

# Kent Academic Repository

## Full text document (pdf)

### Citation for published version

Earl, Stephen R. and Taylor, Ian M. and Meijen, Carla and Passfield, Louis (2016) Autonomy and Competence Frustration in Young Adolescent Classrooms: Different Associations with Active and Passive Disengagement. *Learning and Instruction*, 49 . pp. 32-40. ISSN 0959-4752.

### DOI

<https://doi.org/10.1016/j.learninstruc.2016.12.001>

### Link to record in KAR

<http://kar.kent.ac.uk/59539/>

### Document Version

Author's Accepted Manuscript

#### Copyright & reuse

Content in the Kent Academic Repository is made available for research purposes. Unless otherwise stated all content is protected by copyright and in the absence of an open licence (eg Creative Commons), permissions for further reuse of content should be sought from the publisher, author or other copyright holder.

#### Versions of research

The version in the Kent Academic Repository may differ from the final published version.

Users are advised to check <http://kar.kent.ac.uk> for the status of the paper. **Users should always cite the published version of record.**

#### Enquiries

For any further enquiries regarding the licence status of this document, please contact:

[researchsupport@kent.ac.uk](mailto:researchsupport@kent.ac.uk)

If you believe this document infringes copyright then please contact the KAR admin team with the take-down information provided at <http://kar.kent.ac.uk/contact.html>

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22

Running head: Active and Passive Classroom Disengagement

**Autonomy and Competence Frustration in Young Adolescent Classrooms:  
Different Associations with Active and Passive Disengagement**

Stephen R. Earl<sup>1</sup>, Ian M. Taylor<sup>2</sup>, Carla Meijen<sup>1</sup> and Louis Passfield<sup>1</sup>

<sup>1</sup> University of Kent, England; <sup>2</sup> Loughborough University, England

Accepted for publication in Learning and Instruction – ISSN: 0959-4752

\* Address for correspondence to Stephen R. Earl, School of Sport and Exercise Sciences,  
University of Kent, The Medway Building, Chatham Maritime, Kent, ME4 4AG  
England, UK.  
E-mail: se220@kent.ac.uk.

23 **Abstract**

24 **Background**

25 Pupil disengagement is a primary concern for classroom teachers, yet few studies have  
26 attempted to identify distinct psychological correlates of different forms of classroom  
27 disengagement.

28 **Aims**

29 Drawing from basic psychological needs theory, this study investigated two novel and  
30 divergent mechanisms whereby pupils' autonomy frustration was expected to be directly  
31 associated with active disengagement (e.g. talking and making noise), whereas competence  
32 frustration would be associated with passive disengagement (e.g. daydreaming in class) via  
33 reports of reduced vitality. We further hypothesised that these two processes would be  
34 associated with pupil perceptions of teacher psychological control.

35 **Sample**

36 Participants were 647 pupils (age = 11–14 years) and their respective teachers (N = 22) from  
37 three secondary schools in the United Kingdom.

38 **Methods**

39 This study was a cross-sectional survey with pupil questionnaires administered during a  
40 single school lesson, and teachers rating each pupil's active and passive disengagement in  
41 their class.

42 **Results**

43 Using structural equation modelling, perceptions of teacher control positively predicted  
44 pupils' autonomy and competence frustration in class. Pupils' competence frustration was  
45 indirectly and positively associated with teacher-rated passive disengagement, via reduced  
46 subjective vitality. Pupils' autonomy frustration directly and positively predicted active  
47 disengagement but was not explained by reduced vitality.

48 **Conclusions**

49 The proposal that autonomy and competence frustration have different correlates may be  
50 important for the advancement of basic psychological needs theory (Deci & Ryan, 2000). The  
51 distinct mechanisms proposed have important implications for teachers and schools,  
52 including potential causes of different forms of pupil disengagement and the importance of  
53 avoiding psychological control in classrooms.

54     Keywords: teacher control, motivation, psychological needs, frustration, disengagement.

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

---

71 Engaging school pupils is a principal goal for most teachers in schools classrooms. As  
72 such, theoretical and empirical research has investigated the adaptive teacher behaviours  
73 (e.g., Ames, 1992; Assor, Kaplan, & Roth, 2002) and pupil perceptions of learning contexts  
74 (e.g., Fall & Roberts, 2012; Hafen et al., 2012; Patrick, Ryan, & Kaplan, 2007) that may  
75 effectively promote pupil engagement. Teachers are, however, often confronted with pupils  
76 that do not participate, become disruptive, and withdraw themselves from classroom  
77 activities. Despite the presence of these behaviours, there seems a lack of conceptual  
78 understanding and theoretical evidence concerning the negative processes underpinning  
79 classroom disengagement. In the present work, we investigated whether the frustration of two  
80 candidate basic psychological needs (i.e., autonomy and competence) were associated with  
81 distinct disengagement processes.

82 Classroom disengagement reflects negative classroom conduct and detachment from  
83 learning activities (Fredricks, Blumenfeld & Paris, 2004). Disengaged pupils will typically  
84 not try hard, give up easily in the face of challenges, and alienate themselves in the classroom  
85 by withdrawing from learning activities (Reeve 2006; Skinner & Belmont, 1993). These  
86 behaviours are often accompanied by negative emotions, such as boredom, anxiety,  
87 frustration or anger in the classroom (Connell & Wellborn, 1991; Furrer & Skinner, 2003;  
88 Skinner, Furrer, Marchland, & Kindermann, 2008).

89 A closer examination of these maladaptive reactions to classroom activity suggests  
90 two different forms of academic disengagement. Pupils can actively disengage by detaching  
91 themselves from classroom activities in an energetic and reactive manner, such as disrupting  
92 the class, talking over or arguing with others, or disobeying the teacher (Way, 2011).

93 Alternatively, pupils may passively disengage by withdrawing in an inactive manner,  
94 signified by lethargy, daydreaming, tiredness and becoming unresponsive in class.

95 Researchers have not explored the distinction between these two types of pupil

96 disengagement or the associated social and cognitive correlates, despite the clear differences  
97 in their respective characteristics. For instance, pupils that passively disengage do not impose  
98 an immediate problem in classrooms and often do not receive the same focus from educators  
99 as actively disruptive pupils (Paulsen, Bru, & Murberg, 2006). Consequently, passive pupils  
100 may exist in classrooms without teachers identifying these pupils as disengaged. Adopting a  
101 generic disengagement perspective does not allow for targeted interventions aimed at  
102 minimising passive or active disengagement and this may stunt theoretical advancement.

103       When examining the social and intrapersonal processes associated with pupil behaviour,  
104 self-determination theory (SDT; Ryan & Deci, 2002) has gained extensive empirical support  
105 within the domains of education and human motivation. In particular, it is posited within SDT  
106 that pupils will function less effectively in classroom environments that are perceived as  
107 psychologically controlling (Assor et al., 2002; Deci & Ryan, 1987). Psychologically  
108 controlling teachers attempt to direct, manipulate or pressure students' thoughts, feelings, and  
109 behaviours by disregarding pupils' perspective and adopting a teacher centred agenda,  
110 typically using external sources to motivate pupil behaviour (e.g. deadlines, incentives,  
111 threats of punishment, criticism; Deci, & Ryan, 1987; Reeve, 2009; Reeve, Deci, & Ryan,  
112 2004; Reeve & Jang, 2006). SDT posits that pupils' basic psychological needs will be  
113 frustrated when they perceive their teacher as psychologically controlling (Niemač & Ryan,  
114 2009; Ryan & Deci, 2000; Vansteenkiste & Ryan, 2013). We further propose that the  
115 frustration of two needs, namely autonomy and competence, may be differentially associated  
116 with active and passive disengagement in the classroom. The need for autonomy refers to the  
117 experience of volition and psychological freedom towards one's behaviour (deCharms,  
118 1968). Frustration of this need, therefore, concerns feeling oppressed and pressured to behave  
119 in certain ways (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011). The need  
120 for competence refers to the experience of effectiveness in one's pursuits (White, 1959). Thus

121 competence frustration concerns feelings of inadequacy or failure (Bartholomew, Ntoumanis,  
122 Ryan et al., 2011).

123         Attempts to cope with experiences of need frustration typically provoke defensive and  
124 compensatory behaviours such as passivity, misbehaviour, resistance, and defiance (Ryan &  
125 Deci, 2000; Vansteenkiste & Ryan, 2013). School classrooms represent contexts where  
126 learners face regular elicited pressures and demands relating to their performance and ability  
127 (Reis, Sheldon, Gable, Roscoe & Ryan, 2000). In such environments, it will be difficult for  
128 pupils who experience competence frustration to maintain active and energetic involvement  
129 in activities (Nicholls, 1989). In fact, when pupils perceive themselves to lack competence in  
130 the classroom, they are likely to withdraw from class activities in a passive manner. A lack of  
131 competence has been associated with greater amotivation in education settings (Legault,  
132 Green-Demers & Pelletier, 2006; Standage, Duda & Ntoumanis, 2003; Vallerand et al.,  
133 1993), which is characterised by an absence of effortful behaviour (Deci & Ryan, 2000).  
134 Similarly, students that were passively detached from school have reported little belief in  
135 their capability of being successful at school (Patrick, Skinner, & Connell, 1993). This  
136 process is analogous to learned helplessness, where pupils develop a belief that they cannot  
137 influence or bring about a desired outcome and develop self-defeating behaviour patterns,  
138 such as giving up, withdrawing effort and passive avoidance of tasks (Abramson, Seligman,  
139 & Teasdale, 1978; Alderman, 2008; Elliot & Dweck, 1988). Collectively this evidence  
140 suggests that if competence is frustrated in the classroom, it will result in learners  
141 withdrawing their effort and demonstrating passive, avoidance type behaviours in attempts to  
142 evade demonstrating their perceived incapableness.

143         In contrast to the relationship between competence frustration and passive behaviours,  
144 an active and disruptive response may be more likely associated with the frustration of ones'  
145 autonomy. Research in the parenting domain indicates that children tend to have actively

146 adverse responses to an absence of autonomy, including higher levels of delinquency (Barber,  
147 1996), problem behaviours (Pettit, Laird, Dodge, Bates & Criss, 2001), and aggressive  
148 behaviour (Joussemet et al., 2008). Young adolescents have also been found to reject parental  
149 authority when prevented from acting volitionally (i.e. in line with endorsed values and  
150 interests; Van Petegem, Vansteenkiste, Soenens, Beyers, & Aelterman, 2014). Extrapolating  
151 from this knowledge base, we propose that the frustration of autonomy in classrooms is likely  
152 to lead to more energetic disengagement and avoidance which manifests itself as making  
153 noise or talking to other pupils. In contrast, frustrated competence may be a stronger correlate  
154 of passive disengagement in class. Exploring potentially distinct correlates of autonomy and  
155 competence frustration is required to identify theoretical mechanisms that explain different  
156 types of disengagement.

157         Our portrayal of the two types of disengagement processes suggests that different  
158 levels of energy, or vitality, may underpin each process. Subjective vitality refers to the  
159 psychological experience of having positive energy available to one's self (Ryan &  
160 Frederick, 1997). Pupils that are high in subjective vitality will have more feelings of energy,  
161 arousal and aliveness, whereas pupils low in vitality will have a lower sense of personal  
162 energy, often appearing drained (Ryan & Frederick, 1997). From a broad perspective, SDT  
163 posits that the frustration of autonomy and competence will decrease feelings of subjective  
164 vitality (Ryan & Deci, 2008). Nonetheless, research in adolescent athletes and physical  
165 education students has evidenced a stronger association between competence and feelings of  
166 vitality, compared to autonomy (Adie, Duda, & Ntoumanis, 2012; Reinboth, Duda, &  
167 Ntoumanis, 2004; Taylor & Lonsdale, 2010). These studies examined autonomy and  
168 competence satisfaction; however, investigating classroom disengagement may be better  
169 understood by measuring competence and autonomy frustration, which may appropriately tap  
170 into the intensity associated with negative psychological experiences (Bartholomew,



171 Ntoumanis, Ryan et al., 2011). No educational study to date has assessed the maladaptive,  
172 and potentially different, correlates of competence and autonomy frustration.

### 173 **The Present Research**

174 On the basis of the foregoing considerations, the aim of this study was to assess the  
175 maladaptive processes that underlie active and passive disengagement in class. In accordance  
176 with SDT (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; Ryan &  
177 Deci, 2000; Vansteenkiste & Ryan, 2013), we hypothesised that teacher psychological  
178 control will be positively associated with pupils' perceived autonomy and competence  
179 frustration. Concordant with learned helplessness processes (Abramson et al., 1978;  
180 Alderman, 2008; Elliot & Dweck, 1988) and previous evidence (Adie et al., 2012; Reinboth  
181 et al., 2004; Taylor & Lonsdale, 2010), we proposed that the frustration of competence will  
182 be associated with teacher ratings of passive disengagement via decreased feelings of vitality.  
183 In contrast, the frustration of autonomy in class will be directly associated with teacher  
184 ratings of active disengagement and not explained by pupils' subjective vitality.

## 185 **Method**

### 186 **Participants**

187 Six hundred and forty seven secondary school pupils (60% male, mean age = 12.59  
188 years,  $SD = 0.93$  years, age range = 11 – 14 years old) and their teachers ( $N = 22$ ) participated  
189 in the study, coming from three schools in the United Kingdom (two selective grammar  
190 schools and one comprehensive school). All three schools catered for pupils ageing from 11-  
191 18 years of age, with total pupil numbers for each school ranging from 1,277 up to 1,935.  
192 Participating class sizes ranged from 17 to 31 pupils per class.

### 193 **Measures**

194 **Perceptions of Teacher Psychological Control.** Pupil perceptions of their teacher's  
195 psychological control in a specific class were measured using 10 items previously used by

196 Madjar, Nave, and Hen (2013) (e.g. “My teacher does not allow me to work at my own pace”  
197 and “My teacher makes me feel guilty when I do not please them”). Items were rated using a  
198 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). The scale authors  
199 demonstrated satisfactory factorial structure and internal consistency (Madjar et al., 2013).

200 **Autonomy and Competence Frustration.** Pupil perceptions of autonomy and competence  
201 frustration during the class were measured using the respective subscales of the Psychological  
202 Need Thwarting Scale (Bartholomew, Ntoumanis, Ryan et al., 2011). Items were adapted to  
203 an educational context with some words simplified for use with secondary school children.  
204 These items were also checked by teachers and modified where necessary to ensure pupils’  
205 understanding of each item’s terminology and phrasing. For instance, the original  
206 questionnaire stem “In my sport” was changed to “In this class”, with any original item  
207 relating to training (e.g. “I feel prevented from making choices with regard to the way I  
208 train”) modified to represent learning (e.g. “I feel prevented from making choices about the  
209 way I learn”). Both subscales consisted of four items: autonomy (e.g. “I feel forced to follow  
210 decisions made for me,”); competence (e.g. “There are situations where I am made to feel I  
211 am not good enough”). Items were rated on a 7 point scale, ranging from 1 (strongly  
212 disagree) to 7 (strongly agree). Both subscales have previously demonstrated satisfactory  
213 internal consistency and factorial validity (Bartholomew, Ntoumanis, Ryan et al., 2011).

214 **Subjective Vitality.** Pupils’ feelings of aliveness and energy available to the self in the  
215 class were measured using a five item version of the Subjective Vitality Scale (Ryan &  
216 Frederick, 1997), previously used by Bartholomew, Ntoumanis, Ryan, Bosch et al., (2011).  
217 Items were rated on a 7 point scale, ranging from 1 (strongly disagree) to 7 (strongly agree).  
218 Example items include “I have energy and spirit” and “I nearly always feel alert and awake”.  
219 All original items demonstrated good internal consistency ( $\alpha = .92$ ) and factorial validity, with

220 all items used in this study loading above .50 onto their respective latent factor (Ryan &  
221 Frederick, 1997).

222 **Active Disengagement.** Teacher perceptions of pupils' active disengagement in class were  
223 assessed using two adapted items from the disrespect subscale of the Pupil Behaviour  
224 Patterns Scale (Friedman, 1995; see Hastings & Bham, 2003, for construct validity). These  
225 items were selected to assess active disobedience (e.g. "Student X in my class argues with  
226 other students") and active inattentiveness (i.e., "Student X in my class often speaks over  
227 others and makes a lot of noise"). Both items were rated on a 6 point scale ranging from 1  
228 (never) to 6 (always). The original scale demonstrated good internal consistency ( $\alpha = .87$ ;  
229 Friedman, 1995), with the two items used in this study loading .60 and .51 onto their  
230 respective latent factor (Hastings & Bham, 2003).

231 **Passive Disengagement.** Teacher perceptions of pupils' passive disengagement in class  
232 were measured using two items designed for the purpose of this study: "To what extent does  
233 Student X daydream" and "To what extent does Student X switch off in class". Each item was  
234 rated on a 6 point scale ranging from 1 (never) to 6 (always). These items were designed to  
235 reflect teachers' general perceptions of pupils' withdrawal from both social and performance  
236 situations, typically associated with pupil passivity (Paulsen et al., 2006). Internal  
237 consistency and factor loadings are presented in Table 1.

## 238 **Procedure**

239 Full ethical approval was obtained from the principal researcher's university ethics  
240 committee. Pupils and teachers were provided with details of the study both verbally and in  
241 writing prior to the study commencing. All teachers provided written consent, with parental  
242 opt-out forms provided to enable parents to indicate if they did not wish for their child to  
243 participate. Four pupils opted out of the study. All pupils were instructed that they did not  
244 have to complete the questionnaire if they did not wish to. The pupil questionnaire was

245 administered by the principal researcher at the beginning of a school lesson and collected  
246 once each pupil had completed the questionnaire. The taught subject varied between classes  
247 (Physical Education = 41%; Humanities = 24%; Citizenship = 21%; Sciences = 14%). Prior  
248 to administering the questionnaire, it was explained to the pupils and teachers that all items  
249 referred to the specific class that the questionnaire was administered in. Once the  
250 questionnaires had been administered, the principal researcher explained the instructions to  
251 each class and allowed the opportunity for pupils to ask any additional questions. The pupil  
252 questionnaire took approximately ten minutes for pupils to complete. To ensure  
253 confidentiality, pupils were asked to direct any questions regarding the study to the principal  
254 researcher and not the class teacher (who remained a passive observer during data collection).  
255 The teacher rated pupil disengagement questionnaires were provided to teachers prior to the  
256 school lesson and were completed and returned to the principal researcher within a week of  
257 being administered.

## 258 **Data Analysis**

259 Preliminary analysis involved calculation of descriptive statistics, Cronbach's alpha  
260 coefficients, and bivariate correlations (see Table 1). We also conducted confirmatory factor  
261 analysis using Mplus software (Version 7:2; Muthén & Muthén, 1998 - 2012) to test the item  
262 factor loadings on their respective latent factor. Given our relatively large sample size and the  
263 distribution of data, we used maximum likelihood (ML) estimation as it has been  
264 demonstrated to be robust to deviations from normality (Olsson, Foss, Troye, & Howell,  
265 2000). Each item was used as an indicator of its respective subscale latent factor (e.g. the four  
266 autonomy items were indicators of the autonomy frustration latent factor). The indices used  
267 for estimating goodness of fit of the models were the Standardised Root Mean Square  
268 Residual (SRMR < .06), Root Mean Square Error of Approximation (RMSEA < .08) and  
269 Comparative Fit Index (CFI > .90). Whilst CFI values greater than .90 are considered



295 positively with passive disengagement, but did not correlate with active disengagement.  
296 Autonomy frustration was found to positively correlate with both types of disengagement.  
297 Active and passive disengagement were moderately and positively correlated with each other.

298 **INSERT TABLE 1 HERE**

299 **Confirmatory Factor Analysis**

300 Standardised factor loadings, residual variances and model fit values for each latent  
301 variable are presented in Table 2. Autonomy and competence frustration variables were  
302 analysed together to confirm the existence of two distinguishable latent factors. Each  
303 disengagement factor had only two items and therefore model fit indices could not be  
304 computed. Nonetheless, each item loaded strongly onto their respective latent factor. The fit  
305 indices and factor loadings of the remaining CFAs indicated that all latent variables were  
306 found to have acceptable factorial structure.

307 **INSERT TABLE 2 HERE**

308 **Primary Analysis**

309 Our hypothesised model (Figure 1) demonstrated acceptable fit to the data;  $\chi^2 =$   
310 7340.39; SRMR = .06; CFI = .93; RMSEA = .05 (90% confidence intervals: 0.046 - 0.054).  
311 As illustrated in Figure 1, standardised coefficients indicated that teacher psychological  
312 control strongly and positively predicted the frustration of both autonomy and competence.  
313 Furthermore, and in line with our hypothesis, competence frustration negatively predicted  
314 feelings of pupil vitality which, in turn, negatively predicted passive disengagement.  
315 Autonomy frustration positively predicted active disengagement directly.

316 To rebut the competing hypothesis that autonomy frustration would be associated with  
317 reduced vitality, we added a direct pathway between these two factors. The relationship was  
318 not significant ( $\beta = -.08$ ,  $p = .57$ ), model fit was not improved based on  $\Delta CFI \geq .01$  (Cheung  
319 & Rensvold, 2002) ( $\chi^2 = 7340.39$ ; SRMR = .06; CFI = .93; RMSEA = .05), and all originally

320 hypothesised relationships remained significant. Finally, to rebut a third possible model, we  
321 removed the direct path between autonomy frustration and active disengagement and added  
322 paths from autonomy frustration to vitality, and vitality to active disengagement. Again  
323 model fit was not improved ( $\chi^2 = 7340.39$ ; SRMR = .07; CFI = .93; RMSEA = .05), and  
324 paths between autonomy frustration and vitality ( $\beta = -.08$ ,  $p = .56$ ) and vitality to active  
325 disengagement ( $\beta = -.03$ ,  $p = .58$ ) were not significant. All originally hypothesised  
326 relationships remained significant.

### 327 **Indirect Effects**

328 To provide further support for our hypotheses, we calculated relevant indirect effects  
329 within the model. Teacher psychological control negatively predicted pupils' subjective  
330 vitality through competence frustration ( $\beta = -.38$ ,  $p < .001$ ). Teacher psychological control  
331 positively predicted pupil active disengagement through the autonomy frustration ( $\beta = .07$ ,  $p$   
332  $< .05$ ). Teacher psychological control predicted passive disengagement through competence  
333 frustration and reduced feelings of vitality ( $\beta = .06$ ,  $p < .001$ ). Competence frustration was  
334 found to predict pupil passive disengagement through reduced subjective vitality ( $\beta = .08$ ,  $p <$   
335  $.001$ ).

336 **INSERT FIGURE 1 HERE**

### 337 **Discussion**

338 The purpose of this study was to determine if passive and active disengagement were  
339 associated with perceived teacher control, and to examine if the frustration of pupils' basic  
340 psychological needs of autonomy and competence would associate differentially with  
341 separate disengagement responses. No research to date has explored if the frustration of these  
342 psychological needs may trigger different maladaptive processes in school settings. The  
343 findings of the present study provide cross-sectional evidence for an association between  
344 these needs and distinct active and passive disengagement processes.

345           The present findings demonstrate that pupil disengagement is indirectly associated with  
346 teachers' psychological controlling strategies, such as adopting guilt inducing tactics,  
347 disregarding pupil opinions and using criticism to pressure pupils. The use of teacher  
348 psychological control has been associated with a range of maladaptive learning outcomes  
349 including pupil amotivation and resistance to authority (Haerens, Aelterman, Vansteenkiste,  
350 Soenens, & Van Petegem, 2015), decreased academic engagement (Assor, Kaplan, Kanat-  
351 Maymon & Roth, 2005), and reduced enjoyment (Reeve & Jang, 2006). Yet despite this  
352 evidence, educators still regularly demonstrate, and often prefer, the use of psychological  
353 controlling strategies in the classroom (Newby, 1991; Reeve, 2009; Reeve & Assor, 2011;  
354 Taylor, Ntoumanis & Smith, 2009). The findings in the present study extend current  
355 knowledge by detailing potential mechanisms which explain how psychologically controlling  
356 teaching may lead to passive withdrawal or active disengagement in classrooms. Specifically  
357 teachers' use of psychological control will thwart, rather than support, pupils' needs of  
358 autonomy and competence in the classroom. As a consequence, pupils that perceived their  
359 autonomy to be frustrated may become disruptive and disobedient, whereas perceived  
360 competence frustration may lead to pupil passivity in class.

361           Our findings illustrate that pupils who perceived that their competence was frustrated  
362 were rated as passive, daydreaming pupils by their teacher. Low perceived competence has  
363 been previously associated with feelings of learned helplessness (Elliot & Dweck, 1988),  
364 amotivation (Vallerand et al., 1993), and passive detachment from school (Patrick et al.,  
365 1993). In other words, pupils that feel they do not have the ability to be successful in the  
366 classroom may withdraw passively from learning activities in an attempt to hide their  
367 perceived incompetency and avoid failure. These pupils may avoid attention and become  
368 unwilling to answer questions or offer their opinion in class. Our results also show that this  
369 relationship between competence frustration and passive disengagement may be a



370 consequence of reduced feelings of vitality. That is, pupils that perceive themselves as a  
371 failure or being incapable in class will likely experience reductions in their vital energy,  
372 resulting in passive, unenergetic behaviour. These pupils will typically avoid difficult tasks,  
373 have reduced concentration, participate less in activities, and appear tired in class. As a result,  
374 such passive behaviours may impede pupils' academic development and progression, often  
375 without the teacher's awareness.

376 In line with previous evidence found within the parenting domain (Barber, 1996; Pettit et  
377 al., 2001), autonomy frustration positively predicted active disengagement. Pupils lacking in  
378 autonomy will struggle to apply social rules and standards to their behaviour in the classroom  
379 (Rimm-Kaufman et al., 2002; Weinstein, Przybylski, & Ryan, 2012). For instance, pupils that  
380 feel forced to behave in regimented ways may become restless, disobedient and disruptive.  
381 The finding that vitality did not play a role in this process suggests that, unlike competence  
382 frustration, perceived heteronomy does not lead to reduced energy in the classroom.  
383 Therefore, pupils' experience of autonomy frustration manifests as active disengagement,  
384 disobedience and disruption. Pupils that experience autonomy frustration may actively  
385 disengage as a method of distraction from any negative feelings associated with perceived  
386 coercion (Skinner & Wellborn, 1997).

387 From a theoretical perspective, the different relationships of autonomy and  
388 competence frustration with subjective vitality are noteworthy. Previous studies exploring  
389 basic need satisfaction with child and adolescent samples (Adie et al., 2012; Reinboth et al.,  
390 2004; Taylor & Lonsdale, 2010), illustrated that young learners' vitality is more strongly  
391 influenced by satisfying competence rather than autonomy. Our findings add to this by  
392 suggesting that it is the frustration of competence and not autonomy that produces reduced  
393 vitality. From an applied perspective, the different associations of autonomy and competence  
394 frustration with vitality could be of critical importance for educators aiming to reduce

395 specific types of classroom disengagement. Some teachers may interpret psychological  
396 control as an effective method of engaging pupils (Reeve et al., 2014), as a response to poor  
397 pupil behaviour (Reeve, 2009) or motivation (Pelletier, Seguin Levesque, & Legault, 2002).  
398 The present work highlights reasons why this approach may be counterproductive and may  
399 result in both active and passive disengaged pupils. Thus, teacher directed interventions may  
400 be required to help teachers understand the consequences of employing psychological control  
401 and methods to avoid such strategies (Reeve & Assor, 2011). Teachers should not force  
402 pupils to do activities, but demonstrate the relevance of learning activities, and provide the  
403 opportunity for pupils to give their opinion without using controlling language (e.g. “you  
404 must” or “have to”; Assor, et al., 2002; Reeve & Jang, 2006; Reeve & Assor, 2011; Ryan &  
405 Niemiec, 2009).

#### 406 **Direction for Future Research**

407         This study presented a number of findings concerning maladaptive teacher behaviours  
408 and internal processes that lead to different types of pupil disengagement. A particular  
409 strength of this study is the use of teacher reported pupil disengagement as it provides an  
410 observed assessment of pupil disengagement, rather than relying on a self-report measure.  
411 Nevertheless, the addition of independent classroom observations in future research may also  
412 offer an alternative account of pupil disengagement (Allen et al., 2013; Hafen et al., 2012).  
413 Second, the cross-sectional nature of this study allowed us to explore associations with the  
414 frustration of autonomy and competence. Future studies may adopt a longitudinal method to  
415 explore if different disengaging processes are indicators of prolonged academic problems.  
416 For example, longitudinal work could investigate if the passive responses associated with  
417 competence frustration result in increased class truancy levels, school drop-out or decreased  
418 performance expectations over a longer time period. Similarly, active disengagement

419 associated with autonomy frustration may be associated with increased classroom  
420 punishments, school suspensions and even school exclusions.

421 Finally, the concept of engagement versus disengagement is considered as a  
422 multidimensional paradigm comprising behavioural, cognitive, and emotional components  
423 (Fredericks et al., 2004; Skinner & Belmont, 1993; Skinner, Kindermann, Connell &  
424 Wellborn, 2009). The present study exclusively focused on teacher perceptions of  
425 behavioural components. The addition of emotional and cognitive components may also  
426 provide educators and researchers an understanding of negative feelings that may accompany  
427 these maladaptive behaviours. For instance, previous work found perceived competence to be  
428 the only significant predictor of anxiety whilst autonomy was the only significant predictor of  
429 frustration (Skinner et al., 2008). It may be that anxiety is associated with passive  
430 disengagement whilst feelings of frustration contribute to active disengagement. Thus, the  
431 addition of emotional responses to future work may provide a more comprehensive  
432 understanding of the concept of classroom disengagement.

### 433 **Conclusions**

434 The findings from the current study highlight distinct correlates of autonomy and  
435 competence and identify different mechanisms underpinning two separate types of pupil  
436 disengagement. Teacher psychological control was found to be associated with both  
437 processes, stressing the importance for schools and educators to avoid applying such  
438 psychological control in classrooms. Whilst most teachers may apply controlling strategies  
439 with the well-meaning intention of engaging pupils, the adoption of such control may  
440 promote pupils to become passively or actively disengaged in classrooms.

## References

- Abramson, L. Y., Seligman, M. E. P., & Teasdale, J. D. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology, 87*, 49–74. doi:10.1037/0021-843X.87.1.49
- Adie, J. W., Duda, J.L., & Ntoumanis, N. (2012). Perceived coach-autonomy support, basic need satisfaction and the well- and ill-being of elite youth soccer players: A longitudinal investigation. *Psychology of Sport and Exercise, 13*, 51–59. doi:10.1016/j.psychsport.2011.07.008
- Alderman, M.K. (2008). *Motivation for achievement: Possibilities for teaching and learning* (3<sup>rd</sup> ed.). New York, NY: Routledge.
- Allen, J., Gregory, A., Mikami, A., Lun, J., Hamre, B., & Pianta, R. (2013). Observations of effective teacher-student interactions in secondary school classrooms: Predicting student achievement with the Classroom Assessment Scoring System—Secondary. *School Psychology Review, 42*, 76-98. Retrieved from <http://www.nasponline.org/publications/spr>
- Ames, C. (1992). Classrooms: goals, structures, and student motivation. *Journal of Educational Psychology, 84*, 261–271. doi:10.1037/0022-0663.84.3.261
- Assor, A., Kaplan, H., & Roth, G. (2002). Choice is good, but relevance is excellent: Autonomy-enhancing and suppressing teacher behaviors predicting students' engagement in schoolwork. *British Journal of Educational Psychology, 72*, 261-278. doi:10.1348/000709902158883
- Assor, A., Kaplan, H., Kanat-Maymon, Y., & Roth, G. (2005). Directly controlling teacher behaviors as predictors of poor motivation and engagement in girls and boys: The role of anger and anxiety. *Learning and Instruction, 15*, 397–413. doi:10.1016/j.learninstruc.2005.07.008
- Barber, B. K. (1996). Parental psychological control: Revisiting a neglected construct. *Child Development, 67*, 3296–3319. doi: 10.1111/j.1467-8624.1996.tb01915.x
- Bartholomew, K., Ntoumanis, N., Ryan, R. M., & Thøgersen-Ntoumani, C. (2011). Psychological need thwarting in the sport context: Assessing the darker side of athletic

experience. *Journal of Sport & Exercise Psychology*, 33, 75-102. Retrieved from <http://journals.humankinetics.com/jsep>

Bartholomew, K., Ntoumanis, N., Ryan, R. M., Bosch, J. A., & Thøgersen-Ntoumani, C. (2011). Self-determination theory and diminished functioning: The role of interpersonal control and psychological need thwarting. *Personality & Social Psychology Bulletin*, 37, 1459–1473. doi:10.1177/0146167211413125

Bentler, P. M., (1992). On the fit of models to covariances and methodology to the Bulletin. *Psychological Bulletin*, 112, 400-404. doi:10.1037/0033-2909.112.3.400

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modelling*, 9, 233-255. doi:10.1207/S15328007SEM0902\_5

Connell, J. P., & Wellborn, J. G. (1991). Competence, autonomy, and relatedness: A motivational analysis of self-system processes. In M. R. Gunnar & L. A. Sroufe (Eds.), *Self-processes in development: Minnesota symposium on child psychology* (pp. 167–216). Chicago, IL: University of Chicago Press.

deCharms, R. (1968). *Personal causation: The internal affective determinants of behavior*. New York, NY: Academic.

Deci, E. L., & Ryan, R. M. (1987). The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology*, 53, 1024–1037. doi:10.1037/0022-3514.53.6.1024

Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry: An International Journal for the Advancement of Psychological Theory*, 11, 319–338. doi:10.1207/S15327965PLI1104\_01

Elliot, E. S., & Dweck, C. S. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology*, 54, 5-12. doi:10.1037/0022-3514.54.1.5

- Fall, A-M., & Roberts, G. (2012). High school dropouts: Interactions between social context, self-perceptions, school engagement, and student dropout. *Journal of Adolescence*, 35, 787–798. doi:10.1016/j.adolescence.2011.11.004
- Fredericks, J. A., Blumenfeld, P.C., & Paris, A. H. (2004). School engagement: Potential of the concept, State of the Evidence. *Review of Educational Research*, 74, 59-109. doi:10.3102/00346543074001059
- Friedman, I. A. (1995). Student behavior patterns contributing to teacher burnout. *The Journal of Educational Research*, 88, 281-289. doi:10.1080/00220671.1995.9941312
- Furrer, C., & Skinner, E. (2003). Sense of relatedness as a factor in children's academic engagement and performance. *Journal of Educational Psychology*, 95, 148–162. doi:10.1037/0022-0663.95.1.148
- Haerens, L., Aelterman, N., Vansteenkiste, M., Soenens, B., & Van Petegem, S. (2015). Do perceived autonomy-supportive and controlling teaching relate to physical education students' motivational experiences through unique pathways? Distinguishing between the bright and dark side of motivation. *Psychology of Sport and Exercise*, 16, 26-36. doi:10.1016/j.psychsport.2014.08.013
- Hafen, C. A., Allen, J. P., Mikami, A. Y., Gregory, A., Hamre, B., & Pianta, R. C. (2012). The pivotal role of adolescent autonomy in secondary school classrooms. *Journal of Youth and Adolescence*, 41, 245-255. doi: 10.1007/s10964-011-9739-2
- Hastings, R. P., & Bham, M. S. (2003). The relationship between student behaviour patterns and teacher burnout. *School Psychology International*, 24, 115-127. doi:10.1177/0143034303024001905
- Hu, L., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6, 1-55. doi:10.1080/10705519909540118
- Joussemet, M., Vitaro, F., Barker, E. D., Cote, S., Nagin, D.S., Zoccolillo, M., & Tremblay, R. E. (2008). Controlling parenting and physical aggression during elementary school. *Child Development*, 79, 411–425. doi: 10.1111/j.1467-8624.2007.01133.x

- Legault, L., Green-Demers, I., & Pelletier, L. (2006). Why do high school students lack motivation in the classroom? Toward an understanding of academic amotivation and the role of social support. *Journal of Educational Psychology*, 98, 567–582. doi:10.1037/0022-0663.98.3.567
- Madjar, N., Nave, A., & Hen, S. (2013). Are teachers' psychological control, autonomy support and autonomy suppression associated with students' goals? *Educational Studies*, 39, 43–55. doi:10.1080/03055698.2012.667871
- Muthen, L. K., & Muthen, B. O. (1998-2012). *Mplus User's guide* (7th ed.). Los Angeles, CA: Muthen & Muthen.
- Newby, T. J. (1991). Classroom motivation: strategies of first-year teachers. *Journal of Educational Psychology*, 83, 195–200. doi:10.1037/0022-0663.83.2.195
- Nicholls, J.G. (1989). *The competitive ethos and democratic education*. Cambridge, MA: Harvard University Press.
- Niemiec, C. P., & Ryan, R. M. (2009). Autonomy, competence, and relatedness in the classroom: Applying self-determination theory to educational practice. *Theory and Research in Education*, 7, 133–144. doi:10.1177/1477878509104318
- Olsson, U.H., Foss, T., Troye, S.V., & Howell, R.D. (2000). The performance of ML, GLS, and WLS estimation in structural equation modeling under conditions of misspecification and nonnormality. *Structural Equation Modeling: A Multi-disciplinary Journal*, 7, 557–595. doi:10.1207/S15328007SEM0704\_3
- Patrick, H., Ryan, A. M., & Kaplan, A. (2007). Early adolescents' perceptions of the classroom social environment, motivational beliefs, and engagement. *Journal of Educational Psychology*, 99, 83–98. doi:10.1037/0022-0663.99.1.83
- Patrick, B. C., Skinner, E. A., & Connell, J. P. (1993). What motivates children's behavior and emotion? Joint effects of perceived control and autonomy in the academic domain. *Journal of Personality and Social Psychology*, 65, 781-791. doi:10.1037/0022-3514.65.4.781

- Paulsen, E., Bru, E., & Murberg, T. A. (2006). Passive students in junior high school: The associations with shyness, perceived competence and social support. *Social Psychology of Education, 9*, 67–81. doi:10.1007/s11218-005-1365-y
- Pelletier, L. G., Seguin-Levesque, C., & Legault, L. (2002). Pressure from above and pressure from below as determinants of teachers' motivation and teaching behavior. *Journal of Educational Psychology, 94*, 186–196. doi:10.1037/0022-0663.94.1.186
- Pettit, G.S., Laird, R.D., Dodge, K.A., Bates J.E., & Criss, M.M. (2001) Antecedents and behavior-problem outcomes of parental monitoring and psychological control in early adolescence. *Child Development, 72*, 583–598. doi:10.1111/1467-8624.00298
- Reeve, J., & Assor, A. (2011). Do social institutions necessarily suppress individuals' need for autonomy? The possibility of schools as autonomy promoting contexts across the globe. In R. Chirkov, R. M. Ryan, & K. Sheldon (Eds.), *Human autonomy in cross-cultural context: Global perspectives on the psychology of freedom and people's well-being* (pp. 111-132). New York, NY: Springer.
- Reeve, J., & Jang, H. (2006). What teachers say and do to support students' autonomy during a learning activity. *Journal of Educational Psychology, 98*, 209-218. doi:10.1037/0022-0663.98.1.209
- Reeve, J. (2006). Teachers as facilitators: What autonomy-supportive teachers do and why their students benefit. *The Elementary School Journal, 106*, 225-236. doi:10.1086/501484
- Reeve, J., Vansteenkiste, M., Assor, A., Ahmad, I., Cheon, S.-H., Jang, H., ... Wang, C. K. J. (2014). The beliefs that underlie autonomy-supportive and controlling teaching: a multinational investigation. *Motivation and Emotion, 37*. doi:10.1007/s11031-013-9367-0
- Reeve, J. (2009). Why teachers adopt a controlling motivating style toward students and how they can become more autonomy-supportive. *Educational Psychologist, 44*, 159 - 175. doi:10.1080/00461520903028990



- Reeve, J., Deci, E. L., & Ryan, R. M. (2004). Self-determination theory: A dialectical framework for understanding the sociocultural influences on student motivation. In D. McInerney & S. Van Etten (Eds.), *Research on sociocultural influences on motivation and learning: Big theories revisited* (pp. 31–59). Greenwich, CT: Information Age Press.
- Reinboth, M., Duda, J. L., & Ntoumanis, N. (2004). Dimensions of coaching behavior, need satisfaction, and the psychological and physical welfare of young athletes. *Motivation and Emotion*, 8, 297-313. doi:10.1023/B:MOEM.0000040156.81924.b8
- Reis, H. T., Sheldon, K. M., Gable, S. L., Roscoe, J., & Ryan, R. M. (2000). Daily well-being: The role of autonomy, competence, and relatedness. *Personality and Social Psychology Bulletin*, 26, 419–435. doi:10.1177/0146167200266002
- Rimm-Kaufman, S. E., Early, D. M., Cox, M. J., Salauja, G., Pianta, R. C., Bradley, R. H., & Payne, C. (2002). Early behavioral attributes and teachers' sensitivity as predictors of competent behavior in the kindergarten classroom. *Journal of Applied Developmental Psychology*, 23, 451–470. doi:10.1016/S0193-3973(02)00128-4
- Ryan, R., & Deci, E. (2000). The darker and brighter sides of human existence: Basic psychological needs as a unifying concept. *Psychological Inquiry*, 11, 319–338. doi:10.1207/S15327965PLI1104\_03
- Ryan, R. M., & Deci, E. L. (2002). An overview of self-determination theory: An organismic-dialectical perspective. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 3–33). Rochester, NY: University of Rochester Press.
- Ryan, R. M., & Deci, E. L. (2008). From ego depletion to vitality: Theory and findings concerning the facilitation of energy available to the self. *Social and Personality Psychology Compass*, 2, 702-717. doi:10.1111/j.1751-9004.2008.00098.x
- Ryan, R.M., & Frederick, C. (1997). On energy, personality, and health: Subjective vitality as a dynamic reflection of well-being. *Journal of Personality*, 65, 529-65 doi:10.1111/j.1467-6494.1997.tb00326.x
- Ryan, R. M., & Niemiec, C. P. (2009). Self-determination theory in schools of education: Can an empirically supported framework also be critical and liberating? *Theory and Research in Education*, 7, 263-272. doi:10.1177/1477878509104331

- Skinner, E. A., & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. *Journal of Educational Psychology, 85*, 571-581. doi:10.1037/0022-0663.85.4.571
- Skinner, E. A., & Wellborn, J. G. (1997). Children's coping in the academic domain. In S. A. Wolchik & I. N. Sandler (Eds.), *Handbook of children's coping with common stressors: Linking theory and intervention* (pp. 387-422). New York, NY: Plenum Press.
- Skinner, E. A., Furrer, C., Marchand, G., & Kindermann, T. (2008). Engagement and disaffection in the classroom: Part of a larger motivational dynamic? *Journal of Educational Psychology, 100*, 765-781. doi:10.1037/a0012840
- Skinner, E. A., Kindermann, T. A., Connell, J. P., & Wellborn, J. G. (2009). Engagement as an organizational construct in the dynamics of motivational development. In K. Wentzel & A. Wigfield (Eds.), *Handbook of motivation in school* (pp. 223-245). Mahwah, NJ: Erlbaum.
- Standage, M., Duda J.L., & Ntoumanis, N. (2003). A model of contextual motivation in physical education: Using constructs from self-determination and achievement goal theories to predict physical activity intentions. *Journal of Educational Psychology, 95*, 97-110. doi:10.1037/0022-0663.95.1.97
- Taylor, I.M., & Lonsdale, C. (2010). Cultural differences in the relationships among autonomy support, psychological need satisfaction, subjective vitality, and effort in British and Chinese physical education. *Journal of Sport & Exercise Psychology, 32*, 655-673. Retrieved from <http://journals.humankinetics.com/jsep>
- Taylor, I. M., Ntoumanis, N. & Smith, B. (2009). The social context as a determinant of teacher motivational strategies in physical education. *Psychology of Sport and Exercise, 10*, 235-243. doi:10.1016/j.psychsport.2008.09.002
- Vallerand, R.J., Pelletier, L.G., Blais, M.R., Briere, N.M., Senecal, C., & Vallieres, E.F. (1993). On the assessment of intrinsic, extrinsic, and amotivation in education: Evidence on the concurrent and construct validity of the academic motivation scale. *Educational and Psychological Measurement, 53*, 159-172. doi: 10.1177/0013164493053001018

- Van Petegem, S., Vansteenkiste, M., Soenens, B., Beyers, W., & Aelterman, N. (2014). Examining the longitudinal association between oppositional defiance and autonomy in adolescence. *Developmental Psychology*, 51, 67-74. doi:10.1037/a0038374
- Vansteenkiste, M., & Ryan, R. M. (2013). On psychological growth and vulnerability: Basic psychological need satisfaction and need frustration as a unifying principle. *Journal of Psychotherapy Integration*, 23, 263-280. doi:10.1037/a0032359
- Way, S. M. (2011). School discipline and disruptive classroom behavior: The moderating effects of student perceptions. *The Sociological Quarterly*, 52, 346–375. doi:10.1111/j.1533-8525.2011.01210.x
- Weinstein, N., Przybylski, A.K., & Ryan, R. M. (2012). The index of autonomous functioning: Development of a scale of human autonomy. *Journal of Research in Personality*, 46, 397–413. doi:10.1016/j.jrp.2012.03.007
- White, R. W. (1959). Motivation reconsidered: The concept of competence. *Psychological Review*, 66, 297–333. doi:10.1037/h0040934

Table 1  
Descriptive Statistics and Bivariate Correlations Among Study  
Variables

Variable	Range	Mean	SD	$\alpha$	1	2	3	4	5	6
1. Teacher Control	1-5	2.19	0.77	.84	-					
2. Autonomy Frustration	1-7	2.45	0.96	.78	.69**	-				
3. Competence Frustration	1-7	2.24	1.01	.81	.61**	.70**	-			
4. Vitality	1-7	4.69	1.36	.82	-.32**	-.41**	-.44**	-		
5. Active Disengagement	1-6	1.65	0.99	.84	.25**	.10*	.07	-.02	-	
6. Passive Disengagement	1-6	1.92	1.06	.84	.23**	.18**	.15**	-.17**	.47**	-

Note: \* $p < .05$ . \*\* $p < .01$ .

Table 2  
Standardised Factor Loadings and Model Fit Values for Latent Variables

Variable	Factor Loading	Residuals	$\chi^2$	SRMR	CFI	RMSEA
<b>Teacher Control (TC)</b>			1972.54	.04	.93	.08
TC1	.39	.85				
TC2	.47	.78				
TC3	.68	.54				
TC4	.45	.80				
TC5	.74	.46				
TC6	.64	.59				
TC7	.68	.54				
TC8	.63	.60				
TC9	.70	.51				
TC10	.61	.64				
<b>Autonomy (Aut) &amp; Competence (Comp)</b>			1978.29	.02	.99	.05
Aut1	.67	.55				
Aut2	.64	.59				
Aut3	.73	.47				
Aut4	.71	.49				
Comp1	.72	.48				
Comp2	.66	.56				
Comp3	.74	.46				
Comp4	.76	.42				
<b>Vitality (V)</b>			1100.00	.03	.98	.09
V1	.54	.71				
V2	.71	.50				
V3	.61	.63				
V4	.73	.46				
V5	.86	.26				
<hr/>						
<b>Active Disengagement (Active)</b>						
Active 1	.85	.28				
Active 2	.85	.28				
<b>Passive Disengagement (Passive)</b>						
Passive 1	.83	.30				
Passive 2	.87	.24				

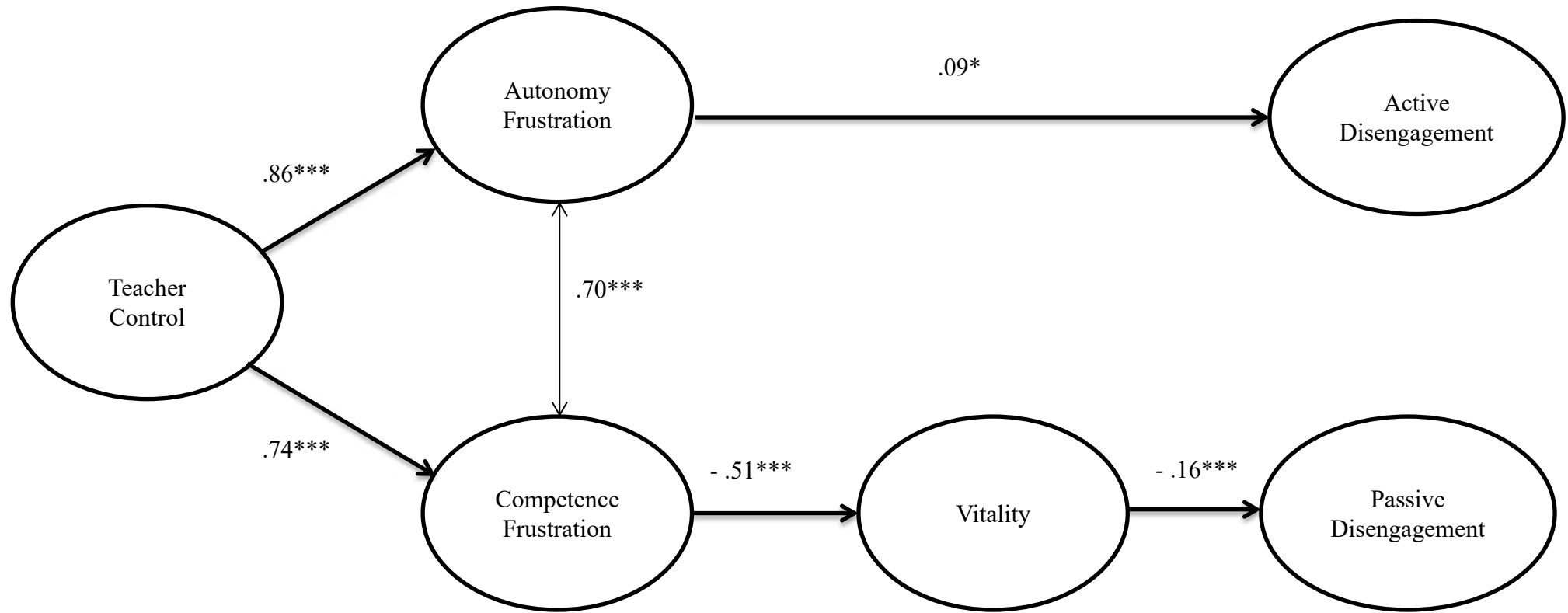


Figure 1. Structural equation model depicting two separate processes predicting active and passive classroom disengagement. For brevity, latent factor indicators are not shown.

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