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## The connection between classroom climate and emotions in educational context and their relationship with academic achievement<sup>2</sup>

## **Extended summary**

In addition to cognitive and conative aspects, the emotional component of the teaching process is of exceptional importance for all participants in educational work. The small number of empirical studies, especially in our region, that focus on objective indicators of the affective side of the teaching process and their corresponding correlates, inspired the authors to design a study that examined the relationship between classroom climate and students' emotions, as well as their potential effects on student achievement. The theoretical framework for the study is the control-value theory by Pekrun and his colleagues. Pekrun emphasizes that emotions in the educational process are significant based on their valence, dividing them into positive and negative. Positive emotions stimulate motivation, memory, and creativity, while negative emotions reduce attention and motivation, complicate recall, and can lead to dropping out of learning.

The general aim of the empirical research presented in this paper was to examine whether there is a connection between the dimensions of classroom atmosphere and the intensity of experienced academic emotions (positive and negative), and to determine the possibility of predicting academic achievement based on the dimensions of classroom atmosphere and aca-

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demic emotions. The research considered six academic emotions: three positive (enjoyment, pride, relaxation) and three negative ones (anger, anxiety, boredom); as well as four dimensions of classroom atmosphere (teacher-student interaction, social atmosphere, fear of failure, and emotional atmosphere). The sample consisted of 200 fourth-grade students from three high schools in Kosovska Mitrovica (High School, Medical School, and Technical School). The instruments used were: Classroom Atmosphere Assessment Questionnaire, the Achievement Emotions Questionnaire, and the Sociodemographic Questionnaire. All instruments used showed satisfactory psychometric characteristics.

The results show that positive emotions are more pronounced than negative ones during class. The teacher-student interaction dimension positively correlates with enjoyment and pride, and negatively with relief, anger, anxiety, and boredom. Social atmosphere positively correlates with enjoyment and pride, and negatively with relief, anger, anxiety, and boredom. The feeling of fear of failure negatively correlates with pride and enjoyment, and positively with relief, anger, anxiety, and boredom. The emotional atmosphere positively correlates with enjoyment and pride, and negatively with anxiety and boredom. Enjoyment and pride show a weak positive correlation with academic success. It was shown that academic success can be predicted based on the dimensions of the classroom atmosphere and academic emotions, with 10% of the variance explained.

The results are partially consistent with the findings of the previous research, and their coherent connection with the theoretical interpretation of emotions in education, in line with the control-value theory by Pekrun and his colleagues, has been shown.

Overall, the results support the view that the classroom climate is more than just a context it represents a crucial pedagogical and psychological resource that has an effect not only on emotions but also on students' educational outcomes. This opens up space for pedagogical interventions aimed at improving the emotional climate in the classroom, through supporting teachers in developing empathic and flexible relationships with students.

**Keywords**: classroom climate, positive and negative emotions in teaching, academic success, high school students

## References

- Alić, B. (2019). *Povezanost socio-emocionalne klime u razredu sa školskim uspjehom učenika*. Filozofski fakultet Univerziteta u Sarajevu, Odsjek za pedagogiju.
- Andrilović, V., & Čudina, M. (1985). Psihologija učenja i nastave. Školska knjiga.
- Ahmed, I., Hamzah, A. B., & Abdullah, M. N. L. Y. B. (2020). Effect of Social and Emotional Learning Approach on Students' Social-Emotional Competence. *International Journal of Instruction*, 13(4), 663–676. https://doi.org/10.29333/iji.2020.13441a
- Bilić, V. (2001). *Uzroci, posljedice i prevladavanje školskog neuspjeha*. Hrvatski pedagoško-književni zbor.

- Boekaerts, M. (2007). Understanding Students' Affective Processesin the Classroom. In P. Schutz., & R. Pekrun (Eds). *Emotion in Education* (pp. 37–56). Elsevier Academic Press. htt-ps://doi.org/10.1016/B978-012372545-5/50004-6
- Božić, B. (2013). Stvarno i poželjno razredno ozračje u osnovnoj školi. *Život i škola 61*(1), 93–101.
- Brdovčak, B. (2017). The relationship between achievement emotions, appraisals of control and value, and academic success. *Croatian Journal of Education*, 19(3), 29–41. https://doi.org/10.15516/cje.v19i0.2744
- Burić, I. (2008), Uloga emocija u obrazovnom kontekstu teorija kontrole i vrednosti. *Suvremena psihologija*, *11*(1), 77–92.
- 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
- Ellsworth, P. C., & Tong, E. M. W. (2006). What does it mean to be angry at yourself? Categories, appraisals, and the problem of language. *Emotion*, 6(4), 572–586. https://doi.org/10.1037/1528-3542.6.4.572
- Finlayson, M. (2014). Addressing Math Anxiety in the Classroom. *Improving Schools*, 17, 99–115. https://doi.org/10.1177/1365480214521457
- Frenzel, A. C. (2014). Teacher Emotions. In R. Pekrun, & A. Linnenbrink (Eds.). *International Handbook of Emotions in Education* (pp. 494–519). Routledge.
- Gosarić, D. (2020). *Uloga emocija u nastavi primarnog obrazovanja* (diplomski rad). Učiteljski fakultet Sveučilišta u Zagrebu.
- Habulin, L. (2016). *Razredno-nastavno ozračje i komunikacija* (završni rad). Sveučilište u Rijeci, Filozofski fakultet, Odsek za pedagogiju.
- Hamre, B. K., & Pianta, R. C. (2005). Can Instructional and Emotional Support in the First-Grade Classroom Make a Difference for Children at Risk of School Failure? *Child Development*, 76, 949–967. http://dx.doi.org/10.1111/j.1467-8624.2005.00889.x
- Hascher, T. (2007). Exploring Students' Well-Being by Taking a Variety of Looks into the Classroom. *Hellenic Journal of Psychology*, 4(3), 331–349.
- Huang, S. L. (2003). Antecedents to psychosocial environments in middle school classrooms in Taiwan. *Learning Environments Research*, 6, 119–135. https://doi.org/10.1023/A:1024978318362
- Hughes, J. N., & Cavell, T. A. (1999). Influence of the teacher-student relationship in child-hood conduct problems: A prospective study. *Journal of clinical child psychology*, 28(2), 173–184. https://doi.org/10.1207/s15374424jccp2802\_5
- Jurčić, M. (2006). Uloga ispitne anksioznosti u zadovoljstvu učenika razredno-nastavnim ozračjem. *Napredak*, 147(2), 191–202.
- Kolak, A., i Majcen, M. (2011). Emocionalne reakcije učenika u nastavnom procesu kao poticaj u razvoju kreativnosti. U G. Gojkov, i A. Stojanović (ur.). *Zbornik radova, 13: Daroviti u procesu globalizacije* (str. 361–298). Visoka škola strukovnih studija za obrazovanje vaspitača "Mihailo Palov" i Universitatea de Vest "Aurel Vlaicu".

- Koludrović, M., i Kalebić-Jakupčević, K. (2017). Odnos razrednog ozračja i školskog uspjeha učenika osnovnoškolske dobi. *Školski vhesnik*, 66(4), 557–571.
- Kragulj, S. (2011). Odgojno-obrazovna klima u sveučilišnoj nastavi. Život i škola, 57, 35–60.
- Krnjajić, S. (2002). Socijalni odnosi i obrazovanje. Institut za pedagoška istraživanja.
- Kuppens P., Van Mechelen I., & Rijmen F. (2008). Towards disentangling sources of individual differences in the experience of anger. *Journal of Personality*, 76, 969–1000. https://doi.org/10.1111/j.1467-6494.2008.00511.x
- Lei, H., Cui, Y., & Chiu, M. M. (2018). The relationship between teacher support and students' academic emotions: A meta-analysis. *Frontiers in Psychology*, 8, Article 2288. https://doi.org/10.3389/fpsyg.2017.02288
- Méndez, M. (2011). The motivational properties of emotions in Foreign Language Learning. *Colombian Applied Linguistics Journal*, *13*(2), 43–59.
- Panik, M. (2005). Advanced Statistics from an Elementary Point of View. Elsevier Academic Press
- Pekrun, R. (2006). The control value theory of achievement emotions: Assumptions, corollaries, and implications for educational research and practice. *Educational Psychology Review*, 18, 315–341. https://doi.org/10.1007/s10648-006-9029-9
- Pekrun, R., & Stephens, E. J. (2009). Goals, emotions, and emotion regulation: Perspectives of the control-value theory. *Human Development*, 52(6), 357–365. https://doi.org/10.1159/000242349
- Pekrun, R., & Stephens, E. J. (2010). Achievement emotions: A control-value approach. *Social and Personality Psychology Compass*, 4(4), 238–255. https://doi.org/10.1111/j.1751-9004.2010.00259.x
- Pekrun, R., Goetz, T., Titz, W., & Perry, R. P. (2002). Academic emotions in students' self-regulated learning and achievement: A program of quantitative and qualitative research. *Educational Psychologist*, 37, 91–105. http://dx.doi.org/10.1207/S15326985EP3702\_4
- Pekrun, R., Goetz, T., Frenzel, A. C., Barchfeld, P., & Perry, R. P. (2011). Measuring Emotions in Students' Learning and Performance: The Achievement Emotions Questionnaire (AEQ). *Contemporary Educational Psychology*, *36*, 36–48. https://doi.org/10.1016/j.cedpsych.2010.10.002
- Perkins, R. E., & Hill, A. B. (1985). Cognitive and affective aspects of boredom. *British Journal of Psychology*, 76(2), 221–234. https://doi.org/10.1111/j.2044-8295.1985.tb01946.x
- Petrešević, Đ., i Sorić, I. (2009). Učeničke emocije i njihovi prediktori u procesu samoregulacije učenja. *Društvena istraživanja*, 20(1), 211–232. https://doi.org/10.5559/di.20.1.11
- Radišić, J., Videnović, M., i Baucal, A. (2015). Math Anxiety Contributing School and Individual Level Factors. *Europian Journal of Psychology of Education*, 30(1), 1–20. https://doi.org/10.1007/s10212-014-0224-7
- Ranđelović, D., i Dimić, D. (2019). Connection between classroom climate and academic performance. *Teaching, Learning and Teacher Education*, 3(2), 83–93. https://doi.org/10.22190/FUTLTE1902083R

- Ranđelović, D., i Mihajlović, R. (2021). Emocije u obrazovnom kontekstu i procena kvaliteta postojećih platformi za onlajn nastavu na teritoriji Kosova i metohije. *Baština*, *31*(55), 297–322. https://doi.org/10.5937/bastina31-34257
- Schutz, P. A., Hong, J., Cross, D. I., & Osbon, J. N. (2006). Reflections on Investigating Emotion in Educational Activity Settings. *Educational Psychology Review*, *18*, 343–360. https://doi.org/10.1007/s10648-006-9030-3
- Stanković-Janković, T., i Gojković, V. (2015). Emocije u nastavi likovne kulture. *Naša škola*, 76(1), 5–15.
- Stolp, S., & Smith., S. C. (1994). *School Culture and Climate: The Role of the Leader*. Oregon School Study Council.
- Stojaković, P. (2011). *Psihologija obrazovanja 2*. Filozofski fakultet Univerziteta u Banja Luci.
- Thapa, A., Cohen, J., Higgins-D'Alessandro, & Gueffey, S. (2013). A Review of School Climate Research. *Review of Educational Research*, 83(3), 357–385. https://doi.org/10.3102/0034654313483907
- Tracy, J. L., & Robins, R. W. (2007). The self in self-conscious emotions: A cognitive appraisal approach. In J. L. Tracy, R. W. Robins, & J. P. Tangney (Eds.). *The self-conscious emotions: Theory and research* (pp. 443–467). Guilford.
- Weiner, B. (1985). 'Spontaneous' causal thinking. *Psychol Bull*, 97(1), 74–84. https://doi.org/10.1037/0033-2909.97.1.74