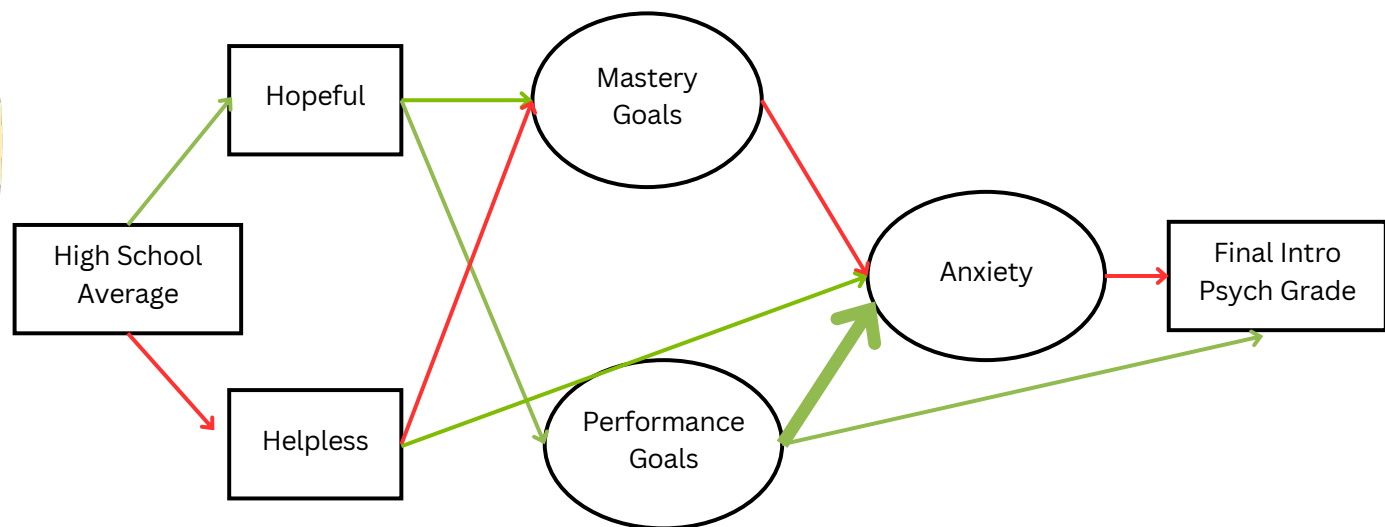
Daniels, L. M., Stupnisky, R. H., Pekrun, R., Haynes, T. L., Perry, R. P., & Newall, N. E. (2009). A longitudinal analysis of achievement goals: From affective antecedents to emotional effects and achievement outcomes. *Journal of Educational Psychology*, 101(4), 948.

Longitudinal data
n = 699
first year students
age 17-22 years
68% women
70% White



Daniels, L. M., Stupnisky, R. H., Pekrun, R., Haynes, T. L., Perry, R. P., & Newall, N. E. (2009). A longitudinal analysis of achievement goals: From affective antecedents to emotional effects and achievement outcomes. *Journal of Educational Psychology*, 101(4), 948.

Longitudinal data
n = 699
first year students
age 17-22 years
68% women
70% White



Daniels, L. M., Stupnisky, R. H., Pekrun, R., Haynes, T. L., Perry, R. P., & Newall, N. E. (2009). A longitudinal analysis of achievement goals: From affective antecedents to emotional effects and achievement outcomes. *Journal of Educational Psychology*, 101(4), 948.

Longitudinal data

n = 1002

80% first year

64% women

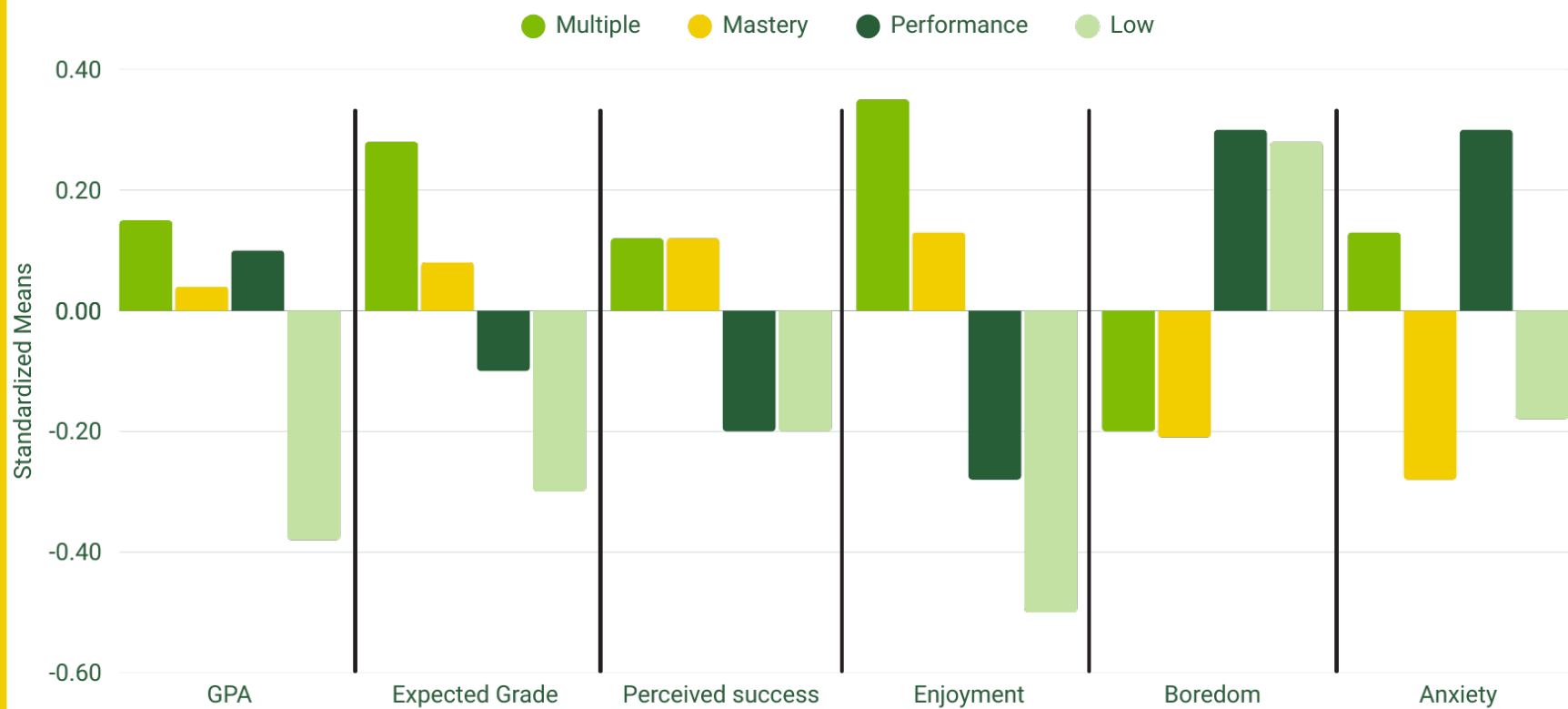
11% ESL

Table 3

Cluster centroids

Goal type	Cluster 1: Multiple goals	Cluster 2: Mastery	Cluster 3: Performance	Cluster 4: Low motivation
Mastery	.71	.62	-.95	-.79
Performance	1.06	-.16	.12	-1.43
<i>n</i>	289	275	232	206

Daniels, L. M., Haynes, T. L., Stupnisky, R. H., Perry, R. P., Newall, N. E., & Pekrun, R. (2008). Individual differences in achievement goals: A longitudinal study of cognitive, emotional, and achievement outcomes. *Contemporary Educational Psychology*, 33(4), 584-608.



Daniels, L. M., Haynes, T. L., Stupnisky, R. H., Perry, R. P., Newall, N. E., & Pekrun, R. (2008). Individual differences in achievement goals: A longitudinal study of cognitive, emotional, and achievement outcomes. *Contemporary Educational Psychology*, 33(4), 584-608.

02 Shape learning environments



From pre-service to practicing teacher: considering the stability of personal and classroom mastery and performance goals

Lia M. Daniels*

Department of Educational Psychology, University of Alberta, Edmonton, Canada

(Received 10 October 2012; final version received 22 November 2012)

Research shows that personal and classroom goals and practicing teachers' personal and professional research has examined changes to these types of goals from student to teacher. This study followed pre-service and assessed changes in self-reported personal surveys and focus groups. Correlations, covariance and reliable change indices were used to the quantitative data. Qualitative data were also supported the quantitative results. The results show as personally oriented towards mastery-approach 4 during their pre-service education but less personal terms of classroom goals, performance practices indices decreased, particularly for secondary school teachers are personally mastery-oriented in their establish classroom mastery goals appear difficult to practices

Keywords: motivation; learning environment; teaching practices

The transition from student to teacher is one that is difficult to understand. Although on the surface from one educational context to another, in reality different achievement environments. In Canada, post-teacher education, represents a competitive achievement regularly assessed, vie to win scholarships and honor reference letters. For pre-service teachers the pressure an all-time high because there are few job opportunities (Ontario College of Teachers, 2012). However, if teaching positions the achievement environment evaluation of teaching is low in Canada relative to accountability with students, parents and the Federation, 2003). Nonetheless, the pressures to standardised tests remain (Weber, Aitken, Lupart, & shift, and because achievement goals are responsive 2005), new teachers may have to seriously re-examine

*Email: lia.daniels@ualberta.ca

© 2013 Taylor & Francis

Concordance Between Preservice Teachers' Personal Responsibilities and Intended Instructional Practices

Lia M. Daniels, Amanda Radil, and Amanda K. Wagner
University of Alberta, Edmonton, Canada

During their education, preservice teachers begin to assume professional responsibilities and gain pedagogical knowledge. However, the question remains whether preservice teachers intend to use instructional practices that are effective in meeting their assumed responsibilities. Thus, we examined the concordance between preservice teachers' responsibilities and their intended instructional practices. At the start of the semester there was no concordance. At the end of the semester there was high concordance in two instances: Responsibility for student motivation negatively predicted performance goal-oriented practices; responsibility for teaching positively predicted rationales and negatively predicted extrinsic rewards. Instructional practices associated with responsibility for achievement and motivation were not concordant. We discuss how preservice teachers understand these responsibilities and their readiness to adopt evidence-based practices.

Keywords: beliefs; correlational analysis; instruction; motivation; teacher preparation

THE CLASSROOM THAT students experience represents a series of intentional instructional decisions made by the teacher that are largely invisible to the student eye (Kagan, 1992; Wilson, Shulman, & Richert, 1987). What a Grade 1 student sees as a sticker his teacher chose as a way to motivate; the revision process that frustrates a Grade 9 student is her English teacher's way to maximize her chance of a high grade. During their training, preservice teachers face the massive challenge of reinterpreting years of student experiences in light of the theoretical and pedagogical foundation that underpins the teaching profession (Britzman, 1986).

The scenarios presented above share two underlying components. First, the teacher felt responsible for some outcome. Lauerma and Karabenick (2011a) suggest that preservice and practicing teachers' daily sense of personal responsibility concerns can be sorted according to four categories: responsibility for students' achievement, motivation, relationships and the quality of the teacher's own teaching. Second, the teacher implemented some instructional practice with the hope that it would allow him or her to fulfill the corresponding responsibility. Preservice teachers receive implicit and explicit instruction in a range of instructional practices during their education (Darling-Hammond & Bransford, 2005). Educational research based on achievement goal theory (Elliot, 1999) and self-determination theory (Deci & Ryan, 2000) suggests that some of these practices will be more successful at meeting particular responsibilities

Address correspondence to Lia M. Daniels, Department of Educational Psychology, University of Alberta, 6-102 Education North, Edmonton, AB, Canada T6G 2G5. E-mail: lia.daniels@ualberta.ca

Supporting pre-service teachers' motivation beliefs and approaches to instruction through an online intervention

Lia M. Daniels¹*, Lauren D. Goegan¹, Amanda I. Radil² and Bryce S. Dueck¹

¹Department of Educational Psychology, Faculty of Education, Edmonton, Alberta, Canada

²Department of Family Medicine, Faculty of Medicine and Alberta, Edmonton, Alberta, Canada

Background. Previous research has shown that pre-service responsibility for student motivation and feel underprepared issues. As an extension, researchers have designed interventions about motivation or equip them with approaches to instruction. Following best practices for motivation interventions, we on intervention and tested its efficacy to shift pre-service teacher approaches to instruction to be more supportive of student motivation. Included priming, materials designed for mindsets and/or for consolidation activity, and take-home materials.

Sample. A convenience sample of 384 pre-service teacher university participated.

Methods. We embedded an experimental design into multiple assessment course. After completing a pre-test, participants a one of four conditions: beliefs-only, approaches-only, combined or control. After completing the online module, students assessment practices and motivation.

Results. The results from our MANCOVA showed that participated in the beliefs-only condition reported increased student motivation, more growth mindset beliefs, and less participants in the other conditions. The approaches-only condition reported mastery or performance approaches to instruction as had no effect on beliefs or approaches.

Conclusions. We discuss the implications for educating pre-student motivation and suggest that beliefs and approaches addressed separately.

Researchers have shown that teachers' beliefs and approach 2012) have important implications for students' motivation (2008). As a natural extension, researchers have designed interventions to shift pre-service teacher beliefs about motivation (Seaton, 2018) or equip them with (Cheon, Reeve, Lee, & Lee, 2018), but rarely both. Designing

DOI:10.1111/bjpe.12393

The impact of COVID-19 triggered changes to instruction and assessment on university students' self-reported motivation, engagement and perceptions

Lia M. Daniels¹, Lauren D. Goegan¹, Patti C. Parker¹

Received: 25 September 2020 / Accepted: 22 January 2021
© The Author(s), under exclusive licence to Springer Nature B.V. part of Springer Nature 2021

Abstract

During the northern hemisphere Winter 2020 academic term, university students had to adjust to remote learning in response to the COVID-19 pandemic. This abrupt change provided a unique opportunity to examine students' motivation, engagement and perceptions of success and cheating under two learning conditions, namely traditional and remote. We used a single survey to collect retrospective self-report data from a convenience sample of Canadian undergraduate students ($n = 98$) about their motivation, engagement and perceptions of success and cheating before COVID-19 and then in remote learning. Students' achievement goals, engagement and perceptions of success all significantly decreased, while their perceptions of cheating increased. Moreover, we used regression analyses to examine associations amongst achievement goals and engagement, perceptions of success and cheating concerns. Mastery-approach goals were positively associated with more engagement and higher perceptions of success. Achievement goals were unrelated to cheating. Students in large classes and who were originally concerned about cheating became more concerned about cheating in remote learning conditions. Our study provides information to researchers and instructors about how achievement goals relate to student outcomes across learning conditions. By extension, we provide timely recommendations for instructors as they continue to wrestle with how to deliver their courses during the COVID-19 pandemic.

Keywords: Motivation · Achievement goals · Engagement · Success · Cheating · Undergraduates

✉ Lauren D. Goegan
goegan@ualberta.ca
Lia M. Daniels
lia.daniels@ualberta.ca
Patti C. Parker
pparker@ualberta.ca

¹ Department of Educational Psychology, University of Alberta, Edmonton, AB, Canada

Published online: 16 February 2021



Social Sciences and Humanities
Research Council of Canada

Conseil de recherches en
sciences humaines du Canada

Canada

Classroom Goals

Pre-service Teachers

In-Service Teachers

Classroom Mastery Goal Structures

I plan to give a wide range of assessment to match student skills.

My goal is to learn as much as possible.



My goal is to teach as well as possible.

My aim is to avoid learning less than I possibly could.



My aim is to avoid teaching worse than I possibly could.

Classroom Performance Goal Structures

I plan to give special privileges to students who do the best work.

My goal is to perform better than other students.



My goal is to perform better than the other teachers.

I am striving to avoid performing worse than others.



I strive to avoid performing worse than other teachers.

Classroom Mastery Goal Structures

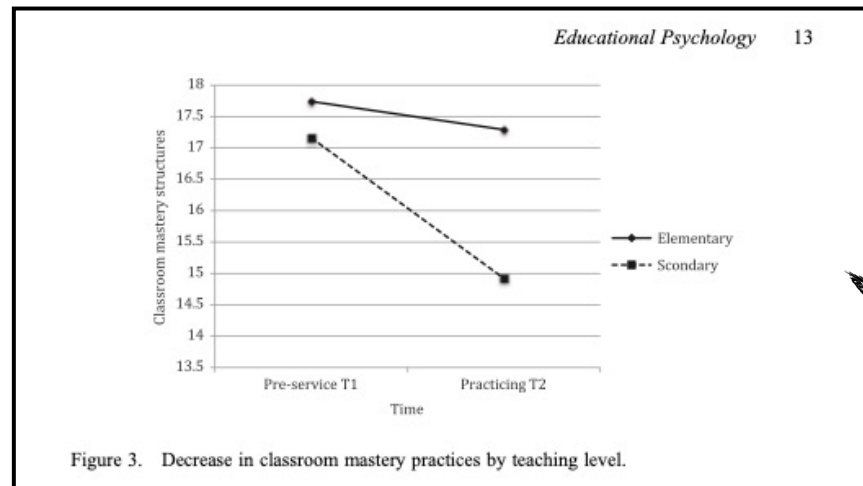
I give a wide range of assessment to match student skills.

Classroom Performance Goal Structures

I give special privileges to students who do the best work.

Good Intentions

Longitudinal multi-
method
2 years across grad
n = 47, 72% women
22-44 years
27 elementary, 19 high
school



You are in competition with other teachers. If there's too many teachers at your school, and there's only one position the next year, you want to be the best you can be but you also want your principal to notice. It's not a competition, but it is when you don't have job it is a competition.

Daniels, L. M. (2015). From pre-service to practicing teacher: Considering the stability of personal and classroom mastery and performance goals. *Educational Psychology*, 35(8), 984-1005.

Personal Responsibility

“a sense of internal obligation and commitment to produce or prevent designated outcomes, or that these outcomes should have been produced or prevented” (Lauermann & Karabenick, 2011 p. 135).

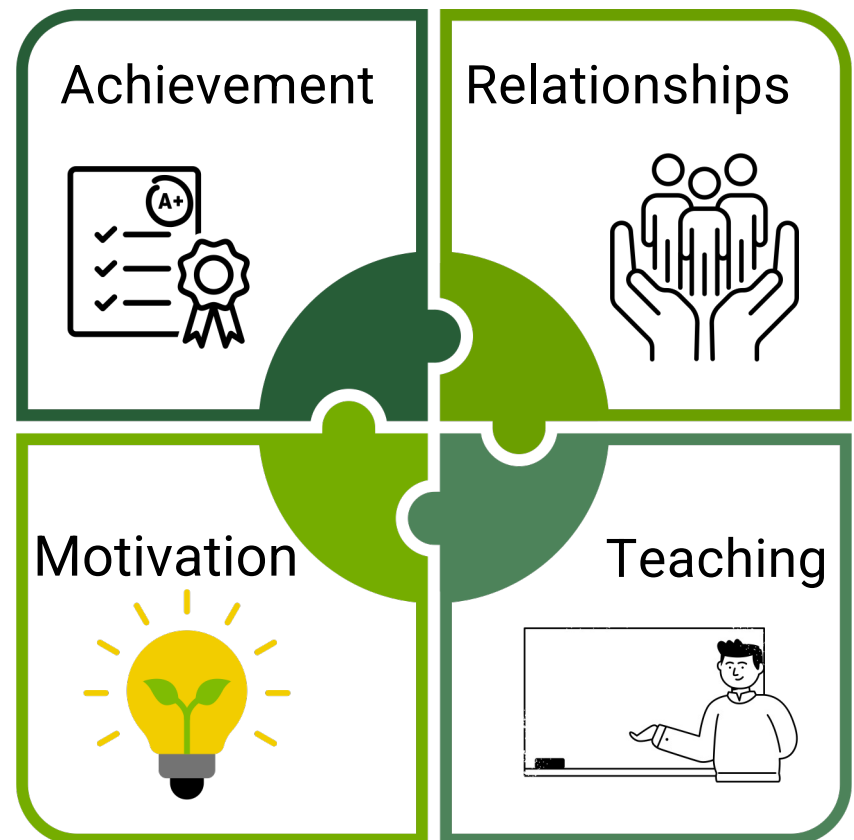
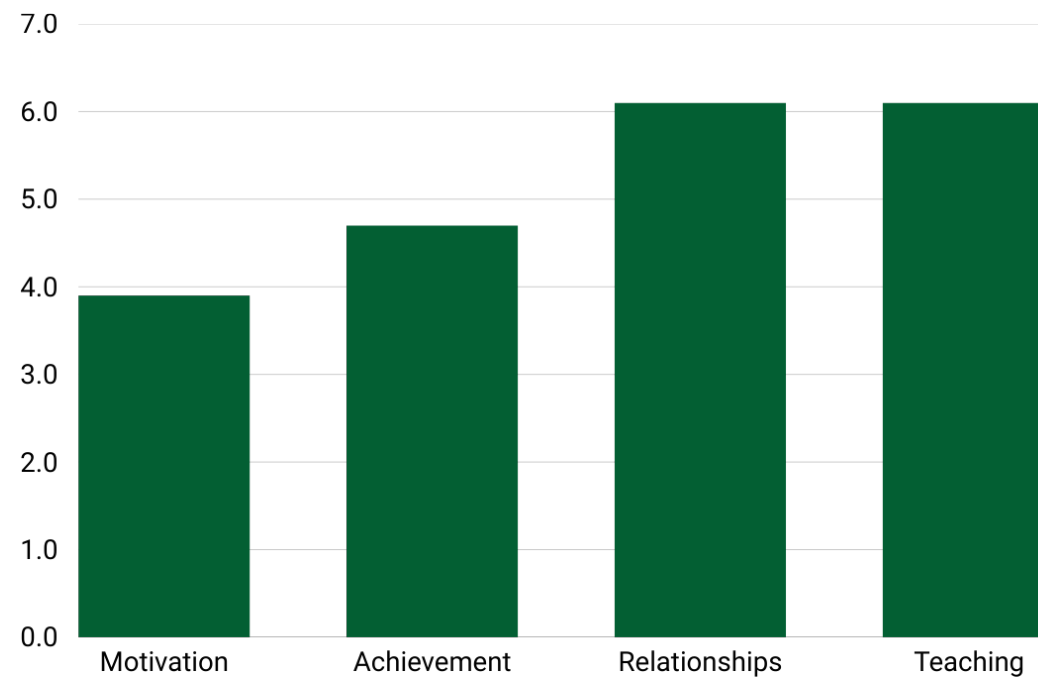


FIGURE 2 Mean of endorsement of responsibilities at Time 1. Note. All paired samples t tests are significant to $p < .001$ except for the between responsibility for relationships and responsibility for teaching, $t(89) = -0.16$, $p = .87$.



Longitudinal data start
and end of course
 $n = 97$
pre-service teachers
74% women
age $M = 21$, 19-44
74% high school

Longitudinal data start
and end of course
 $n = 97$
pre-service teachers
74% women
age $M = 21, 19-44$
74% high school

536 DANIELS, RADIL, AND WAGNER

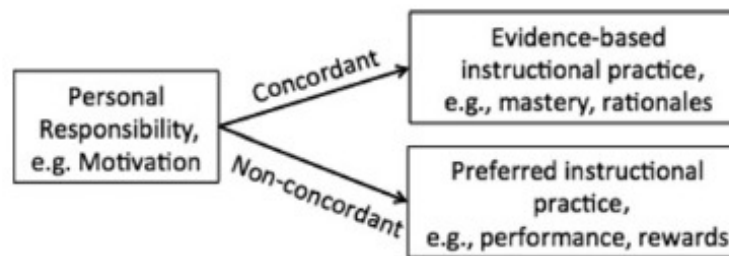


FIGURE 1 Conceptual framework of concordance between personal responsibility and instructional practices.

Instructional Strategies



Mastery

I plan to give a wide range of assessment to match student skills.



Performance

I plan to give special privileges to students who do the best work.

Instructional Strategies



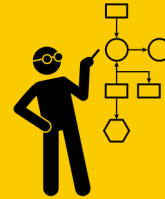
Mastery

I plan to give a wide range of assessment to match student skills.



Performance

I plan to give special privileges to students who do the best work.



Rationale

I plan to offer rationales that explain the importance of the work.



Rewards

I plan on providing incentives (e.g., tangible rewards, free time).

We saw almost no evidence of concordance between a responsibility and an instructional decisions that would support that outcome.

TABLE 4
Standardized Beta Weights From Regression Analyses Predicting Instructional Strategies at Time 2

Predictor variable	Mastery-goal structure T2			Performance-goal structure T2			Rationale T2			Extrinsic rewards T2		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Age	.19	.09	.04	.20	.16	.25*	-.02	-.04	-.10	.12	.127	.14
Stream ^a	.35**	.21**	.19	-.06	-.04	.05	-.01	.00	-.04	.15	.116	.11
Section	.11	.06	.05	-.09	-.14	-.14	.06	.05	.08	.01	-.05	-.01
Instructional Strategy T1		.49***	.54***		.40***	.44***		.36**	.31**		.42***	.43***
Responsibility for achievement T1			-.29*			.16			-.33*			.19
Responsibility for motivation T1			.05			-.41**			.07			.15
Responsibility for relationships T1			.26*			.14			-.13			-.14
Responsibility for teaching T1			.05			-.13			.48**			-.39**
Adjusted R ²	.10	.32	.36	.01	.16	.24	-.04	.08	.20	-.01	.16	.25

* $p < .05$, ** $p < .01$, *** $p < .001$.

^a1 = elementary; 2 = secondary.

We saw almost no evidence of concordance between a responsibility and an instructional decisions that would support that outcome.

TABLE 4
Standardized Beta Weights From Regression Analyses Predicting Instructional Strategies at Time 2

Predictor variable	Mastery-goal structure T2			Performance-goal structure T2			Rationale T2			Extrinsic rewards T2		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Age	.19	.09	.04	.20	.16	.25*	-.02	-.04	-.10	.12	.127	.14
Stream ^a	.35**	.21**	.19	-.06	-.04	.05	-.01	.00	-.04	.15	.116	.11
Section	.11	.06	.05	-.09	-.14	-.14	.06	.05	.08	.01	-.05	-.01
Instructional Strategy T1		.49***	.54***		.40***	.44***		.36**	.31**		.42***	.43***
Responsibility for achievement T1			-.29*			.16			-.33*			.19
Responsibility for motivation T1			.05			-.41**			.07			.15
Responsibility for relationships T1			.26*			.14			-.13			-.14
Responsibility for teaching T1			.05			-.13			.48**			-.39**
Adjusted R ²	.10	.32	.36	.01	.16	.24	-.04	.08	.20	-.01	.16	.25

* $p < .05$, ** $p < .01$, *** $p < .001$.

^a1 = elementary; 2 = secondary.



Intervention

Increase pre-service teachers' responsibility for motivation.

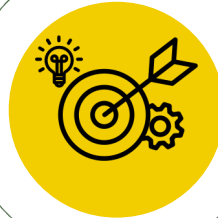
Teach them about evidence-based motivation practices.

Intervention Fundamentals



Beliefs are reflected on before presenting a new perspective.

Priming



Specific, targeted, truthful but inconspicuous message.

Mindset



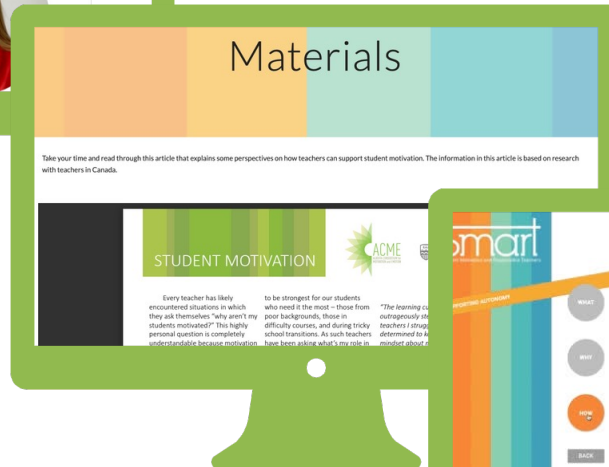
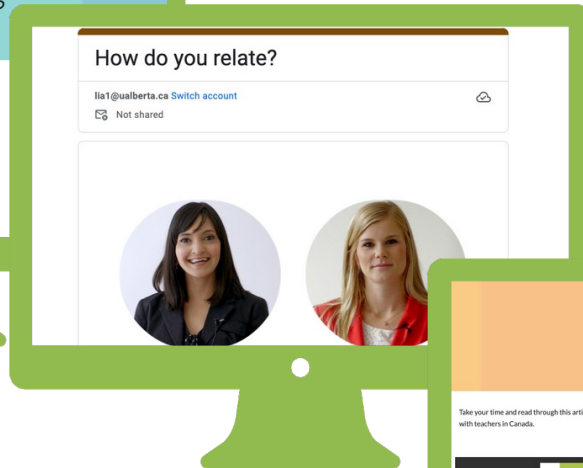
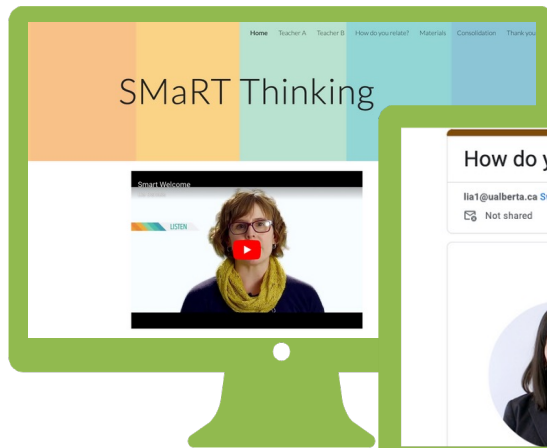
Brief information explaining how to do things and why.

"How to"



Saying is believing writing task to own the message.

Consolidation



smart
Student Motivation and Responsible Teachers

<https://sites.google.com/ualberta.ca/smartred>

<https://sites.ualberta.ca/~lia1/smart-skills/>

Experimental Design

Random assignment

To four conditions:
Beliefs, Strategies,
Combined, Control

Duration

10-51 minutes
 $M = 20$ min



In class

Large lectures, together
but individual



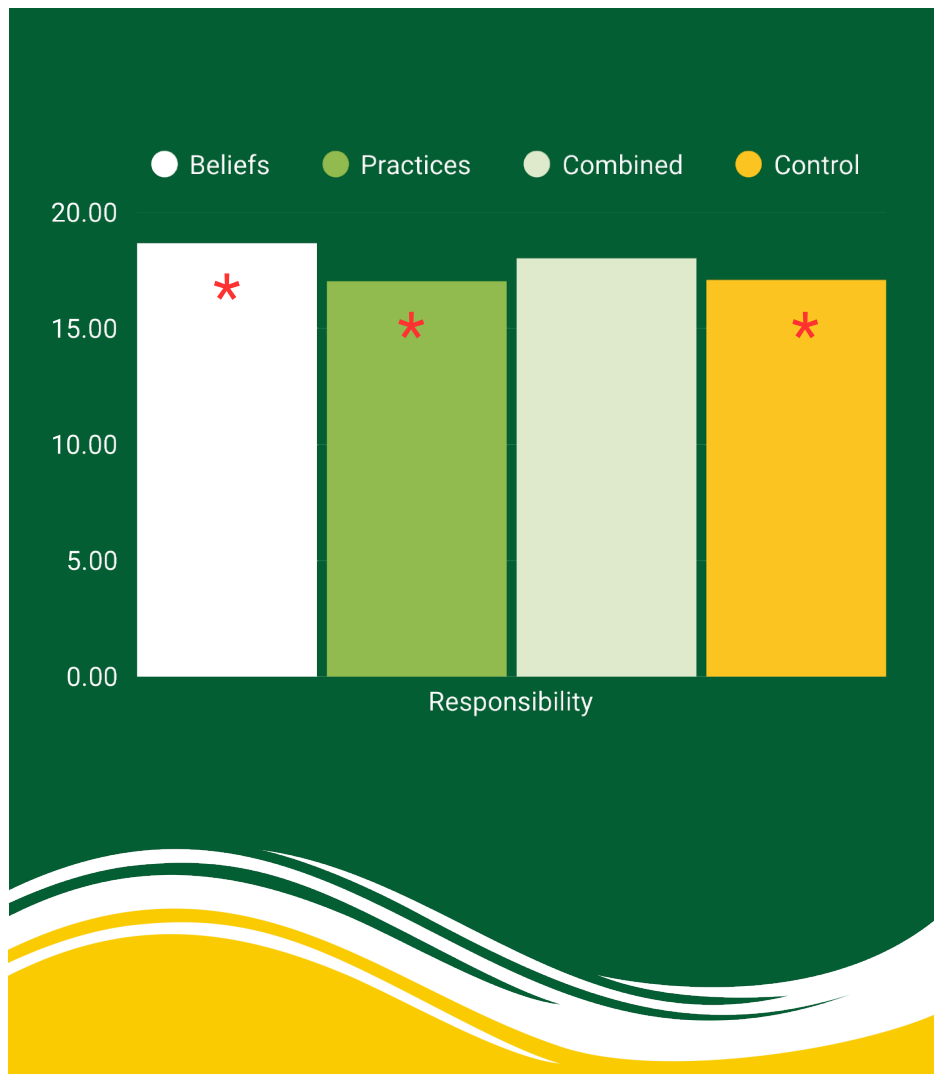
384 participants

206 elementary
178 secondary

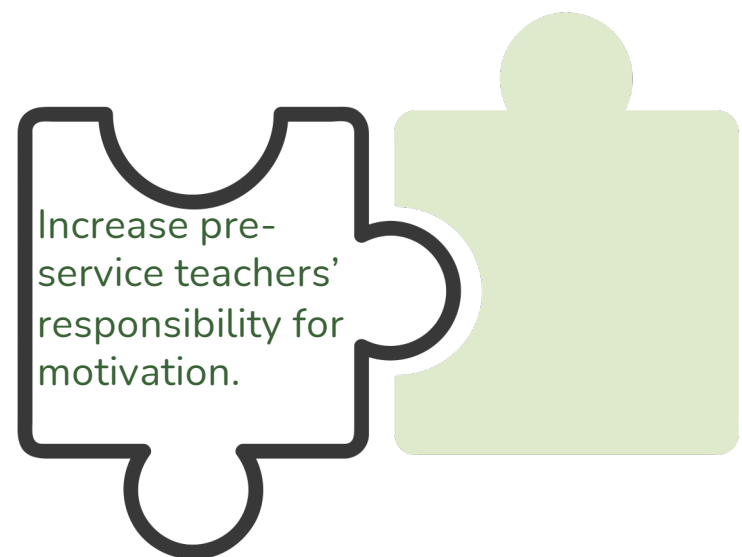
92 men, 286 women, 2 non-binary

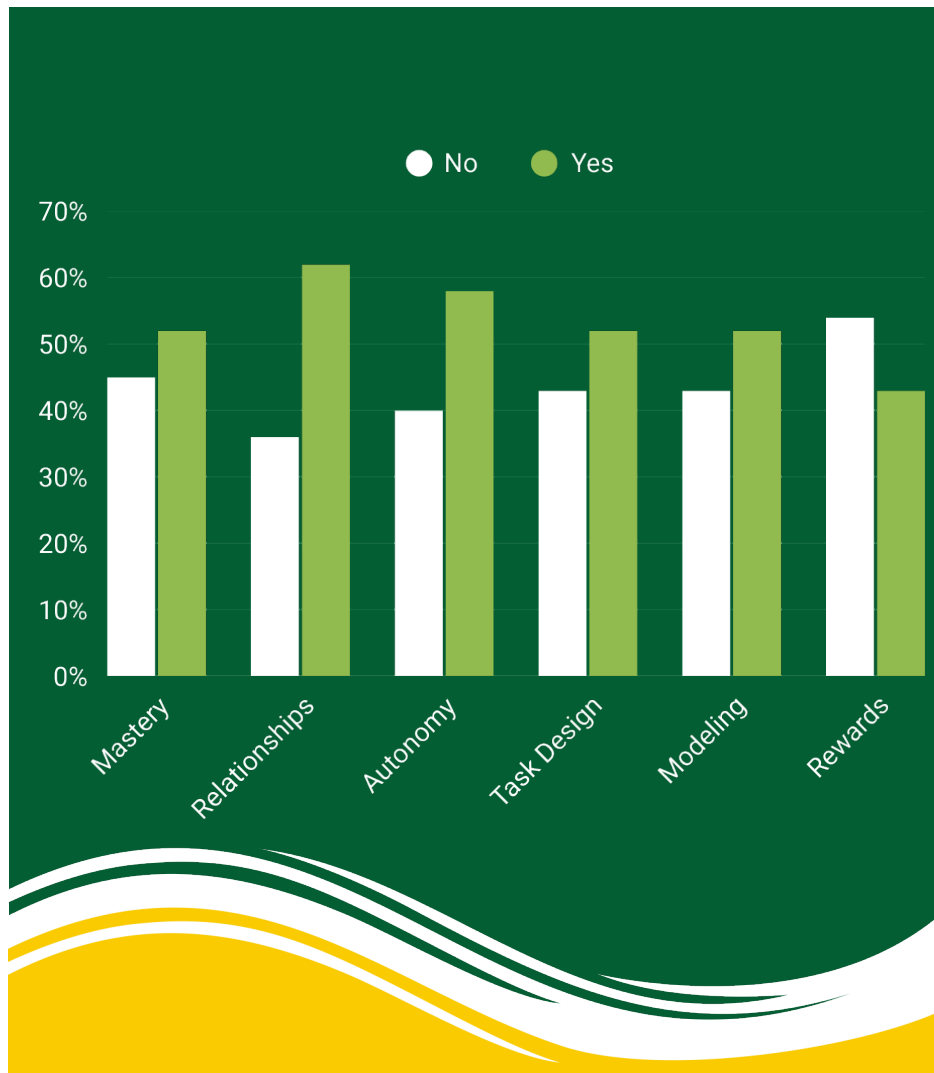


Daniels, L. M., Goegan, L. D., Radil, A. I., & Dueck, B. S. (2021). Supporting pre-service teachers' motivation beliefs and approaches to instruction through an online intervention. *British Journal of Educational Psychology*, 91(2), 775-791.

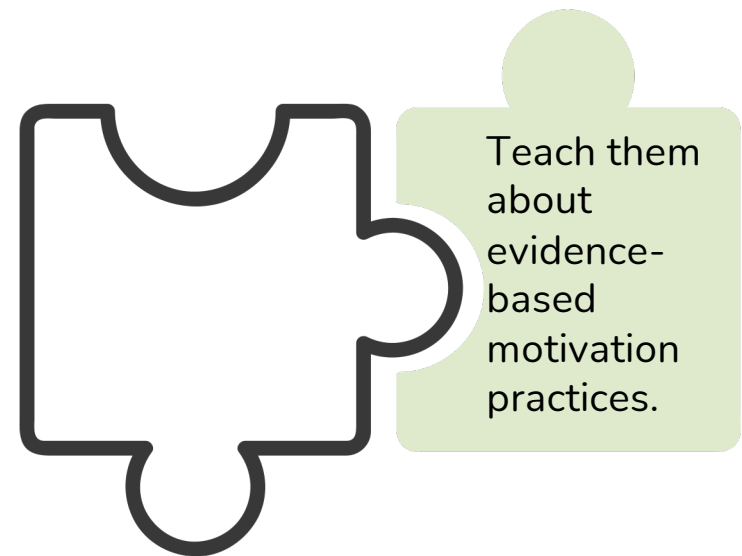


Results





Results

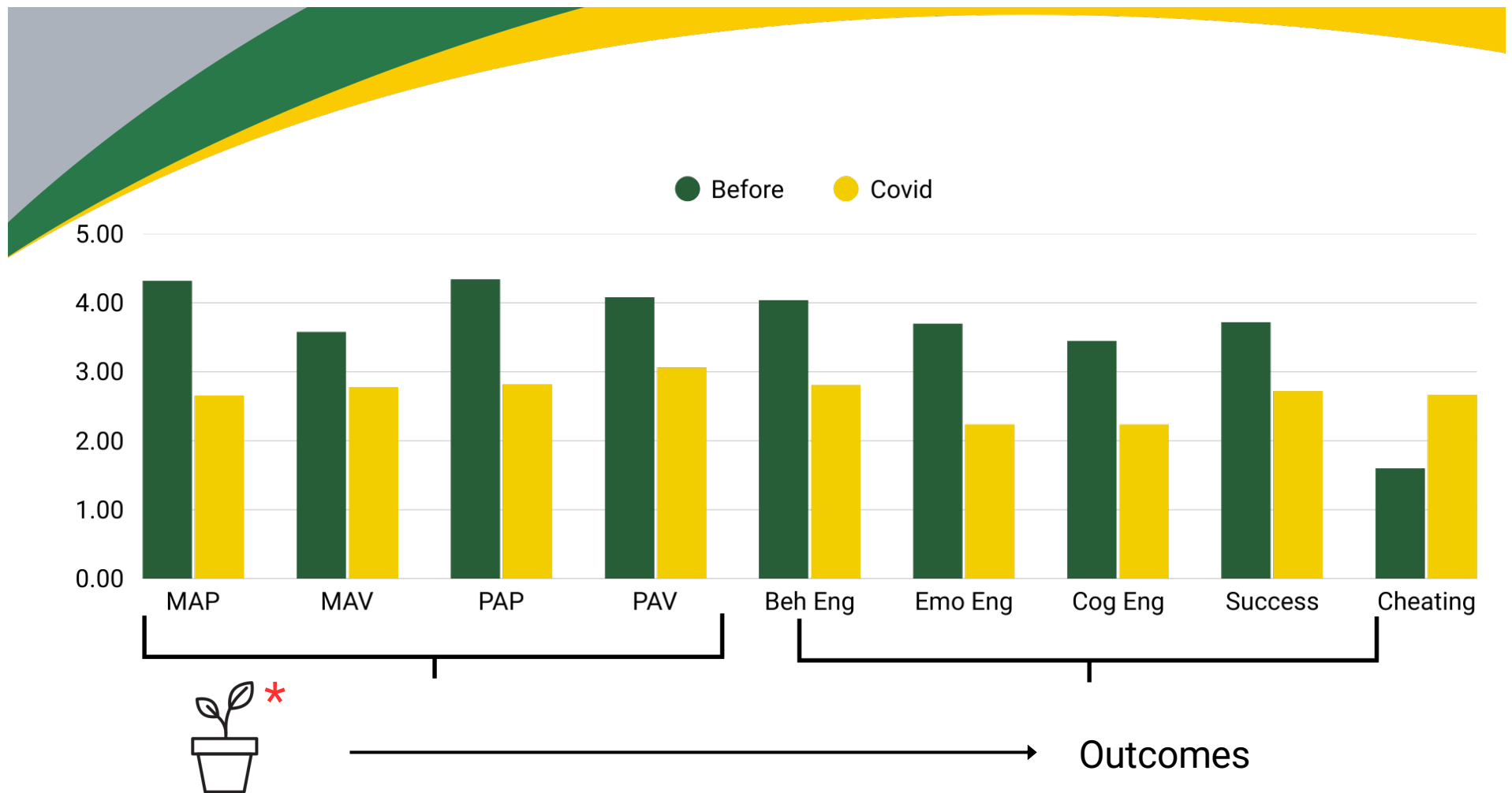




$n = 98$ post secondary students

within participant design contrasting
usual vs. covid learning environments

(a) Did students' motivation, engagement
and perceptions of cheating and success
change across the two learning
conditions? and (b) Do achievement
goals differently predict students'
engagement and perceptions of cheating
and success across the two conditions?



Daniels, L. M., Goegan, L. D., & Parker, P. C. (2021). The impact of COVID-19 triggered changes to instruction and assessment on university students' self-reported motivation, engagement and perceptions. *Social Psychology of Education, 24*(1), 299-318.



03

Wellbeing and assessment

Self-Determination Theory

“...as these psychological need satisfactions are enhanced [through practices], people demonstrate not only more intrinsic motivation and internalization but also more wellness, meaning, and vitality...” Ryan & Vansteenkiste, 2023, p.9

Positive emotions

Negative emotions

Perc. of success

Confidence

Fairness

Indicators of Wellbeing



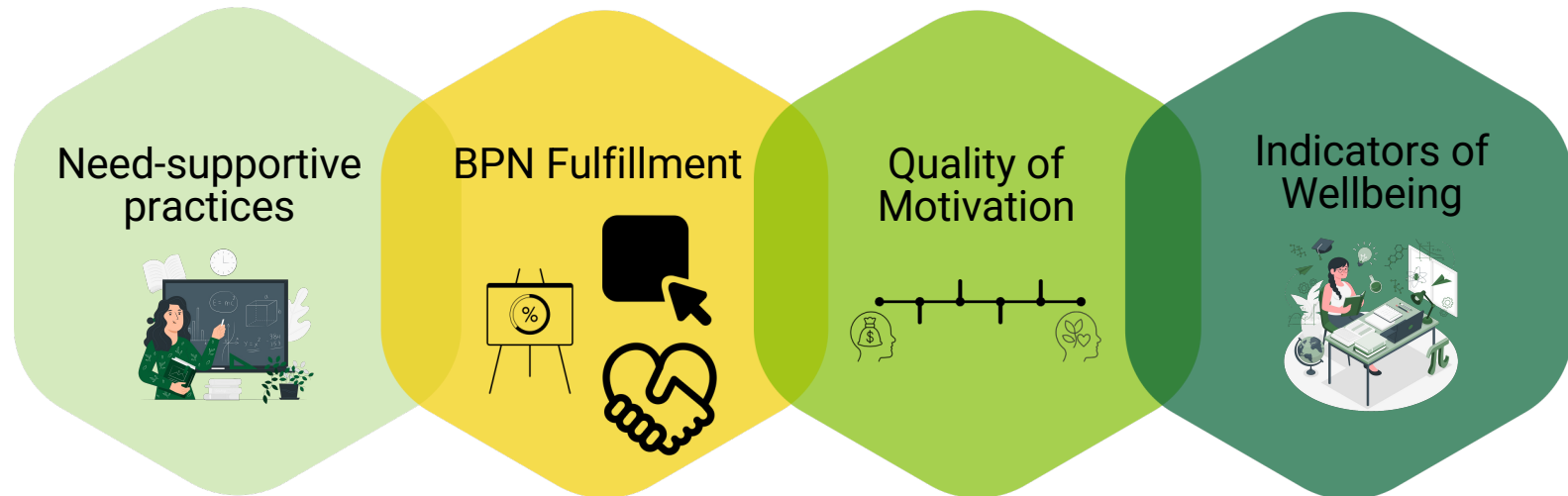
Self-Determination Theory

“...as these psychological need satisfactions are enhanced [through practices], people demonstrate not only more intrinsic motivation and internalization but also more wellness, meaning, and vitality...” Ryan & Vansteenkiste, 2023, p.9



Self-Determination Theory

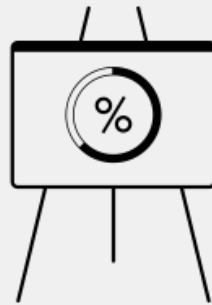
“...as these psychological need satisfactions are enhanced [through practices], people demonstrate not only more intrinsic motivation and internalization but also more wellness, meaning, and vitality...” Ryan & Vansteenkiste, 2023, p.9



Basic Psychological Needs



Relatedness
Warm caring
relationships, trust,
respect, and support



Competence
Opportunities to
experience success and
growth



Autonomy
Perceiving control over
the learning situation,
choice, and volition

Describe and Conceptualize

114 • L. M. DANIELS, G. PELLETIER, A. I. RADIL, & L. D. Goegan

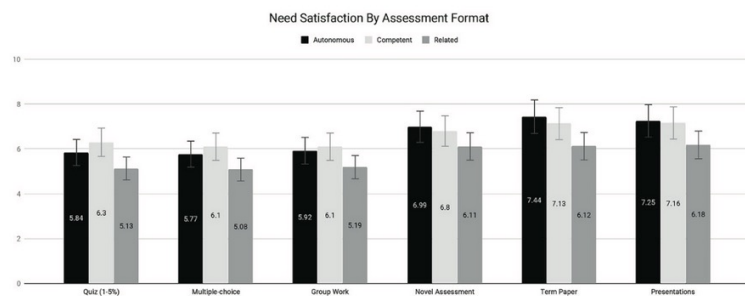


FIGURE 6.2. Means for Student Perceived Need Satisfaction by Assessment Format (n = 200).

open book
study guide
no surprises
supportive
exam aligned with lesson
performance assessment
blueprint
student choice
feedback
accommodations
practical
portfolio
student input
creativity

BPN supporting - Summative

standardized testing
no choice
subjective grading
tricking students
high stakes
multiple choice
test
restricting
heavily weighted
unclear
exam
unfair
no creativity
too easy
test anxiety

BPN frustrating - Summative

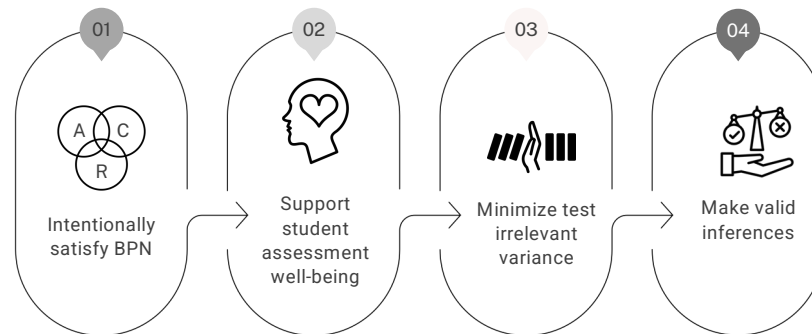
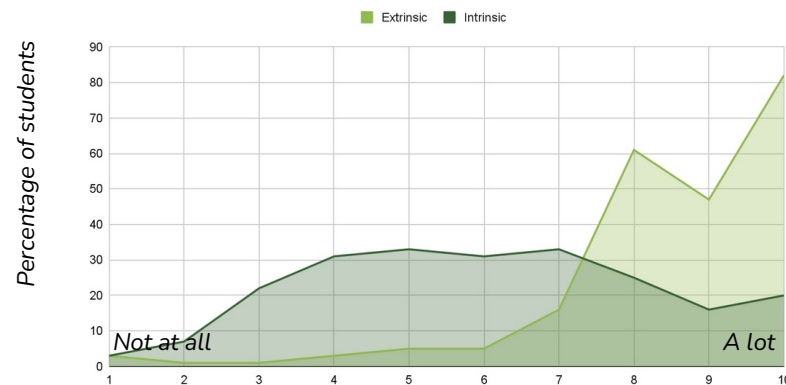
too easy
homework
too many
discussion forum posts
meaningless
no feedback
too hard
completion
time

BPN frustrating - Formative

participation
time practice
relationships
formative
learning
feedback
choice
discussions
growth
benchmark
supporting student learning

BPN supporting - Formative

How have you been motivated by assessment?



Scale Creation

		
Autonomy Satisfaction I feel that I have a lot of input in the assessments used in this class. (AS1) I feel free to express my opinions about the assessments in this class. (AS2) I feel I can make decisions about the assessments in this course. (AS3) I feel able to make choices related to the assessments in this class. (AS4)	Competence Satisfaction I feel that the types of assessments in this class allow me to show my learning. (CS1) I feel capable of completing the assessments in this class. (CS4) I feel competent completing assessments in this class. (CS3) I feel a sense of accomplishment completing the assessments in this class. (CS2)	Relatedness Satisfaction I feel that my instructor tries to understand how assessments affect me. (RS3) My instructor designed assessments in a way that makes me feel that they care about me(RS1) I feel that my instructor takes my perspectives into consideration when it comes to assessment. (RS4) I feel like my instructor tries to prevent me from feeling overwhelmed by assessments in this class. (RS2)
Autonomy Frustration I feel like there are no opportunities to make choices about assessments in this class. (AF2) I feel forced to do assessments that I wouldn't choose to do if it was up to me. (AF3) I feel pressured by the assessments in this class. (AF1) Assessments for this class feel like a chain of obligations. (AF4)	Competence Frustration I feel doubtful about whether or not I can do the assessments in this class well. (CF4) I feel a sense of incompetence as I work on the assessments in this class. (CF1) I feel ineffective in completing assessments in this class. (CF3) The assessments in this class make me feel like a failure. (CF2)	Relatedness Frustration Assessment is a barrier to feeling supported by my instructor in this class. (RF4) I feel disconnected from my instructor because of the assessments in this class. (RF1) It seems like my instructor is indifferent about the stress that assessment creates for me. (RF2) I feel my connection with my instructor is hurt by assessment in this class. (RF3)



	as4	cs1	rs1	af4	cf2	rf1
well	0.444	0.426	0.532	-0.389	-0.37	-0.376
enj1	0.528	0.338	0.461	-0.422	-0.303	-0.285
plea	0.422	0.399	0.498	-0.322	-0.306	-0.297
fair	0.326	0.582	0.387	-0.358	-0.592	-0.557
stress	-0.336	-0.296	-0.419	0.507	0.472	0.371
anx1	-0.308	-0.288	-0.292	0.403	0.556	0.342

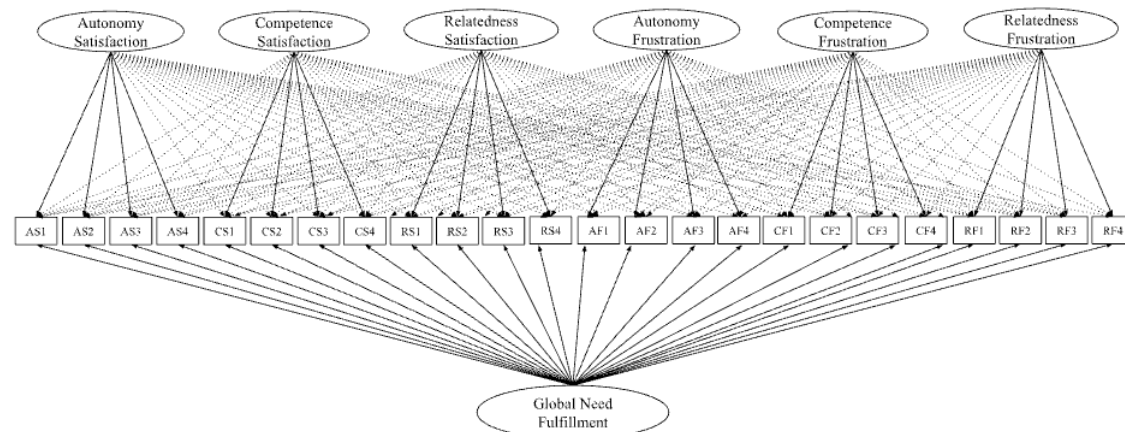
Study 1: Validation of BPNSF-CA

n = 400 undergrads from Prolific
50% White, 46% men
18-67 yrs.

Bifactor Exploratory Structural equation modelling

Figure 1

Representation of the Bifactor-ESEM Model Tested for the BPNSF-CA



Note. AS = autonomy support item; CS = competence support item; RS = relatedness support item; AF = autonomy frustration item; CF = competence frustration item; RF = relatedness frustration item.

$$\chi^2 = 129.67, p = .47, df = 129, SRMR = .013, RMSEA = .004, CFI = 1.00, TLI = 1.00$$

Study 1: Validation of BPNSF-CA
n = 400 undergrads from Prolific
50% White, 46% men
18-67 yrs.

Bifactor Exploratory Structural equation modelling

Table 3

Associations with Indicators of Student Assessment Well-Being

Factors	Stress		Anxiety		Fairness	
	β	CI	β	CI	β	CI
G-factor	-.63	-.51, -.75	-.67	-.52, -.82	.64	.54, .74
Specific factors						
AS	-.10	-.24, .04	-.07	-.27, .13	-.01	-.14, .12
CS	.08	-.03, .19	.02	-.12, .16	.29	.19, .40
RS	-.12	-.35, .12	.12	-.47, .24	.15	.01, .29
AF	.44	.31, .58	.34	.17, .52	.07	-.03, .16
CF	.29	.16, .42	.53	.36, .71	-.11	-.23, .01
RF	-.13	-.32, .07	-.06	-.32, .20	-.16	-.23, -.001

Notes. G-factor = global need fulfillment; AS = autonomy support; CS = competence support; RS = relatedness support; AF = autonomy frustration; CF = competence frustration; RF = relatedness frustration; β = standardized weight; CI = confidence interval. Bold indicates statistical significance.

Study 1: Validation of BPNSF-CA
n = 400 undergrads from Prolific
50% White, 46% men
18-67 yrs.

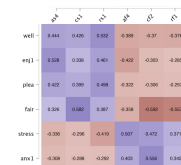
Bifactor Exploratory Structural equation modelling

Table 3

Associations with Indicators of Student Assessment Well-Being

Factors	Stress		Anxiety		Fairness	
	β	CI	β	CI	β	CI
G-factor	-.63	-.51, -.75	-.67	-.52, -.82	.64	.54, .74
Specific factors						
AS	-.10	-.24, .04	-.07	-.27, .13	-.01	-.14, .12
CS	.08	-.03, .19	.02	-.12, .16	.29	.19, .40
RS	-.12	-.35, .12	.12	-.47, .24	.15	.01, .29
AF	.44	.31, .58	.34	.17, .52	.07	-.03, .16
CF	.29	.16, .42	.53	.36, .71	-.11	-.23, .01
RF	-.13	-.32, .07	-.06	-.32, .20	-.16	-.23, -.001

Notes. G-factor = global need fulfillment; AS = autonomy support; CS = competence support; RS = relatedness support; AF = autonomy frustration; CF = competence frustration; RF = relatedness frustration; β = standardized weight; CI = confidence interval. Bold indicates statistical significance.



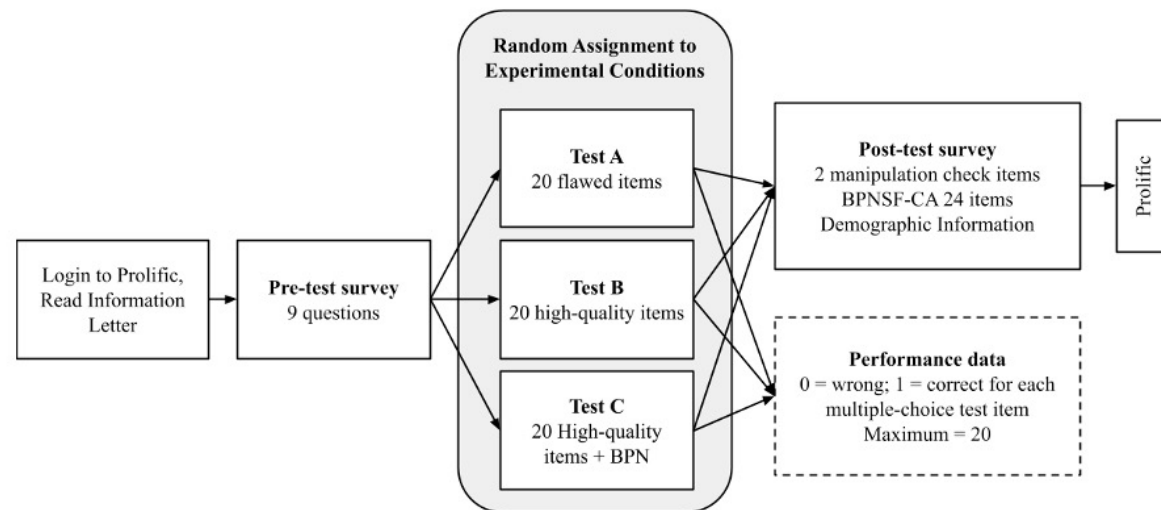
Experimental Study

Figure 2

Visual Representation of Experimental Procedure for Study 2

Study 2: Experimental
n = 387 Prolific psych
students
73% women, M = 29yrs.

Pre-registered at
AsPredicted
MIMIC Model & Linear Mixed
Effects Models



**Psychology Test
May, 2024**

A

Test Directions: This exam contains 20 items. For each question, select the one response that is the best answer. Please note that this is a closed book knowledge test that you must take on your own. You may **NOT** use any type of online resources such as ChatGPT, Google, etc. to determine the correct answer.

1. Which of the following theorists demonstrated that a neutral stimulus could acquire the ability to evoke a response originally attributed to another stimulus?
 - a) Ivan Pavlov*
 - b) Albert Bandura
 - c) B. F. Skinner
 - d) E. L. Thorndike
2. According to Jean Piaget, young infants are in which stage of development?
 - (A) Proximal
 - (B) Psychosocial
 - (C) Attachment
 - (D) Preoperational
 - (E) Sensorimotor*
3. According to the *Diagnostic and Statistical Manual of Mental Disorders*, children with separation anxiety disorder often experience which of the following symptoms?
 - (A) Excessive concern about the safety and well-being of attachment figures.*
 - (B) Persistent desire to develop relationships with adults other than those who serve as major attachment figures.
 - (C) Perceptual delusions that the child's parents have been replaced by physically identical imposters.
 - (D) All of the above

**Psychology Test
May, 2024**

B

Test Directions: This exam contains 20 items. For each question, select the one response that is the best answer. Please note that this is a closed book knowledge test that you must take on your own. You may **NOT** use any type of online resources such as ChatGPT, Google, etc. to determine the correct answer.

Which of the following learning theorists **first** demonstrated that a neutral stimulus could acquire the ability to evoke a response originally attributed to another stimulus?

- A. Pavlov*
- B. Skinner
- C. Bandura
- D. Thorndike

According to Jean Piaget, young infants are in which stage of development?

- A. Sensorimotor*
- B. Preoperational
- C. Formal operational
- D. Concrete operational

According to the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5TM)*, children with separation anxiety disorder often experience which of the following symptoms **in addition** to excessive fear or anxiety over separation from attachment figures?

- A. Pervasive anxiety about failure in school or social situations.
- B. Excessive concern about the safety and well-being of attachment figures.*
- C. Perceptual delusions that attachment figures have been replaced by physically identical imposters.

USE-INSPIRED

MULTIPLE-CHOICE ITEM WRITING GUIDELINES

01 WRITE THE STEM AND OPTIONS

Connect each item to a learner outcome.

Write the stem as one positively worded question or statement that contains the main idea.

Write and key the correct option to the item.

Use common misunderstandings to write two or more options.

Make all options similar length and complexity as the correct option.

Do not use all-of-the-above, none-of-the-above, and combinations of options.

Avoid no, not, never, always, completely, etc. in stem and options.

02 SUPPORT COMPREHENSION

Bold or capitalize important words in the stem.

Include or contain the appropriate reading and linguistic complexity.

Proofread items for grammar, spelling, appropriate vocabulary, etc.

03 MINIMIZE CONSTRUCT IRRELEVANT STRATEGIES

Avoid language hints between the stem and options.

Logically order options e.g., shortest to longest or alphabetically.

Available as preprint:

Daniels, LM., et al (2025).
Multiple-Choice Item-Writing
Guidelines for Classroom
Assessment: A State-of-the-
Art Review and Use-Inspired
Reframing. PsyArXiv
https://doi.org/10.31234/osf.io/u8yjb_v1

Psychology Test
May, 2024

B

Test Directions: This exam contains 20 items. For each question, select the one response that is the best answer. Please note that this is a closed book knowledge test that you must take on your own. You may **NOT** use any type of online resources such as ChatGPT, Google, etc. to determine the correct answer.

Which of the following learning theorists **first** demonstrated that a neutral stimulus could acquire the ability to evoke a response originally attributed to another stimulus?

- A. Pavlov*
- B. Skinner
- C. Bandura
- D. Thorndike

According to Jean Piaget, young infants are in which stage of development?

- A. Sensorimotor*
- B. Preoperational
- C. Formal operational
- D. Concrete operational

According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5TM), children with separation anxiety disorder often experience which of the following symptoms **in addition** to excessive fear or anxiety over separation from attachment figures?

- A. Pervasive anxiety about failure in school or social situations.
- B. Excessive concern about the safety and well-being of attachment figures.*
- C. Perceptual delusions that attachment figures have been replaced by physically identical imposters.

Psychology Test
May, 2024

C

Test Directions: This exam contains 20 items. For each question, select the one response that is the best answer. Please note that this is a closed book knowledge test that you must take on your own. You may **NOT** use any type of online resources such as ChatGPT, Google, etc. to determine the correct answer.

Additional Note from Instructor: As we discussed in class, this midterm covers content from our most recent four chapters and lectures. Here is the test blueprint that I shared with you last week to support your studying. There are five questions on each topic and they test content directly from your textbook. Take a breath and let what you have learned come into your mind.

Content Area:	Theory	Clinical	Biological	Methods
# of questions:	5	5	5	5

Content Area: These questions deal with content related to **general theories of psychology** such as human development and cognition and learning.

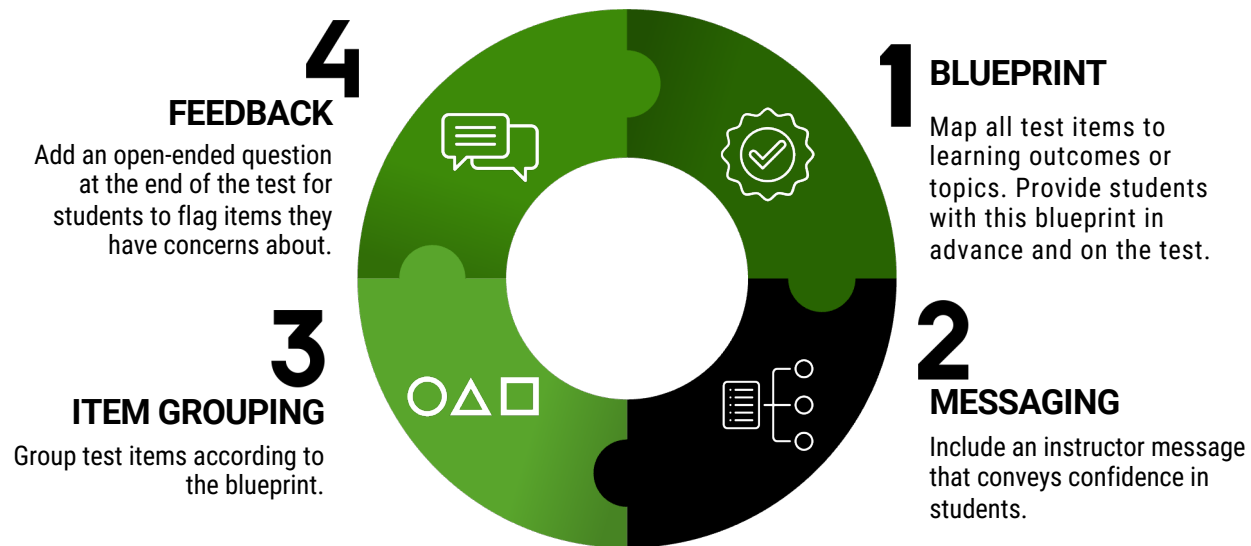
1. Which of the following learning theorists **first** demonstrated that a neutral stimulus could acquire the ability to evoke a response originally attributed to another stimulus?

- A. Pavlov*
- B. Skinner
- C. Bandura
- D. Thorndike

2. According to Jean Piaget, young infants are in which stage of development?

- A. Sensorimotor*
- B. Preoperational
- C. Formal operational
- D. Concrete operational

NEED-SUPPORTIVE FEATURES FOR MULTIPLE-CHOICE TESTS



Study 2: Experimental
n = 387 Prolific psych
students
73% women, *M* = 29yrs.

Pre-registered at
AsPredicted
MIMIC Model & Linear Mixed
Effects Models

A

Test A
20 low quality items

Score = 10/20

B

Test B
20 high quality items

Score = 13/20

C

Test C
20 high quality items +
BPN features

Score = 13/20

+ G-factor*

+ Autonomy
Support*

- Relatedness
frustration*

Classroom Study

Visual Representation of Multi-Method Instrumental Embedded Case Study Design

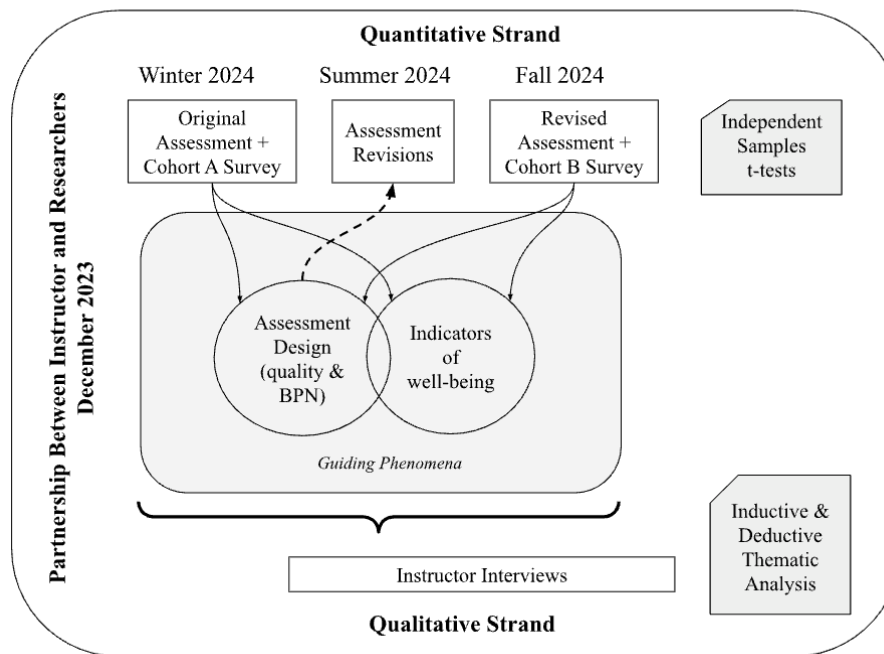
Multi-method
case study

1 instructor qualitative

2 sections of a course

Cohort A = 23

Cohort B = 42



Classroom Study

Multi-method
case study

1 instructor qualitative

2 sections of a course

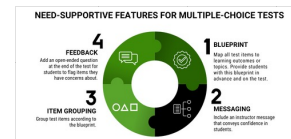
Cohort A = 23

Cohort B = 42

Figure 2.

Quality and Need-supportive Features Added to Course Assessments

Overall Assessment Structure	Multiple-Choice Exam	Constructed Response
Linked to LOs Minimize redundancy Weighting matches scope Spacing throughout term Scoring practices	Quality Guidelines Blueprint Supportive messaging Item grouping Request for feedback	Quality Guidelines LOs and explanatory rationale Where to get help Grading window Request for feedback



Grading Dates



What it means: Taking in work from students when it will be graded.

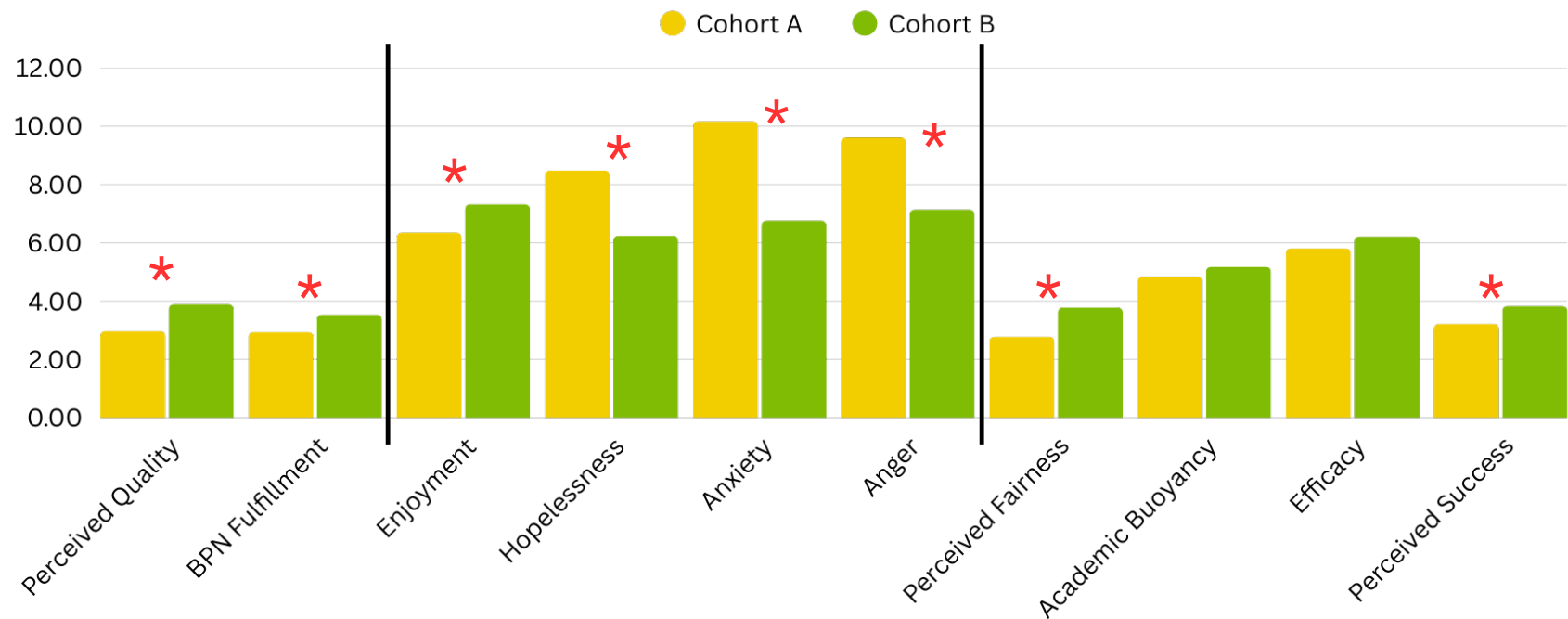
Perspective & autonomy: Students' lives are busy and it is over controlling to assume they should finish by midnight.

Competence & care: Students have as much time as possible to do their work before instructors start doing their work.

Feedback: Reduces turn around time

Logistics: Decide when work will be graded and us that as the start for when work comes in.

Student Wellbeing



Instructor Wellbeing



Next Steps

PLANNING

I. Learner Outcomes

We start the assessment-revising process by understanding the Learner Outcomes of the course. The Learner Outcomes for this course are:

By the end of this course, you will be able to:

1. Critically interpret and analyze economic and financial news using the foundational concepts and theories of macroeconomics.
2. Detail the methodology and implications of measuring key macroeconomic variables, diving deep into GDP, inflation measures, unemployment statistics, and the complexities of deficits.
3. Understand the foundational elements influencing long-run economics, exploring why some

come are poor, the significance of banks and financial systems, and employment.

We model, with an emphasis on the aggregate demand and supply

why economies fluctuate in the short run and recognize the common

the policies governments use to influence economies in the long and

the application of monetary and fiscal policies to stabilize economic

we

we describe what students will learn and the level of that learning

knowledge to higher levels like analysis. Learner Outcomes do this by

verbs that can then guide the type of assessment that is appropriate

of Learner Outcomes do an excellent job of indicating the level of

verbs and tend to focus on higher levels of thinking. We suggest you

start and "comprehend" with verbs that are more observable. We quite

enter teaching/learning/assessment/learning-outcomes/Documents/80

assessment Blueprint

are all assessment features to the course learner outcomes. A Blueprint

if between Learner Outcomes and assessments. However, a Blueprint is

guidance or places where a Learner Outcome is used assessed. All

assessed but not all Learner Outcomes have to be assessed in every

especially when the course assessment feels very heavy to students.

of the semester, and/or there are limitations with scoring supports. A

elements based on the weekly chapter distribution and syllabus

are:



RECOMMENDATIONS

Prepared for: Instructor

Prepared by: iMAP Team

Course: ECON 102, Fall 2024

The recommendations herein represent the suggestions of the research team to make adjustments to current assessment practices to better support students' wellbeing. The recommendations are rooted in principles of Self-determination Theory and are designed to support rather than thwart students' basic psychological needs in the domain of assessment specifically. As the instructor, you retain full authority and responsibility for the assessments in the course and can accept, reject, or modify any of the recommendations offered by the team. The research team is pleased to answer any questions and support revisions in any way possible.

The report addresses four stages in the assessment process and broader considerations in what we refer to as the assessment ecosystem:

FOUR STAGES

Assessment Process



Item Feedback



GUIDELINE

Write the stem as one positively worded question or incomplete statement that contains the main idea.
Of the items you submitted, #1, 2, 3, 7, and 10 contain this flaw:

To fix this, we recommend writing a direct question with a question mark. We suggest and provide an item example. A good check of a strong item is that students should be able to answer the item without looking at the options.

MCQ AI Diagnostic Report



Research Network and Collaborative
Research Council of Canada

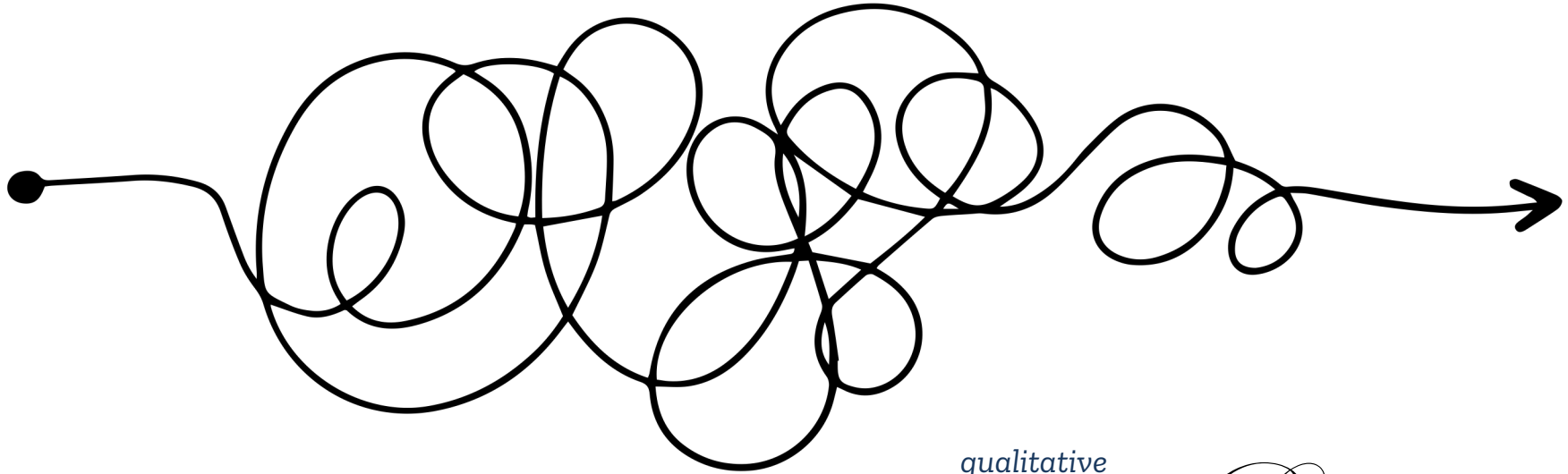
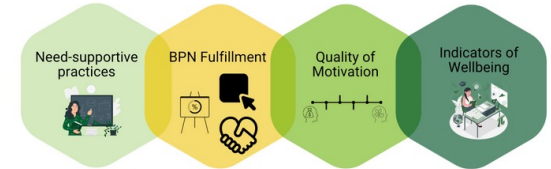
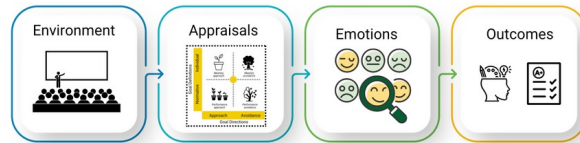
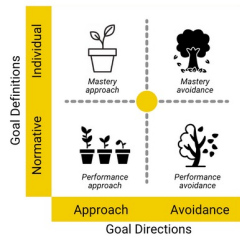
Consent to participate in
research activities by Canada





04

Take aways



descriptive **COLLABORATION** **SURVEY** *RE-REGISTRATION*
 EXPERIMENTAL *longitudinal*



prioritize your
own
perspective

focus on what
has to be
done

expect blind
compliance

disparage
negative
feelings

rely on
controlling
language

rush students'
learning



take students
perspectives

consider
student
interests

provide
explanatory
rationales

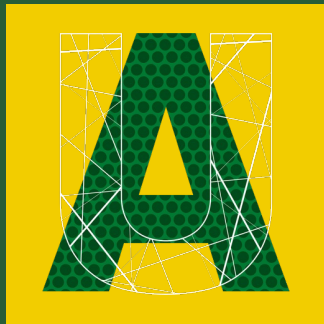
acknowledge
negative
feelings

rely on
invitational
language

display
patience

Thank you!

lia.daniels@ualberta.ca | <https://sites.google.com/ualberta.ca/acme>



This presentation included icons from **The Noun Project** and images from **Storyset**.