


|   |  |   |
|---|--|---|
|  <p><b>UniSR</b><br/>Università Vita-Salute<br/>San Raffaele</p> | <p><b>CANDIDATURA A SUPERVISORE E PROPOSTA</b></p> <p><b>PROGETTO DI RICERCA</b></p> <p>CANDIDACY AS SUPERVISOR &amp;<br/>RESEARCH PROJECT</p> | <p><b>MO 47-27</b></p> <p>rev. 00 del 12/01/2023</p> <p>PO 47</p> <p>Pag. 4 di 11</p> |
|---|--|---|

## PROGETTO 2/ PROJECT 2

**Supervisore/Supervisor:** Valentina Tobia

**Titolo/Title:** \_\_\_\_\_  
The role of school climate and innovation in promoting students' and teachers' well-being and students' cognitive skills

**Corso /PhD Course** \_\_\_\_\_  
Scienze Cognitive e Comportamentali/Cognitive and Behavioral Sciences


**Curriculum:** \_\_\_\_\_

Link alla pagina personale OSR/UNISR/ <https://www.unisr.it/docenti/t/tobia-valentina>  
Link to OSR/UniSR personal page: \_\_\_\_\_

**Descrizione del progetto/Project description** (Tra i 2.000 e 3.000 caratteri spazi inclusi/ Number of characters, including spaces: 2.000 - 3.000):

A positive school climate supports academic achievement as well as the well-being of students and teachers (Wang & Degol, 2016). Also, recent studies showed that a positive school climate promotes students' neurodevelopment (e.g., greater myelination, Hong et al., 2021; increased global cortical thickness, Piccolo et al., 2019) and high-order cognitive skills (e.g., executive functions-EF; Piccolo et al., 2019). However, the school climate is a multifaceted construct, that includes relational, environmental, and organizational variables, as perceived from multiple points of view (students, school staff) (Zulling et al., 2010). The associations between different components of school climate and students'/teachers' well-being, as well as students' cognitive skills, are still an object of debate (Aldridge & McChesney, 2018; Wang & Degol, 2016). In particular, the role of instructional (e.g., flipped classroom, scenario-based teaching) and organizational (e.g., flexible spaces, block scheduling) innovations, that can be considered a component of the perceived (subjective) school climate (Brand et al., 2003) and also evaluated with observational measures, is a potential source of change for students' cognitive development and well-being, as well as of teachers' well-being, that received less attention in the literature.

This project is aimed at filling this gap by investigating the impact of different components of school climate, with a focus on instructional and organizational innovations, on students' well-being and high-order cognitive skills, and on teachers' well-being. For doing so, a multi-informant and multi-method longitudinal design will be implemented, assessing school climate (including both subjective and objective measures of innovation), students' and teachers' well-being, and students' cognitive skills at 3 testing points in the school year. Schools with different levels of instructional and organizational innovation will be involved, enrolling

|   |  |   |
|---|--|---|
|  <p><b>UniSR</b><br/>Università Vita-Salute<br/>San Raffaele</p> | <p><b>CANDIDATURA A SUPERVISORE E PROPOSTA</b></p> <p><b>PROGETTO DI RICERCA</b></p> <p>CANDIDACY AS SUPERVISOR &amp;<br/>RESEARCH PROJECT</p> | <p><b>MO 47-27</b></p> <p>rev. 00 del 12/01/2023</p> <p>PO 47</p> <p>Pag. 5 di 11</p> |
|---|--|---|

schools participating and not participating in the “Educational Avant-garde Movement” (Laici & Orlandini, 2016), headed by the National Institute for Documentation, Innovation and Educational Research (INDIRE).

Students and teachers in the first cycle of instruction (4<sup>th</sup> to 8<sup>th</sup> grade) will be involved and administered in 3 moments of the school year, with questionnaires, standardized tests, and tasks for investigating: individual wellbeing (T1, T3; students and teachers), basic learning skills and EFs (T1, T3; students), and school climate (T2; students and teachers). Also, parents will fill in, only at T1, a short questionnaire for investigating demographic variables, among which the socioeconomic status (SES) which has been shown to play a role in the relationship between school climate and students’ well-being and cognition (e.g., Piccolo et al., 2019).

The project will provide insights useful for the implementation of school policies aimed at improving the school climate and innovation.

**Competenze che deve acquisire lo studente/Skills to be acquired by the student** (Max 600 caratteri spazi inclusi/ *Number of characters, including spaces: max 600*):

- deep knowledge of the construct of school climate and of the updated innovative strategies activated within schools
- deep knowledge of the literature on the effects of environmental school-related variables on teachers/children’s well-being and cognition
- administration of neurophysiological tests and questionnaires to children and adults
- work in multidisciplinary and international teams
- handling data collection within schools, including contacting schools, explaining the study to parents, teachers and children, reporting to them the study’s results
- data analysis
- academic writing

**Bibliografia/References** (max. 15)

- Aldridge, J. M., & McChesney, K. (2018). The relationships between school climate and adolescent mental health and wellbeing: A systematic literature review. *International Journal of Educational Research*, 88, 121-145.
- Brand, S., Felner, R. D., Seitsinger, A., Burns, A., & Bolton, N. (2008). A large scale study of the assessment of the social environment of middle and secondary schools: The validity and utility of teachers’ ratings of school



UniSR

Università Vita-Salute  
San Raffaele

**CANDIDATURA A SUPERVISORE E PROPOSTA**

**PROGETTO DI RICERCA**

CANDIDACY AS SUPERVISOR &  
RESEARCH PROJECT

**MO 47-27**

rev. 00 del 12/01/2023

PO 47

Pag. 6 di 11

climate, cultural pluralism, and safety problems for understanding school effects and school improvement.

*Journal of School Psychology*, 46(5), 507-535.

- Brand, S., Felner, R., Shim, M., Seitsinger, A., & Dumas, T. (2003). Middle school improvement and reform: Development and validation of a school-level assessment of climate, cultural pluralism, and school safety.

*Journal of educational psychology*, 95(3), 570-588.

- Bulbul, T. (2012). Developing a Scale for Innovation Management at Schools: A Study of Validity and Reliability. *Educational Sciences: Theory and Practice*, 12(1), 168-175.

- Diamond, A. (2013). Executive functions. *Annual review of psychology*, 64, 135-168.

- Hong, S. J., Sisk, L. M., Caballero, C., Mekhanik, A., Roy, A. K., Milham, M. P., & Gee, D. G. (2021). Decomposing complex links between the childhood environment and brain structure in school-aged youth. *Developmental cognitive neuroscience*, 48, 100919.

- Laici, C., & Orlandini, L. (2016). "Avanguardie Educative": paths of innovation for schools. *Research on Education and Media*, 8(1), 53-61.

- Mueller, S. T., & Piper, B. J. (2014). The Psychology Experiment Building Language (PEBL) and PEBL Test Battery. *Journal of neuroscience methods* (222), 250-259.

- OECD (2013). *Innovative Learning Environments, Educational Research and Innovation*. Paris: OECD Publishing.

- Piccolo, L. R., Merz, E. C., Noble, K. G., & Pediatric Imaging, Neurocognition, and Genetics Study. (2019). School climate is associated with cortical thickness and executive function in children and adolescents. *Developmental Science*, 22(1), e12719.

- Wang, M.-T., & Degol, J.L. (2016). School climate: A review of the construct, measurement, and impact on student outcomes. *Educational Psychology Review*, 28(2), 315-352.

- Zullig, K.J., Koopman, T.M., Patton, J.M., & Ubbes, V.A. (2010). School climate: Historical review, instrument development, and school assessment. *Journal of Psychoeducational Assessment*, 28(2), 139-152.

**Periodo di studio e ricerca presso Impresa /Centri di ricerca / Pubblica Amministrazione**

Il periodo per un minimo di 6 mesi fino a un massimo di 12 mesi è **obbligatorio**, anche non continuativi, per le borse attivate nell'ambito di investimento:

- Transizione digitali e ambientali
- Pubblica amministrazione
- Patrimonio culturale

*Sono esclusi quelle di Ricerca PNRR.*

Il dottorando svolgerà il periodo **OBBLIGATORIO** presso *Istituto nazionale di documentazione innovazione e ricerca educativa (INDIRE)* per n 6 mesi

**Sede legale:**

|           |                                  |
|-----------|----------------------------------|
| Paese     | Italia                           |
| Città     | Firenze                          |
| Indirizzo | via Michelangelo Buonarroti n.10 |

**Sede operativa principale**, se diversa dalla sede legale, presso cui è svolta l'attività di ricerca del dottorando

|           |  |
|-----------|--|
| Paese     |  |
| Città     |  |
| Indirizzo |  |

**Periodo di studio e ricerca all'estero**

Il periodo per un minimo di 6 mesi fino a un massimo di 12 mesi, anche non continuativi, è **obbligatorio** per le borse attivate in tutti e 4 gli ambiti di investimento (Transizione digitali e ambientali, Ricerca PNRR, Pubblica amministrazione e Patrimonio culturale).

Il dottorando svolgerà il periodo **OBBLIGATORIO** presso *University of Surrey* per n 6 mesi

**Sede legale:**

|           |   |
|-----------|---|
| Paese     | United Kingdom                                  |
| Città     | Brighton  |
| Indirizzo | Stag Hill, University Campus, Guildford GU2 7XH |

**Sede operativa principale**, se diversa dalla sede legale, presso cui è svolta l'attività di ricerca del dottorando

|           |  |
|-----------|--|
| Paese     |  |
| Città     |  |
| Indirizzo |  |

**I periodi di cui sopra sono distinti e da svolgere presso soggetti distinti.**