

## STRESS IN THE PRESCHOOL PROFESSION: ACTION RESEARCH

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### Abstract/Izvlaček

*Summary:* Stress has become an integral part of modern humans' busy lives. One of the professions in which stress is highly prevalent is that of a preschool teacher. Therefore, action research was conducted in a higher education context aimed at reducing preschool teacher stress. After one month of introducing changes that met teachers' interests and needs and realizing their baseline values, teacher stress was reduced. Moreover, the research produced multiple benefits on both the personal and professional levels. The paper points to the need to organize a motivating pedagogical environment in higher education, which will make positive changes in students' lives and in their professional development.

### Keywords:

experiential teaching,  
occupational stress,  
preschool teachers,  
values, well-being.

### Ključne besede:

izkustveno učenje,  
koristi, poklicni stres,  
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## Introduction

Nowadays, stress is a common term that is ubiquitous in our fast-paced society. Stress represents a person's physical and/or psychological reaction to stressors, where a stressor or stress stimulus implies a physical, psychological, or social stimulus that causes a state of stress (Matulović et al., 2012). The beginning of research on the phenomenon of stress dates to the 1930s, when Hans Selye explained stress as a bodily reaction to different demands, which earned him the title of the founder of the stress theory (Fink, 2010). The concept of stress has been explored in diverse scientific fields and areas, producing numerous, divergent definitions of the term (Brkić and Rijavec, 2011). For example, stress is defined as the degree of disagreement between the demands placed on an individual and their ability to cope with those demands (Guglielmi and Tatrow, 1998, as cited. in Kyriacou, 2001) or as a state of worry or mental tension caused by a difficult situation (World Health Organization (WHO), 2023). According to the WHO (2023), stress is a natural human response that prompts us to address challenges and threats in our lives. People react to stress differently, precisely because the source of stress can be different situations or our assessment of those situations, based on which we produce a reaction as a response to stress. Every person is different, which means not all reactions are the same, i.e., not all stressors are the same. However, the way we react to stress greatly affects our overall well-being.

General discussion on stress points to different understandings of the term; however, when talking about occupational or work-related stress, some professions stand out, including teaching (class teachers, subject teachers, preschool teachers) (Brkić and Rijavec, 2011; Tatalović Vorkapić and Lončarić, 2013; Živčić-Bećirević and Smojver-Ažić, 2005). Kyriacou (2001) defines teacher stress as stress caused by the perception of work that causes a negative emotion and poses a potential threat to self-esteem or personal well-being. According to De Simone et al. (2016), the results of research on stress conducted on samples of educational staff show that the teaching job is extremely stressful. Recently, Tekavc and Vončina (2023) also determined that teachers, although satisfied with their work, find their profession to be highly stressful. There are three main variables connected with stress: mental well-being, physical health, and job satisfaction.

Based on the above, teachers showed higher job dissatisfaction and higher levels of stress related to mental and physical well-being compared to other highly stressful professions (Travers and Cooper, 1993). Research conducted by the European Agency for Safety and Health at Work (2008) has shown that workload, role overload, lack of support from management, increased class size per teacher, and unacceptable student behaviour are the main causes of teacher stress. Similarly, students, teachers and parents point to keeping discipline as one of the most common difficulties teachers face in their work (Plavšić and Diković, 2022).

Sindik and Pavlović (2016) and Živčić-Bećirević and Smojver-Ažić (2005) found that preschool teachers also experience high levels of work-related stress. They perceive the following as being extremely stressful: time pressure, meeting children's needs, coping with duties outside their professional domain, meeting personal needs, interaction with parents of kindergarten children, interpersonal relationships, and constant adaptation to changes in the preschool curriculum (Živčić-Bećirević and Smojver-Ažić, 2005). Tatalović Vorkapić and Lončarić (2013) point out that monitoring the levels of preschool teacher stress, well-being and personality traits is essential in maintaining quality early learning and education. Furthermore, the authors argue that only satisfied teachers who feel good, learn, explore, cooperate, and perceive their job as meaningful can do their job well, as Mandarić Vukušić and Krstulović (2024) also concluded in their research.

In addition to experiencing stress, it is also important how an individual copes with it. Coping with stress is a response or a way of reacting in a particular situation perceived as stressful. Pavlović and Sindik (2014) identify three ways of coping with stress: problem-focused coping, emotion-focused coping, and avoidance coping. How one copes with stress depends on his/her personal characteristics and capacities (Pavičić Dokota et al., 2020). Kyriacou (2001) believes that a teacher can cope with stress in two ways: using direct action and palliative techniques. With regard to the former way, it is necessary to determine the cause of stress and then decide how to cope with it. Palliative techniques are not a stress management mechanism but are used to alleviate the cause of stress. One can use mental techniques as well as physical relaxation techniques. Lučanin (2014) claims that it is necessary to have certain techniques for coping with stress. He argues that individuals should adjust their goals and better organize themselves, and emphasizes the importance of implementing protective measures, improving health, regular and

adequate high-quality nutrition, physical exercise, and scheduling time for rest with enough sleep. The author mentions the importance of education for a better attitude toward work, the appreciation of feedback from other people in the same situation and slowing down the pace. In addition to these stress-coping techniques, a positive and supportive environment can significantly improve professional functioning, thus creating optimal conditions for educational work (Pavičić Dokota et al., 2020). Consequently, this paper presents action research conducted in a higher education context aimed at reducing stress in the preschool profession.

### **Broader research context**

This action research was conducted within the course *Action Research in Early and Preschool Education* held at the Department of Early and Preschool Education, Faculty of Humanities and Social Sciences at the University of Split, Republic of Croatia, in the academic year 2022/2023. The *research problem* was preschool teacher stress, an issue that has been present for decades in the preschool profession (Tatalović Vorkapić and Lončarić, 2013); it is thus not surprising that students (hereinafter referred to as preschool teachers, all female) need to actively face it.

Under the mentorship of course professors in the process of experiential learning, preschool teachers took an active part in the basic phases of action research (Kuhne and Quigley, 1997). In the *planning phase*, they identified the research problem, project, and methodology. After determining the initial state, in the *action phase*, preschool teachers implemented the action plan, then they *observed*, and recorded the results using mixed methods, and determined the final state of the research. In the *reflection phase*, they evaluated the results and reflected on the entire research process, identifying the benefits of the completed research. The *aim of the action research* was to reduce stress in the preschool profession, and the initial research question was: *How can we reduce the level of stress by introducing activities in which we achieve our baseline values?*

In accordance with the varied causes of stress that they perceived (including poor organization, neglect of themselves and their families, and job dissatisfaction), preschool teachers identified, individually, in pairs, or in groups, different baseline values they sought to achieve with this research, and thus reduce work-related stress. The baseline values that were the standards for assessing the quality of action research (Whitehead, 1989) included *good organization, self-commitment and family commitment, and job satisfaction*. Furthermore, preschool teachers planned the changes

they would introduce in a one-month period to meet their needs and interests, achieve baseline values, and reduce perceived stress. Among the changes were activities such as introducing a schedule of obligations, relaxing, entertaining, and meditative activities, regular exercise, healthy eating habits, and joint activities with friends, family and/or parents, colleagues, and kindergarten children. The following step was to determine the initial state of the research, whereby all preschool teachers completed a questionnaire to determine stress levels (Lovibond and Lovibond, 1995). This was followed by a one-month introduction of previously planned changes, which was systematically monitored and documented by applying mixed methods. This process consisted of weekly monitoring of the changes in stress levels using the same self-assessment scale from the initial state and keeping records (diaries, photos, or videos). After a month, the questionnaire from the initial research phase was completed again, and the research benefits were determined. After completing the course, the preschool teachers made a report on the action research and presented the process of their research by replying to several reflective questions. Extracts from these reports were used to achieve a deeper understanding of the benefits of the action research.

## **Research methodology**

### *Research participants*

The action research was conducted among preschool teachers attending the first year of the part-time graduate study program in Early and Preschool Education (N = 58) at the Faculty of Humanities and Social Sciences in Split in the academic year 2022/2023. Preschool teachers enrolled in part-time study after completing either the full-time undergraduate study program or the differential program for enrolment in the graduate study program. Most of them work in one of the kindergartens in the city (n = 41; 73.2%), eleven are employed in private kindergartens (19.5%), while four preschool teachers are unemployed (7.1%). The majority (n = 39; 69.6%) work in a ten-hour program, five of them work in a six-hour program (8.9%), one preschool teacher (1.8%) works in a five-hour program, and one (1.8%) in an eight-hour program, while four preschool teachers (7.1%) work in shifts. Three preschool teachers (5.4%) have different job combinations (special program, trainee, etc.).

As for their marital status, almost the same number of preschool teachers are married ( $n = 22$ ; 39.3%) and in a relationship ( $n = 19$ ; 33.9%), while 15 are not in a relationship (26.8%).

### *Instruments and data collection*

In addition to the questionnaire that examined the general data presented in the description of the research participants, the *Stress Scale* was applied in the initial and final research phases. The *Stress Scale* is part of the *Depression Anxiety Stress Scales (DASS)* (Lovibond and Lovibond, 1995), and consists of 14 items that include indicators of chronic, non-specific arousal, difficulties with relaxation, anxiety, impatience, etc. (Reić Ercegovac and Penezić, 2012). Živčić-Bećirević and Smojver-Ažić (2005) state that self-assessment methods are usually not considered sufficiently objective in research, but according to the definition of stress as an assessment or perception of the experience, these are nevertheless relevant methods for examining this phenomenon. Therefore, self-assessment was used in this study as well. The research participants were required to assess the extent to which each item applies to them using a four-point Likert-type scale ranging from 0 – it does not apply to me at all, to 3 – it applies to me completely. Using the Cronbach alpha coefficient, the internal consistency reliability of the scale was calculated in the initial and final tests, confirming high values in both cases (Table 1), which is in line with the reliability found by Lovibond and Lovibond (1995) ( $\alpha = 0.81$ ) and Reić Ercegovac and Penezić (2012) ( $\alpha = 0.89$ ). One factor was extracted using principal components analysis in both cases. The total score on the scale in the initial and final states was formed as a linear combination of estimates on the scale items, and a higher score represents a higher level of stress.

Table 1. Reliability and validity of the *Stress Scale*

	Cronbach's alpha	% of total explained variance	N item	M scale	SD scale
initial	0.918	49.512	14	14.91	8.54
final	0.927	53.699	14	9.37	7.87

Qualitative data were collected by analysing the records, i.e., written student reports on the conducted action research to better understand the quantitative indicators.

## Results and discussion

The average values for *Stress Scale* items in the initial and final states can be seen in Table 2. In both cases, preschool teachers showed slightly more pronounced anxiety and difficulties with relaxation, while less pronounced irritability or negative energy were identified. The overall result was formed on the *Stress Scale*, and by comparing the overall results on the scale in both cases using the dependent samples t-test, it was found that in the final test, the stress was significantly lower ( $M_{\text{initial}} = 1.06$ ;  $SD = 0.61$ ;  $M_{\text{final}} = 0.67$ ;  $SD = 0.56$ ;  $t = 4.179$ ;  $df = 55$ ;  $p < 0.001$ ). This confirmed the effectiveness of the changes implemented in the action research. It can be seen that, as opposed to the results of other researchers (Sindik and Pavlović, 2016; Živčić-Bećirević and Smojver-Ažić, 2005), preschool teachers did not show a high, but a medium level of stress in the initial research phase; however, this level of stress created aggravating circumstances in their private life and work, which can be seen from the qualitative results of the research, and this made them feel the need to conduct the action research to reduce stress.

Table 2. Descriptive indicators of the *Stress Scale* items

Items	initial				final			
	Min	Max	M	SD	Min	Max	M	SD
I found it difficult to relax.	0.00	3.00	1.32	0.95	0.00	3.00	0.86	0.88
I found myself getting upset by quite trivial things.	0.00	3.00	1.30	0.93	0.00	3.00	0.77	0.89
I tended to over-react to situations.	0.00	3.00	1.27	0.84	0.00	3.00	0.89	0.82
I found it hard to wind down.	0.00	3.00	1.21	1.02	0.00	3.00	0.68	0.92
I found it hard to calm down after something upset me.	0.00	3.00	1.14	0.96	0.00	3.00	0.82	0.83
I found myself getting upset rather easily.	0.00	3.00	1.12	0.89	0.00	3.00	0.78	0.75
I found myself getting agitated.	0.00	3.00	1.11	0.93	0.00	3.00	0.61	0.75
I was intolerant of anything that kept me from getting on with what I was doing.	0.00	3.00	1.05	0.82	0.00	3.00	0.84	0.89
I was in a state of nervous tension.	0.00	3.00	1.05	0.90	0.00	3.00	0.71	0.80
I felt that I was rather touchy.	0.00	2.00	1.02	0.73	0.00	3.00	0.53	0.71
I found it difficult to tolerate interruptions to what I was doing.	0.00	3.00	0.91	0.84	0.00	3.00	0.71	0.75
I found myself getting impatient when I was delayed in any way (e. g., lifts, traffic lights, being kept waiting).	0.00	3.00	0.89	0.84	0.00	3.00	0.48	0.68
I found that I was very irritable.	0.00	3.00	0.82	0.72	0.00	3.00	0.43	0.66
I felt that I was using a lot of nervous energy.	0.00	3.00	0.68	0.83	0.00	3.00	0.25	0.54

The t-test results indicate the positive effect of the changes made in preschool teachers' lives during the action research aimed at reducing the level of perceived stress; however, this quantitative indicator is not enough for understanding the process that enabled the reduction of their stress. Therefore, the following passages will present preschool teachers' statements about the benefits of the study, which are the result of their continuous reflection on the research and the meaning it had for them. Based on content analysis, preschool teachers' statements were classified into three categories: 1) *personal, emotional, and physical well-being* related to the subjective perception of one's own health and satisfaction, 2) *educational well-being* related to the development of personal cognitive and other potential, and 3) *social well-being* related to successful functioning with others and the development of social competences. The types of well-being were determined in accordance with the categories of well-being described in the *National Curriculum for Early and Preschool Education* (2014). Tables 3–5 provide examples of statements in each category. In the category of *personal, emotional, and physical well-being* (Table 3), the preschool teachers emphasized the achievement of personal peace, improved physical and mental health, and greater work motivation, whereby personal satisfaction contributed to their job satisfaction. These results are important for understanding the reduction in stress that occurred after introducing the activities aimed at meeting preschool teachers' personal needs, interests and baseline values because previous research has shown that failure to achieve mental and physical well-being and job satisfaction is correlated with high levels of stress (Travers and Cooper, 1993). Thus, introducing a schedule of obligations, relaxing, entertaining, and meditative activities, regular exercise, healthy eating habits, and joint activities with friends, family and/or parents, colleagues, and kindergarten children can be considered effective techniques for coping with stress, which is in accordance with the recommendations given by Lučanin (2014). In addition, the results showed that in this category, preschool teachers achieved their baseline values of *good organization, self-commitment, family commitment, and job satisfaction*.



Table 3. Personal, emotional, and physical well-being as the benefit of the action research

Examples of participant statements
<i>"I achieved primarily personal well-being, which was my goal, I feel better, I relax more easily, I am less irritable and more pleasant company, I ask for help and support when I am in a problem situation, and have better control over my life (...)"</i>
<i>"The research benefits are related to subjective feelings, being satisfied, and feeling good in my work environment and being calm in situations that I cannot change."</i>
<i>"The benefits include better quality time, better organization, this has led to a sense of peace and satisfaction."</i>
<i>"The benefits of this research are better organization, which contributes to greater efficiency both at home and at work, and a sense of happiness and satisfaction because I have succeeded in my goals."</i>
<i>"The main research benefit is a better quality of life, seen in good time management, better nutrition, and frequent movement."</i>
<i>"The benefit of my research is better time organization which allowed me to find time for myself, my family, and friends. This is the best way to reduce stress and tension."</i>
<i>"The benefits of this research for me are primarily the introduction of physical activity into my life, which I completely neglected before this research, and it resulted in my being more satisfied with my own body, a general sense of satisfaction and competence, and a reduction in tension."</i>
<i>"The research improved my mental and physical health (emotional calm, reduction of undesirable emotional states – nervousness, irritability, better concentration, more physical energy, and better sleep)."</i>
<i>"In the psychophysical sense, I recognize the benefit in the concrete reduction of personal stress levels, and the decline in the intensity and occurrence of physiological indicators of stress during this project (rapid heartbeat, feelings of physical and emotional fatigue). I also recognize psychophysical well-being in a greater focus on a caring attitude towards myself (...). The emotional well-being was achieved by strengthening my self-esteem, developing a sense of optimism and self-efficacy, and greater openness to (self-)reflection."</i>
<i>"The research benefit is that I introduced and carried out activities that affect both my appearance and my health. Satisfaction with myself and the time I devoted to myself also resulted in an increase in work motivation."</i>

With regard to *educational well-being* (Table 4), preschool teachers emphasized learning about themselves in the context of stress through action research that enabled them to better understand themselves, their relationship with themselves and others, and their attitude toward work. They appreciate the action research structure (plan, action, observation, reflection), (self)assessment, and documentation of practice (Kuhne and Quigley, 1997). These statements show the importance of preschool teacher reflection during the research, and the importance of the educational and research task as an incentive for their action. Reflection has been confirmed as an important form of professional development in preschool teachers (Vekić-Kljajić, 2022) and schoolteachers (Močinić and Tatković, 2021). Therefore, it is positive that preschool teachers have recognized the benefits of engaging in reflection.

According to their statements, higher education courses organized in the form of experiential learning proved to be a favourable pedagogical environment that provided the motivating conditions necessary to make positive changes in their lives, work, and professional development. This is also positive given that a supportive pedagogical environment has proven to be a significant factor for successful professional functioning and coping with stress (Pavičić Dokota et al., 2020). Similar results were obtained by Jukić et al. (2022), who found that experiential learning through action research in higher education improved the quality of students' free time during the coronavirus pandemic, an effect which had a positive impact on other aspects of students' lives. The authors concluded that an organized pedagogical environment creates conditions favourable for meeting students' needs and interests, and thus achieving their personal and professional well-being.

Table 4. Educational well-being as a benefit of the action research

<i>Examples of participant statements</i>
<i>"The benefits are certainly conducting the first action research in my life, reflecting on the activities I have carried out, finding their scientific basis, and reviewing other research."</i>
<i>"Keeping a diary and taking notes has helped me reduce my stress levels, and especially to learn how to cope better with stressful situations. Daily planning of different activities enabled me to discover which activities help me cope with stress and calm down (...)."</i>
<i>"Frankly speaking, I was curious how this research would affect me because I would never have dared to do something like this if it wasn't for a course assignment at the faculty (...). I have come to the conclusion that the research benefits are 'pushing' oneself towards positive changes, changing one's way of thinking, putting oneself and one's needs first from time to time, setting boundaries, and acting on one's health before high levels of stress occur."</i>
<i>"This research has encouraged me to devote more time to myself, since I cannot change the stress that comes from the nature of this work, but also unexpected situations, as well as the number of obligations I have, I can change myself and the way I deal with everything that life brings."</i>
<i>"The research benefits are that I paid attention to how I respond to stress. I have learned that I should not experience so intensively what is out of my control, and that what I can influence always has several alternative solutions. Now I try not to postpone problems, but to act immediately, deliberately, and purposefully."</i>
<i>"I learned about my best coping mechanisms, and the activities we chose at the beginning, in my opinion, are very good so I will definitely continue to implement these in my free time and during the time of socializing with others because they greatly contribute to reducing stress levels and to easier relaxation."</i>
<i>"The research benefits are that I have concluded I can now more easily cope with stressful situations; that is, I managed to improve the mechanisms for coping with stress. I feel safer, I do not shy away from responsibility, I try to solve the problem immediately and analyse it before I react. All this helps me to come to work more calmly."</i>
<i>"The benefits of this research for me are that in stressful situations, I react more calmly and focus on finding solutions."</i>
<i>"The benefits of the conducted research are really many for me... New insights about stress, about my reaction, about possible reactions that I can consciously choose and apply."</i>

Finally, in this category, preschool teachers pointed out that during the research, by making a judicious choice of changes that they introduced into their private life and/or work environment, they developed various mechanisms for coping with stress, which also had a beneficial impact on their work and relationships with others. The preschool teachers' statements show their focus on problem solving (Pavlović and Sindik, 2014) and active coping with stressors, i.e., the use of direct-action techniques, whereby they first determined the cause of their stress, and then chose effective ways to reduce it (Kyriacou, 2001), which contributed to the reduction of perceived stress. It should be emphasized that, in this category, the baseline values of *good organization* and *self-commitment* were realized.

Table 5. Social well-being as a benefit of the action research

<i>Examples of participant statements</i>
<i>"I believe that the greatest benefit of this research for me was communication and cooperation with my colleagues (...). I believe that our relationship was an advantage from the beginning, because we are critical friends in each other's lives, and we have only proved that with this research."</i>
<i>"(...) also, a great benefit is the exchange of experiences in similar situations in which we find ourselves and the analysis of what we do and how we deal with it."</i>
<i>"The research showed me how quality interaction affects my stress level, but I realized that my mood and personal engagement greatly affect the quality of interactions. It's good for the whole group because I'm more positive and I pass on that energy to others."</i>
<i>"The well-being was also achieved by others around me – children and colleagues who participated in the activities by spreading feelings of comfort and satisfaction and building positive relationships. My family members and friends, with whom I spend more quality time in pleasant company, have also benefited."</i>
<i>"(...) my own well-being as the research benefit was also reflected in relationships with others, even with a colleague from work who, with my help, mastered the daily response to routine events. This resulted in our job satisfaction, and my sister helped me not to give up, which was reflected in some of her changes that she introduced during the process. My personal well-being is that I am more satisfied at work and that we as colleagues have connected even more."</i>
<i>"The research benefits are reduced stress and improved interactions with myself, children, colleagues and, to some extent, parents. Higher-quality interactions are the result of stress reduction."</i>
<i>"I find it interesting to note during this project that my more caring attitude towards myself has also activated members of my immediate family to make them aware of the need for more caring relationships (towards me and each other (...))."</i>
<i>"Reflection on everyday activities during this project also strengthened my social relationships with my family members and encouraged me to think about the potential for greater social openness towards members of my environment (acquaintances, close friends, professional colleagues...)." </i>

The category of *social well-being* (Table 5) includes the statements of preschool teachers showing that this action research also contributed to their relationships with others and to raising awareness of the need for environmental support in reducing

stress (Pavičić Dokota et al., 2020). This proved to be especially important for increasing their job satisfaction. In this process, the appreciation of other people's feedback (Lučanin, 2014), along with the cooperation of and support from key friends who help the action researcher improve the understanding, validity, and reliability of the research (Bulent et al., 2021), play a significant role, as pointed out by the preschool teachers in this study. *Job satisfaction* is another baseline value identified by preschool teachers, and it can be seen from their statements that it has been achieved in this category. This result is significant because personal well-being, satisfaction and preschool teacher cooperation enable the quality of educational work (Tatalović Vorkapić and Lončarić, 2013). Furthermore, it is essential to point out that the realization of their social well-being contributed to changes in the lives of their family members, friends, and colleagues, which is another important benefit of the action research (Whitehead, 1989).

The quantitative and qualitative results presented here point to a conclusion about the effectiveness of this action research at a personal level (stress reduction, better organization, self-commitment and family commitment, job satisfaction) and at the institutional level (improved communication, building positive relationships, better interactions, support), but also at the level of the community (more caring relationships with friends and acquaintances), which supports the previously established benefits that action research can yield to improve educational practice and create social change (Whitehead, 1989). This paper aims to address the need to organize a stimulating pedagogical environment in higher education and make positive changes in the life and professional development of students attending pedagogical study programs. Organizing experiential teaching through action research similar to this one presents an opportunity along the way.

## **Conclusion**

Stress has become an ubiquitous factor in modern life, and it is especially recognized in the educational profession. Therefore, this paper presents action research conducted in the higher education context to reduce stress in the preschool profession. The quantitative results showed that the action research significantly contributed to reducing stress in preschool teachers, while the qualitative indicators pointed to the multiple benefits that the action research produced in preschool teachers' private life and work.

Based on continuous reflection during the research, the preschool teachers concluded that higher education courses organized in the form of experiential learning proved to be a favourable pedagogical environment that provided stimulating conditions necessary to make positive changes in their life and work. Furthermore, preschool teachers concluded the action research enabled them to improve their physical and mental health, better understand themselves, their relationship with themselves and others, and their attitude towards work. They claim they developed various mechanisms for coping with stress and improved their social relationships. Finally, it can be said that preschool teachers achieved personal, emotional, and physical, as well as educational and social well-being, which was also reflected in the well-being of others. Therefore, these results support the previously established benefits that action research can have at the level of the individual, the institution, and the community

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