Kristina Ž. Ranđelović[1]
Jelena Lj. Minić
University of Priština in Kosovska Mitrovica, Faculty of Philosophy, Department of Psychology, Serbia

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PERCEIVED ACADEMIC CONTROL AND ACHIEVEMENT: THE MEDIATING ROLE OF BOREDOM DURING ONLINE TEACHING[2]

Abstract

The transition to online teaching due to the pandemic provides optimal conditions for analyzing the complexity of cognitive assessments in the context of education. Perceived academic control (PAC) allows students to recognize their responsibilities in online learning and achieve better learning outcomes. This study aimed to examine whether the experience of boredom in online teaching can be a mediator in the relationship between PAC and academic achievement of pupils and university students. The sample consisted of 18 pupils and 111 university students, 30% male and 70% female, aged between 18 and 29 (M = 21.41; SD = 2.45), who attended online classes during the second year of the pandemic. The results of the study confirmed the hypothesis that the experience of boredom in online teaching is a statistically significant mediator in the relationship between academic control and average grade (b = .192, 95% CI [.073, .347]). Still, this mediation is partial, because the direct effect between academic control and grade point average remains significant (b = .323, 95% CI [.111, .536]). Also, PAC is associated with pupils' and university students' academic achievement, and this connection is mediated by emotions related to teaching. Boredom in the classroom is closely associated with low PAC, resulting in lower academic achievement. We can conclude that pupils and university students more often perceive learning as boring due to the inability to control teaching activities in the research conducted during the pandemic, which may be in correlation with poorer achievements. Given the probability that online teaching will continue, implications for research and practice as well as future research opportunities are discussed.

Keywords: online teaching, COVID-19, perceived academic control, boredom, achievement

[1] Corresponding author: kristina.randjelovic@pr.ac.rs
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Introduction

Perceived Academic Control (PAC)

Perceived academic control (PAC hereinafter) refers to beliefs about personal influence over one's academic achievement outcomes (Perry, 1991). It is a person's general belief in his/her ability to affect and anticipate some aspects of the academic environment. PAC is associated with the attributions that students give for their achievement results (Perry et al., 2005). For example, students who attribute failure to internal, stable, and uncontrolled causes (e.g., low ability) have lower levels of PAC. In contrast, higher levels of PAC were observed in students who attributed the same failure to internal, unstable, and controlled causes (e.g., low effort; Hamm et al., 2017). Perceived control has also been found to lead to better personal adjustment after the occurrence of stressful events (Frazier et al., 2011; Perry et al., 2005).

High level of PAC is positively correlated with greater intrinsic motivation, effort, use of self-regulation strategies, and a sense of control over life in general (Cassidy & Eachus, 2000; Perry et al., 2001; Respondek et al., 2017). Student achievement expressed through GPA is a combination of students' academic skills and abilities, work habits, and content knowledge (Hamm et al., 2019). Numerous studies have confirmed a connection between PAC and achievement. PAC positively predicts achievement in the first year of study (Perry et al., 2001). Students who are insecure about their abilities and who have difficulty addressing the causes of their academic successes and failures had lower PACs and reduced overall well-being. (Tobin & Raymundo, 2010). The connection between PAC and coping with academic failure has also been confirmed. If a failure occurs due to insufficient effort, students with a higher level of PAC will try to develop ideas of competence and establish a plan for future responses to failure (Smiley et al., 2016). Also, students with high PAC who go through challenging academic situations tend to have enhanced coping skills (Perry et al., 2001). Lower scores in academic classes may be a consequence of high fluctuations in PAC (Stupinsky et al., 2012).

Boredom as an Emotion in the Context of Education

Boredom occurs as a consequence of a non-stimulating situation (Mikulas & Vodanovich, 1993), and is most often defined as an affective state of relatively low physiological arousal, a decreased desire to act and a tendency to escape a situation that causes boredom behaviourally or mentally (e.g., daydreaming; Goetz & Frenzel, 2006). Boredom refers to a feeling that is the opposite of feelings such as interest, enthusiasm, involvement and engagement. It refers to a state of fatigue or lack of motivation due to insufficient interest in the environment (Preckel et al., 2010). One of the most important characteristics of boredom is the experience that "time stands still". This profile of symptoms indicates that boredom consists of certain affective components (unpleasant, aversive feelings), cognitive components (altered perception of time), physiological components (reduced arousal), expressive components (facial expressions, vocal expression) and motivational components

(motivation to change activities or to leave the situation). Boredom experienced during a task reduces the cognitive capacity for completing that task and thus causes attention problems, which is reflected in achievement (Pekrun et al., 2010). Due to its negative effects on motivation, boredom will reduce the effort invested in the activity. Furthermore, boredom leads to shallow information processing and reduces the use of any task-related cognitive and metacognitive strategy. Boredom reduces self-regulation of achievement activities, which is defined by active goal setting, strategy selection, and outcome tracking. As a consequence of the negative effects of boredom on attention, motivation and the use of strategies, boredom has negative effects on accomplishing both simpler and more complex tasks, as opposed to activating negative emotions, such as anxiety, which have more variable effects (Pekrun, 2006). In general, boredom has negative effects on overall academic achievement.

The causes of boredom in school are numerous (Daschmann et al., 2014; Robinson, 1975). Although it is traditionally assumed that boredom is caused by a lack of challenges (e.g., already having good knowledge of the material; Csikszentmihalyi, 1975), it turned out that boredom is also caused by too much challenge (e.g., problems with understanding). Thus, an inadequate level of challenge leads to boredom. Boredom is best explained from the perspective of modern theories such as the control-value theory, which explains the role of emotions in the learning process (Pekrun & Perry, 2014).

The Control-Value Theory

Academic emotions in the control-value theory (Pekrun, 2006) were posited as mediators in the learning process. The evidence showed significant relationships between control and value appraisal and discrete academic emotions (Assor et al., 2005). The control-value theory (Pekrun, 2006) claims that the effects of emotions on achievement reflect through three different types of functional mechanisms: availability of cognitive resources, motivation underlying achievement activities, and strategies used to perform activities, including self-regulation of these activities. Achievement goals, that is, students' goal orientation (learning orientation, performance orientation and avoidance orientation) (Elliot & Church, 1997) and beliefs about control over one's own learning and academic achievement, as well as beliefs about their value, are an important set of individual antecedents that shape students' assessments of control and values and thus indirectly affecting students' emotions (Pekrun, 2006). Another set of antecedent emotions include learning environment and social environment (Pekrun, 2006; Pekrun et al., 2002). Assessments of control and values are seen as mediators of learning environment and individual antecedents (goal orientation and beliefs about control and values) and certain emotions. Learning environment antecedents include: (a) the qualitative dimension of learning (e.g., teacher enthusiasm and engagement in developing students' intrinsic values), (b) supporting student autonomy and not imposing control, (c) expectations of achievement and values passed on to students by important others, class structure

of goals and class interaction (e.g., competition versus cooperation), (d) feedback and consequences of achievement (educational and career outcomes) and (e) social cohesion and support (class cohesion, acceptance, support after failure by teachers and parents, etc.; Pekrun, 2006).

Numerous authors suggest that cognitive assessments are important and influence the onset of emotions (Beck & Beck, 2011; Lazarus, 1991; Schutz & Davis, 2000). Emotions include an assessment of how successful a person (student) is in achieving their goals, which in turn represents one's own desires regarding future (Schutz & DeCuir, 2002). In the learning context, perceived academic control is seen as an important predictor to academic emotions, motivation (Pekrun, 2006) and performance (Ruthig et al., 2008). The specific situation caused by the pandemic and the sudden transition to online instruction provides optimal conditions to observe the complexity of cognitive assessments in the context of education. The aim of this paper was to examine whether boredom in online lessons during the pandemic can be a mediator in the relationship between academic control and the outcome of educational achievement in high school and university students. Given that both high school and college students were affected by the pandemic, i.e., both of them found themselves in the specific situation related to online classes during the pandemic for the first time, the same mechanism was assumed for both.

Method

Sample and Procedure

The sample consisted of 129 participants, 18 pupils and 111 university students, 30% males and 70% females, aged between 18 and 29 (M = 21.41; SD = 2.45), who attended online classes during the second year of the pandemic. Data were collected through an online questionnaire. Participants previously confirmed that they were familiar with their rights and testing rules, and then moved on to the questions section. Moreover, they were given the opportunity to withdraw at any moment, meaning that the answers would be saved only after the participants entered all the necessary data and sent them to the database, and in case of withdrawal, no traces of participants' participation were recorded.

Instruments

Scale of Boredom in Class (SDN, Trogrlić & Sorić, 2013) contains 26 items. The instrument measures the level of boredom in class related to low physiological excitement, fatigue or lack of interest, as a result of a lack of sufficient interest in what is taking place and the experience that "time stands still". Participants assess the extent to which they experience the described conditions during classes ("Time passes slowly", "Sometimes I can barely keep my eyes open because I feel sleepy a lot") on a five-point Likert-type scale (from 1 = *I do not agree at all,* to 5 = *I completely agree*). The reliability of the scale on this sample is excellent and is α =

.92. The scale has been used before as a one-dimensional scale (Dragoslavić & Bilić, 2021).

Perception of Academic Control (PAC, Perry et al., 2001) contains 8 items. The instrument measures students' beliefs about whether they have the skills needed to manage their own academic achievement. Participants assess their beliefs about PAC by assessing the level to which they agree with the statements ("The more effort I put into learning, the better I'm at it") on a five-point Likert-type scale (from 1 = *I do not agree at all,* to 5 = *I completely agree*). The reliability of the scale on this sample is very good and amounts to α = .80. Other studies have used this scale as a unidimensional one as well (You & Kang, 2014).

Achievement (GPA) - Grade Point Average, as students declared their current average grade.

Data Analysis

Data processing was done in the program package IMB SPSS 26. The FACTOR program was used to check the dimensionality of the used constructs. Using the procedure described by Preacher and Hayes (Preacher & Hayes, 2008), the multiple mediation statistical analysis calculated by the PROCESS macro, we tested our hypothesis. The bootstrap method (with 1000 repeated samples) was used in the analysis with the selected option of corrected accelerated confidence intervals of 95%, which means that the lower limit is the lowest value of the indirect effect (ab) in 95% random sampling, and the upper limit is the highest value of this product, i.e., its effect. If there is a mediator effect, zero must not be included in the confidence intervals.

Results

Table 1 shows the descriptive-statistical data of the variables used in the research. Moreover, correlations between variables are shown, as well as the level of reliability of the instruments used.

Table 1

Descriptive-statistical data of variables used in the research, reliability of scales and intercorrelations of used dimensions

	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis	α
PAC	1.00	5.00	3.65	.84	-0.57	0.32	.80
Boredom	1.24	5.00	3.29	.99	-0.17	-0.77	.92
GPA*	-3.33	1.43	.00	1.00	-1.02	0.75	

Note. *z score; PAC = Perceived Academic Control, GPA = Standardized Grade Point Average

The results shown in Table 1 show that all three variables are normally distributed and that there are no large deviations that would be unacceptable. Since the high school and university students' GPAs were compared, a standardized GPA measure was used to make the scores comparable, so for this reason there are no results regarding directly comparable scores with other variables at minimum and maximum levels.

Table 2

Prediction of the mediator variable to the achievement

	Model	Standardized Coefficients B	*t*	*p*	Model summary
1.	PAC	.43	5.35	.000	R=.43 R^2=.18 F(1,126)=28.67
2.	PAC	.27	3.01	.003	R=.51 R^2=.25
	Boredom	-.31	-3.49	.001	R^2_{Change}=.07 F(2,125)=21.71 F_{Change} sig.=0.001

Note. PAC= Perceived Academic Control

Based on the conducted regression analysis (Table 2), we can see that the mediator remains a significant predictor of the criterion when the predictor variable is kept under control. The contribution that the predictor variable makes when predicting the criterion is significantly reduced, but does not lose its significance, which is why we can conclude that the mediation is partial.

Mediation Analysis

After we singled out the variables that we will include in the multiple mediation model, we applied the statistical mediation analysis using the PROCESS macro.

Table 3

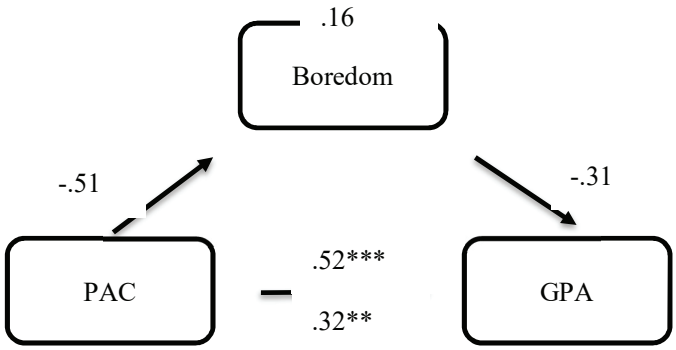
Total, direct and indirect effects on GPA when PAC is the predictor

Mediator	*A*	*B*	*ab*	CI (95%)
Boredom	-.51	-.31	.16	.06 –.27
c'	.32**			
C	.52***			

Note. a = the effect of the predictor on the mediator; b = the effect of the mediator on the criterion; ab =indirect effect of the mediator in the relationship between the predictor and the criterion (completely standardized); c '= direct effect of the predictor on the criterion when the effect of the mediator is controlled; c = total effect; ** p< .01 ***p < .001.

The results of the mediation analysis confirmed the initial assumption that the Boredom dimension is a statistically significant mediator in the relationship between academic control and GPA. According to these results, low academic control is associated with higher levels of boredom, and higher levels of boredom with low academic achievement.

Figure 1
The results of the mediation analysis



Discussion

Research to date has confirmed the relationship between beliefs about control over one's learning and academic achievement. In this paper, we were interested in whether boredom in online lessons can be a mediator in the relationship between academic control and academic achievement.

PAC is considered an important predictor of academic achievement and motivation, and numerous studies support this (Pekrun, 2006; Perry et al., 2001; Ruthig et al., 2008). A meta-analysis that dealt with academic achievement and PAC showed a moderately positive correlation between these two variables (Richardson et al., 2012). A higher level of academic control is positively correlated with pleasant emotions, intrinsic motivation, engagement, and persistence in learning. In a study that dealt with online instruction (Joo et al., 2011), the authors concluded that the internal locus of control helps students recognize their responsibilities and persevere in online learning. The link between PAC and GPA was also confirmed in our study. The correlation between the internal locus of control and perseverance in learning obtained in the above-mentioned research is .35 (Joo et al., 2011), while in our research the correlation between PAC and GPA is slightly higher, and it amounts to .43.

Given that the association between PAC and GPA has been confirmed, we proceeded to a further analysis of mediation where we examined the mediation role of boredom. The results have shown that boredom in online lessons is a statistically significant partial mediator in the relationship between academic control and GPA. According to the results, it seems that students who are convinced that they

do not have the skills needed to control their academic achievement in an online environment may feel more tired or uninterested in learning or have a feeling that "time stands still". The mediating role of boredom is partial because the direct connection between academic control and GPA remains significant. Bearing in mind that a lower perception of academic control can lead to non-engagement in learning activities, it is possible that boredom in class stems from non-engagement and lack of interest in the learning material. Although logical, confirming such a conclusion would require a different research design, so this conclusion is given only as an assumption about a somewhat more complex relationship between variables.

When it comes to academic control, numerous studies have shown the critical role of emotions that occur in response to various outcome events. It is known that students often experience boredom in class (Daschmann et al., 2011; Larson & Richards, 1991; Mann & Robinson, 2009; Tze et al., 2016), and that boredom can reduce academic achievement, which has been shown by meta-analysis (Tze et al., 2016). Boredom experienced while performing a task reduces cognitive capacity and thus causes attention problems, which is reflected in achievement (Pekrun et al., 2010).

According to the control-value theory of achievement emotions (Pekrun, 2006), assessments related to subjective control over activities and achievements are crucial for the emergence of academic emotions. Existing empirical findings suggest that academic emotions may arise from students' perceived academic control.

We would like to put a strong emphasis on the fact that the previous data refer to the traditional school context and that there is probably a significant difference between traditional and online instruction. During online classes, students may feel less in control of their academic engagement and achievement due to the specific set of online classes, which can often be hampered by poor connection or other external factors. Previous studies have shown that academic control is especially important for freshmen who have to adapt to new learning circumstances at the university (Perry, 1991; Perry et al., 2005; Respondek et al., 2017). In our research, the sample consisted of students who found themselves in a new learning environment due to the sudden transition to online learning, so there is a possibility that the specific environment contributed to experience of lower levels of academic control. Moreover, students may place less value on the assignments they receive during online classes and thus avoid completing them, since they know that the teacher does not have a clear insight into their engagement. The teacher does not have the opportunity to make eye contact or to notice which student is feeling bored and take action, such as involving the student in the discussion by asking questions. It is known that nowadays students are used to being connected with their peers at all times (Felisoni & Godoi, 2018), which can be even more pronounced in moments of emergency when live contact with peers is forbidden, and therefore they remain in contact with friends via social media and messaging apps (Rabl et al., 2019). This is in line with the developmental period of the participants from our sample – late adolescence and the beginning of early adulthood, when loyalty to the group is most valued and the need for closeness is prominent. This may be related to a greater experience of the boredom of teaching itself in an online environment, given that there are no breaks and rest when interacting with peers.

Conclusion

The results have shown that boredom in online lessons is a statistically significant mediator in the relationship between PAC and GPA. The mediating role of boredom is partial because the direct connection between academic control and GPA remains significant. These findings are consistent with the control-value theory of achievement emotions. According to this theory, factors such as assignment requirements, support of autonomy, and assignment value affect the students' PAC, which further provokes certain academic emotions, and emotions in turn influence the use of learning strategies and student self-regulation. The theory suggests that boredom negatively affects motivation, cognitive activation, learning self-regulation, and academic outcomes.

The main drawback of this paper is that college and high school students are treated as one group, the group of those who attended online classes. From a developmental point of view, we are talking about young people, who, despite certain differences that are conditioned by development, have a whole series of common specificities and similarities. However, between these two populations there may be differences regarding the organization of teaching, but also other variables such as academic control and boredom that were used in this paper. Therefore, the differences between these two groups should be verified in future research. Due to the methodology used in this research, it cannot be stated with certainty whether students in online classes (do not) receive assignments worth the effort, and whether they perceive lessons as insufficiently stimulating or perceive their academic control over achievements as low. As the mediating role of boredom in our sample is partial, future studies should explore what other variables contribute to achievement in the context of online instruction in specific conditions such as the pandemic.

The results presented in this paper may be of use to teachers and school associates to take certain steps when it comes to reducing boredom in online classes, e.g., encouraging greater interaction through various activities such as quizzes or using platforms that offer the possibility of dividing students into smaller subgroups for work, which can also achieve a greater sense of connection with the group. Also, by setting clear rules and expectations for students regarding their success in a specific subject, they can help students feel more confident about academic success depending on them. This paper also opens up new questions for future researchers – how to help students feel safe and in control of their own success in a rapidly changing educational environment, how to structure time in online classes, and enable students to meet their interaction needs with peers.

In addition to the above, other possible sources of boredom in an online environment should be investigated, such as teachers' skills to teach such classes, the conditions in which students learn, the adaptation of the material used, etc. A recommendation for future studies may consider incorporating objective measures of student academic performance. In addition, longitudinal studies could provide better insight into the long-term consequences of online instruction, and using an

experimental design to compare the effects of online versus live instruction compared to live instruction would be very useful.

References

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*(5), 397–413. https://doi.org/10.1016/j.learninstruc.2005.07.008

Beck, J. S., & Beck, A. T. (2011). *Cognitive behavior therapy.* Basics and beyond; Guilford Publication. https://doi.org/10.4103/0975-2870.110294

Cassidy, S., & Eachus, P. (2000). Learning style, academic belief systems, self-report student proficiency and academic achievement in higher education. *Educational psychology*, *20*(3), 307–322. https://doi.org/10.1080/713663740

Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety*. Jossey-Bass.

Daschmann, E. C., Götz, T., & Stupnisky, R. H. (2011). Testing the predictors of boredom at school: Development and validation of the precursors to boredom scales. *British Journal of Educational Psychology*, *81*(3), 421–440. https://doi.org/10.1348/000709910X526038

Daschmann, E. C., Goetz, T., & Stupnisky, R. H. (2014). Exploring the antecedents of boredom: Do teachers know why students are bored? *Teaching and Teacher Education*, 39, 22–30. https://doi.org/10.1016/j.tate.2013.11.009

Dragoslavić, M., & Bilić, V. (2021). Adolescents' Academic boredom as a predictor of peer violence. *Pedagogika*, *142*(2), 140–165. https://doi.org/10.15823/p.2021.142.8

Elliot, A. J., & Church, M. A. (1997). A hierarchical model of approach and avoidance achievement motivation. *Journal of Personality and Social Psychology*, *72*(1), 218–232. https://doi.org/10.1037/0022-3514.72.1.218

Felisoni, D. D., & Godoi, A. S. (2018). Cell phone usage and academic performance: An experiment. *Computers & Education*, 117, 175–187. https://doi.org/10.1016/j.compedu.2017.10.006

Frazier, P., Keenan, N., Anders, S., Perera, S., Shallcross, S., & Hintz, S. (2011). Perceived past, present, and future control and adjustment to stressful life events. *Journal of Personality and social psychology*, *100*(4), 749–765. https://doi.org/10.1037/a0022405

Goetz, T., & Frenzel, A. C. (2006). Phänomenologieschulischer Langeweile. *Zeitschrift für Entwicklungspsychologie und Pädagogische Psychologie*, *38*(4), 149–153. https://dx.doi.org/10.1026/0049-8637.38.4.149

Hamm, J. M., Perry, R. P., Chipperfield, J. G., Murayama, K., & Weiner, B. (2017). Attribution-based motivation treatment efficacy in an online learning environment for students who differ in cognitive elaboration. *Motivation and Emotion*, *41*(5), 600–616. https://doi.org/10.1007/s11031-017-9632-8

Hamm, J. M., Perry, R. P., Chipperfield, J. G., Parker, P. C., & Heckhausen, J. (2019). A motivation treatment to enhance goal engagement in online learning environments:

Assisting failure-prone college students with low optimism. *Motivation Science*, *5*(2), 116–134. https://doi.org/10.1037/mot0000107

Joo, Y. J., Joung, S., & Sim, W. J. (2011). Structural relationships among internal locus of control, institutional support, flow, and learner persistence in cyber universities. *Computers in Human Behavior*, *27*(2), 714–722. https://doi.org/10.1016/j.chb.2010.09.007

Larson, R. W., & Richards, M. H. (1991). Boredom in the middle school years: Blaming schools versus blaming students. *American Journal of Education*, *99*(4), 418–443. https://doi.org/10.1086/443992

Lazarus, R. S. (1991). Progress on a cognitive-motivational-relational theory of emotion. *American Psychologist*, *46*(8), 819–834. https://doi.org/10.1037//0003-066x.46.8.819

Mann, S., & Robinson, A. (2009). Boredom in the lecture theatre: An investigation into the contributors, moderators and outcomes of boredom amongst university students. *British Educational Research Journal*, *35*(2), 243–258. https://doi.org/10.1080/01411920802042911

Mikulas, W. L., & Vodanovich, S. J. (1993). The essence of boredom. *The Psychological Record*, *43*(1), 3–12.

Pekrun, R. (2006). The control-value theory of achievement emotions: Assumptions, corollaries, and implications for educational research and practice. *Educational Psychology Review*, *18*(4), 315–341. https://doi.org/10.1007/s10648-006-9029-9

Pekrun, R., & Perry, R. P. (2014). Control-value theory of achievement emotions. In R. Pekrun & L. Linnenbrink-Garcia (Eds.), *International handbook of emotions in education* (pp. 120–141). Routledge/Taylor & Francis Group.

Pekrun, R., Goetz, T., Daniels, L. M., Stupnisky, R. H., & Perry, R. P. (2010). Boredom in achievement settings: Exploring control–value antecedents and performance outcomes of a neglected emotion. *Journal of Educational Psychology*, *102*(3), 531–549. https://doi.org/10.1037/a0019243

Pekrun, R., Goetz, T. & Titz, W. (2002). Academic emotions in students' self-regulated learning and achievement: A program of qualitative and quantitative research. *Educational Psychologist, 37,* 91–105. https://doi.org/10.1207/S15326985EP3702_4

Perry, R. P. (1991). Perceived control in college students: Implications for instruction in higher education. In J. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. 7, pp. 1-56). Agathon Press

Perry, R. P., Hladkyj, S., Pekrun, R. H., & Pelletier, S. T. (2001). Academic control and action control in the achievement of college students: A longitudinal field study. *Journal of Educational Psychology*, *93*(4), 776–789. https://doi.org/10.1037/0022-0663.93.4.776

Perry, R. P., Hladkyj, S., Pekrun, R. H., Clifton, R. A., & Chipperfield, J. G. (2005). Perceived academic control and failure in college students: A three-year study of scholastic attainment. *Research in Higher Education*, *46*(5), 535–569. https://doi.org/10.1007/s11162-005-3364-4

Perry R. P., Hall N. C., & Ruthig J. C. (2005). Perceived (academic) control and scholastic attainment in higher education. In J. Smart (Ed.), *Higher education: Handbook of*

theory and research 20th edition (pp 363–436). Springer https://doi.org/10.1007/1-4020-3279-X_7

Preckel, F., Götz, T., & Frenzel, A. (2010). Ability grouping of gifted students: Effects on academic self-concept and boredom. *British Journal of Educational Psychology*, *80*(3), 451–472. https://doi.org/10.1348/000709909X480716

Rabl, M., Pattermann, J., Schlögl, S., & Canham, N. (2019). The use of digital devices in the university classroom: exploring and comparing students' perceptions and practices. In L. Uden, D. Liberona, G. Sanchez, S. Rodríguez-González (Eds.) *International Workshop on Learning Technology for Education in Cloud* (pp. 103–113). Springer. https://doi.org/10.1007/978-3-030-20798-4_10

Respondek, L., Seufert, T., Stupnisky, R., & Nett, U. E. (2017). Perceived academic control and academic emotions predict undergraduate university student success: Examining effects on dropout intention and achievement. *Frontiers in Psychology*, *8*, 243–243. https://doi.org/10.3389/fpsyg.2017.00243

Richardson, M., Abraham, C., & Bond, R. (2012). Psychological correlates of University students' academic performance: a systematic review and meta-analysis. *Psychological Bulletin*, *138*(2), 353–387. https://doi.org/10.1037/a0026838

Robinson, W. P. (1975). Boredom at school. *British Journal of Educational Psychology*, *45*(2), 141–152. https://doi.org/10.1111/j.2044-8279.1975.tb03239.x

Ruthig, J. C., Perry, R. P., Hladkyj, S., Hall, N. C., Pekrun, R., & Chipperfield, J. G. (2008). Perceived control and emotions: Interactive effects on performance in achievement settings. *Social Psychology of Education*, *11*(2), 161–180. https://doi.org/10.1007/s11218-007-9040-0

Schutz, P. A., & Davis, H. A. (2000). Emotions and self-regulation during test taking. *Educational Psychologist*, *35*(4), 243–256. https://doi.org/10.1207/S15326985EP3504_03

Schutz, P. A., & DeCuir, J. T. (2002). Inquiry on emotions in education. *Educational Psychologist*, *37*(2), 125–134. https://doi.org/10.1207/S15326985EP3702_7

Smiley, P. A., Buttitta, K. V., Chung, S. Y., Dubon, V. X., & Chang, L. K. (2016). Mediation models of implicit theories and achievement goals predict planning and withdrawal after failure. *Motivation and Emotion*, *40*(6), 878–894. https://doi.org/10.1007/s11031-016-9575-5

Stupnisky, R. H., Perry, R. P., Hall, N. C., & Guay, F. (2012). Examining perceived control level and instability as predictors of first-year college students' academic achievement. *Contemporary Educational Psychology, 37*(2), 81–90. https://doi.org/10.1016/j.cedpsych.2012.01.001

Tobin, S. J., & Raymundo, M. M. (2010). Causal uncertainty and psychological well-being: The moderating role of accommodation (secondary control). *Personality and Social Psychology Bulletin*, *36*(3), 371–383. https://doi.org/10.1177/0146167209359701

Trogrlić, I. & Sorić, I. (2014). Skala dosade na nastavi. U V. Ćubela Adorić, Z. Penezić, A. Proroković, I. Tucak Junaković (Ur.) *Zbirka psihologijskih skala i upitnika VII*. [Collection of Psychological Scales and Questionnaires, Vol. 7] (pp. 7–14). Sveučilište u Zadru.

Tze, V. M., Daniels, L. M., & Klassen, R. M. (2016). Evaluating the relationship between boredom and academic outcomes: A meta-analysis. *Educational Psychology Review*, *28*(1), 119–144 https://doi.org/10.1007/s10648-015-9301-y

You, J. W., & Kang, M. (2014). The role of academic emotions in the relationship between perceived academic control and self-regulated learning in online learning. *Computers & Education*, *77*, 125–133. https://doi.org/10.1016/j.compedu.2014.04.018

Kristina Ž. Ranđelović[3]
Jelena Lj. Minić
Univerzitet u Prištini sa privremenim sedištem u Kosovskoj Mitrovici,
Filozofski fakultet,
Katedra za psihologiju, Srbija

AKADEMSKA KONTROLA I POSTIGNUĆE: POSREDUJUĆA ULOGA DOSADE TOKOM ONLAJN NASTAVE

Apstrakt

Specifičnost situacije izazvane pandemijom i prelazak na onlajn nastavu pruža optimalne uslove za posmatranje složenosti kognitivnih procena u kontekstu obrazovanja. Percepcija akademske kontrole (PAK) omogućava studentima da prepoznaju svoje odgovornosti u onlajn okruženju za učenje i ostvare bolje postignuće. Ova studija je imala za cilj da ispita da li iskustvo dosade u onlajn nastavi može biti medijator u odnosu između PAK-a i akademskog postignuća kod učenika i studenata. Uzorak je činilo 18 učenika i 111 studenata, 30% muškog i 70% ženskog pola, starosti između 18 i 29 godina (M = 21,41; SD = 2,45), koji su pohađali onlajn nastavu tokom druge godine pandemije. Rezultati studije potvrdili su hipotezu da je iskustvo dosade u onlajn nastavi statistički značajan medijator u odnosu između akademske kontrole i prosečne ocene (b = .192, 95% CI [.073, .347]). Ipak, medijacija je delimična, jer direktan efekat između akademske kontrole i prosečne ocene ostaje značajan (b = .323, 95% CI [.111, .536]). Dosada na nastavi je povezana sa niskom PAK, što rezultira nižim akademskim postignućem. Moguće je da učenici i studenti učenje češće doživljavaju kao dosadno zbog nemogućnosti kontrole nastavnih aktivnosti u istraživanju sprovedenom tokom pandemije, što može biti u korelaciji sa gorim postignućem. S obzirom na verovatnoću da će se onlajn nastava nastaviti, razmatrane su praktične implikacije i dati su predlozi za buduća istraživanja.

Ključne reči: onlajn nastava, COVID-19, percipirana akademska kontrola

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[3] Corresponding author: kristina.randjelovic@pr.ac.rs
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