



**Joanna Krzyżak, Jolanta Walas-Trębacz**

Krakow University of Economics

Krakow, Poland

e-mail: krzyzakj@uek.krakow.pl; walasj@uek.krakow.pl

ORCID 0000-0002-8230-3552 | 0000-0002-8266-8922

## **ACADEMIC TEACHERS' ENGAGEMENT DURING INSTITUTIONAL CHANGE: RESEARCH FINDINGS**

**ZAANGAŻOWANIE NAUCZYCIELI AKADEMICKICH W CZASIE ZMIAN INSTYTUCJONALNYCH  
– WYNIKI BADAŃ**

**Keywords:** work engagement, academic teacher, higher education, UWES-17 questionnaire, dimensions of engagement

**Słowa kluczowe:** zaangażowanie w pracę, nauczyciel akademicki, szkolnictwo wyższe, kwestionariusz UWES-17, wymiary zaangażowania

### **Abstract**

Investigating and analyzing the factors influencing academic teachers' engagement is crucial for the quality of education and the effectiveness of higher education institutions. This article presents the findings of a study conducted among 416 Polish university lecturers using the UWES-17 questionnaire. The study focused on three dimensions of engagement: vigor, dedication, and absorption. The results indicate a strong sense of purpose and professional pride among respondents, though energy levels vary. The article outlines key recommendations and future research directions regarding the determinants teachers' engagement in Polish higher education.

### **Streszczenie**

*Badanie i analiza czynników wpływających na zaangażowanie nauczycieli akademickich jest kluczowe dla jakości kształcenia i efektywności uczelni. Artykuł prezentuje wyniki badań przeprowadzonych wśród 416 polskich wykładowców uniwersyteckich z wykorzystaniem kwestionariusza UWES-17. W badaniu skupiono uwagę na trzech wymiarach zaangażowania: wigorze, oddaniu i zaabsorbowaniu pracą. Wyniki wskazują na występowanie silnego poczucia celu i dumy zawodowej, jednak poziom energii jest zróżnicowany. W artykule wskazano kluczowe rekomendacje oraz kierunki dalszych badań nad uwarunkowaniami zaangażowania nauczycieli w polskim szkolnictwie wyższym.*

### **INTRODUCTION**

The professional engagement of academic teachers has been identified as a pivotal factor in the quality of education, the effectiveness of institutions, and the advancement of science and innovation. According to the extant scholarly literature, elevated levels of engagement have been demonstrated to engender

heightened work motivation, enhanced teaching and research outcomes, elevated job satisfaction, and improved psychological well-being [Bakke, Bal, 2010; Schaufeli et al., 2006]. In academic settings, where work demands high cognitive effort, significant autonomy, and responsibility, engagement is paramount to accomplishing the educational and research missions of higher education institutions [Fernandez, 2020].

In recent years, Polish higher education has undergone significant structural and legislative transformations that have had a considerable impact on the daily work of academic teachers [Cieciora, 2017; Liang, 2024].

The objective of this article is to present the findings of an empirical study on the level of academic teachers' engagement in the context of institutional change. The study was conducted with a sample of 416 lecturers employed at Polish universities. The present study employed the UWES-17 scale, a tool developed by Schaufeli and colleagues, to assess three fundamental components of engagement: vigor, dedication, and absorption. The analysis was supplemented with group comparisons based on demographic and professional variables, such as gender, work experience, and academic position.

The findings of this study provide updated quantitative data on the state of engagement among Polish academic staff. In addition, the findings serve as a starting point for discussions on strategies to support human capital development in universities. It is imperative to identify areas necessitating intervention, both on an individual basis and within institutional frameworks, and to explore methods to enhance the professional resilience of academic personnel in the face of significant institutional transformations.

## THEORETICAL FRAMEWORK

### Institutional changes in higher education and their impact on the work environment

In recent years, Polish higher education has undergone significant transformations that have reshaped the working conditions of academic teachers. These changes are rooted in legislative reforms, evolving educational policies, new funding systems, updated professional requirements, and increasing expectations in teaching and research.

A seminal catalyst for this transformation was the 2018 higher education reform, formally designated as the "Constitution for Science" (Act 2.0), which profoundly revised the evaluation criteria for academic institutions and individual researchers [Dz. U. 2018, item 1668; ISAP, 2018]. These novel regulations had ramifications for university funding mechanisms, encompassing grants and research projects, thereby engendering a transformation in the academic landscape. Concurrently, modifications in employment conditions and career advancement procedures—including novel habilitation processes, escalated requirements for professorship, and diversified contract forms—have exerted a direct influence on job stability, salaries, and social benefits [Dz. U. 2018, item 1668; ISAP, 2018].

Another critical challenge pertains to the mounting workload associated with teaching and research obligations. The number of teaching hours, the necessity of working overtime, and the pressure to publish in international journals all shape the nature of academic labor [Johann et al., 2024]. The pressure to publish in international journals is further compounded by citation metrics and the demand for international research output [Kulczycki, 2017; Pokorska, 2020].

The autonomy and management style of universities also influence academic work. Key factors that contribute to this phenomenon include the role of university leadership, the level of institutional support, and the degree of bureaucratization, which encompasses mandatory reporting and accreditation

standards. The prevailing institutional culture and the organizational structure play a pivotal role in shaping both academic freedom and the daily responsibilities of faculty members [Drennan et al., 2020].

Academic authorities are increasingly encouraging involvement in public engagement, industry collaboration, and political discourse [Orazbayeva et al., 2021]. Concurrently, internationalization has emerged as a pivotal aspect of institutional growth, propelled by the demand for international research collaborations, EU-funded projects, and English-language instruction to appeal to foreign students. While these trends present novel opportunities, they also necessitate additional time and resources [Spook & Raghoobar, 2022].

Technological and digital transformation have gained special relevance, particularly with the rise of remote and hybrid teaching [Lee, 2018]. The evolution of e-learning instruments and the digital transformation of academic and administrative operations have profoundly impacted teaching methodologies and research administration. The integration of artificial intelligence (AI) has emerged as a pivotal element in this transformation, necessitating a pedagogical shift among educators. This shift involves adapting to new technologies and redefining roles to encompass algorithm-assisted teaching, assessment, and data analysis [Śluzek, Suppan, 2024]. While artificial intelligence (AI) has the potential to enhance efficiency by automating repetitive tasks and personalizing learning, it also necessitates continuous upskilling and method adaptation. Institutions must allocate resources to infrastructure development and establish ethical AI use policies. Consequently, AI functions as both a supportive instrument and a catalyst for systemic transformation within academic labor [Imran et al., 2024].

Contemporary academia is further characterized by increasing researcher mobility and intensified international cooperation [Kostecki, 2025]. Programs such as Erasmus+ and initiatives by the National Academic Exchange Agency (NAWA) play a pivotal role in academic career development [Kwiek, 2020].

In light of mounting professional pressures, mental health and well-being have emerged as pivotal concerns. Burnout, work-related stress, and challenges in maintaining a healthy work-life balance have emerged as significant concerns [Skibicka-Piechna, 2021]. There is an increasing demand for the implementation of psychological support programs and institutional mentoring systems that have the potential to enhance academic well-being [Batool et al., 2021].

In summary, the dynamic changes in Polish higher education have significant ramifications for academic staff at both the organizational and individual levels. The contemporary academic landscape is characterized by a series of dynamic factors, including legislative reforms, funding changes, rising expectations, technological developments, and international collaboration. In response to these challenges, academic institutions must devise effective strategies to support and adapt their personnel to this evolving context.

## **Work engagement and the JD-R model**

Work engagement constitutes a pivotal component of contemporary organizational functionality, encompassing educational institutions. According to Schaufeli et al. [2002], it is defined as a positive, fulfilling, work-related state of mind characterized by three components: vigor, dedication, and absorption [Evitha et al., 2021]. Vigor is defined as high levels of energy and mental resilience while working, enabling employees to cope effectively with difficulties and challenges in the workplace [Shraga, Shirom, 2009]. Dedication is characterized by a sense of significance, enthusiasm, and pride in one's work. Absorption, in turn, refers to being fully concentrated and engrossed in one's job, often accompanied by the impression that time passes quickly [Baka & Cieślak, 2010]. Engagement among teachers, a key occupational group, has major implications for both their well-being and instructional effectiveness [Sonnentag, 2003]. In educational settings, high engagement has been demonstrated to be

associated with enhanced teaching quality, student motivation, and the development of innovative pedagogical practices [Fernandez, 2020; Khamzina et al., 2024; Sonnentag, 2017].

One of the most widely used models for explaining work engagement is the Job Demands-Resources (JD-R) model proposed by Bakker and Demerouti [2007]. The present model posits that the level of engagement exhibited by employees is derived from a state of equilibrium between the demands imposed by their professional roles and the resources available to them within the same context. The demands experienced by healthcare professionals include physical, emotional, and organizational stressors that may lead to overload and exhaustion [Sonnentag, 2017]. Academic teachers may encounter various challenges in their professional landscape, including administrative burdens, elevated student expectations, and the pressure to adapt to curricular changes. Conversely, job resources have been shown to promote professional functioning, encompassing elements such as social support, autonomy, avenues for growth, and access to constructive feedback. These elements play a pivotal role in the maintenance of motivation and the prevention of burnout [Demerouti et al., 2001; Kuvaas, Dysvik, 2010].

The application of the JD-R model to the analysis of teachers' engagement facilitates a more profound comprehension of how organizational and environmental factors influence their motivation and job satisfaction. Increases in job demands accompanied by limited resources have been shown to reduce engagement and may lead to professional burnout [Schaufeli et al., 2009].

## **REASERCH METHODOLOGY**

### **Methodological Assumptions and Sample Selection**

The empirical study employed a diagnostic survey method using a standardized online questionnaire, allowing for the collection of quantitative data on the level of academic teachers' professional engagement. The selection of this method was predicated on its demonstrated efficacy in the aggregation of diverse and representative data from a substantial cross-section of university personnel. A purposive sampling technique was employed, entailing the selection of participants based on criteria that were congruent with the research objectives. The inclusion criterion was employment as an academic teacher at a Polish higher education institution. This methodological approach was designed to ensure that the collected data accurately reflected the experiences of individuals directly impacted by the phenomena under study. This methodological approach enhanced the validity of the subsequent findings.

The study was conducted between November 2023 and February 2024. To ensure accessibility and participant comfort, a remote (online) format was used, thereby increasing the potential reach of the sample. Prior to the study, approval was obtained from the University Research Ethics Committee (decision no. KEBN/71/0044/D29/2023), confirming compliance with ethical standards.

### **Measurement tool and data collection procedure**

The primary research instrument employed was the Utrecht Work Engagement Scale (UWES-17), which was developed by Schaufeli et al. in 2006. This scale is among the most widely utilized instruments for measuring professional engagement and has been employed in numerous studies involving various occupational groups, including educators and academic staff [Schaufeli, 2013]. The UWES-17 instrument comprises 17 items that are evaluated using a 7-point Likert scale (ranging from 0, representing "never", to 6, indicating "always"). This scale has been developed to assess three fundamental dimensions of engagement:

1. Vigor (VI) is defined as the levels of energy and psychological resilience exhibited during professional activities.
2. Dedication (DE) is defined as the degree to which an individual identifies with their professional endeavors, the sense of purpose they derive from their work, and the inspiration they find in their work.
3. Absorption (AB) is characterized by profound concentration and complete immersion in work-related tasks.

The core scale was augmented with a sociodemographic section, incorporating inquiries into demographic and professional variables. In order to guarantee anonymity and maintain ethical standards, participants were not requested to disclose personal information or the name of their institution. Participation in the study was voluntary, and participants could withdraw from the study at any time.

The data obtained through the online questionnaire were subjected to quantitative analysis using Statistica 13.3. The analysis encompassed calculations of means, standard deviations, and measures of central tendency to meticulously ascertain the level and variability of engagement across disparate sociodemographic groups.

## **Sample characteristics**

The sample included 416 academic teachers representing diverse demographic and professional backgrounds. The gender distribution was balanced, with 50.5% of the subjects identifying as female, 47.1% as male, and 2.4% who did not specify their gender. The predominant age group represented was 41–50 years of age, constituting 35.3% of the sample. Conversely, the under-29 age group represented a significantly smaller proportion, with a percentage of only 4.3%. With respect to professional experience, the largest group, constituting 36.6% of the sample, reported 21–30 years of service. With respect to academic positions, the largest group was composed of assistant professors (adjuncts) (48.3%), followed by university professors (26.4%), assistants (16.8%), and full professors (5.5%). The majority of respondents (81.5%) occupied teaching and research positions, with the predominant academic field being social sciences (78.1%). The vast majority of respondents were employed by public institutions (94.2%).

## **Study limitations**

It is imperative to acknowledge the limitations that pertain to the generalizability of the findings. First, the study concentrated on a particular professional group, namely academic teachers, who generally possess elevated autonomy, a wide range of experience, and distinctive working conditions. As Baka and Cieślak [2010] have observed, such variability may affect engagement levels and limit generalizability to other professions. Secondly, although the UWES-17 is widely recognized as a reliable measurement tool, further validation is necessary in the context of Polish higher education. In the future, researchers should consider the development of a measurement instrument that is tailored to the realities of academic work in Poland. This would improve diagnostic precision and better identify engagement-related factors.



## RESEARCH RESULTS

Academic teachers' engagement plays a fundamental role in shaping the quality of education, research outcomes, and the overall effectiveness of academic institutions. Given the demanding nature of the profession, which encompasses teaching, research, and administrative duties, it is essential to thoroughly understand the levels of engagement to ensure a supportive work environment [Fernandez, 2020]. Descriptive statistics, including means, medians, and standard deviations, were calculated for each UWES-17 component and the total engagement score. The following statistics provide an overview of the central tendency and variability in engagement levels among academic staff (see Table 1).

**Table 1. Results of academic teachers' engagement in work**

UWES-17 results				
Statistics	Vigor (VI)	Dedication (DE)	Absorpcion (AB)	Overall score
Mean (M)	3.79	4.30	3.96	4.00
Median (Me)	4.00	4.60	4.17	4.24
Standard deviation (SD)	1.43	1.35	1.42	1.41
Range	0-6	0-6	0-6	0-6

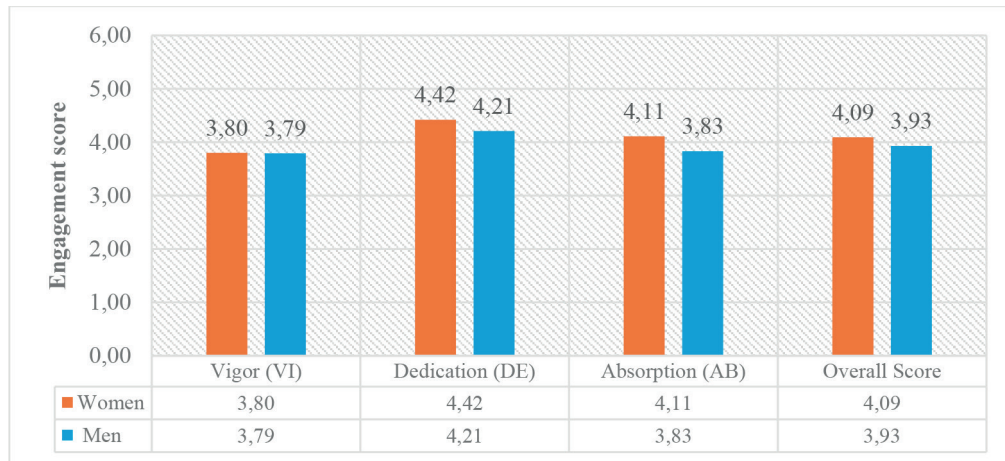
**Source:** own study based on research results.

The mean overall engagement score ( $M = 4.00$ ,  $SD = 1.41$ ,  $Me = 4.24$ ) indicates a moderate to high level of professional engagement among academic teachers. The construct of vigor, which is defined as energy and persistence in one's work, demonstrated a moderate average score ( $M = 3.79$ ). However, the high standard deviation ( $SD = 1.43$ ) indicates substantial variability, with some teachers reporting high stimulation and motivation, while others may experience fatigue or disengagement.

The component with the highest rating ( $M = 4.30$ ) was "dedication", indicating that the majority of academic staff members experience a profound sense of purpose and satisfaction in their work. With regard to the phenomenon of absorption, the respondents exhibited a range of moderate to high levels ( $M = 3.96$ ), although individual responses exhibited variability. While some respondents reported experiencing profound engagement with their work, others exhibited indications of diminished concentration or despondency.

A comparison of the level of professional involvement of university teachers by gender variable is shown in Figure 1.

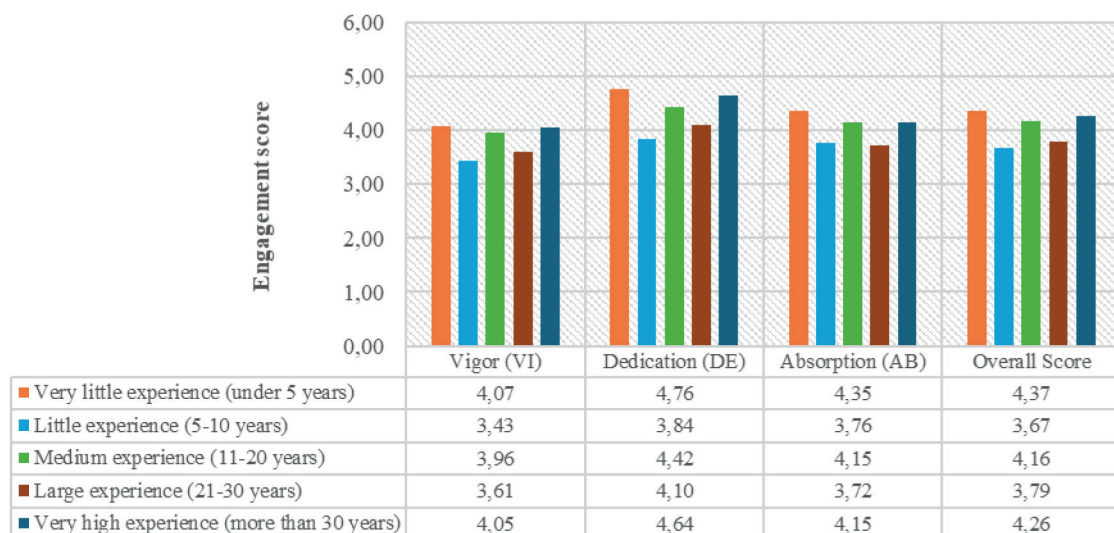
The data demonstrate that female participants exhibited higher scores in all three components of engagement: vigor (VI), dedication (DE), and absorption (AB). Additionally, they demonstrated higher scores in the overall engagement index. The most salient discrepancy emerged in the dedication component, wherein women exhibited an average of 4.42, while men demonstrated an average of 4.21. This phenomenon may be indicative of a stronger identification with their professional roles on the part of women, leading to a heightened sense of purpose and a sense of professional accomplishment. In the absorption component, female participants demonstrated higher scores ( $M = 4.11$ ) compared to male participants ( $M = 3.83$ ), suggesting a heightened state of concentration and an increased probability of attaining a state of flow.

**Figure 1. Comparison of engagement scores by gender**

**Source:** own study based on research results.

The observed differences in vigor were negligible, with means of 3.80 and 3.79, respectively, for female and male participants. This finding suggests that there was no significant difference in energy levels or persistence between the sexes. The overall engagement score for women ( $M = 4.09$ ) was marginally higher than that for men ( $M = 3.93$ ). Though the differences are modest, they may reflect subtle factors related to gender-based perceptions of professional roles and emotional involvement in academic work. In the context of institutional change, these findings suggest that women may exhibit greater resilience and intrinsic motivation. These factors should be considered in change management strategies.

The variation in the level of professional involvement of university teachers according to the length of their work experience is illustrated in Figure 2.

**Figure 2. Comparison of engagement scores by professional experience**

**Source:** own study based on research results.

The highest overall engagement scores were observed in two groups: individuals with very little professional experience (under 5 years;  $M = 4.37$ ) and those with extensive experience (over 30 years;  $M = 4.26$ ). These findings suggest that engagement may be fueled by early-career enthusiasm or, later, by a solidified professional identity and internal motivation.

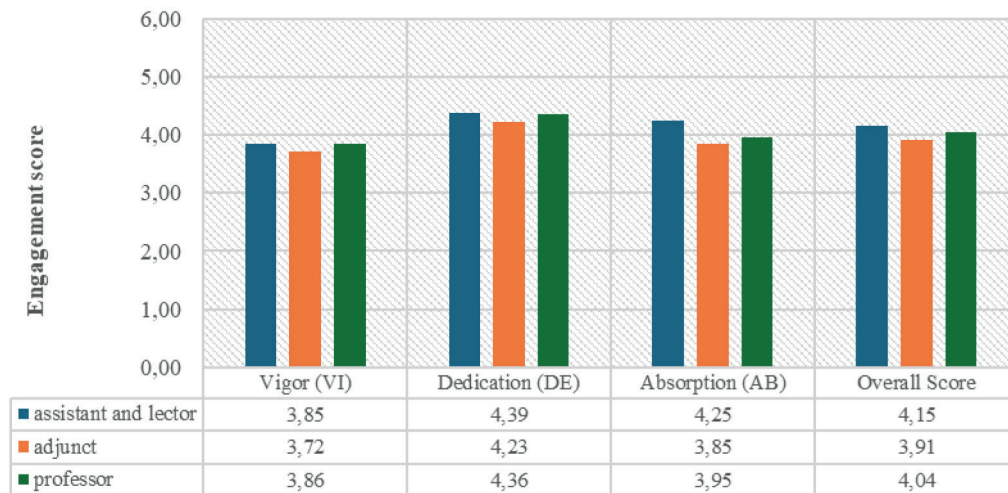
A thorough analysis of the UWES-17 components yielded remarkably elevated dedication scores among both the least experienced ( $M = 4.76$ ) and the most experienced ( $M = 4.64$ ) teachers. This

phenomenon is indicative of a profound commitment and a well-defined sense of purpose, characteristics that are evident at both extremes of the career spectrum. Conversely, the lowest engagement levels were documented among individuals with 5–10 years of experience, indicative of a potential “mid-career dip”. This phenomenon is characterized by a decline in enthusiasm and the absence of well-established coping mechanisms to address mounting professional demands.

A notable finding was the comparable vigor scores between the least and most experienced groups ( $M = 4.05$ ), suggesting high resilience in both. However, individuals with 5–10 and 21–30 years of experience exhibited lower vigor levels ( $M = 3.43$  and  $M = 3.61$ , respectively), which may be attributable to stressors associated with career advancement pressure and administrative burdens. These findings indicate that engagement does not follow a linear trajectory across years of service but is shaped by specific stages of professional development.

The variation in the level of professional involvement by academic position reveals interesting patterns that may have important implications for human resource management policies in higher education (see Figure 3).

**Figure 3. Comparison of engagement scores by academic position**



**Source:** own study based on research results.

The data presented in Figure 3 indicates that the highest overall level of commitment was observed among teaching assistants and lector ( $M = 4.15$ ), followed by professors ( $M = 4.04$ ), with assistant professors (adjuncts) scoring the lowest ( $M = 3.91$ ). This distribution may suggest that individuals in the nascent stages of their academic careers are characterized by high levels of enthusiasm and strong intrinsic motivation. Conversely, professors have been shown to demonstrate heightened degrees of professional stability and contentment with their accomplishments. The subsequent sections present the findings, which indicate that teaching assistants and lecturers are the most preoccupied with work (AB;  $M = 4.25$ ). This phenomenon may be indicative of a strong focus and commitment to ongoing tasks. Conversely, professors demonstrated the highest levels of dedication (DE;  $M = 4.36$ ), which may be attributable to their profound alignment with the academic and instructional objectives of the institution. Assistant professors, a pivotal component of the academic framework, exhibited diminished performance across all domains, particularly in the domain of vigor (VI;  $M = 3.72$ ). This decline may be attributable to an accumulation of responsibilities and the pressure to advance their academic careers.

The data collected underscores the need for an individualized approach to foster engagement at different stages of the career path, taking into account the specific burdens and expectations of the job.



## CONCLUSSIONS, RECOMMENDATIONS AND FUTURE RESEARCH DIRECTIONS

The analysis of the study results presents a complex picture of academic teachers' engagement in the context of dynamic institutional transformations. The findings indicate that academic teachers in Poland exhibit moderate to high levels of professional engagement, with particularly high scores in the dedication component. This suggests that a significant proportion of the academic staff exhibits a profound sense of professional fulfillment, a strong sense of identification with their professional role, and a deep sense of pride in their responsibilities.

A particularly noteworthy finding is the non-linear trajectory of engagement across years of professional experience. The highest levels of engagement were observed among those at the beginning and end of their academic careers, while those in the mid-career phase (5–10 years of experience) demonstrated the lowest levels. The reduced engagement observed within the assistant professor (adjunct) group may be attributed to the strain of balancing teaching, research, and administrative tasks. At this stage, the absence of career stability may also have a deleterious effect on a sense of influence and motivation.

Scores indicating lower vigor may be indicative of limited mental and physical energy resources, which could be a sign of overload and a potential risk for burnout. This diminished vigor was most often observed among mid-career academics (five to ten years of experience) and assistant professors, suggesting possible motivational decline during a phase marked by increasing expectations but not yet consolidated career rewards. The diminished vigor component may not only be attributable to structural overload but also to a fragmented support system and mounting expectations for academic performance [Maquidato, Bayani, 2024]. These factors are cognitively demanding and have the potential to compromise recovery capacity.

Furthermore, gender differences in engagement merit consideration. The data suggest that women exhibit a stronger identification with their professional roles, potentially reflecting a more profound emotional engagement. However, this heightened engagement may carry a greater risk of psychological overload, particularly in contexts where social roles are imbalanced. The findings underscore the necessity for customized support strategies, meticulously tailored to the distinct career stages and responsibilities of individuals in different professional roles [Khamzina et al., 2024].

In response to the identified challenges and engagement disparities, the following recommendations are proposed:

1. The development of psychological support programs and strategies to prevent burnout is imperative. These programs should include access to psychological consultations, designated institutional spaces for recovery, and internal mentoring systems [Skibicka-Piechna, 2021].
2. The reduction of administrative and teaching burdens can be achieved through the streamlining of reporting systems, the limitation of redundant forms, and the promotion of more flexible curriculum planning [Marciniak, 2016].
3. In order to achieve an optimal work-life balance, it is imperative to implement measures such as remote work options, the rotational assignment of administrative duties, and the promotion of a culture that fosters rest. [Sęczkowska, 2019]
4. It is imperative to adapt HR policies to the academic career cycle, particularly for groups exhibiting a higher risk of diminished vigor, such as young assistant professors and those with 5–10 years of experience. It is imperative that support programs be customized to align with these pivotal phases [Pieniędzy, 2017; Szot, 2021].
5. The enhancement of the status of the teaching track, in conjunction with the creation of equivalent development opportunities for staff primarily engaged in teaching, is imperative in response to the mounting pressure for research output [Pieniędzy, 2017].

6. To cultivate a culture of recognition and autonomy, it is essential to reinforce the role of feedback, encompassing teaching and organizational contributions in reward systems, while concurrently engaging staff in decision-making processes [Wołodźko, 2019].

The theoretical contribution of this study lies in extending the application of the Job Demands–Resources (JD-R) model to the context of academic work in Poland. The empirical findings indicate that elevated levels of cognitive and organizational demands, when not adequately counterbalanced with resources such as time, stability, or support, exert a detrimental effect on vigor, a fundamental component of engagement. Concurrently, the persistent presence of dedication underscores the role of intrinsic motivation and professional identity in sustaining engagement under challenging conditions.

This study also provides empirical evidence for the diagnostic value of the UWES-17 scale in analyzing academic work, and offers a foundation for its further cultural and institutional adaptation to the realities of Polish higher education.

The practical contribution of the study is the formulation of specific recommendations for higher education institutions aiming to support academic engagement. The factors and areas that have been identified as needing intervention can inform the development of human resource strategies grounded in sustainable development principles. These strategies should balance organizational effectiveness with employee well-being [Fernandez, 2020].

In the context of a shifting institutional landscape, this study makes a significant contribution to the broader discourse on the creation of resilient, flexible, and engagement-friendly work environments within the higher education sector [Alexander, Manolchev, 2020]. A promising avenue for future research may include examining the tension between autonomy and bureaucratic control, as well as exploring the role of informal survival strategies in maintaining motivation and well-being among academic staff.

## BIBLIOGRAPHY

Alexander A., Manolchev C., 2020: *The future of university or universities of the future: a paradox for uncertain times*. International Journal of Educational Management. 34(7), p. 1143-1153. <https://doi.org/10.1108/IJEM-01-2020-0018>

Baka L., Cieślak R., 2010: *Zależności między stresorami w pracy a wypaleniem zawodowym i zaangażowaniem w pracę w grupie nauczycieli: pośrednicząca rola przekonań o własnej skuteczności i wsparcia społecznego*. Studia Psychologiczne, 48, p. 5-18.

Bakker A.B., Demerouti E., 2017: *Job demands–resources theory: Taking stock and looking forward*. Journal of Occupational Health Psychology, 22(3), p. 273–285. <https://doi.org/10.1037/ocp0000056>

Bakker A.B., Bal P.M., 2010: *Weekly work engagement and performance: a study among starting teachers*. Journal of Occupational and Organizational Psychology, 83(1), p. 189-206. Retrieved in September 2017. <http://dx.doi.org/10.1348/096317909X402596>.

Bakker A.B., Demerouti E., 2007: *The Job Demands-Resources Model: State of the Art*. Journal of Managerial Psychology, 22, p. 309-328, <http://dx.doi.org/10.1108/02683940710733115>.

Batool A., Ahmad S., Naz S., 2021: *Correlation of personal and institutional factors with research productivity among university teachers*, Humanities & Social Sciences Reviews, 9(2), p. 240–246. <https://doi.org/10.18510/hssr.2021.9225>

Cieciora M., 2017: *Wyzwania związane z zarządzaniem procesami na uczelniach wyższych w Polsce – wybrane zagadnienia*. Zeszyty Naukowe PWSZ w Płocku. Nauki Ekonomiczne, 1(25), p. 337-349.

Demerouti E., Bakker A.B., Nachreiner F., Schaufeli W.B., 2001: *The Job Demands-Resources Model of Burnout*. Journal of Applied Psychology, 86(3), p. 499-512, <http://dx.doi.org/10.1037/0021-9010.86.3.499>.

Drennan J., Clarke M., Hyde A., Politis Y., 2020: *Academic Identity in Higher Education*. In: Teixeira, P.N., Shin, J.C. (Eds.), *The International Encyclopedia of Higher Education Systems and Institutions*. Springer, Dordrecht. [https://doi.org/10.1007/978-94-017-8905-9\\_300](https://doi.org/10.1007/978-94-017-8905-9_300)

Evitha Y., Vikaliana R., Sabaruddin L., Sapta A., Abdul, F., 2021: *Description And Causes Of Having Work Engagement In Employees*. Ilomata International Journal of Management, 2(3), p. 206-215 <https://doi.org/10.52728/ijjm.v2i3.282>

Fernandez S., 2020: *Faculty Work Engagement and Teaching Effectiveness in a State Higher Education Institution*. International Journal of Educational Research Review, 6, p.432-444. <https://doi.org/10.24331/ijere.783947>.

Imran M., Almusharraf N., Abdellatif M.S., Abbasova M.Y., 2024: *Artificial Intelligence in Higher Education: Enhancing Learning Systems and Transforming Educational Paradigms*. International Journal of Interactive Mobile Technologies (iJIM), 18(18), p.34–48. <https://doi.org/10.3991/ijim.v18i18.49143>

ISAP Internetowy System Aktów Prawnych, 2018: *Ustawa Prawo o szkolnictwie wyższym i nauce*. Dz.U. 2018 poz. 1668. <http://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU20180001668/O/D20181668.pdf>

Johann D., Neufeld J., Thomas K., Rathmann J., Rauhut H., 2024: *The impact of researchers' perceived pressure on their publication strategies*. Research Evaluation, rvae011, p. 1-16, <https://doi.org/10.1093/reseval/rvae011>

Khamzina B., Abiyeva Z., Abdrasheva B., Nurkatova L., 2024: *Teacher work engagement in Kazakhstan universities*. Bulletin of L.N. Gumilyov Eurasian National University. Pedagogy. Psychology. Sociology Series, 147(2), p.76–95. <https://doi.org/10.32523/2616-6895-2024-147-2-76-95>.

Kinman G., Wray S., 2018: *Work-related wellbeing in UK higher education: Good practice guide*. Education Support Partnership. Retrieved from <https://www.educationsupport.org.uk> (02-04-2025)

Kostecki D., 2025: *Meandry umiędzynarodowienia szkolnictwa wyższego w Polsce. Działalność Narodowej Agencji Wymiany Akademickiej – próba bilansu*, Krytyka Prawa, 17(1), p. 225–243, DOI: 10.7206/kp.2080-1084.761

Kulczycki E., 2017: *Punktoza jako strategia w grze parametrycznej w Polsce*. Nauka i Szkolnictwo Wyższe, 1(49), p. 63–78.

Kuvaas B., Dysvik A., 2010: *Exploring alternative relationships between perceived investment in employee development, perceived supervisor support and employee outcomes*. Human Resource Management Journal, 20(2), p. 138–156. <https://doi.org/10.1111/j.1748-8583.2009.00120.x>

Kwiek M., 2020: *Międzynarodowa współpraca badawcza w Europie w świetle dużych danych i jej globalne konteksty*, Nauka, 1, p. 35–66, DOI:10.24425/nauka.2020.132621

Levecque K., Anseel F., De Beuckelaer A., Van der Heyden J., Gisle L., 2017: *Work organization and mental health problems in PhD students*. Research Policy, 46(4), p. 868–879, <https://doi.org/10.1016/j.respol.2017.02.008>

Lee K., 2018: *Discursive effects of a paradigm shift rhetoric in online higher education: Implications on networked learning research and practice*. In: B. Nina, S. Cranmer, S. Julie-Ann, M. Laat, T. Ryberg (Eds.), *Networked Learning: Looking Back - Moving Forward*. New York, NY: Springer.

Liang H., 2024: *The Transformation of University Governance Abroad Under the Perspective of New Public Management*. Academic Journal of Management and Social Sciences. 7(2), p. 6-9, <https://doi.org/10.54097/zfkeag92>

Maquidato J.N.C, Bayani R.T., 2024: *Workload and work engagement among the teachers: a descriptive-correlational study*. EPRA International Journal of Environmental Economics, Commerce and Educational Management. 11(7), p. 136-148, <https://doi.org/10.36713/epra17756>

Marciniak Z. (red.), 2016: *Rekomendacje w sprawie odbiurokratyzowania procesu kształcenia i oceny jego jakości*, Raport Nr 4, Rada Główna Nauki i Szkolnictwa Wyższego, Warszawa.

Orazbayeva B., Van der Sijde P., Baaken T., 2021: *Autonomy, competence and relatedness – the facilitators of academic engagement in education-driven university-business cooperation*, *Studies in Higher Education*, 46(7), p. 1406-1420, <https://doi.org/10.1080/03075079.2019.1679764>

Pieniądz A., 2017: *Model kariery akademickiej – pokolenie niepewności między nauką a dydaktyką*. *Nauka i Szkolnictwo Wyższe*, 2(50), p. 305-313, DOI:10.14746/nisw.2017.2.17

Pokorska A., 2020: *Co liczyć i na kogo liczyć? Produktowa i nieproduktowa aktywność naukowa w kontekście uczelni badawczej – perspektywa kluczowych grantobiorców*, *Przegląd socjologiczny*, 69(4), p. 65-90, <https://doi.org/10.26485/PS/2020/69.4/3>

Schaufeli W.B., Bakker A.B., Salanova M., 2006: *The Measurement of Work Engagement with a Short Questionnaire: A Cross-National Study*. *Educational and Psychological Measurement*, 66(4), p.701-716. <https://doi.org/10.1177/0013164405282471>

Schaufeli W.B., 2013: *Utrecht Work Engagement Scale*. Pozyskano z: <http://www.wilmarschaufeli.nl/downloads/test-manuals/> (10-03-2025).

Schaufeli W.B., Salanova M., Gonz'alez-Rom'a V., Bakker A.B., 2002: *The Measurement of Engagement and Burnout: A Two Sample Confirmatory Factor Analytic Approach*. *Journal of Happiness Studies*, 3, p. 71-92, <http://dx.doi.org/10.1023/A:1015630930326>

Sęczkowska K., 2019: *Praca emocjonalna i równowaga. Praca-życie we współczesnym świecie*, *Problemy Nauk Humanistycznych i Społecznych. Teoria i praktyka*. Lipiec, p. 8-13.

Shraga O., Shirom A., 2009: *The construct validity of vigor and its antecedents: A qualitative study*. *Human Relations*, 62, p. 271 - 291. <https://doi.org/10.1177/0018726708100360>

Skibicka-Piechna A., 2021: *Wsparcie społeczne nauczyciela*, *Społeczeństwo, Edukacja, Język*, 14, p.239-249. DOI:10.19251/sej/2021.14.1(15).

Sonnentag S., 2017: *A task-level perspective on work engagement: A new approach that helps to differentiate the concepts of engagement and burnout*, *Burnout Research*, 5, p. 12-20. <https://doi.org/10.1016/j.burn.2017.04.001>

Sonnentag S., 2003: *Recovery, work engagement, and proactive behavior: A new look at the interface between nonwork and work*. *Journal of Applied Psychology*, 88(3), p. 518–528. <https://doi.org/10.1037/0021-9010.88.3.518>

Spook J.E., Raghoobar S., 2022: *Achieving Balance Between Research, Teaching, and Service at Work*. In: Kwaśnicka, D., Lai, A.Y. (Eds). *Survival Guide for Early Career Researchers*. Springer, Cham. [https://doi.org/10.1007/978-3-031-10754-2\\_5](https://doi.org/10.1007/978-3-031-10754-2_5)

Szot A., 2021: *Polityka kadrowa i jej realizacja w europejskich uczelniach badawczych*, Raport III, Centrum Studiów nad Polityką Publiczną UAM, p. 1-27.

Śluzek N., Suppan A., 2024: *Sztuczna inteligencja w edukacji wyższej – szansa czy zagrożenie? Szkoła – Zawód – Praca*, 27, p. 13-14, <https://doi.org/10.34767/SZP.2024.01.01>

Wołodźko E., 2019: *Autonomia w przestrzeni akademickiej – znaczenia, doświadczenia, ograniczenia*, *Pedagogika Szkoły Wyższej*, 2(24), p. 89-104, DOI:10.18276/psw.2018.2-09

Willetts D., 2019: *A university education*. Oxford University Press.

## FUNDING

The publication presents the results of scientific research carried out within the framework of projects 059/ZZP/2024/POT and 050/ZZD/2023/POT funded by the subsidy granted to the Cracow University of Economics.