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Maï Yasué 8988034
Quest University Canada, maiyasue@gmail.com

Lucas M. Jeno
University of Bergen, Lucas.Jeno@uib.no

Jody L. Langdon
Georgia Southern University, School of Health and Kinesiology, Georgia, jlangdon@georgiasouthern.edu

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Abstract

We extended the research on autonomy-supportive teaching to universities and examined the relationships between autonomous motivation to teach and autonomy-supportive teaching. Autonomously motivated university instructors were more autonomy-supportive instructors. The freedom to make pedagogical decisions was negatively correlated with external motivation towards teaching. Participants indicated that large class sizes, high teaching loads, publication pressures, and a culture that undervalues effective undergraduate teaching undermined both student learning and their feelings of autonomy. Together these results presents a picture of a subset of university instructors who remained autonomously motivated to teach, irrespective of barriers they experienced from university administrators or policies.

Keywords

Self-Determination Theory, Intrinsic Motivation, Undergraduate, Mixed-methods

Cover Page Footnote

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Are Autonomously Motivated University Instructors More Autonomy-Supportive Teachers?

Maï Yasué[1], Lucas M. Jeno[2], & Jody L. Langdon[3]

1. Quest University Canada
2. University of Bergen
3. Georgia Southern University

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We extended the research on autonomy-supportive teaching to universities and examined the relationships between autonomous motivation to teach and autonomy-supportive teaching. Autonomously motivated university instructors were more autonomy-supportive instructors. The freedom to make pedagogical decisions was negatively correlated with external motivation towards teaching. Participants indicated that large class sizes, high teaching loads, publication pressures, and a culture that undervalues effective undergraduate teaching undermined both student learning and their feelings of autonomy. Together these results presents a picture of a subset of university instructors who remained autonomously motivated to teach, irrespective of barriers they experienced from university administrators or policies.

INTRODUCTION

Research on motivation in education has created a wealth of knowledge regarding the benefits and uses of teaching styles that foster feelings of autonomy in students (Black & Deci, 2000; Reeve, 2006; Reeve, Bolt, & Cai, 1999). In contrast to controlling teachers who use coercive language and rely mainly on extrinsic rewards and punishment, autonomy-supportive teachers promote feelings of autonomy by explaining class policies, providing meaningful choices, acknowledging and accepting negative feelings, framing class material in a way that is consistent with the personal goals of the individual students and using informational and non-controlling language (Reeve, 2006). By fostering inner motivations to learn, autonomy-supportive teachers help engender autonomously-motivated students who have higher academic performance, engagement, persistence, creativity and well-being (Black & Deci, 2000; Nunez, Fernandez, Leon, & Grijalvo, 2015; Pulfrey, Buchs, & Butera, 2011; Reeve, 2006; Sheldon & Krieger, 2014; Vansteenkiste, Lens, & Deci, 2006). Although past research on the characteristics of the teacher and the work environments in schools (Nunez et al., 2015; Pelletier, Seguin-Levesque, & Legault, 2002; Reeve et al., 1999; Tadic, 2015) identified potential antecedents of these two contrasting teaching styles, such research on the antecedents of autonomy-supportive teaching has not been extended to universities. Thus, the goal of this study is to determine which motivational characteristics influence university instructors to be more autonomy-supportive in their teaching. To frame our investigation, we relied on the rich body of empirical research from Self-Determination Theory (SDT) (Ryan & Deci, 2000, 2017).

Past SDT studies in schools (Pelletier et al., 2002; Pelletier & Sharp, 2009; Roth, Assor, Kanat-Maymon, & Kaplan, 2007) suggest that work environments can affect autonomous motivation in teachers (Stupnisky, Hall, Daniels, & Mensah, 2017) by supporting or thwarting the basic psychological needs (BPN) for autonomy (feeling able to make meaningful choices and have freedom in thought), relatedness (feeling connection to people and place), and competence (feeling capable and confident in the ability to carry out tasks) (Deci et al., 2001; Ryan & Deci, 2017). Whether or not teachers in schools feel autonomously motivated to teach depends on factors such as perceived pressures and constraints at work (e.g., concerns relating to pressures from students to adjust grading, or pressures from colleagues and administrators) (Pelletier et al., 2002; Taylor, Ntoumanis, & Standage, 2008) as well as feelings of autonomy with respect to teaching decisions such as being able to decide on course content or teaching styles (Tadic, 2015; Taylor et al., 2008). In comparison to such research in primary or secondary schools, and the extensive research on motivations for faculty to engage in research (Goodwin & Sauer, 1995; Hardré et al., 2007; Hardré, Beesley, Miller, & Pace, 2011), there is a paucity of studies on autonomous motivation towards teaching among university instructors (Burgess & Ramsey-Stewart, 2015).

Three recent studies in schools (Pelletier et al., 2002; Pelletier & Sharp, 2009; Roth et al., 2007) demonstrated that teachers who feel their BPNs are satisfied also feel more autonomously-motivated to teach. In turn, more autonomously-motivated teachers are also more autonomy-supportive teachers who succeed in engendering autonomous academic motivation in students (Nunez et al., 2015; Reeve, 2006; Reeve et al., 2014). Because both work-place satisfaction for instructors and autonomously-motivated students are also important goals for universities, our research may help to inform positive university learning environments to help both students and instructors thrive.

The present study

We examined the relationships between faculty work-place BPN satisfaction, faculty autonomous motivation to teach and autonomy-supportive teaching methods for undergraduate students among university instructors in North America, Europe and Australia. Based on the results of school studies, we hypothesized that university instructors who perceived greater work-place BPN satisfaction would have higher autonomous motivation in teaching, and in turn, report more autonomy-supportive teaching and mentoring methods.

One of the differences between school teachers and university instructors is that university instructors have highly variable work environments that differ depending on the type, permanence and rank of university position (Baldwin & Wawrzynski, 2011; Hardré et al., 2011; Haviland, Alleman, & Allen, 2017; Stup-

nisky et al., 2017; Umbach, 2007). Thus, even within the same institution and department, instructors with different university positions could experience different work-place BPN satisfaction. For example, typical casual or part-time non-tenure-track instructors (who may represent upwards of 25 % of instructors (Crawford & Germov, 2015)) do not participate fully in university governance (Haviland et al., 2017), are not protected under academic freedom (Baldwin & Chronister, 2001; Reevy & Deason, 2014), are paid less than assistant professors (Ehrenberg & Zhang, 2005), and may have less power to select courses, decide course content or participate in broader university decision-making as compared with tenured professors (Haviland et al., 2017). Such differences in the pressures or constraints on non-tenure-track instructors could lead to differences in teaching styles. Previous studies have indicated that the part-time non-tenure-track faculty may spend less time preparing for classes, are more likely to assess students with multiple choice tests rather than essays, meet less often with students and are less likely to design classes that are student-centered (Umbach, 2007). Moreover, because of the need to secure future employment, these instructors may worry more about student teaching evaluations (Johnson, 2011), and therefore we could hypothesize that they may feel more extrinsically motivated in their teaching than instructors with tenure. Lastly, in some cases pre-tenured faculty who are under significant pressures to enhance research productivity in order to get tenure and have job security may feel less autonomously motivated to teach because tenure reviews may emphasize research success over teaching (Hardré et al., 2011; Stupnisky et al., 2017).

Although the above literature suggests that the relationship between autonomous-motivation and teaching styles could differ amongst instructors in different ranks, positions (e.g., tenured faculty, tenure track and non-tenure-track instructors) or institutions, at present there are no studies that have explicitly explored these variables together. Thus, given the paucity of past research on the relationship between work-place autonomy and autonomy-supportive teaching methods in undergraduate education, instead of focusing on one department, institution, or position we have intentionally cast a wide net to include a wide range of university instructors. Furthermore, by including both open and closed-ended questions in our survey we hope that institutions could use the results of this study to understand the mechanisms of how autonomy relates to teaching styles amongst the wide spectrum of university instructors. Institutions or departments could then develop a more focused survey that is tailored to their particular institution or types of university instructors. The aim of this research is thus to identify characteristics across multiple teaching environments that may influence autonomy-supportive teaching practices.

METHOD

Participants

A total of 157 participants (58 % females) filled out the survey. The respondents indicated whether they were in life sciences/physical sciences/math (44 %), social sciences and education (33 %) or humanities and arts (16 %). There was a minimum of 25 different departments represented in the participant pool. There were 14 participants who did not indicate departmental affiliation. The majority of participants were white (92 %) with most indicating they were tenured faculty (57 %), followed by temporary or non-tenure track (21 %), pre-tenure (17 %), and permanent teachers (ie. instructors who have permanent or tenured positions with teaching as their primary responsibility) (5 %). The respondents were from North America (75 %), Europe (19 %) and Australia (4 %). Although half of respondents did not indicate which university they were from, there were responses from at least 15 different universities. The mean[SD] age, years at the institution and salaries were: 47[11], 10[9] and 74,506 [25,990] USD, respectively. The universities were mainly large institutions (85% >10,000 students).

Procedures

Data collection was conducted between 10 Jan 2017 and 10 May 2017 via internet web-survey, using Interceptum. A link to the survey was emailed to university instructors at the researchers' home institutions. The link was the same for all participants and was not connected to their email accounts. Furthermore, in order to increase the breadth of respondents, we also asked colleagues in our home and institutions in which we were previously affiliated to forward the link to instructors at other institutions. Two reminders were sent out to the participants. In addition to emails, participants were also recruited via closed or private groups on Facebook as well as posters at one of the institutions. Given that filling out the survey was voluntary and we used snow-ball methods to recruit survey respondents, we are unable to estimate the response rate. Because this data is not representative or random, relational analyses (i.e., relationships between the variables) are more useful than an attempt to make normative statements from the sample. Research ethics (IRB) approval was granted at each researcher's home institution for this procedure.

MEASURES

See Table 1 for an overview of the descriptive statistics of the study measures and Online Supplementary Materials for the survey items that we adapted to the undergraduate context. There were two measures that examined BPNs satisfaction in the work-place. These were the BPN at Work Scale (Baard et al., 2004) and the Teacher's Need for Autonomy Satisfaction (TNAS; Tadic, 2015)

Basic Psychological Needs

The BPN was used to measure autonomy (e.g., "When I am at work, I have to do what I am told", termed BPN-Auto), competence (e.g., "Most days I feel a sense of accomplishment from working", BPN-Comp), and relatedness (e.g., "People at work care about me", BPN-Relate) in the work-place. It consisted of 21 questions, using a Likert Scale ranging from 1 (not at all true) to 7 (very true). The reliabilities from our data were similar to others in previous studies (Deci et al., 2001).

The Teacher's Need for Autonomy Satisfaction (TNAS)

Because the BPN at Work survey is not specific to teaching, we also included an additional measure of BPN satisfaction that has been adapted from a previous study (Johnston & Finney, 2010) to the teaching work environment. The TNAS measures perceived pressures and constraints teachers experienced in school (TNAS; Tadic, 2015). We chose this questionnaire because it included two factors that could easily be adapted to reflect two different and important aspects of work-place autonomy in

a university. The first factor (TNAS-Free) measured whether teachers felt they could make pedagogical decisions according to personal values and goals with limited pressures from colleagues, administrators, parents and curricula (Pelletier et al., 2002; Pelletier & Sharp, 2009; Taylor & Ntoumanis, 2007). The latter factor (TNAS-Participate), related to whether instructors felt they were able to influence broader decision-making at an institution. Instructors who are at institutions that allow them to influence university policies and practices (Haviland et al., 2017) may have greater BPN satisfaction and therefore be more autonomously-motivated in their teaching.

Although there are 16 items in the original TNAS, we used 11 items that were most relevant to the university context and did not duplicate items in the BPN. Participants also rated these statements on a 7-point Likert Scale ranging from 1 (completely disagree) to 7 (completely agree). Upon initial inspection, we removed one of the items as it was only weakly correlated with the other items and exploratory factor analysis indicated low factor loadings. Similar to Tadic (2015), the two factors that accounted for 49 % of the variation corresponded to "freedom to make teaching decisions" (TNAS-Free, 6 items) and "participation in collective decisions" (TNAS-Participate 4 items).

Autonomous Motivation for Teaching

We adapted a questionnaire designed to measure autonomous (intrinsic motivation and identified regulation, AMT) and controlled (external regulation, EMT) motivations towards teaching in schools (Roth et al., 2007). Although the original survey used 16 items and also measured introjected regulation, for the sake of brevity we only included 12 items. We also removed references to parents or principals and replaced them with student evaluations or supervisors respectively so that it was more suitable for a general undergraduate context. Following approaches from previous studies (Jeno, Grytnes, & Vandvik, 2017; Martinek, Hofmann, & Kipman, 2016), participants rated these statements on a 7-point Likert Scale ranging from 1 (strongly disagree) to 7 (strongly agree). We removed two items from the survey because they were weakly correlated with the other items and an exploratory factor analysis suggested that these items had low factor loadings. Once these two items were removed the reliabilities for external and autonomous motivations were similar to the original instrument (Roth et al., 2007).

Teaching Style – Mentoring

Autonomy-supportive teaching for university instructors may manifest both in terms of the design and execution of classes as well as in more individualized mentoring contexts (Reeve et al., 2014, 1999). To measure autonomy-supportive teaching (termed "Auto-Mentor") and controlling mentoring styles (termed "Control-Mentor"), we adapted the "Problems in Schools" (PIS; Reeve, Bolt, & Cai, 1999) and "Problems at Work" (PAW; Deci, Connell, & Ryan, 1989) questionnaires to an undergraduate context. These items were related to how instructors engage with students in one-on-one mentoring meetings rather than how the teacher runs the classroom environment. Each of the six vignettes presented a scenario that an instructor may encounter when mentoring students and then a prompt: "As a teacher, what are you most likely to do?". Similar to the PIS and PAW, there are four options that range from highly autonomy-supportive teaching approaches (i.e., acknowledging negative feelings, coaching a student to diagnose and try out a solution), as well as a highly controlling approach (i.e., identifies a solution and emphasizes extrinsic pressures such as grades). In addition, there were moderately controlling or moderately autonomous options (e.g., teacher identifies a solution and justifies the solution based on a student's internalized idea of obligation [moderately controlling] or presents information on how the student's peers have solved a similar problem [moderately autonomous]). However, when we examined ordination plots of the data and reliabilities and re-examined the survey questions, some of the moderately autonomous items loaded on multiple factors and could be interpreted to be both autonomy-supportive and controlling. Thus, for this study we ended up omitting all of the moderately autonomous or moderately controlling items and instead calculated an average of the two extreme poles (i.e. highly autonomy-supportive and highly controlling) styles. We also omitted one of the highly autonomy-supportive items because of low correlation coefficients with the other highly-controlling items as well as the measure of highly controlling classroom teaching style.

Teaching Style – Classroom

In addition to the vignettes that focused on inter-personal mentoring styles, we adapted the description of autonomy-supportive (termed "Auto-Class") and more controlling classroom (termed "Control-Class") teaching styles by Reeve et al (2014) for an undergraduate context. At the end of each paragraph we asked "Does this approach to teaching describe what you actually do on a daily basis to motivate and engage your students in your classes?" Participants responded based on 1 (Not at all) through 7 (Very much). Auto-Mentor and Auto-Class were positively correlated to each other, as were Control-Mentor and Control-Class (Table 2). There were no correlations between Control-Mentor and Auto-Class styles, nor between Auto-Mentor and Control-Class styles.

Valuing and Feeling Autonomous in Teaching, Research or Service

Because of the multi-faceted nature of the university instructor's position, university instructors may feel autonomous to different degrees when they are teaching, conducting research, or engaging in service (for the university, department or program eg. sitting on committees). Thus, in addition to the above measures which do not allow the participants to respond differently to different aspects of their job, at the end of the survey we also asked participants to provide more detail on the different aspects of their job. For example, we asked, "To what extent do you personally value each of the professional activities?" (1=low, 10 = high). The professional activities we prompted were: research (Value-Research), service/administration (Value-Service), undergraduate teaching/mentoring (Value-Teach) and graduate teaching/mentoring. In addition, we asked participants how autonomous they felt (1 = Not at all, 2= A little, 3 = Somewhat, 4 = Very and 5 = Extremely) when engaging in undergraduate teaching and mentoring (Auto-Teach), research (Auto-Research) and service (Auto-Service).

Open-Ended Responses

Furthermore, to help provide more context to the closed-ended results, participants were asked to comment on the conditions that positively or negatively influence feelings of choice and sense of freedom in teaching, service and research, as well as contextual factors that helped or hindered their ability to teach engaging and enriching learning environments. We also asked a final ques-

tion that provided opportunities for participants to comment on their motivation as a university instructor and the factors that affect their motivation.

DATA ANALYSIS

We conducted preliminary analysis on the data by examining the Cronbach's alphas as well as conducting exploratory factor analysis using Promax and oblique rotations in SPSS 24. Table 1 represents means and Cronbach's alphas after the item was removed.

Table 1. Means and reliabilities of measures used in the survey.

	Items	Mean [SE]	Alpha
BPN-			
Auto	7	5.00[0.08]	0.79
Comp	6	5.42 [0.07]	0.66
Relate	8	5.27[0.09]	0.88
TNAS-			
Free[B]	4	5.22[0.08]	0.75
Participate	6	4.18[0.10]	0.69
Autonomous motivation in teaching			
AMT[A]	6	5.76[0.07]	0.81
EMT	4	3.54[0.11]	0.78
Mentoring style-			
Auto-Mentor	6	4.07 [0.05]	0.78
Control-Mentor	5	2.09 [0.05]	0.64
Classroom style			
Auto-Class	1	4.18[0.10]	Na
Control-Class	1	4.36[0.05]	Na
Value-			
Research	1	7.36 [0.21]	Na
Service	1	6.05 [0.20]	Na
Teach	1	8.66 [0.12]	Na
Autonomy			
Research	1	4.24 [0.08]	Na
Service		3.11 [0.09]	Na
Teach		3.89 [0.07]	Na

Path Analysis

IBM AMOS 24 was employed to conduct the proposed path-analytical model. Conventional goodness-of-fit criteria was used to evaluate mode fit. Specifically, according to Hu and Bentler (1999) CFI, TLI, and NFI values > .90, RMSEA < .08, and a χ^2/df ratio < 2, are considered a good model fit. We specified that relatedness, competence, autonomy, TNAS-Free and TNAS-Participate would predict teacher motivation (i.e., AMT and EMT). Furthermore, we examined whether teacher motivation would, in turn, predict self-assessed mentoring styles (i.e., Auto-Mentor versus Control-Mentor)

Comparison Among University Positions

Moreover, to assess whether there may be differences in perceived work pressures, autonomous motivation in teaching, autonomy-supportive teaching and value placed on teaching (as opposed to research and service) among university instructors with different types of positions, we used one-way ANOVAs to compare instructors who were tenured, pre-tenure or non-tenure-track.

Qualitative Analysis

In total 115 participants included qualitative comments. These comments included short phrases (e.g., "Hinder-Large class sizes, Help-Supportive department chair") as well as more elaborate descriptions of how or why (for instance) large classes impede a teacher's ability to teach according to their own personal values. The longest comment we received was 440 words. We used a content analysis approach to analyze the open-ended responses, in line with recommendations from Hsieh and Shannon (2005). The responses were examined by two of the researchers, who independently read through the responses several times to iteratively identify repeating key words, phrases, and themes from the responses (Hoonard, 2015; Hsieh & Shannon, 2005; Rubin & Rubin, 2005). After this process, the researchers came together to discuss their impressions and establish specific themes based on these impressions. Negative case analysis was also employed to ensure the integrity of the themes. After themes were established, responses were separated by themes, with individual statements fitting into only one theme.

RESULTS

Descriptive analysis

Descriptive analyses show acceptable Cronbach´s Alpha levels for the study variables (Table 1). Furthermore, descriptive analyses show that the teachers reported higher means for AMT than EMT and relatively low scores for Control-Mentor (Table 1). In addition, the majority of instructors indicated that they were afforded at least some autonomy over teaching decisions (98 %, i.e., with only 2 % indicated "not at all" autonomous). Results from the correlation matrix show that AMT is positively related to BPN-Competence, BPN-Relate Auto-Mentor, Auto-Class and Value-Teach and Value-Service. EMT is negatively related to TNAS-Free, Auto-Teach, and positively related to Auto-Class and Value-Service (Table 2)

Path Analysis

The path-analysis, using bias-corrected bootstraps (5000 bootstrap samples) was conducted to test how well our hypothesized model fit the data. Throughout the results, p-values are indicated as †= 0.10, * = 0.05, ** = 0.01. Results showed a good model fit, $\chi^2(11) = 20.79$, p=.04, χ^2/df= 1.88 CFI= .97, TLI= .90 and NFI= .94. This analysis indicated that the different measures of work-place BPN satisfaction were positively correlated to each other (i.e., BPN-Auto, BPN-Comp, BPN-Relate, TNAS-Free, TNAS-Participate). However, of these five measures of BPN satisfaction in the workplace only TNAS-Free negatively predicted EMT (β = -.33**). In contrast to our predictions, none of the other measures predicted autonomous or controlled motivation in teachers (Fig. 1, Table 2). On the other hand, the results did support the hypothesis that autonomously motivated teachers were more likely to be autonomy-supportive teachers. Specifically, EMT negatively predicted Auto-Mentor (β = -0.17*) and positively predicted Control-Mentor (β = 0.22**), whereas, AMT positively predicted Auto-Mentor (β = .15†) and negatively predicted Control-Mentor (β = -0.32**).

Table 2. Correlation coefficient of the study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. BPN-Auto	1														
2. BPN-Comp	0.63**	1													
3. BPN-Relate	0.48**	0.46**	1												
4. AMT	0.07	0.13†	0.14†	1											
5. EMT	-0.12	-0.08	0.03	0.19*	1										
6. TNAS-Free	0.58**	0.50**	0.33**	-0.01	-0.29**	1									
7. TNAS-Participate	0.64**	0.36**	0.57**	0.03	-0.01	0.28**	1								
8. Auto-Mentor	-0.04	0.07	-0.01	0.39**	-0.12	0.09	-0.13	1							
9. Control-Mentor	0.06	0.03	-0.01	0.07	0.11	-0.06	0.08	0.16*	1						
10. Auto-Class	-0.14†	-0.04	-0.06	0.21**	0	-0.01	-0.09	0.32**	0.01	1					
11. Control-Class	-0.11	-0.28**	-0.1	-0.01	0.14†	-0.23**	-0.01	-0.06	0.34**	-0.08	1				
12. Auto-Teach	0.52**	0.46**	0.32**	0.09	-0.16*	0.57**	0.25*	0.11	0.06	-0.07	-0.09	1			
13. Value-Teach	-0.03	0.18*	0.1	0.22**	-0.04	0.20*	-0.14†	0.11	-0.13	0.12	-0.1	0.32**	1		
14. Value-Research	0.07	0.11	0.14	0.07	0.08	0.11	0.15†	0.05	-0.04	0.03	-0.02	-0.02	-0.16*	1	
15. Value-Service	-0.01	0.15†	0.12	0.15†	0.14 †	-0.02	0.12	0.11	0.04	0.13†	0.03	0.13†	0.30**	-0.06	1

n = 160, †= .10, *p= .05, **p=.01

Given the significant paths, we conducted indirect effect tests for these paths (Baron & Kenny, 1986). To test for indirect effects we used the Sobel test (Sobel, 1982), in which we calculated the standardized beta weights and standard error from the predictor variable and mediator, and from the mediator to the dependent variable. Results showed two significant indirect effects; TNAS-Free negatively predicted Control-Mentor through EMT (β = -.07, z = -2.20*). Lastly, TNAS-Free positively predicted Auto-Mentor, indirectly through EMT (β = .05, z = 1.80†).

University Positions

In contrast to our predictions, there were few differences in BPN satisfaction, autonomous motivation in teaching and autonomy-supportive teaching styles of instructors who were in tenured (n = 96), tenure-track (n = 28) and non-tenure-track or temporary positions (n = 34) (Table 3). Tukey's post-hoc tests indicated that tenured instructors had higher feelings of autonomy than tenure-track faculty and higher feelings of autonomy with respect to research than non-tenure-track instructors.

Qualitative Responses

The responses for the open-ended question on factors hindering or enhancing feelings of autonomy in the work-place could be divided into four broad themes. These were: 1) Large class sizes and teaching loads, 2) a general culture of undervaluing teaching (in comparison to research), 3) the effect of administration or administrators on work-place satisfaction, and 4) reduced autonomy due to external assessment.

Over a third of the respondents to the qualitative questions indicated that large class sizes and teaching loads hindered their ability to teach meaningful and effective classes. For example, one participant said, "Class size is the primary factor that restricts what I can do with undergraduate students. Classes of more than 20 students do not work as well for the discussion style courses that I teach." Large class sizes and teaching loads meant that instructors were unable to facilitate discussions and other engaging class activities and develop meaningful relationships with the students.

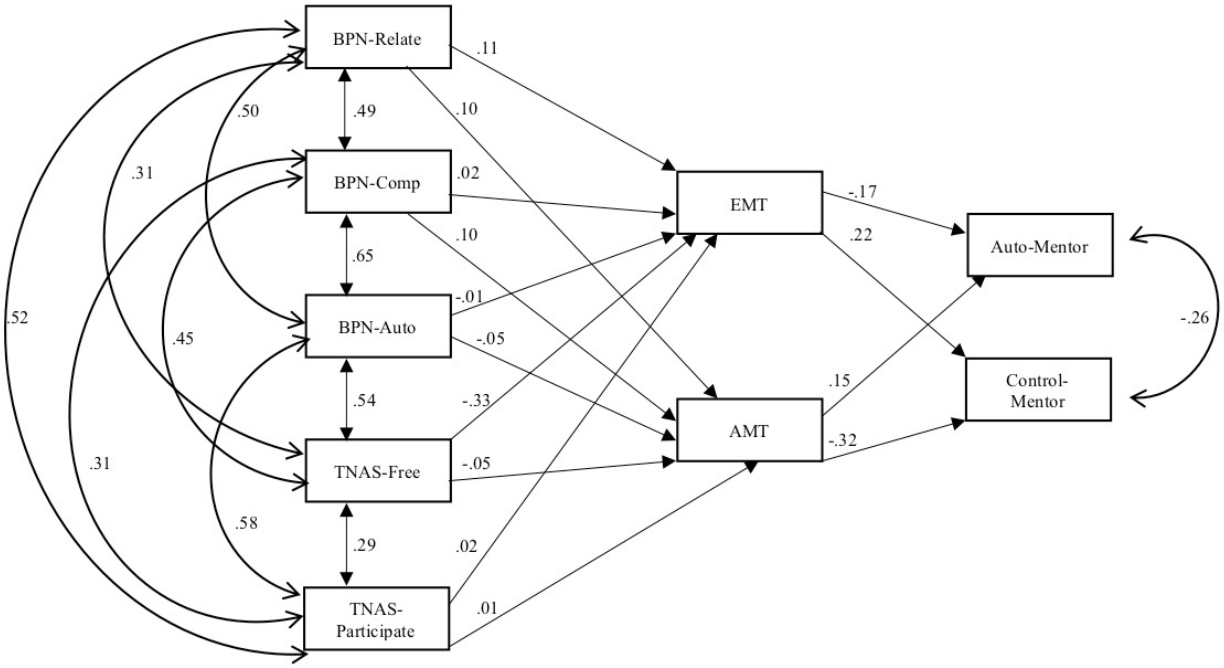
Several participants indicated that there was also a culture of undervaluing teaching in comparison to research. For example, one participant indicated, "Nobody but me cares. Some are actively disdainful of teaching undergrads". Participants felt that the time pressures imposed by large class sizes and teaching loads were exacerbated by the fact that time spent supporting students by through creative and effective classes, volunteering time to help students with exams or writing references for students, was not acknowledged and considered in tenure decisions. Thus, even though participants indicated that they personally valued teaching over research, the lack of reward or recognition for teaching effectiveness made instructors feel they needed to choose between effective teaching and job security. Since many of the instructors responding to this survey valued undergraduate teaching (as indicated by the quantitative responses), several participants seemed to feel resentful that they had to choose

Table 3. Comparison of Basic Psychological Needs, motivation towards teaching, teaching styles and personal value placed on research, service and teaching

	Tenure		**Tenure-track**		**Non-tenure-track**		**F** $_{2,155}$
	Mean	**SE**	**Mean**	**SE**	**Mean**	**SE**	
BPN-Auto	5.1	0.09	4.6	0.23	4.9	0.15	2.6†
BPN-Comp	5.5	0.09	5.2	0.17	5.3	0.14	1.4
BPN-Relate	5.3	0.11	5.3	0.19	5.0	0.19	1.0
TNAS-Free	5.3	0.10	5.1	0.19	5.0	0.15	1.6
TNAS-Participate	4.3	0.12	4.2	0.26	3.9	0.26	0.7
AMT	5.8	0.09	5.8	0.15	5.8	0.10	0.2
EMT	3.5	0.14	3.6	0.28	3.4	0.24	0.1
Auto-Mentor	4.0	0.07	4.0	0.13	4.3	0.09	2.1
Control-Mentor	2.2	0.07	2.0	0.09	2.4	0.09	1.4
Value							
...research	7.5	0.27	7.4	0.47	6.8	0.50	0.7
...service	5.9	0.23	5.7	0.57	6.7	0.36	1.4
…teaching	8.7	0.15	8.3	0.40	8.7	0.21	0.7
Autonomy							
...research	4.4	0.08	4.1	0.21	3.7	0.21	10**
...service	3.2	0.11	3.0	0.15	3.1	0.15	0.8
…teaching	3.9	0.08	3.8	0.11	4.0	0.11	0.4

Note: n = 160, †= .10, *p = .05, **p =.01

Figure 1: The final path-analysis model with standardized regression coefficients.



All the covariances are significant at $p < .05$. All path coefficients ≥ .15 are significant. The predictor variable in the model explained the following variance in the mediators and dependent variables: EMT (R^2=.10), AMT (R^2=.02), Auto-Mentor (R^2=.05), and Control-Mentor (R^2=.15).

between excellence in teaching and job security. Although it might be expected that doctoral universities with high research activity would prioritize research, several faculty who were not from such universities also provided examples of how teaching was under-valued at their institution. For example one participant said:

> *…when the university decides to reward someone, they do so with a course release, or with reassigned time from teaching. What we're really saying is that less teaching makes for a better situation for faculty. This is ridiculous, because we're not an R1 institution. If you want to make my life better, give me a research release. I got into this job to teach, the University systematically denigrates teaching by treating it as the worst of the chores we must perform.*

It appeared that this undervaluing of teaching led faculty to feel less autonomy and also less competent in their jobs. For example, a participant said, "My classes are far too large. I teach more students than anyone in the school and I am trying to prepare to go up for tenure - not a good match". Similarly, another participant who appeared to value teaching seemed resentful when told by a supervisor to "put my classes on 'auto-pilot' and shift my focus to research and scholarship".

The culture of undervaluing undergraduate teaching was reflected not only in existing reward structures, but also in poor infrastructure for teaching, as well as in insufficient professional development support for teaching, poor quality control and insufficient oversight to ensure high quality teaching. For example, a participant says:

> *The school does not support teaching innovation and actively hinders effective teaching. It is clear that undergrad education is not a priority at my school... Hardly an afterthought. Large class sizes, no resources, poor facilities. I am embarrassed by the education our undergrads receive.*

Critiques of administration and administrators (e.g., departmental chairs) were also frequently mentioned by participants. The actions of some administrators appeared to thwart basic psychological needs of autonomy and competence. Participants felt that decisions made by administrators adversely affected both student learning and work-satisfaction. Specifically, participants cited: large class sizes, unattainably high work-loads for instructors, top-down curricular changes, over emphasis on online learning, apparently arbitrary course scheduling, restriction of academic freedom by administration, and insufficient infrastructure (e.g., classroom space) to ensure that faculty were able to teach effective classes. Regarding class size and administrators, one participant commented: "not enough understanding from upper administration about the burden it places on faculty and students when they impose their demands on how many students we should be able to teach."

Although the quantitative survey responses did not appear to indicate substantial differences amongst non-tenure-track, pre-tenure or tenured faculty, a small number of the responses described the differences in experience between tenured and pre-tenure faculty (n = 2) as well as between non-tenured-track instructors and tenured faculty (n = 3). Tenured faculty indicated the expectation that they would take on a larger proportion of the administrative or service work-load than pre-tenure faculty (who needed to focus on research). The non-tenure-track faculty indicated that they felt under-appreciated and felt a lack of autonomy within the work-place, especially given their long-term commitment to the institution. Non-tenure-track faculty indicated frustration about the low wages and inability to select classes

or service activities. They felt they were forced to take on the least popular classes or service duties and also conduct research in their "spare" time in order to have a chance at gaining job security.

> *Most of us have to take on extra jobs to make up the income that tenure-track professors earn for less work. To make a living wage, we often take on extra courses… and/or have outside jobs (e.g., bartending). We also desperately need summer courses and are usually the bottom of the priority list. Being a college professor without tenure is a lot like being a college student only without student loans. It is no wonder why we relate so well to the students.*

> *The service demands within the Department can be challenging too. All of the University-level work falls on us. If they need to expand class size, our classes get bigger (without consultation). If they need to cut courses (summer) or programs (study abroad), we lose…. We do not have any votes in meetings, but we have to do the service.*

> *Lastly, it would really be nice if someone in the administration asks us what we want or what we don't want…All of that puts additional pressure on us, our families, and our desire to publish and earn respect in our discipline. We absorb the pressures, because we put so much into this career that we would rather melt down than fail ourselves or anyone else.*

Finally, several of the respondents also indicated that the mandatory requirements from external assessment or accreditation agencies reduced autonomy in teaching. Participants felt that these requirements forced instructors to redesign assessments or course material based on these requirements and reduce faculty work satisfaction as well as student learning. For example, one participant said:

> *Overall my university understands the importance of teaching, and the time it takes. However the recent move towards accreditation and goals and unifying diverse fields is having a profoundly negative effect of streamlining teaching and diminishing the kinds of creative thinking that professors like to engage with in order to meet the students' individual needs.*

In the responses to the open-ended questions, participants also identified the types of pedagogical decisions they could make at their institution. These responses demonstrated a wide range of experiences with respect to autonomy in teaching. For instance, some participants felt autonomous in how courses were taught or the texts they use but were unable to decide which classes to teach. Other participants were able to decide which classes to teach but were unable to decide assessment methods. There were also faculty who indicated a high level of autonomy and academic freedom in their teaching more generally. For example, "I can ask for the courses I want and generally get them, so I can spend most of my time teaching things that I find interesting. I have a lot of freedom in my classrooms to make my classes what I want them to be." Although there were numerous comments related to dissatisfaction with the teaching environment (as discussed above), there were no instructors who indicated that they felt no autonomy in terms of teaching.

In comparison to the large number of comments related to perceived problems in the learning environment (e.g., large class sizes, poor infrastructure) for work satisfaction and student learning, few participants seemed to blame the individual characteristics of the students and none of the participants commented on the characteristics of other instructors. Only three participants commented on the characteristics of students. They mentioned their students' inability to think critically, pay attention to detail, apply feedback and focus more on learning (rather than grades).

DISCUSSION

The main goal of this study was to determine which motivational characteristics influence university instructors to be more autonomy-supportive in their teaching. Our findings suggest that university instructors who are more autonomously motivated towards teaching tend to also be less controlling and more autonomy-supportive instructors. Conversely, more externally motivated instructors tended to be more controlling and less autonomously-supportive in their mentoring styles. The results of our study are in line with previous work in schools (Pelletier et al., 2002; Roth et al., 2007). Given the importance of autonomy-supportive instructors for student learning and motivations in schools (Nunez et al., 2015; Reeve et al., 1999) and the potential benefits for university students (Black & Deci, 2000; Williams & Deci, 1996), these results suggest that universities should also strive to create work environments that engender an instructor's autonomous motivation towards teaching.

In contrast to our predictions and results of previous school studies (Pelletier et al., 2002; Taylor et al., 2008), BPN satisfaction, in general, did not seem to correlate strongly with autonomous motivation in teaching in our study. Clearly more research is necessary to elucidate the contextual factors that may enhance autonomous motivation in teaching. There are several possible reasons for the lack of significant relationship between BPN at work and autonomous-motivation in teaching. First, compared to school teachers, the job responsibilities for university instructors are often divided between teaching, research and service (Fairweather, 2002; Hardré et al., 2007). Thus, in comparison to school teachers, teaching may represent a smaller proportion of both the work responsibilities and performance assessment criteria. Moreover, because research productivity may be more important for performance reviews than teaching (Hu & Gill, 2000; Rond, & Miller, 2005; Stupnisky et al., 2017), the perceptions of BPN at work may be influenced more by research pressures than teaching. For example, even if an instructor experienced low BPN satisfaction in terms of teaching environment, the high BPN satisfaction in research or service could compensate for the low BPN satisfaction in terms of teaching environment. Indeed, only TNAS-Free, the one measure of BPN that explicitly related to freedom in teaching decisions was correlated to motivation. Instructors who experienced low autonomy with respect to teaching decisions (TNAS-Free and Auto-Teach) were more likely to be externally motivated in their teaching.

Another possible reason for the lack of relationship between BPN satisfaction (in general) and motivation could be that given the generally high levels of autonomy in a university instructor's job overall as indicated in this and other studies (Haviland et al., 2017), motivation towards teaching may be relatively resilient to reductions in autonomy. In this study, participants valued undergraduate teaching equally or more than research (70 % of participants) and service (93 %). Such instructors who value undergraduate teaching, could have the internal resources to maintain autonomous motivation irrespective of unsupportive

administrators or university policies. The resilience of the autonomous motivation of the participants was also indicated by the lack of negative correlation between TNAS-Free and AMT. Given the generally high levels of AMT, the results suggested that even people who experienced relatively low TNAS-Free (and lower work-place competence, autonomy and relatedness) still maintained high autonomous motivation to teach. The comments in the qualitative responses also seemed to indicate that instructors cared about providing high quality learning environments for the students, regardless of insufficient support for undergraduate teaching from administrators.

In addition, we initially hypothesized that tenured professors would experience higher work-place BPN satisfaction than pre-tenure or non-tenure-track faculty. As indicated above, the lack of significant differences could be attributed to both the varied nature of the university instructor job as well as the resilience of the autonomous motivation of these study participants to the broader work environment. University instructors may have broader career goal aspirations compared to school teachers. Although it is reasonable to expect that all school teachers chose their careers because they wanted to teach, university instructors may have been attracted to the research or service components of the job and may not necessarily value teaching. Consequently, different instructors may place different personal values and priorities on teaching, research and service, regardless of the formal job description or performance assessment criteria. This may have led to wide within-group variation amongst tenured, pre-tenure and non-tenure-track faculty that may have obfuscated any effect of university position. The responses from the qualitative results suggested that given these differences in personal values and the varying degrees of emphasis placed on research versus teaching at different institutions, instructors may have chosen to work in departments with goals that are more compatible with their own priorities. Alternatively, some of the respondents appeared to have maintained their own priorities (e.g., towards valuing undergraduate teaching) despite conflicting priorities from the institution. Further research is necessary to better understand the interplay of situational factors and personal characteristics (Fernet, Guay, & Senecal, 2004; Henderson & Dancy, 2007) that may influence autonomous motivation in teaching.

As a starting point, the qualitative results from this study provided examples of the situational constraints that instructors felt reduced both feelings of autonomy with respect to teaching as well as their ability to provide enriching and engaging classes. Specifically, in terms of factors that reduced feelings of autonomy, participants identified factors that were similar to those identified in school studies: external accreditation requirements, pressure from administrators or colleagues to teach using a similar style, required assessment exercises and limited control of curriculum design (Pelletier et al., 2002; Pelletier & Sharp, 2009).

However, in contrast to school studies, a significant proportion of participants (1/3) indicated that large class size and teaching loads hindered their ability to teach engaging classes. Participants felt class sizes and teaching loads were imposed on them without consultation. These class sizes created time pressure and also prevented them from facilitating discussion or getting to know students in order to teach effective classes. As indicated in previous research (Fairweather, 2002; Stupnisky et al., 2017), for non-tenured faculty large class sizes and teaching loads were also perceived to compromise an instructor's ability to maintain sufficient research productivity in order to be tenured. Thus, larger class sizes may have simultaneously negatively affected autonomy, competence and relatedness (with respect to feelings of trust with administrators). Because the majority of research on autonomy-supportive teaching has focused on primary and secondary school students where class size is much smaller than a typical university class, no studies have examined the impacts of class size on both the instructor's motivation to teach and the use of autonomy-supportive teaching methods. This is important because autonomy-supportive teaching methods that are theorized to support autonomy and competence, may be more difficult in larger classes. For example, in large class sizes, teachers may struggle to understand a students' internal frame of reference into account and, or provide optimal challenges for individual students (Ryan & Deci, 2017). Another consequence of such large class sizes may be that the motivational strategy employed is more frequently a controlling attempt at one-size-fits all, with an emphasis on external rewards and punishments rather than more autonomy-supportive approaches.

The qualitative responses identified a range of factors beyond strictly the teaching environment that affected BPN. These included unfair recognition and promotion systems, time pressure, low pay, job insecurity, unsupportive administrators, and for non-tenure-track instructors an inability to vote, or voice concerns about work-place problems and job insecurity. Similar challenges were also indicated in past research on faculty burnout and workplace satisfaction (Fernet et al., 2004; Persson, 2017; Reevy & Deason, 2014; Stupnisky et al., 2017). In addition, similar to previous research, faculty felt challenged and pressured by the need to excel in both research and teaching (Fairweather, 2002; Persson, 2017; Watts & Robertson, 2011).

Limitations

Several limitations are worth mentioning. First, the present study was a cross-sectional study, thus no causal inferences can be made. Future studies should replicate our results either experimentally or longitudinally. Second, the present study has a low sample size and the majority of participants were from the US. This may have affected the results of our study. For instance, comparative research amongst countries has indicated differences in work satisfaction and stress across universities in 34 different countries. Stress attributed to external pressures at the work-place was much higher in US universities compared with Canada, Finland or Germany, for example (Persson, 2017). Future studies would need to replicate our methods to confirm our results. Third, our measure of autonomy-supportive teaching was self-reported by the instructor and we did not ask students for perceptions of autonomy-supportive teaching (Roth et al., 2007). Self-reports of teaching approaches may differ from both student reports and also from external reports of teaching methods (Ebert-May et al., 2011). Thus, it seems important that future studies include the assessment of students or external observer measures of autonomy-supportive teaching practices. Fourth, the results from this study were likely biased towards instructors who already felt highly autonomously-motivated in their teaching. Indeed, perhaps only people who are more autonomously-motivated to teach would actually be interested in completing a survey for university instructors. The vast majority of the respondents who completed this survey placed a high value on undergraduate ed-

ucation and also appeared to have some autonomy in teaching. For example, if the survey was advertised as a "researcher survey", we may have gained a different perspective from the participants, who may feel less autonomously motivated for teaching. To better assess the reliability and generality of this study, it is important that future studies focus sampling efforts on a single institution or department in order to gain a larger and more representative sample of university instructors who may be less autonomously motivated to teach. Despite some of these limitations, and given that some of the qualitative responses indicated that instructors experienced autonomy thwarting, future studies should attempt to disentangle these potentially interesting motivational dynamics. Finally, in this study we did not measure the perceived autonomous motivation of students. This information is important to consider, as SDT researchers in education postulate that instructors are willing to be more autonomy supportive when they perceive students to be motivated to learn (Pelletier et al., 2002; Pelletier & Sharp, 2009; Roth et al., 2007). However, undergraduate students tend to have higher levels of autonomy and motivation than school age students (Ratelle, Guay, Vallerand, Larose, & Senecal, 2007), so it is possible that the effects of perceived motivation of the students may be less important for the autonomous motivation in university instructors.

Practical implications

As far as we know, this study is the first to develop a questionnaire that measures autonomous motivation in undergraduate instructors, and autonomy-supportive mentoring and classroom teaching styles for university students. Within our participant pool, there were positive correlations between autonomy-supportive mentoring and classroom teaching styles (adapted from two different original surveys) as well as between the BPN at work, the TNAS items and Auto-Teach. These correlations were consistent with theoretical predictions. Furthermore, instructors who valued undergraduate teaching were also more likely to feel autonomous with respect to pedagogical decisions (TNAS-Free and Auto-Teach) and more autonomous motivation towards teaching. The correlations between personal values placed on undergraduate teaching were not significantly correlated to autonomy-supportive mentoring and classroom styles. However the direction of the relationship was positive and there was a negative correlation with highly-controlling teaching styles.

This study also highlights the value of using an SDT framework and a mixed-methods study to better understand how universities policies and practices may hinder or support the autonomous motivation of both instructors and students. Quantitative data of this study suggests that the instructors who completed this questionnaire were autonomously motivated to teach, irrespective of the constraints they faced from the university. Alternatively, despite some of the limitations placed on them by administrators (e.g., class size, reduced autonomy in curriculum design, inequitable pay or inability to vote), they were still able to remain autonomously motivated, perhaps because they still experienced some level of autonomy in their teaching or other aspects of their job. These results might suggest that universities are providing work contexts that are sufficiently conducive for autonomously motivated instructors. However, the information from the qualitative responses and also the likely response bias (i.e., a subset of the most highly autonomously motivated instructors) might suggest that large class sizes, high teaching loads, limited recognition for quality teaching and a culture of undervaluing undergraduate education are likely areas of concern that could have detectable effects on less autonomously motivated teachers. Alternatively, these contextual factors may prevent otherwise autonomously motivated educators from deciding to choose a career path as a university instructor.

CONCLUSION

Despite the extensive research on teachers' motivations to teach, very few studies have examined the motivations and teaching styles of university instructors. The results of this study suggest that there is at least a subset of university instructors, across a range of countries and university positions, who are autonomously-motivated to teach engaging and effective classes and care deeply about the quality of undergraduate education. This group of instructors felt frustrated by insufficient university support for undergraduate education. For many of these faculty, teaching was not viewed as a distraction from their main responsibility of research, but rather as a highly valued, meaningful, rewarding and important component of their job (Budden, Svechnikova, & White, 2017; Paduraru, 2014). Despite this, existing research on motivations and teaching in undergraduate education tends to focus more on how teaching "loads" *reduce* research productivity (Goodwin & Sauer, 1995; Hu & Gill, 2000; Watts & Robertson, 2011) rather than on motivations to teach. Thus to design university practices that help to promote well-being and learning amongst faculty and students, this research, emphasizes the importance of conducting more studies on the autonomous motivation of university instructors to teach.

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Online Supplementary Information - Survey instruments that were adapted for this study

Autonomous or controlled motivation for teaching

Adapted from: Roth et al. 2007

Instructions: These questions relate to your motivation in your undergraduate teaching. To what extent do you agree with the following statements? (1 = Strongly disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Neither Agree Nor Disagree, 5 = Slightly Agree, 6 = Agree and 7 = Strongly Agree). Two items (*) were removed after preliminary analysis of data.

1. When I invest effort in my work as a teacher, I do so because,
   a. It is important for me to make students feel that I care about them.* (Autonomous)
   b. I enjoy creating connections with people. (Autonomous)
   c. I enjoy finding unique solutions for various students. (Autonomous)
   d. In order to prevent disruptions and discipline problems in my classes. (Controlled)
2. When I devote time to individual talks with students, I do so because,
   a. I want good teaching evaluations from students. (Controlled)
   b. I like being in touch with young adults. (Autonomous)
   c. I can learn from the students what happens in the classroom. (Autonomous)
   d. It is important for me to make students feel that I care about them. (Autonomous)
3. When I try to find interesting subjects and new ways of teaching, I do so because,
   a. It is important for me to keep up with innovation in teaching.* (Autonomous)
   b. I want good teaching evaluations from supervisors. (Controlled)
   c. It is fun to create new things. (Autonomous)
   d. I want the students not to complain to my supervisors. (Controlled)

The Teacher's Need for Autonomy Satisfaction (TNAS)

Adapted from: Tadic (2015)

Instructions: In front of you is a series of statements related to your job, relationships in the collective and teaching of **undergraduate** students. Please read each statement carefully, consider each of them and express the extent to which you agree with each statement. There are no "correct" and "incorrect" responses, all answers are good if they are sincere.
(1 = Strongly disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Neither Agree Nor Disagree, 5 = Slightly Agree, 6 = Agree and 7 = Strongly Agree)

* One item was removed after preliminary analysis of data.

Subscale-TNAS-Free

1. I often feel pressure by colleagues and supervisors to change course content or teaching methods.
2. I have the freedom to personalize syllabus and course content so that teaching is meaningful to me.
3. I do not have many opportunities to decide what content to teach and how to teach it.
4. The required course content limits my creativity and flexibility about work in classrooms.
5. I do not see the opinions and wishes of students as pressures on my personal style of teaching. *
6. I feel pressure from my students to adjust grading schemes, personal style of teaching or course content to please my students.
7. Sometimes I feel pressure to align my assessment criteria according to the requirements of the collective or my supervisor.

Subscale – TNAS-Participate

1. At collective meetings I feel completely free to express my ideas and opinions.
2. The administration of the university often makes decisions that affect teaching without consulting instructors.
3. Colleagues and supervisors try to understand how I am feeling about situations I face every day in the classroom and teaching environment.
4. The university administration encourages faculty participation in important decision-making that affects the teaching environment.

University Mentoring Styles

Adapted from: "Problems in Schools" (PIS; Reeve, Bolt, & Cai, 1999) and "Problems at Work" (PAW; Deci, Connell, & Ryan, 1989). Shown are only the highly controlling (HC) and highly autonomous (HA) responses. One item (*) was removed after preliminary analysis of data.

Instructions: Below each vignette describes a situation and then lists four possible ways of responding to the situation. Imagine yourself in each of the vignettes and think about how likely you are to implement the approach in *undergraduate* teaching in the institution where you currently teach. There are six vignettes with four options each. There are no right or wrong ratings on these items. Individual teaching styles differ, and we are simply interested in what you would be most likely to do given your own style.
(1-Not at all likely, 2-slightly likely, 3-Somewhat likely, 4- Very likely and 5-Extremely likely)

1. A student is struggling to pick a research topic for his final research paper. The paper is due in 3 days and the student has not yet picked their topic and he comes to your office distraught and stressed.

   As a teacher what are you most likely to do?
   a. Acknowledge that it can be stressful to pick a topic. Talk to him about his academic interests in order to identify a topic that he would find interesting. (HA)
   b. Remind him that the essay is worth 50 % of their grade and that if he does not start his paper, he may not pass the course. (HC)

2. A student comes to your office hours and talks about how anxious she feels about participating in class. Despite her high-quality assignments, she is losing points because she does not participate in class.

   As a teacher what are you most likely to do?
   a. Suggest to the student, that she will get a bonus point on her final grade for every five times she speaks up in class. (HC)
   b. Invite her to explore the root causes of her anxiety with you in order to create a strategy together. * (HA)

3. Your student who is on the varsity/university basketball team has been working hard at basketball and is proud of her team's success. However you are concerned, because you've noticed that her class performance declines when training for basketball is intense.

   As a teacher, what are you most likely to do.
   a. Tell her that she must reduce her training schedule. If she continues what she is doing, she will not pass the class and may not be allowed to play basketball next year. (HC)
   b. Ask her how she plans to handle the situation. (HA)

4. A student, who you have worked closely with as a biomedical research assistant in your lab, has received a graduate school offer in biomedicine at Harvard University. He is torn between biomedical research and his lifelong dream of being a musician.

   As a teacher, what are you most likely to do.
   a. Ask the student questions about what he likes about going to graduate school and what he likes about pursuing a career in music. (HA)
   b. Remind the student that going to graduate school at Harvard will lead to more opportunities and higher paying jobs. (HC)

5. One of the project groups in your class is performing poorly all year. You would like them to pull it together for the final project.

   As a teacher, what are you most likely to do.
   a. Remind the group that the group final project is worth a large proportion of their final grade. Given their low grades in this class so far, they need to improve in order for all of them to pass the class. (HC)
   b. Have some discussions with the group as a whole and facilitate their devising some solutions to improve group's performance. (HA)

6. A student, who was at the top of the class in a previous class, is now only getting a C in your current class.

   As a teacher, what are you most likely to do.
   a. Encourage him to meet with you and talk about his last paper in order to identify some of the barriers for his success (HA)
   b. Remind him that if he performs better, you may be able to nominate him for a scholarship that will help him get into grad school. (HC)

Autonomy-supportive and controlling classroom teaching styles

Adapted from: Reeve et al. (2014)

Instructions: Read the following paragraph about teaching styles in the undergraduate classroom and answer the questions below.

Paragraph 1:

As you prepare for an upcoming class, you make a step-by-step plan of what students are supposed to do and when they are supposed to do it. As the class period begins, you tell students what to do, monitor their compliance closely, and when needed make it clear that there is no time to waste. To keep students on-task, you make sure they follow your directions and basically do what they are supposed to do. When students stray off task, you correct them saying, "You should be working now" and "stay focused". To motivate students, you offer little incentives. When students encounter difficulties and setbacks, you intervene quickly to show them the right way to do it. When they produce right answers, you smile and give your praise. When they don't do what you tell them to do, you make it clear that you are in charge and that it is your responsibility to make sure that they efficiently complete their work. *Overall, you take a "no-nonsense" attitude and make sure students do what you tell them to do, even if it means you need to push and pressure them to do what they are required to do.*

1. Does this approach to teaching describe what you actually do on a daily basis to motivate and engage your students in your classes? (1 = Not at all, 4 = Neutral, 7 = Very Much)

Paragraph 1:

As you prepare for an upcoming class, you think about what your students want and need. You wonder if students will find the class interesting and relevant to their lives. You prepare some resources so that they can see how interesting and important the lesson truly is. To better engage students in the lesson, you create a challenging activity for students to do, and you create some engaging questions to pique their interest. At the end of class, you invite your students' input and suggestions for the next class, letting your students know that you value their suggestions. To motivate students, you take the time to explain why the lesson is important and how it aligns with their personal goals. When students encounter difficulties and setbacks, you give them the time and space they need to figure out the problem for themselves. When students complain and show little initiative, you acknowledge and accept their negative feelings, telling them that you understand why they might feel that way, given the difficulty and complexity of the lesson. As you talk with your students, you resist any pressuring language such as "you should" and "you must". Instead, you communicate your understanding and encouragement. *Overall, you take your students' perspectives, welcome their thoughts, feelings and and actions into the flow of the lesson, and support their developing capacity for autonomous self-regulation.*

1. Does this approach to teaching describe what you actually do on a daily basis to motivate and engage your students in your classes? (1 = Not at all, 4 = Neutral, 7 = Very Much)