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To cite this article: Alan K. Goodboy, San Bolkan, Stephen M. Kromka & Kevin C. Knoster (2021) Instructional dissent over the course of the semester, *Communication Education*, 70:4, 347-364, DOI: [10.1080/03634523.2021.1925718](https://doi.org/10.1080/03634523.2021.1925718)

To link to this article: <https://doi.org/10.1080/03634523.2021.1925718>



Published online: 18 May 2021.



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## Instructional dissent over the course of the semester

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### ABSTRACT

The purpose of this longitudinal study was to model student trajectories of instructional dissent over the course of a semester. Participants were 312 undergraduate students who completed panel surveys on their worst course of the semester at three time points: during the beginning, middle, and end of a college course. Latent growth curve modeling revealed that, on average, expressive dissent slightly decreased, rhetorical dissent remained unchanged, and vengeful dissent slightly increased each month during the semester. Above and beyond the dissent growth process, student anger and hopelessness were independent and contemporaneous predictors of expressive and vengeful dissent at each time point.

### ARTICLE HISTORY

Received 4 February 2021  
Accepted 30 April 2021

### KEYWORDS

instructional dissent;  
achievement emotions;  
anger; hopelessness; latent  
growth curve modeling

In life, people tend to complain because they are dissatisfied when events or behaviors do not measure up to a set standard (Kowalski, 1996). Ample literature suggests that individuals complain when products, services, or conditions are not up to par (Bolkan, 2018); for example, patients complain about their physician care and treatment (Reader et al., 2014), employees complain about their work conditions (Kassing, 2006), and fans complain about their favorite sports teams (Row et al., 2010), among other domain-specific possibilities. In this respect, the college classroom is no different than other life domains as students complain about their instructors and courses, which is known as instructional dissent (Goodboy & Bolkan, 2018). Instructional dissent occurs when “students express their disagreements or complaints about class-related issues” (Goodboy, 2011b, p. 423), and tends to be motivated by their goals to vent frustrations to others (expressive dissent), rectify an academic issue with an instructor (rhetorical dissent), or damage an instructor’s reputation or career (vengeful dissent; Goodboy, 2011a). Thus, instructional dissent is operationalized with students’ end goals in mind by measuring latent motivations for why students complain when they experience course-related dissatisfaction (Goodboy, 2011b).

The interplay between instructors’ contributions toward, and students’ proclivities to, complaining is an important topic in instructional communication because the presence of dissent is a marker for inferior learning environments and classroom problems that may (or may not) be addressed (Goodboy & Bolkan, 2018). Although the reasons why

students might complain are innumerable, most often, instructional dissent originates from student dissatisfaction attributed to the instructor (Cooper-Hind & Taylor, 2012; LaBelle & Martin, 2014) including issues of unfairness and interpersonal mistreatment coupled with ineffective teaching (Ball & Goodboy, 2014; Bolkan & Goodboy, 2013, 2016; Goodboy, 2011a, 2011b; Horan et al., 2010; Linvill et al., 2018; Martin et al., 2015; Vallade et al., 2015). Although instructors often trigger students to engage in instructional dissent (Bolkan & Goodboy, 2013; Goodboy, 2011a), students are also more prone to complain when they believe they cannot perform well in a course, including when they experience classroom anxiety (Johnson & Kelly, 2020), lack academic self-efficacy (Goodboy & Frisby, 2014), become disinterested in what they are learning (Martin et al., 2015), and externalize their academic failures (LaBelle & Martin, 2014). On one hand, students tend to be less motivated and able to learn when they communicate expressive and vengeful dissent to others (Goodboy, 2011b; Goodboy et al., 2014; Vallade et al., 2015). On the other hand, students tend to benefit from communicating rhetorical dissent by directly talking to their instructor to resolve issues (Bolkan & Goodboy, 2013, 2016) with a greater focus on their learning (Buckner & Finn, 2013; Goodboy, 2011b).

Although the programmatic research on instructional dissent has revealed instructor and student contributions that explain student complaints (Goodboy & Bolkan, 2018), scholarship to date has exclusively used cross-sectional designs. As such, these cross-sectional studies offer a contemporaneous assessment of student complaints that occur at the time of data collection (usually toward the end of the semester), without considering that student complaints might occur and evolve from the beginning to the end of the semester. Cross-sectional studies do not take into account that instructional dissent might follow individual trajectories over time that vary from student to student and that may increase, decrease, or remain unchanged throughout the semester. Thus, the lack of longitudinal research on instructional dissent limits the insights to be gleaned from measuring repeated student complaints. Noting the dearth of longitudinal research in instructional communication, Myers (2017) encouraged instructional scholars to employ longitudinal surveys and “provide insight into classroom communication practices that otherwise would go undetected or unnoticed if examined instead via an end of the semester, cross-sectional survey” (p. 472).

Two longitudinal studies peripherally informed our current investigation. First, Jones and Simonds (1994) found that over the course of a semester, students challenge their instructors in ways that are more prevalent at the beginning of the semester (e.g., procedural challenges), while some challenge behaviors fluctuate over time (e.g., practicality challenges), and other challenge behaviors remain unchanged over the course of a semester (e.g., power challenges). Second, Myers (2017) observed that the motives students have for communicating with their instructors were relatively stable over the semester, but found slight differences in functional, relational, and excuse-making motives. Although these exploratory longitudinal studies on challenge behaviors and student motives do not offer direct insights into student dissent, they do acknowledge that students’ classroom communication behaviors have the potential to change over a semester or may remain relatively stable over time. The same may be true for students’ instructional dissent throughout the course of a semester. Without specific direction from the instructional dissent literature to guide this exploratory longitudinal investigation, we offer the following research question:

RQ: Does instructional dissent (i.e., expressive, rhetorical, vengeful) change over the course of the semester?

Without existing longitudinal research, we were unable to hypothesize if instructional dissent changes over time (if at all), but we were more confident in making predictions about how students' achievement emotions correlate with instructional dissent over time. Achievement emotions are defined as "emotions that relate to activities or outcomes that are judged according to competence-related standards of quality" (Pekrun & Linnenbrink-Garcia, 2012, p. 262). Thus, they are tied directly to the students' achievement of activities and outcomes in a course (Pekrun, 2006). Two negatively valenced achievement emotions that are important predictors of instructional dissent are student anger and hopelessness (Goodboy et al., 2019). According to Pekrun (2006), anger is an activity-related emotion (negative/activating) experienced by students when activities are aversive but controllable (e.g., homework assignments are unnecessarily time-consuming but doable), whereas hopelessness is an outcome-related emotion (negative/deactivating) experienced when students' object focus is prospective and failure is likely (e.g., taking a test that is near impossible to pass).

Both anger and hopelessness are negatively associated with student interest and engagement (Mazer, 2017) as well as academic performance (Pekrun et al., 2006). These negative achievement emotions also require students to more actively manage their emotional displays in class (Mazer et al., 2014) and are indicative of classroom problems or issues that trigger students to communicate instructional dissent (Horan et al., 2010). Kennedy-Lightsey (2017) found that student anger is positively correlated with expressive, rhetorical, and vengeful dissent. Likewise, Goodboy et al. (2019) found that anger and hopelessness are positive predictors of all three types of instructional dissent, controlling for all other achievement emotions.

Because achievement emotions are experienced by students at any point during the semester, Pekrun and Schutz (2007) recommended that achievement emotions be studied over time considering that "most of the extant research on emotions in education provides cross-sectional snapshots" and "if progress regarding the dynamics of emotions is to be made, however, affective processes have to be studied by multiple assessments over time, instead of relying on single-shot assessments" (p. 326). Thus, given that extant cross-sectional research demonstrates positive relationships between student anger and hopelessness with expressive, rhetorical, and vengeful dissent (Goodboy et al., 2019), we sought to extend these emotion findings over time by offering two hypotheses. The first hypothesis predicts simple contemporaneous correlations among these variables. The second hypothesis builds on our research question, as we believe that if dissent does change over the course of the semester, student anger and hopelessness will directly predict repeated assessments of dissent at each point across the semester controlling for possible uncovered growth (Curran et al., 2010). That is, above and beyond growth, these negative achievement emotions, as time-varying covariates, should explain dissent uniquely at each repeated assessment (dissent at the beginning, middle, and end of the semester).

H1: Student anger and hopelessness will correlate positively with instructional dissent at the beginning, middle, and end of the semester.

H2: If instructional dissent changes over the course of the semester, student anger and hopelessness (as time-varying covariates) will contemporaneously predict instructional dissent above and beyond the underlying dissent growth process.

## Method

### *Participants and procedures*

After IRB approval was granted, student participants in communication studies courses completed a series of three identical online surveys in a longitudinal panel design. To sample from a variety of different courses/disciplines and elicit variability in dissent responses, participants were instructed to report on their “worst” instructor in a course they were currently taking (Goodboy et al., 2015) throughout the semester (students reported on the same instructor/course three times throughout the semester). Online surveys were administered in Fall 2018 at the beginning of the semester (i.e., September 27, 2018), middle (i.e., October 27, 2018), and end of the semester (i.e., November 26, 2018) in one-month equal time intervals. To pair the longitudinal surveys, participants were provided a unique and confidential alphanumeric identifier so that surveys responses could be matched at all three time points. Survey responses that could not be matched by this alphanumeric identifier (double checking that the same course information and same instructor’s initials were provided each time) were removed from the study. This procedure ensured that students reported on the same instructor/course throughout the semester, yielding 312 participants with matched responses at all three time points.

The 312 participants (100 men, 208 women, 3 nonbinary, 1 nondisclosed) were undergraduate students (88 first year, 71 second year, 72 third year, 77 fourth year, 4 fifth year or beyond) with a majority identifying as white ( $n = 261$ ), followed by Black ( $n = 15$ ), Asian ( $n = 11$ ), Middle Eastern ( $n = 11$ ), Hispanic ( $n = 9$ ), other races ( $n = 3$ ), and Native American ( $n = 2$ ). Students’ mean GPA was 3.28 ( $SD = .50$ ) ranging from 1.94 to 4.00. Participants reported on courses from 62 different subject areas including Accounting, Biology, Chemistry, Computer Science, Economics, English, Geology, Music, Physics, Political Science, Sociology, and Spanish, among others. Each questionnaire included items from the Instructional Dissent Scale (IDS; Goodboy, 2011b) and student anger and hopelessness subscales from the Achievement Emotions Questionnaire (AEQ; Pekrun et al., 2005). To estimate scale reliability, coefficient omega ( $\omega$ ) was calculated for all scales using robust maximum likelihood estimation with 95% confidence intervals using the delta method at the three time points (Goodboy & Martin, 2020).

The IDS measures three types of instructional dissent using a 5-point Likert-type response format ranging from (1) *never* to (5) *very often*. Expressive dissent was measured using 10 items (e.g., “I complained about my teacher and course because it made me feel better.”). The expressive dissent subscale demonstrated reliability at time 1 ( $\omega = .946$ ; CI [.935, .956];  $M = 2.888$ ,  $SD = 1.029$ ), time 2 ( $\omega = .955$ ; CI [.947, .964];  $M = 2.915$ ,  $SD = 1.040$ ), and time 3 ( $\omega = .958$ ; CI [.950, .967];  $M = 2.772$ ,  $SD = 1.003$ ). Rhetorical dissent was measured using six items (e.g., “I told my teacher when I disagreed with him/her so I could do better in the course.”). The rhetorical dissent subscale demonstrated reliability at time 1 ( $\omega = .914$ ; CI [.893, .935];  $M = 1.940$ ,  $SD = .937$ ), time

2 ( $\omega = .921$ ; CI [.904, .938];  $M = 1.970$ ,  $SD = .956$ ), and time 3 ( $\omega = .947$ ; CI [.934, .960];  $M = 1.999$ ,  $SD = 1.011$ ). Vengeful dissent was measured using six items (e.g., “I spread negative publicity about my teacher so that everyone knew how bad he/she was.”). The vengeful dissent subscale demonstrated reliability at time 1 ( $\omega = .949$ ; CI [.934, .963];  $M = 1.447$ ,  $SD = .800$ ), time 2 ( $\omega = .960$ ; CI [.948, .972];  $M = 1.524$ ,  $SD = .869$ ), and time 3 ( $\omega = .965$ ; CI [.955, .975];  $M = 1.602$ ,  $SD = .938$ ).

Eighteen items from the AEQ were used to measure the class-related emotions of student anger (9 items) and hopelessness (9 items) using a 5-point Likert-type response format ranging from (1) *never* to (5) *very often* (e.g., anger: “Thinking about the poor quality of the course made me angry”; hopelessness: “I’d rather not have gone to class since there was no hope of understanding the material anyway”). The anger measure demonstrated reliability at time 1 ( $\omega = .918$ ; CI [.902, .934];  $M = 2.848$ ,  $SD = .920$ ), time 2 ( $\omega = .917$ ; CI [.901, .932];  $M = 2.893$ ,  $SD = .879$ ), and time 3 ( $\omega = .933$ ; CI [.920, .946];  $M = 2.841$ ,  $SD = .937$ ). The hopelessness measure demonstrated reliability at time 1 ( $\omega = .957$ ; CI [.948, .966];  $M = 2.377$ ,  $SD = 1.011$ ), time 2 ( $\omega = .954$ ; CI [.944, .964];  $M = 2.498$ ,  $SD = 1.029$ ), and time 3 ( $\omega = .964$ ; CI [.956, .973];  $M = 2.558$ ,  $SD = 1.069$ ).

### Data analysis

Because instructional dissent scores were not multivariate normal, longitudinal structural equation modeling was used in Mplus 8.5 (Muthén & Muthén, 2017) with robust maximum likelihood (MLR) estimation. Specifically, longitudinal confirmatory factor analysis was used to test for measurement invariance and the feasibility of modeling dissent growth trajectories. After testing for measurement invariance, unconditional latent growth curve models were used to observe interindividual differences in intraindividual changes of dissent over time, and we added time-varying covariates to the unconditional latent growth curve models to examine contemporaneous achievement emotion predictions beyond the underlying growth processes.

### Results

Because the purpose of this study was to model change in instructional dissent over the course of the semester, it is important to first assess longitudinal factorial invariance for our measures (Preacher, 2019) and to establish that change in dissent is alpha change, meaning it “involves a variation in the level of some existential state, given a constantly calibrated measuring instrument related to a constant conceptual domain” (Golembiewski et al., 1976, p. 134). This means that instructional dissent is the same construct on the same numerical scale at each time point, and difference scores reflect real gains or losses of dissent over time. To evaluate the psychometric equivalence of dissent across measurement occasions, measurement invariance (configural, metric, scalar; Putnick & Bornstein, 2016) was tested across the time points using longitudinal confirmatory factor analysis (CFA) with correlated residuals for the same items over time. The analysis strategy for testing measurement invariance was as follows: First, researchers conduct a CFA to test for configural invariance (assuming that a single factor underlies all of the items at each time point to establish construct equivalence). If configural invariance holds, researchers next test for scalar invariance by imposing equality constraints on

factor loadings (testing that the factor loadings are equal over time for each item and that dissent scores are in comparable units) and then compare the configural and metric invariance nested models using a likelihood ratio test (LRT) with scaled model chi-squares adjusted with scaling correction factors (Satorra & Bentler, 2010). If metric invariance holds, researchers then test for scalar invariance and impose additional equality constraints on the intercepts of the items (testing that the factor loadings and intercepts are equal for the items over time and were taken from the same starting point) and conduct another LRT to compare the nested models. It is important to show scalar invariance when assessing alpha change over time.

For expressive dissent, the scalar invariance model was supported as the model provided global fit and the LRT did not show a significant loss of fit from the metric invariance model (see Table 1 for configural, metric, and scalar invariance tests). Therefore, changes in expressive dissent over time reflect alpha change. Global fit indices and LRT comparisons of nested models for configural, metric, and scalar invariance tests are reported in Tables 1–3.

For rhetorical dissent, partial scalar invariance was supported. The model for scalar invariance showed a significant decline ( $p = .039$ ) in model fit from the LRT by imposing equal intercepts. We examined modification indices (MIs) to identify the rhetorical dissent items for which unequal intercepts would improve the global fit. The only MI

**Table 1.** Expressive dissent (10 items: T1–T3).

Model	Test of overall fit			LRT			Global fit indices			
	Y-B $\chi^2$	df	$p$	$\Delta\chi^2$	$\Delta$ df	$p$	RMSEA	CFI	TLI	SRMR
Configural	995.076 <sub>a</sub>	372	.000				.073	.912	.897	.046
Metric	1027.287 <sub>b</sub>	390	.000	20.821	18	.289	.072	.910	.900	.047
Scalar	1057.004 <sub>c</sub>	408	.000	24.906	18	.128	.071	.908	.902	.048

Note. Subscripts are for maximum likelihood robust scaling correction factors used in LRT calculations. a: scaling correction factor = 1.260; b: scaling correction factor = 1.235; c: scaling correction factor = 1.224.

**Table 2.** Rhetorical dissent (6 items: T1–T3).

Model	Test of overall fit			LRT			Global fit indices			
	Y-B $\chi^2$	df	$p$	$\Delta\chi^2$	$\Delta$ df	$p$	RMSEA	CFI	TLI	SRMR
Configural	197.186 <sub>a</sub>	114	.000				.048	.971	.961	.035
Metric	208.649 <sub>b</sub>	124	.000	9.404	10	.494	.047	.970	.963	.039
Scalar	226.857 <sub>c</sub>	134	.000	19.068	10	.039	.047	.967	.963	.038
Partial	219.757 <sub>d</sub>	133	.000	9.724	1	.002	.046	.969	.965	.039

Note. Subscripts are for maximum likelihood robust scaling correction factors used in LRT calculations. a: scaling correction factor = 1.457; b: scaling correction factor = 1.425; c: scaling correction factor = 1.391; d: scaling correction factor = 1.394.

**Table 3.** Vengeful dissent (6 items: T1–T3).

Model	Test of overall fit			LRT			Global fit indices			
	Y-B $\chi^2$	df	$p$	$\Delta\chi^2$	$\Delta$ df	$p$	RMSEA	CFI	TLI	SRMR
Configural	177.298 <sub>a</sub>	114	.000				.042	.973	.964	.031
Metric	191.345 <sub>b</sub>	124	.000	14.020	10	.289	.042	.971	.964	.038
Scalar	205.739 <sub>c</sub>	134	.000	12.868	10	.231	.041	.969	.965	.038

Note. Subscripts are for maximum likelihood robust scaling correction factors used in LRT calculations. a: scaling correction factor = 2.488; b: scaling correction factor = 2.484; c: scaling correction factor = 2.370.

**Table 4.** Zero-order correlations for instructional dissent across time.

	Expressive			Rhetorical			Vengeful		
	T1	T2	T3	T1	T2	T3	T1	T2	T3
<i>Expressive</i>									
T1	–								
T2	.702	–							
T3	.653	.746	–						
<i>Rhetorical</i>									
T1	.276	.198	.163	–					
T2	.116	.314	.211	.556	–				
T3	.187	.230	.347	.564	.654	–			
<i>Vengeful</i>									
T1	.281	.206	.192	.510	.417	.361	–		
T2	.123	.296	.273	.284	.606	.427	.591	–	
T3	.246	.255	.401	.369	.436	.680	.550	.631	–

to inspect indicated that freely estimating Item 6 on the rhetorical dissent scale at Time 2 would improve the model (MI = 6.448). Given this was only one item across the three time points for the scale, we retained the model with scalar invariance. However, to be more precise given this MI, we released the equality constraint on this intercept and then tested a model for partial scalar invariance as there was a minor inequality in one intercept of one item (out of 6 items) over time. The model with partial scalar invariance was an improvement in fit (see Table 2). No other MIs were provided for any other items. Changes in rhetorical dissent over time reflect alpha change.

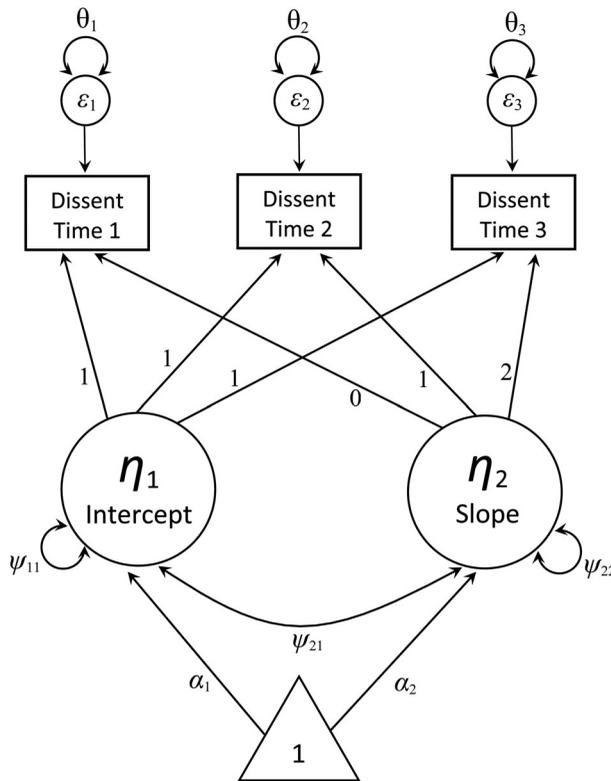
For vengeful dissent, the scalar invariance model was supported as the model provided global fit and the LRT did not show a significant loss of fit from the metric invariance model (see Table 3). Therefore, changes in vengeful dissent over time reflect alpha change.

Zero-order correlations among instructional dissent at three time points are available in Table 4.

### **Research question: unconditional latent growth curve models**

With evidence for scalar invariance and alpha change, we sought to answer our research question which inquired if students' instructional dissent changed over the course of the semester. To do so, we examined trajectories of instructional dissent over the time of the semester using unconditional latent growth curve models using MLR (Bollen & Curran, 2006; Curran et al., 2010). The unconditional latent growth curve models we specified are in Figure 1.

For these models, we have repeated measurements of instructional dissent over three time points throughout the semester as indicators of two latent variables (intercept, slope), fixing the loadings of the intercepts to 1 and fixing the loadings of the slope to be a linear slope at increments of 0 (to designate the starting point 1 month into the semester), 1 (1 month later in the semester), and 2 (another month later in the semester). We estimated the variances and covariance of the latent variables by testing an intercept-only model, linear growth model, and then linear growth model with homoscedastic residuals (Grimm et al., 2017). We started with the intercept-only model which is a “no growth” model predicting that dissent scores do not change over time. Next, we tested a linear growth model by adding a slope factor to estimate dissent trajectories



**Figure 1.** Unconditional latent growth curve model.

Note. Three latent growth curve models: expressive dissent, rhetorical dissent, vengeful dissent across the semester using MLR estimation.

as within-person change (i.e., the rate of dissent change is the same for each student but is allowed to differ between each individual student). Finally, we tested for homoscedasticity of residual variances by imposing an equality constraint on the residuals over time. We examined the global fit of these models using recommended fit statistics and, because these three models were nested, we used an LRT adjusting for scaling correction factors to evaluate improvement in model fit. We tested three models using this approach for expressive, rhetorical, and vengeful dissent.

### **Expressive dissent**

For expressive dissent, the intercept-only model provided poor model fit to the data: scaled  $\chi^2(4) = 16.322$ ,  $p = .003$ ; RMSEA = .099; CFI = .960; TLI = .970; SRMR = .053. Adding a slope to the model produced a significant improvement ( $\chi^2_D(3) = 11.616$ ,  $p = .009$ ) with the following global fit: scaled  $\chi^2(1) = 4.724$ ,  $p = .030$ ; RMSEA = .109; CFI = .988; TLI = .964; SRMR = .023. Imposing an equality constraint for homoscedastic residuals did not reduce the model fit ( $\chi^2_D(2) = 3.868$ ,  $p = .145$ ). Therefore, we retained the growth model with a single homoscedastic residual variance ( $\theta_{1-3} = .274$ ), which yielded acceptable model fit: scaled  $\chi^2(3) = 8.730$ ,  $p = .033$ ; RMSEA = .078; CFI = .981; TLI = .981; SRMR = .028.

The results of this model revealed that the covariance between the slope and intercept was not significant ( $\hat{\psi}_{21} = -.045, p = .104$ ), meaning there was no relationship between students' initial level of expressive dissent and their change over time. On average (using a 1–5 scale), throughout their worst course of the semester, the trajectory of expressive dissent started at a value of  $\hat{\mu}_1 = 2.921$  ( $p < .001$ ) during the first month of the semester, and then decreased  $\hat{\mu}_2 = -.060$  units for each 1-month period ( $p = .013$ ). The variance of the intercept was significant ( $\hat{\psi}_{11} = .797, p < .001$ ) revealing there was individual variability of students' starting points of expressive dissent early in the semester, but the variance of the slope was not significant ( $\hat{\psi}_{22} = .041, p = .056$ ), so students did not vary in their rate of decrease over time. The proportion of variance accounted for in expressive dissent by the latent slope and intercept was: (T1)  $R^2 = .744$ , (T2)  $R^2 = .731$ , (T3)  $R^2 = .739$ . Put simply, on average, students engaged in expressive dissent near the scale's midpoint (i.e., "sometimes") at the beginning of the semester, and then slightly decreased their expressive dissent over the course of the semester.

### **Rhetorical dissent**

For rhetorical dissent, the intercept-only model provided good model fit to the data: scaled  $\chi^2$  (4) = 8.364,  $p = .079$ ; RMSEA = .059; CFI = .975; TLI = .981; SRMR = .057, suggesting preliminary evidence for no growth. Adding a slope to the model produced a significant improvement ( $\chi^2_{\text{D}}$  (3) = 8.100,  $p = .044$ ) with the following global fit: scaled  $\chi^2$  (1) = .001,  $p = .977$ ; RMSEA = .000; CFI = 1.00; TLI = 1.00; SRMR = .000. Imposing an equality constraint for homoscedastic residuals did not reduce the model fit ( $\chi^2_{\text{D}}$  [2] = 2.607,  $p = .272$ ). Therefore, we retained the growth model with a single residual variance ( $\theta_{1-3} = .351$ ), which yielded a good fit to the data (scaled  $\chi^2$  (3) = 2.641,  $p = .450$ ; RMSEA = .000; CFI = 1.000; TLI = 1.000; SRMR = .020).

The results of this model revealed that the covariance between the slope and intercept was not significant ( $\hat{\psi}_{21} = .014, p = .648$ ), meaning there was no relationship between students' initial level of rhetorical dissent and their change over time. On average (using a 1–5 scale), in their worst course of the semester, the trajectory of rhetorical dissent started at a value of  $\hat{\mu}_1 = 1.940$  ( $p < .001$ ) during the first month of the semester, but did not significantly change over time ( $\hat{\mu}_2 = .030, p = .240$ ). The variance of the intercept was significant ( $\hat{\psi}_{11} = .500, p < .001$ ) revealing there was individual variability of students' starting points of rhetorical dissent early in the semester, but the variance of the slope was not significant ( $\hat{\psi}_{22} = .032, p = .291$ ), so students did not vary in their (lack of) rate of change over time. The proportion of rhetorical dissent variance accounted for by the latent slope and intercept was: (T1)  $R^2 = .588$ , (T2)  $R^2 = .615$ , (T3)  $R^2 = .661$ . These results suggest that on average, students are "rarely" engaging in rhetorical dissent at the beginning of the semester, and when they do, they are doing so at a constant rate throughout the remainder of the course.

### **Vengeful dissent**

For vengeful dissent, the intercept-only model provided poor model fit to the data: scaled  $\chi^2$  (4) = 13.118,  $p = .011$ ; RMSEA = .085; CFI = .908; TLI = .931; SRMR = .059. Adding a slope to the model produced a significant improvement ( $\chi^2_{\text{D}}$  [3] = 11.704,  $p = .008$ )

with the following global fit: scaled  $\chi^2$  (1) = .001,  $p = .996$ ; RMSEA = .000; CFI = 1.00; TLI = 1.00; SRMR = .000. Imposing an equality constraint for homoscedastic residuals did not reduce the model fit ( $\chi^2$  [2] = .351,  $p = .839$ ). Therefore, we retained the growth model with a single residual variance ( $\theta_{\varepsilon_{1-3}} = .276$ ), which yielded a good fit to the data (scaled  $\chi^2$  [3] = .433,  $p = .933$ ; RMSEA = .000; CFI = 1.000; TLI = 1.000; SRMR = .019).

The results of this model revealed that the covariance between the slope and intercept was not significant ( $\hat{\psi}_{21} = .022$ ,  $p = .494$ ), meaning there was no relationship between students' initial level of vengeful dissent and their change over time. On average (using a 1–5 scale), in their worst course of the semester, the trajectory of vengeful dissent started at a value of  $\hat{\mu}_1 = 1.447$  ( $p < .001$ ) during the first month of the semester, and then increased  $\hat{\mu}_2 = .080$  units for each 1-month period ( $p = .001$ ). The variance of the intercept was significant ( $\hat{\psi}_{11} = .377$ ,  $p < .001$ ), revealing there was individual variability of students' starting points of vengeful dissent early in the semester, but the variance of the slope was not significant ( $\hat{\psi}_{22} = .036$ ,  $p = .211$ ), so students did not vary in their rate of increase over time. The proportion variance accounted for in rhetorical dissent by the latent slope and intercept was: (T1)  $R^2 = .577$ , (T2)  $R^2 = .623$ , (T3)  $R^2 = .687$ . These results suggest that on average, vengeful dissent is barely communicated at all during the beginning of the semester, but students are slightly increasing their vengeful dissent over the course of the semester.

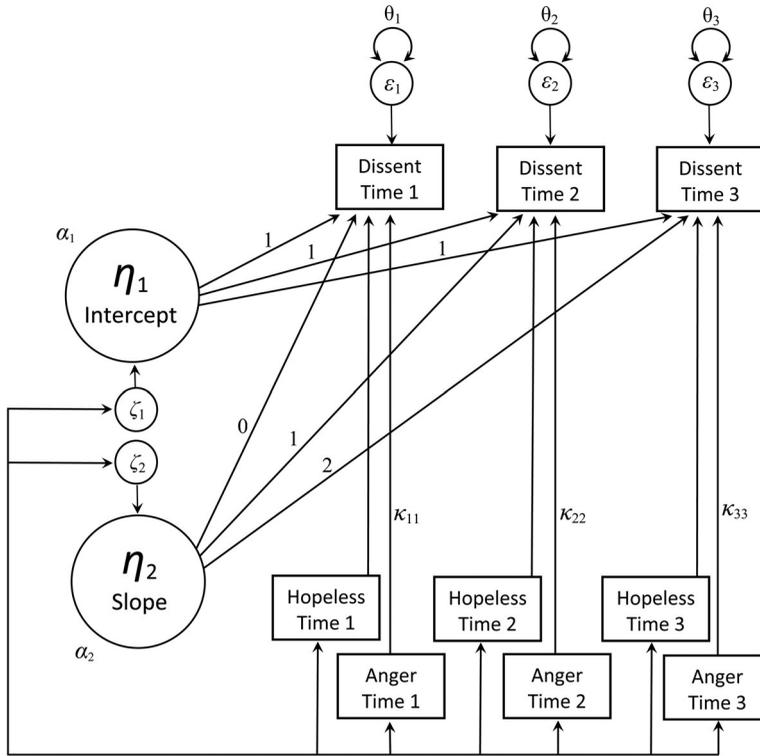
### **Hypothesis 1: contemporaneous correlations**

Hypothesis 1 predicted that student anger and hopelessness would correlate positively with instructional dissent at the beginning, middle, and end of the semester. This hypothesis was confirmed. At the beginning of the semester (T1), student anger was correlated positively with expressive ( $r = .560$  [.466, .641]), rhetorical ( $r = .209$  [.076, .335]), and vengeful dissent ( $r = .265$  [.165, .332]). The midsemester (T2) pattern of correlations was similar; student anger was correlated positively with expressive ( $r = .564$  [.469, .651]), rhetorical ( $r = .208$  [.081, .327]), and vengeful dissent ( $r = .276$  [.164, .381]). The end of semester (T3) pattern of correlations remained similar; student anger was correlated positively with expressive ( $r = .616$  [.523, .694]), rhetorical ( $r = .203$  [.076, .322]), and vengeful dissent ( $r = .316$  [.203, .418]).

Likewise, at the beginning of the semester (T1), student hopelessness was correlated positively with expressive ( $r = .361$  [.252, .467]), rhetorical ( $r = .201$  [.069, .327]), and vengeful dissent ( $r = .302$  [.191, .407]). The midsemester (T2) pattern of correlations was similar; student hopelessness was correlated positively with expressive ( $r = .432$  [.325, .527]), rhetorical ( $r = .188$  [.064, .313]), and vengeful dissent ( $r = .350$  [.239, .455]). The end of semester (T3) pattern of correlations remained similar; student hopelessness was correlated positively with expressive ( $r = .465$  [.359, .565]), rhetorical ( $r = .158$  [.030, .282]), and vengeful dissent ( $r = .353$  [.246, .450]).

### **Hypothesis 2: linear latent curve models with time-varying covariates**

Hypothesis 2 predicted that over the course of a semester, student anger and hopelessness (as time-varying covariates) would contemporaneously predict instructional dissent



**Figure 2.** Linear latent curve model for expressive and vengeful dissent with anger and hopelessness as time-varying covariates.

Note. Anger and Hopelessness as time-varying covariates are correlated with each other, the slope, and the intercept (growth process).

above and beyond the growth process at each time point. That is, controlling for the underlying trajectories of instructional dissent, we predicted that students who reported increased anger and hopelessness (uniquely; controlling for each other) at each time point throughout the semester would communicate more complaints. Because no growth process was discovered for the rhetorical dissent latent growth curve model, we modeled student anger and hopelessness as correlated time-varying covariates for expressive and vengeful dissent models only. Our model specifications for unconditional latent growth curve models with time-varying covariates are displayed in Figure 2.

The model for expressive dissent provided a good fit: scaled  $\chi^2(3) = 2.238$ ,  $p = .523$ ; RMSEA = .000; CFI = 1.000; TLI = 1.00; SRMR = .017. In unstandardized estimates, above and beyond the increasing growth process, expressive dissent one month into the semester (T1) was predicted by anger ( $\kappa_{11} = .430$ ,  $p = .003$ ) but not hopelessness ( $\kappa_{11} = -.045$ ,  $p = .735$ ); expressive dissent one month later, after the midterm of the semester (T2), was predicted by both anger ( $\kappa_{22} = .227$ ,  $p = .003$ ) and hopelessness ( $\kappa_{22} = .205$ ,  $p = .015$ ); expressive dissent another month later (T3) at the end of the semester was predicted by hopelessness ( $\kappa_{33} = .400$ ,  $p = .003$ ) but not anger ( $\kappa_{33} = .007$ ,  $p = .953$ ). Controlling for the contemporaneous effects of students' anger and hopelessness at each time point, the rate of change for expressive dissent was no longer significant ( $\hat{\mu}_2 = -.025$ ,

$p = .940$ ). Collectively, these results suggest that student anger and hopelessness play an important role across the semester, independent of the (no longer significant) expressive dissent growth process.

The model for vengeful dissent provided a good fit: scaled  $\chi^2(3) = .845$ ,  $p = .839$ ; RMSEA = .000; CFI = 1.000; TLI = 1.00; SRMR = .006. In unstandardized estimates, above and beyond the increasing growth process, vengeful dissent one month into the semester (T1) was predicted by anger ( $\kappa_{11} = .301$ ,  $p = .028$ ) but not hopelessness ( $\kappa_{11} = .193$ ,  $p = .118$ ); vengeful dissent one month later, after the midterm of the semester (T2), was predicted by hopelessness ( $\kappa_{22} = .251$ ,  $p < .001$ ) but not anger ( $\kappa_{22} = .030$ ,  $p = .700$ ); vengeful dissent another month later (T3) at the end of the semester was not predicted by anger ( $\kappa_{33} = -.111$ ,  $p = .387$ ) nor hopelessness ( $\kappa_{33} = .170$ ,  $p = .282$ ). Controlling for the contemporaneous effects of students' anger and hopelessness at each time point, the rate of change for vengeful dissent remained significant ( $\hat{\mu}_2 = .679$ ,  $p = .025$ ). Collectively, these results suggest that student anger and hopelessness play an important role in dissent earlier in the semester, independent of the (increasing) vengeful dissent growth process.

## Discussion

The purpose of this study was to determine if instructional dissent changes over the course of the semester, and if so, to understand how student anger and hopelessness explain dissent at each time point independent of the growth process. Two main conclusions can be derived from this study which center on findings that differentiate between earlier versus later times in the semester. First, instructional dissent does not drastically change over the semester, although subtle changes were found for expressive and vengeful dissent. Rhetorical dissent did not yield a growth process and it remained constant throughout the semester, starting out at the beginning of the semester as a rare occurrence and continuing to be stable. Expressive dissent started out near the scale's midpoint, indicating that students sometimes vented their course-related frustrations early on, but this communication behavior slightly decreased as the semester progressed. Vengeful dissent hardly occurred as the semester started and slightly increased as the semester unfolded.

One reason for the slight change in expressive dissent may stem from the notion of saturation. Expressive dissent embodies the act of complaining to one's social network as a means of garnering support (Goodboy, 2011a; 2011b). Considering this, students who were dissatisfied with their educational environments throughout the semester may have felt as if the course-related issues have already been explained to their friends and family. If this was the case, venting about negative classroom experiences as they pertain to the same instructor throughout the semester might have been perceived as repetitive and therefore motivation to share this information may have slightly dwindled over time. Alternatively, students who were upset with their educational experiences may have turned from private communication to more public complaining in the form of vengeful dissent as an escalation of behavior. In other words, an increase in vengeful dissent might indicate that students preferred to vent to their social networks more often when they first encountered a negative classroom experience and became more likely to communicate negative information to third parties in a vengeful

manner the longer they were forced to endure their dissatisfactory classroom experiences.

Given that the growth processes for instructional dissent over time were not particularly substantial, it became more important to explain dissent at each time point controlling for underlying growth trajectories. The achievement emotions of student anger and hopelessness provided a contemporaneous explanation for expressive dissent across the semester. Expressive dissent early in the semester (T1) was explained by anger, at midsemester (T2) it was explained by anger and hopelessness together, and at the end of the semester (T3) it was explained by hopelessness only. This pattern suggests that students who feel the need to complain about course-related issues early on do so because they are angry from the task demands of coursework (Pekrun, 2006), switching to anger and hopelessness midsemester, which suggests that the task demands persist, but that complaining students start to feel deactivated in their work due to lack of success in assignments (Pekrun & Stephens, 2010), followed by sheer hopelessness at the end of the semester from anticipated failure. Such a longitudinal arc of time-varying achievement emotions over time suggests that students who vent move from feeling hostile toward coursework to conceding prospective failure in future performance. Stated differently, students who felt more overwhelmed at first but ended up feeling like academic success was unlikely later in the semester expressively dissented more throughout the semester. After controlling for student anger and hopelessness, we no longer observed a decreasing rate of change for expressive dissent, which showcased the importance of these achievement emotions.

The achievement emotions of student anger and hopelessness also provided a contemporaneous explanation for vengeful dissent across the semester, although this pattern of time-varying predictions was different than for expressive dissent. Vengeful dissent early in the semester (T1) was explained by anger, at midsemester (T2) it was explained by hopelessness only, and at the end of the semester (T3) it was explained by neither achievement emotion. Research on antecedents to emotions suggests that anger stems from negative consequences for one's self that are attributed to controllable actions performed by others (Weiner, 1985). People tend to experience hopelessness, on the other hand, when they attribute negative outcomes to stable causes. Thus, it makes sense that students would experience anger in the beginning of the semester if they blamed their instructors for dissatisfactory experiences. However, if the semester went on with little change in instructional behavior, students may have resigned themselves to their educational fate. In fact, data from the current study appear to reflect Weiner's (1985) conclusion that "if the future is anticipated to remain as bad as the past, then hopelessness is experienced" (p. 563). Ultimately, the pattern of feelings students experienced in this study indicates that vengeful communication behaviors stemmed from activating negative emotions early in the semester and less activating negative emotions later on. These results might imply that students learned to cope with their negative experiences in class by expending fewer emotional resources to manage their frustrations. Instead of being highly worked up about poor teaching all semester, students may have felt discouraged by their instructional environments knowing that things had not changed after several weeks of interaction. As a result of continued dissatisfaction, students may have finally given up the emotional struggle of dealing with class frustrations while still acknowledging and communicating dissatisfaction about their instructional environments.

### ***Implications for teaching and learning***

There are several practical implications resulting from this study. First, instructors should understand that it is normal for students to complain about their courses, as college can be a stressful time for young adults (Kumaraswamy, 2013). Instructional dissent, especially expressive dissent, is bound to happen at some point so students can vent their frustrations and feel heard by their friends, family, and/or instructors (Goodboy, 2011a, 2011b). There will always be some level of instructional dissent that should be expected by instructors (Goodboy & Bolkan, 2018).

Second, instructors should encourage rhetorical dissent. In this study, rhetorical dissent remained a rare and stable occurrence throughout the entire semester. Ideally, there would be higher levels of rhetorical dissent at the beginning of the semester and these levels would increase if student issues arose over the course of the class. Instructors should encourage students to speak up about problems as soon as they arise because rhetorical dissent is a way for them to directly address classroom issues (Bolkan & Goodboy, 2013). Moreover, encouraging students to vent about classroom issues early on in the semester may reduce the risks of threats to the instructor (i.e., vengeful dissent) if these issues went unaddressed (Bolkan & Goodboy, 2016). As an example, instructors could allow their students to provide anonymous feedback by distributing midsemester evaluation surveys that ask them what they like and dislike about the course structure or teaching format (Bolkan & Goodboy, 2013). In doing so, students would be able to voice their concerns about the course and instructor with less fear of reprisal. Instructors could then evaluate the surveys and adjust the course structure in response to the students' feedback.

Third, instructors should do their best to behave in ways that minimize the potential for student anger and hopelessness. Students react with anger when they perceive classroom unfairness (Horan et al., 2010) or a lack of emotional support from their teachers (Mazer et al., 2014). Thus, instructors should make sure their classes are fair by demonstrating clear grading standards (i.e., distributive justice), being respectful and open to communicating with all students (i.e., interactional justice), and setting a reasonable amount of coursework to attain a good grade in the class (i.e., procedural justice; Paulsel et al., 2005). Instructors can provide emotional support when they use effective teaching behaviors such as nonverbal immediacy (e.g., eye contact, vocal variety), clarity (e.g., organized lesson, relevant examples), and communication competence (e.g., effective listening skills, being appropriate; Mazer et al., 2014). When instructors do not use these behaviors, a "teacher could trigger emotional processes that heighten students' anger, anxiety, shame, hopelessness, and boredom in a class" (Mazer et al., 2014, p. 163). Moreover, students feel hopeless when they foresee a prospective failure in the course. To decrease potential feelings of hopelessness, instructors can implement self-efficacy enhancement and stress-reducing strategies (Buric & Soric, 2012). Instructors can enhance students' self-efficacy by providing clear and positive feedback on assignments and giving students the time to seek help on activities if needed. Instructors can reduce student stress by organizing exam study groups and rewarding students after a significant class accomplishment. By implementing these strategies, students may feel more confident in their abilities to successfully complete a course. Importantly, instructors should ensure that students experience anger and hopelessness minimally through effective teaching coupled with fair and structured assignments and activities.

### **Limitations and future research**

The main limitation of this study was that we did not capture the triggering agents of dissent and do not know why dissent occurred beyond students referencing their worst course of the semester (Goodboy et al., 2015). Another limitation is that we did not explain why some students might have had a different rate of change (slope) or starting points of dissent early in the semester (intercept) than others. That said, it would prove useful in future research to incorporate time-invariant predictors into similar latent growth curve models (Bollen & Curran, 2006) to observe individual differences in instructional dissent over time. Similarly, we do not know exactly why students experienced anger or hopelessness about their courses. Students do not just dissent about one single issue, and it is likely that there are a multitude of challenges and problems in their courses that encourage them to dissent (Goodboy & Bolkan, 2018).

Moreover, we did not capture dissent occurring at the very beginning of the semester. Yet it is possible that for some students, dissent begins the very first week of class as instructors discuss syllabus policies, assignments, and expectations. We mention this because research suggests students form thin slice impressions of instructors based on limited information (Tom et al., 2010) and negative student experiences beginning the very first day of class influence their motivation in the following class meetings (Wilson & Wilson, 2007). Thus, longitudinal investigations of dissent might examine initial dissent as the semester begins, drawing upon more intensive longitudinal methods with short time lags, including diary and experience sampling with assessments earlier in the semester (Bolger & Laurenceau, 2013). Future research might also examine student dissent in graduate programs and employ these longitudinal recommendations (e.g., study how Ph.D. students dissent over their years toward obtaining a doctorate degree). We echo Myers' (2017) recommendation to better understand how classroom dynamics unfold over the semester or remain relatively stable. Finally, the instructional dissent literature would benefit from the development of a theory (or competing theoretical models) to predict and explain the causal processes driving students to complain about their courses and instructors.

### **Conclusion**

Instructional dissent occurs over the course of a semester and appears to be relatively stable with only slight rates of change for expressive and vengeful dissent, and no change for rhetorical dissent. Student anger and hopelessness fuel dissent, so it is important for instructors to mollify these feelings if possible. Ultimately, instructors should recognize the potential for dissent about their courses, but encourage their students engage in rhetorical dissent by approaching them directly to address class-related issues. Because rhetorical dissent does not increase over the semester, but vengeful dissent does (although rare, but more so when accompanied by anger and hopelessness), a student's experience in their "worst course" of the semester seems bleak. Perhaps higher-quality courses might yield different dissent trajectories when students receive better instruction with fewer issues to complain about.

## References

- Ball, H., & Goodboy, A. K. (2014). An experimental investigation of the antecedents and consequences of psychological reactance in the college classroom. *Communication Education, 63*(3), 192–209. <https://doi.org/10.1080/03634523.2014.918634>
- Bolger, N., & Laurenceau, J.-P. (2013). *Intensive longitudinal methods: An introduction to diary and experience sampling*. Guilford Press.
- Bolkan, S. (2018). Threat, coping, and cost: Protection motivation in the context of consumer complaining. *Communication Research, 45*(6), 840–861. <https://doi.org/10.1177/0093650215600492>
- Bolkan, S., & Goodboy, A. K. (2013). No complain, no gain: Students' organizational, relational, and personal reasons for withholding rhetorical dissent from their college instructors. *Communication Education, 62*(3), 278–300. <https://doi.org/10.1080/03634523.2013.788198>
- Bolkan, S., & Goodboy, A. K. (2016). Rhetorical dissent as an adaptive response to classroom problems: A test of protection motivation theory. *Communication Education, 65*(1), 24–43. <https://doi.org/10.1080/03634523.2015.1039557>
- Bollen, K. A., & Curran, P. J. (2006). *Latent curve models: A structural equation perspective*. Wiley.
- Buckner, M. M., & Finn, A. N. (2013). Academic locus of control as an individual factor influencing student dissent. *Communication Research Reports, 30*(4), 333–341. <https://doi.org/10.1080/08824096.2013.837389>
- Buric, I., & Soric, I. (2012). The role of test hope and hopelessness in self-regulated learning: Relations between volitional strategies, cognitive appraisals and academic achievement. *Learning and Individual Differences, 22*(4), 523–529. <https://doi.org/10.1016/j.lindif.2012.03.011>
- Cooper-Hind, H., & Taylor, J. (2012). Student complaints: An accurate measure of student dissatisfaction? *Higher Education Review, 44*(3), 54–80.
- Curran, P. J., Obeidat, K., & Losardo, D. (2010). Twelve frequently asked questions about growth curve modeling. *Journal of Cognition and Development, 11*(2), 121–136. <https://doi.org/10.1080/15248371003699969>
- Golembiewski, R. T., Billingsley, K., & Yeager, S. (1976). Measuring change and persistence in human affairs: Types of change generated by OD designs. *The Journal of Applied Behavioral Science, 12*(2), 133–157. <https://doi.org/10.1177/002188637601200201>
- Goodboy, A. K. (2011a). Instructional dissent in the college classroom. *Communication Education, 60*(3), 296–313. <https://doi.org/10.1080/03634523.2010.537756>
- Goodboy, A. K. (2011b). The development and validation of the instructional dissent scale. *Communication Education, 60*(4), 422–440. <https://doi.org/10.1080/03634523.2011.569894>
- Goodboy, A. K., & Bolkan, S. (2018). Instructional dissent. In M. L. Houser & A. M. Hosek (Eds.), *Handbook of instructional communication: Rhetorical and relational perspectives* (pp. 65–79). Routledge.
- Goodboy, A. K., Bolkan, S., & Goldman, Z. W. (2015). Students' imagined interactions as intrapersonal explanations for instructional dissent. *Communication Reports, 28*(2), 115–127. <https://doi.org/10.1080/08934215.2014.936563>
- Goodboy, A. K., Bolkan, S., Knoster, K. C., & Kromka, S. M. (2019). Instructional dissent as an expression of students' class-related achievement emotions. *Communication Research Reports, 36*(3), 265–274. <https://doi.org/10.1080/08824096.2019.1634534>
- Goodboy, A. K., Carton, S. T., Goldman, Z. W., Gozanski, T. A., Tyler, W. J. C., & Johnson, N. R. (2014). Discouraging instructional dissent and facilitating students' learning experiences through instructor self-disclosure. *Southern Communication Journal, 79*(2), 114–129. <https://doi.org/10.1080/1041794X.2013.865256>
- Goodboy, A. K., & Frisby, B. (2014). Instructional dissent as an expression of students' academic orientations and beliefs about education. *Communication Studies, 65*(1), 96–111. <https://doi.org/10.1080/10510974.2013.785013>
- Goodboy, A. K., & Martin, M. M. (2020). Omega over alpha for reliability estimation of unidimensional communication measures. *Annals of the International Communication Association, 44*(4), 422–439. <https://doi.org/10.1080/23808985.2020.1846135>

- Grimm, K. J., Ram, N., & Estabrook, R. (2017). *Growth modeling: Structural equation and multi-level modeling approaches*. Guilford Press.
- Horan, S. M., Chory, R. M., & Goodboy, A. K. (2010). Understanding students' classroom justice experiences and responses. *Communication Education*, 59(4), 453–474. <https://doi.org/10.1080/03634523.2010.487282>
- Johnson, L. L., & Kelly, S. (2020). Student predispositions as predictors of dissent behaviors in supply chain courses. *Decision Sciences: Journal of Innovative Education*, 18(2), 270–290. <https://doi.org/10.1111/dsji.12201>
- Jones, R., & Simonds, C. (1994, April 7–10). *Challenge behavior in the college classroom: What, when, and how often?* [Paper presentation]. Annual Meeting of the Central States Communication Association, Oklahoma City, OK.
- Kassing, J. W. (2006). Employees' expressions of upward dissent as a function of current and past work experiences. *Communication Reports*, 19(2), 79–88. <https://doi.org/10.1080/08934210600917115>
- Kennedy-Lightsey, C. D. (2017). Instructional dissent as a conservation of resources for emotionally exhausted students. *Western Journal of Communication*, 81(2), 188–205. <https://doi.org/10.1080/10570314.2016.1245438>
- Kowalski, R. M. (1996). Complaints and complaining: Functions, antecedents, and consequences. *Psychological Bulletin*, 119(2), 179–196. <https://doi.org/10.1037/0033-2909.119.2.179>
- Kumaraswamy, N. (2013). Academic stress, anxiety, and depression among college students – A brief review. *International Review of Social Sciences and Humanities*, 5(1), 135–143.
- LaBelle, S., & Martin, M. M. (2014). Attribution theory in the college classroom: Examining the relationship of student attributions and instructional dissent. *Communication Research Reports*, 31(1), 110–116. <https://doi.org/10.1080/08824096.2013.846257>
- Linville, D. L., Boatwright, B. C., & Grant, W. J. (2018). “Back-stage” dissent: Student Twitter use addressing instructor ideology. *Communication Education*, 67(2), 125–143. <https://doi.org/10.1080/03634523.2018.1428998>
- Martin, M. M., Goodboy, A. K., & Johnson, Z. D. (2015). When professors bully graduate students: Effects on student interest, instructional dissent, and intention to leave graduate education. *Communication Education*, 64(4), 438–454. <https://doi.org/10.1080/03634523.2015.1041995>
- Mazer, J. P. (2017). Students' discrete emotional responses in the classroom: Unraveling relationships with interest and engagement. *Communication Research Reports*, 34(4), 359–367. <https://doi.org/10.1080/08824096.2017.1365233>
- Mazer, J. P., McKennan-Buchanan, T. P., Quinlan, M. M., & Titsworth, S. (2014). The dark side of emotion in the classroom: Emotional processes as mediators of teacher communication behaviors and student negative emotions. *Communication Education*, 63(3), 149–168. <https://doi.org/10.1080/03634523.2014.904047>
- Muthén, L. K., & Muthén, B. O. (2017). *Mplus user's guide* (8th ed.). Muthén & Muthén.
- Myers, S. A. (2017). A longitudinal analysis of students' motives for communicating with their instructors. *Communication Education*, 66(4), 467–473. <https://doi.org/10.1080/03634523.2017.1313437>
- Paulsel, M. L., Chory-Assad, R. M., & Dunleavy, K. N. (2005). The relationship between student perceptions of instructor power and classroom justice. *Communication Research Reports*, 22(3), 207–215. <https://doi.org/10.1080/00036810500207030>
- Pekrun, R. (2006). The control-value theory of achievement emotions: Assumptions, corollaries, and implications for educational research and practice. *Educational Psychology Review*, 18(4), 315–341. <https://doi.org/10.1007/s10648-006-9029-9>
- Pekrun, R., Elliot, A. J., & Maier, M. A. (2006). Achievement goals and achievement emotions: Testing a model of their joint relations with academic performance. *Journal of Educational Psychology*, 101(1), 115–135. <https://doi.org/10.1037/a0013383>
- Pekrun, R., Goetz, T., & Perry, R. P. (2005). *Achievement emotions questionnaire (AEQ) user's manual*. University of Munich.

- Pekrun, R., & Linnenbrink-Garcia, L. (2012). Academic emotions and student engagement. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 259–282). Springer.
- Pekrun, R., & Schutz, P. A. (2007). Where do we go from here? Implications and future directions for inquiry on emotions in education. In P. A. Schutz & R. Pekrun (Eds.), *Emotion in education* (pp. 313–331). Elsevier Academic Press.
- Pekrun, R., & Stephens, E. J. (2010). Achievement emotions: A control value approach. *Social and Personality Psychology Compass*, 4(4), 238–255. <https://doi.org/10.1111/j.1751-9004.2010.00259.x>
- Preacher, K. J. (2019). Latent growth curve models. In G. R. Hancock, L. M. Stapleton, & R. O. Mueller (Eds.), *The reviewer's guide to quantitative methods in the social sciences* (2nd ed., pp. 179–192). Routledge.
- Putnick, D. L., & Bornstein, M. H. (2016). Measurement invariance conventions and reporting: The state of the art and future directions for psychological research. *Developmental Review*, 41, 71–90. <https://doi.org/10.1016/j.dr.2016.06.004>
- Reader, T. W., Gillespie, A., & Roberts, J. (2014). Patient complaints in healthcare systems: A systematic review and coding taxonomy. *BMJ Quality & Safety*, 23(8), 678–689. <https://doi.org/10.1136/bmjqs-2013-002437>
- Row, D., Ruddock, A., & Hutchins, B. (2010). Cultures of complaint: Online fan message boards and networked digital media sport communities. *Convergence: The International Journal of Research Into New Media Technologies*, 16(3), 298–315. <https://doi.org/10.1177/1354856510367622>
- Satorra, A., & Bentler, P. M. (2010). Ensuring positiveness of the scale difference chi-square test statistic. *Psychometrika*, 75(2), 243–248. <https://doi.org/10.1007/s11336-009-9135-y>
- Tom, G., Tong, S. T., & Hesse, C. (2010). Thick slice and thin slice teaching evaluations. *Social Psychology of Education*, 13(1), 129–136. <https://doi.org/10.1007/s11218-009-9101-7>
- Vallade, J. I., Martin, M. M., & Vela, L. E. (2015). An investigation of students' forgiveness, instructional dissent, and learning in the college classroom. *Western Journal of Communication*, 79(4), 389–412. <https://doi.org/10.1080/10570314.2015.1068368>
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, 92(4), 548–573. <https://doi.org/10.1037/0033-295X.92.4.548>
- Wilson, J. H., & Wilson, S. B. (2007). The first day of class affects student motivation: An experimental study. *Teaching of Psychology*, 34(4), 226–230. <https://doi.org/10.1080/00986280701700151>