MODEL OF PREDICTING ENTREPRENEURIAL INTENTIONS AMONG TEACHERS

Vesna Rodić Lukić
University of Novi Sad, Faculty of Education in Sombor, Sombor, Serbia
Email: vesna.rodic@pef.uns.ac.rs

Mia Marić
University of Novi Sad, Faculty of Education in Sombor, Sombor, Serbia
Email: mia.maric@pef.uns.ac.rs

Nataša Branković
University of Novi Sad, Faculty of Education in Sombor, Sombor, Serbia
Email: natasa.brankovic@uns.ac.rs

Received: 25 January 2024. Revision received: 29 April 2024. Accepted: 21 May 2024

ABSTRACT
This research explores the impact of individual and educational factors on the entrepreneurial intentions of primary school teachers in Serbia, analysing a sample of 706 participants. The study utilizes the Entrepreneurial Propensity Questionnaire and the Entrepreneurial Intentions Questionnaire to assess constructs like self-confidence, need for achievement, need for independence, and locus of control. Through robust statistical methods, including Principal Component Analysis, Confirmatory Factor Analysis, and Structural Equation Modelling, the research identifies critical factors influencing entrepreneurial intentions and validates the model's fit and construct validity. The findings reveal a significant positive influence of entrepreneurial education, self-confidence, and the need for independence on entrepreneurial intentions. Notably, entrepreneurial education emerges as a substantial predictor, highlighting its role in nurturing entrepreneurial mindsets. Conversely, the need for achievement exhibits an unexpected negative correlation with entrepreneurial intentions among teachers, suggesting a distinctive career orientation within this demographic. The study underscores the importance of integrating entrepreneurial components into teacher education, advocating for curricular reforms that foster entrepreneurial competencies. This approach aligns with the evolving educational demands, aiming to cultivate not just knowledge conveyors but also innovators and change agents in the educational landscape. In conclusion, the research contributes to the broader understanding of factors shaping entrepreneurial intentions, offering valuable insights for curriculum developers, policymakers, and educational institutions. It emphasizes the significance of entrepreneurial education in empowering teachers to inspire and instil entrepreneurial spirit in the next generation, thereby enriching the educational ecosystem.

KEYWORDS: Entrepreneurial intentions, locus of control, need for achievement, self-confidence, primary school teachers.


INTRODUCTION
In the wake of transformative shifts within the economic, social, and environmental spheres during the 21st century, the landscape of employment has become increasingly uncertain. In this rapidly changing world, the entrepreneurial spirit emerges as a critical response to these uncertainties, fostering resilience and opportunity creation. It serves as a catalyst for the creation of new job opportunities and equips individuals with the cognitive and behavioral competencies necessary for navigating these evolving times. This evolving paradigm underscores the necessity for a robust entrepreneurial education system that can effectively respond to these global challenges. Recognizing the vital role of this spirit, entrepreneurial education emerges as a key instrument in equipping individuals to not only adapt to but
also shape these uncertainties (Loor & Muñoaz-Fernández, 2022). Entrepreneurs, characterized by their venture into business creation and marked by a readiness to undertake risks and a profound sense of independence, confidently embark on new endeavors despite the prevailing uncertainties (Krisnaresanti et al., 2020).

In this context, while universities play a crucial role in driving the learning process and disseminating essential knowledge (Cera et al., 2020), the impact of entrepreneurial education is profoundly amplified when it begins at the foundational levels. Ključnikov et al. (2016) highlight the importance of introducing entrepreneurial education early, advocating for its integration within primary and secondary education to foster creativity, initiative, and risk-taking skills from a young age. While entrepreneurial education at student levels is essential, the fulcrum of truly transformative education lies in empowering the educators themselves. Therefore, teacher education assumes a paramount role. Integrating entrepreneurial components into teacher training programs becomes imperative, necessitating comprehensive curricular reforms. This strategic shift aims to endow educators with not only the requisite entrepreneurial competencies but also the capacity to act as innovators and change agents within the educational landscape. By being adept in entrepreneurship themselves, teachers are better prepared to inspire and instil these crucial skills in the next generation, thereby laying a solid foundation for an entrepreneurial mindset from the earliest stages of education. However, to enhance entrepreneurial education, Ashari et al. (2021) and Loi et al. (2021) recommend a practical approach that integrates learners' perspectives, adapts to new frameworks, and fosters a dynamic educational environment aligned with real-world entrepreneurship.

This study ventures into relatively uncharted territory, spotlighting the often-overlooked area of teacher entrepreneurial competencies and training, a critical yet underexplored facet in the tapestry of entrepreneurial education research. The primary research gap addressed in this study lies in the exploration of teacher entrepreneurial competencies and their specific educational needs. Despite the recognized importance of instilling entrepreneurial skills in students, there is a notable scarcity of research focusing on the requisite entrepreneurial training and competencies for educators themselves. This study seeks to fill this gap, underscoring the critical role of equipping teachers with entrepreneurial skills to effectively foster an entrepreneurial mindset in the next generation.

1 THEORETICAL BASE

Numerous scholars have endeavored to explore diverse frameworks pertaining to entrepreneurial behaviour (Baum et al., 2001; Cera et al., 2020; Cui & Bell, 2022; Cromie, 2000; Devkota et al., 2022; Le et al., 2023; Lopes & Gomes, 2022; Luthje & Franke, 2003; Osman et al., 2023; Perez-Macías et al., 2022; Tingting et al., 2022; Wach et al., 2023). Historical analyses, however, indicate an absence of a sufficiently intricate and holistic model of entrepreneurial behaviour that delineates explicit causal linkages (Chandler & Lyon, 2001). The prevailing consensus posits that entrepreneurship is the culmination of an amalgamation of individual and contextual factors. Furthermore, research has illuminated distinctions between entrepreneurs and non-entrepreneurs, while concurrently acknowledging the absence of a singular, unified paradigm defining the differential characteristics between these groups (Lee et al., 2005).

Krueger and Breazel's (1994) model of entrepreneurial potential posits that entrepreneurs are cultivated through a dynamic process predicated on the perception and genesis of entrepreneurial potential. Entrepreneurial intention is conceptualized as an individual’s resolute aim to inaugurate a new business venture, with a conscious plan to actualize this objective in the future (Thompson, 2009), embodying the aspiration to own a business (Crant, 1996), or the initiative to launch a business endeavor (Krueger et al., 2000). Lans et al. (2010) postulate that the divergent learning objectives and professional
necessities among entrepreneurs stem from the evolution of three distinct entrepreneurial intention types: classical, alternative, and intrapreneurial intentions. Numerous studies recognize entrepreneurial intentions as key prognosticators of tangible entrepreneurial activities (Cera et al., 2020; Krueger et al., 2000; Le et al., 2023; Lee et al., 2011; Tingting et al., 2022). Theoretical frameworks suggest that a constellation of internal and external factors, and their intricate interplay, significantly contribute to the formation of entrepreneurial intentions. Critical elements in these models include the need for achievement, locus of control, self-confidence, need for independence, and the influence of entrepreneurial education (Bandura, 2000; Kassean et al., 2015; Le et al., 2023; Sánchez, 2013).

The concept of the need for achievement encapsulates an individual's inclination to establish formidable objectives, exhibit proactivity, sustain efforts, assume responsibility for tasks, orchestrate and steer events, seek definitive feedback on activities, and deliberate on their enhancement (McClelland & Burnham, 2003). Empirical evidence underscores the need for achievement as a pivotal determinant of entrepreneurial intentions, a trait not exclusively confined to entrepreneurs but prevalent among other successful individuals as well (Miljković Krečar, 2008; Pittaway & Cope, 2007). Notably, research corroborates the positive nexus between the need for achievement and entrepreneurial intentions (Sánchez, 2013; Zhao et al., 2010), and further reveals the instrumental role of entrepreneurial education in fostering this trait (Jones & Iredale, 2006; Şeşen & Pruett, 2014; Von Graevenitz et al., 2010).

The locus of control is delineated as the extent of one's conviction in their ability to influence life events (Rotter, 1966, as interpreted by Caird 1988). Specifically, an internal locus of control signifies an individual's belief in their capacity to govern occurrences in their life. While some investigations suggest a more pronounced internal locus of control among entrepreneurs (Brockhaus, 1980; Cromie & Johns, 1983), this assertion is not uniformly corroborated across studies (Hull et al., 1980). Parallel discourses pivot around the construct of self-efficacy (Chen et al., 1988), with Krueger and Breazel's (1994) identifying a substantial link between entrepreneurial self-efficacy and entrepreneurial intentions. Entrepreneurial self-efficacy is deemed a critical mediator, bridging cognitive orientations toward venture inception and the intentionality of entrepreneurship (Hassan, 2020; Le et al., 2023; Maheshwari & Kha, 2022). Literature indicates that entrepreneurial education exerts a favorable influence on the cultivation of an internal locus of control, as appropriately structured educational experiences instill a sense of personal accountability for pivotal life events (Fagbohungbe & Jayeoba, 2012; Fayolle & Gailly, 2015; Lindh & Thorgren, 2016).

Self-confidence is conceptualized as an individual’s belief in their capacity for cognition, learning, decision-making, and resilience in the face of challenges and changes (Miljković & Rijavec, 2001). Literature characterizes entrepreneurs as individuals endowed with pronounced self-confidence (Chen et al., 1998; Koh, 1996), harboring a strong conviction in their ability to influence outcomes within their milieu (Kassean et al., 2015; Simon et al., 2000). This trait catalyzes the setting of elevated aspirations and personal objectives. Individuals with a favorable self-assessment and a positive self-concept are inclined towards heightened accomplishments across various domains (Bandura, 1997; Erol & Orth, 2011; Graziano et al., 1997; Le et al., 2023; Maheshwari & Kha, 2022; Robins et al., 2001; Sušanj et al., 2015). Furthermore, self-confidence exerts a positive impact on fostering the need for independence, as individuals with robust self-confidence gravitate towards personal autonomy and self-reliance (Bandura, 2000; Erol & Orth, 2011; Kirkley, 2016; Robins et al., 2001).

The need for independence is delineated as the aspiration to assert one’s desires, notwithstanding prevailing norms. It embodies the quest for autonomous life management (Caird, 1988). Research underscores the need for independence as a distinguishing trait of entrepreneurs, revealing its positive correlation with entrepreneurial intentions (Lindh & Thorgren, 2016; Martin et al., 2013; Zhao et al., 2010).
Entrepreneurial education, encompassing both formal (mandatory academic programs) and informal (self-study, community project involvement) learning avenues, plays a pivotal role in entrepreneurship. Empirical evidence substantiates a positive causal linkage between entrepreneurial education and entrepreneurial intentions (Cera et al., 2020; Cui & Bell, 2022; Fernández-Pérez et al., 2019; Hassan, 2020; Ilomo & Mwantimwa, 2023; Lee et al., 2005; Liñán & Fayolle, 2015; Maheshwari & Kha, 2022; Osman et al., 2023; Ripolles & Blesa, 2023; Zhang et al., 2022), indicating that entrepreneurial traits can be effectively honed through educational programs. Scholars like Liñán et al. (2011) highlight the fundamental role of education in shaping entrepreneurial intention, pointing to the affirmative interrelation between these constructs. Additionally, studies illustrate that entrepreneurial education positively influences the development of the need for independence, reinforcing the nexus between education and entrepreneurial autonomy (Fayolle & Gailly, 2015; Lindh & Thorgren, 2016; Sánchez, 2013).

2 METHODS

The principal objective of this research centered on the development of a comprehensive model encompassing pertinent personal and educational factors that influence the entrepreneurial intentions among primary school teachers. This investigation specifically catered to the cohort of primary school educators, scrutinizing the manifestation of their entrepreneurial aspirations. This focus is particularly relevant given the contemporary educational landscape, wherein primary school teachers are increasingly expected to nurture entrepreneurial competencies in students, a skillset not explicitly addressed in their own training at educational and teacher training institutions. By delving into the entrepreneurial intentions of this specific group, the study aims to enrich the broader understanding of the entrepreneurial decision-making process, contributing valuable insights to the existing body of knowledge (Liñán & Fayolle, 2015).

The following hypothesis can be shaped:

H1. The need for achievement and locus of control have a direct and positive impact on entrepreneurial intentions of primary school teachers.
H2. The need for independence, self-confidence and entrepreneurial education have a direct and positive impact on entrepreneurial intentions of primary school teachers.
H3. Entrepreneurial education and self-confidence have a direct and positive impact on the need for achievement of primary school teachers.
H4. Entrepreneurial education and self-confidence have a direct and positive impact on the need for independence of primary school teachers.
H5. Entrepreneurial education and self-confidence have a direct and positive impact on the locus of control of primary school teachers.

Data for this study were sourced from a cohort of 706 primary school teachers in Serbia. Respondents were selected utilizing a convenience sampling method. Reflective of prevailing gender trends in the profession, the sample comprised predominantly female teachers (89.7%), with male teachers constituting 9.3%. The age spectrum of participants spanned from 21 to 60 years, predominantly clustering in the 41 to 60 years bracket (71.8%), and a significant portion of respondents (67.7%) possessed over 11 years of professional experience within educational settings.

The investigative instrument employed was the Entrepreneurial Propensity Questionnaire – EPQ (adapted from Miljković, 2006), initially comprising 69 items. This questionnaire assessed dimensions such as self-confidence, need for achievement, need for independence, and locus of control. However, items pertaining to risk-taking, innovation, and tolerance of uncertainty were excluded from this study, reducing the EPQ to 40 items. Additionally, the Entrepreneurial Intentions Questionnaire (revised
from Liñán & Chen, 2006) was utilized to gauge the entrepreneurial intentions of the participating teachers. The extent of the teachers’ entrepreneurial education was measured via a tripartite item set, evaluating their educational exposure to entrepreneurship in formal, non-formal, and professional training contexts.

To test the proposed hypotheses, data analysis was conducted using SPSS and AMOS software. Principal Component Analysis (PCA) and Confirmatory Factor Analysis (CFA) were utilized for data simplification and structural validation, respectively. PCA streamlined the dataset and revealed underlying patterns, while CFA confirmed the factor structure of our variables, ensuring the robustness of our measurement model. Subsequently, Structural Equation Modeling (SEM) was employed to rigorously test our hypotheses, capitalizing on its strength in handling complex interrelationships and modeling latent constructs. This integrative approach provided a thorough framework for examining the factors influencing entrepreneurial intentions in the educational sector.

3 RESULTS

A Principal Component Analysis (PCA) was executed on a set of 40 variables encapsulating dimensions such as the need for achievement, need for independence, locus of control, self-confidence, entrepreneurial education, and entrepreneurial intentions. The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy manifested a value of 0.837, surpassing the recommended threshold of 0.8 (Kaiser, 1974), thereby affirming the appropriateness of the data for factor analysis. Concurrently, Bartlett’s Test of Sphericity yielded a significant result (Sig. = 0.000), substantiating the pertinence of factor analysis for the dataset. In pursuit of a robust factor structure characterized by pronounced discriminant and convergent validity, variables exhibiting minimal factor loadings (inferior to 0.3) and pronounced cross-loadings were systematically excluded from subsequent analyses. The refined PCA, applied to the remaining cohort of 29 variables, delineated the emergence of seven distinct components, each with eigenvalues exceeding unity, cumulatively accounting for 64.98% of the total variance observed.

Table 1 The goodness of model fit for the measurement model

<table>
<thead>
<tr>
<th></th>
<th>MEASUREMENT MODEL</th>
<th>THRESHOLDS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>χ²/df</td>
<td>2.613</td>
<td>&lt; 3</td>
</tr>
<tr>
<td>GFI</td>
<td>0.936</td>
<td>&gt;0.90/95</td>
</tr>
<tr>
<td>SRMR</td>
<td>0.045</td>
<td>&lt;0.06/10</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.048</td>
<td>&lt;0.08</td>
</tr>
<tr>
<td>IFI</td>
<td>0.959</td>
<td>&gt;0.90/95</td>
</tr>
<tr>
<td>TLI</td>
<td>0.949</td>
<td>&gt;0.90/95</td>
</tr>
<tr>
<td>CFI</td>
<td>0.958</td>
<td>&gt;0.90/95</td>
</tr>
</tbody>
</table>

Note: χ²/df = normed chi-square statistic; GFI = Goodness-of-Fit Index; SRMR = Root Mean-Square Residual; RMSEA = Root Mean Square Error of Approximation; IFI = Normed Fit Index; TLI = Tucker-Lewis Index; CFI = Comparative Fit Index.
*Reference: Hu and Bentler, 2010; Kline, 2005; Hoyle, 2000; Thompson, 2005

(Source: own research)

To authenticate the factor structure unearthed through PCA, a Confirmatory Factor Analysis (CFA) was instituted. This measurement model was predicated on the assumption that each variable uniquely represented a single dimension, with error terms remaining uncorrelated. However, the initial fit indices
suggested suboptimal model congruence, necessitating refinements predicated on modification indices. Furthermore, a contingent of six items was excised from the model, a decision driven by the insights gleaned from the analysis of Standardized Residual Covariances. Subsequent to these methodological recalibrations, the measurement model underwent re-estimation. The recalibrated measurement model's fit was evaluated through a spectrum of goodness-of-fit metrics, which collectively indicated a substantive enhancement in model congruence. As delineated in Table 1, the optimized model metrics corroborate the achievement of a satisfactory model fit, thus validating the structural integrity of the constructs within the study's conceptual framework.

To assess the constructs' convergent and discriminant validity within the study, Composite Reliability (CR), Average Variance Extracted (AVE), and Maximum Shared Variance (MSV) were computed. As per the criteria delineated by Hair et al. (2010), convergent validity is affirmed when the CR value exceeds 0.7 and the AVE surpasses 0.5. Conversely, discriminant validity is ascertained when the MSV is inferior to the AVE, and concurrently, the square root of the AVE (positioned on the principal diagonal) transcends any inter-construct correlational values (Hair et al., 2010). The empirical data presented in Table 2 substantiates that the stipulated thresholds for both convergent and discriminant validity were met, thereby validating the integrity of the constructs utilized in this investigation.

*Table 2 Convergent and discriminant validity testing*

<table>
<thead>
<tr>
<th></th>
<th>CR</th>
<th>AVE</th>
<th>MSV</th>
<th>EDU</th>
<th>EI</th>
<th>N.INDEP</th>
<th>SELF</th>
<th>LOCUS</th>
<th>N.ACHI</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU</td>
<td>0.870</td>
<td>0.691</td>
<td>0.416</td>
<td>0.831</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EI</td>
<td>0.907</td>
<td>0.621</td>
<td>0.416</td>
<td>0.645</td>
<td>0.788</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N.INDEP</td>
<td>0.801</td>
<td>0.503</td>
<td>0.266</td>
<td>0.003</td>
<td>0.108</td>
<td>0.709</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SELF</td>
<td>0.813</td>
<td>0.525</td>
<td>0.104</td>
<td>-0.022</td>
<td>0.076</td>
<td>0.270</td>
<td>0.725</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOCUS</td>
<td>0.847</td>
<td>0.653</td>
<td>0.104</td>
<td>-0.137</td>
<td>-0.032</td>
<td>0.075</td>
<td>0.323</td>
<td>0.808</td>
<td></td>
</tr>
<tr>
<td>N.ACHI</td>
<td>0.761</td>
<td>0.521</td>
<td>0.266</td>
<td>0.204</td>
<td>0.160</td>
<td>0.516</td>
<td>0.140</td>
<td>0.041</td>
<td>0.722</td>
</tr>
</tbody>
</table>

*Necessary conditions: CR > 0.7; AVE > 0.5; CR > AVE; MSV < AVE

*Abbreviations: CR - Composite Reliability; AVE - Average Variance Extracted; MSV - Maximum Shared Variance; ASV - Shared Average Variance.


(Source: own research)

The potential influence of common method bias within the study was scrutinized utilizing the zero-constrained method. Comparative analysis between the unconstrained common method factor model and the fully constrained common method factor model was conducted, with the resultant chi-squared test yielding a significant outcome (chi-square = 178.829, df = 23, p = 0.000). This significant result indicated the presence of substantial shared variance, necessitating the implementation of factor score imputation. This process was designed to adjust for the shared variance attributable to a common latent factor, as discerned through the statistical analysis. To elucidate the causal linkages amongst the constructs - need for achievement, need for independence, locus of control, self-confidence, entrepreneurial education, and entrepreneurial intentions - path analysis was executed, employing structural equation modeling within the AMOS 20 statistical software framework. The factors elucidated through Confirmatory Factor Analysis (CFA) constituted the underpinnings of this path analysis.
The structural model was conceptualized such that the constructs of self-confidence, need for achievement, need for independence, locus of control, and entrepreneurial education were posited to exert a direct and affirmative influence on entrepreneurial intentions. Additionally, the constructs of self-confidence and entrepreneurial education were hypothesized to impart a direct and positive impact on the constructs of need for achievement, need for independence, and locus of control. However, the initial instantiation of the model manifested suboptimal fit indices, prompting model refinement. This refinement was actualized through the exclusion of the non-significant path from locus of control to entrepreneurial intentions and the covariation of error terms associated with the constructs of need for achievement, need for independence, and locus of control.

Figure 1 Structural model of entrepreneurial intentions


(Source: own research)

Post-refinement, the model was subjected to re-evaluation, with the resultant fit indices signifying a commendable enhancement in model fit, as delineated in Table 3.

Table 3 The goodness of model fit for the structural model

<table>
<thead>
<tr>
<th></th>
<th>STRUCTURAL MODEL</th>
<th>THRESHOLDS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$/df</td>
<td>1.571</td>
<td>&lt; 3</td>
</tr>
<tr>
<td>GFI</td>
<td>0.999</td>
<td>&gt;0.90/95</td>
</tr>
<tr>
<td>SRMR</td>
<td>0.010</td>
<td>&lt;0.06/10</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.028</td>
<td>&lt;0.08</td>
</tr>
<tr>
<td>IFI</td>
<td>0.999</td>
<td>&gt;0.90/95</td>
</tr>
<tr>
<td>TLI</td>
<td>0.992</td>
<td>&gt;0.90/95</td>
</tr>
<tr>
<td>CFI</td>
<td>0.999</td>
<td>&gt;0.90/95</td>
</tr>
</tbody>
</table>

*Abbreviations: $\chi^2$/df = normed chi-square statistic; GFI = Goodness-of-Fit Index; RMR= Root-Mean-Square Residual; RMSEA = Root Mean Square Error of Approximation; NFI = Normed Fit Index; TLI= Tucker-Lewis Index; CFI = Comparative Fit Index.

(Source: own research)
An analysis of the empirical data, as presented in Table 3, revealed that the construct of entrepreneurial education exhibited the most pronounced, direct, and statistically significant positive influence on entrepreneurial intentions ($\beta = 0.726; p < 0.01$). Conversely, the construct of need for achievement was identified as exerting the least substantial, yet direct and statistically significant negative effect on entrepreneurial intentions ($\beta = -0.077; p < 0.05$). It was also observed that the relationship between entrepreneurial education and need for independence did not reach statistical significance. The findings, pertaining to the validation or rejection of the posited hypotheses, are systematically cataloged in Table 4, providing a comprehensive overview of the study’s empirical outcomes.

### Table 4 Hypothesis testing

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Paths within the model</th>
<th>Direct effect</th>
<th>Supported/rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1. Need for achievement (N.ACHI), and locus of control (locus) have a direct and positive impact on entrepreneurial intentions (EI) of primary school teachers.</td>
<td>EI &lt;-- N.ACHI</td>
<td>-0.077**</td>
<td>Rejected N.ACHI has weak, direct and statistically significant negative impact on EI ($\beta = -0.077; p &lt; 0.05$); The insignificant path between locus and EI was deleted from the final model.</td>
</tr>
<tr>
<td></td>
<td>EI &lt;-- LOCUS</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>H2. Need for independence (N.INDEP), self-confidence (SELF) and entrepreneurial education (EDU) have a direct and positive impact on entrepreneurial intentions (EI) of primary school teachers.</td>
<td>EI &lt;-- N.INDEP</td>
<td>0.140***</td>
<td>Supported N.INDEP has weak, direct and statistically significant positive impact on EI ($\beta = 0.140; p &lt; 0.01$);</td>
</tr>
<tr>
<td></td>
<td>EI &lt;-- SELF</td>
<td>0.071**</td>
<td>SELF has weak, direct and statistically significant positive impact on EI ($\beta = 0.071; p &lt; 0.01$); EDU has strong, direct and statistically significant positive impact on EI ($\beta = 0.726; p &lt; 0.01$)</td>
</tr>
<tr>
<td></td>
<td>EI &lt;-- EDU</td>
<td>0.726***</td>
<td></td>
</tr>
<tr>
<td>H3. Entrepreneurial education (EDU) and self-confidence (SELF) have a direct and positive impact on the need for achievement (N.ACHI) of primary school teachers.</td>
<td>N.ACHI &lt;-- EDU</td>
<td>0.233***</td>
<td>Supported EDU has weak, direct and statistically significant positive impact on N.ACHI ($\beta = 0.233; p &lt; 0.01$);</td>
</tr>
<tr>
<td></td>
<td>N.ACHI &lt;-- SELF</td>
<td>0.167***</td>
<td>SELF has weak, direct and statistically significant positive impact on N.ACHI ($\beta = 0.167; p &lt; 0.01$)</td>
</tr>
<tr>
<td>H4. Entrepreneurial education (EDU) and self-confidence (SELF) have a direct and positive impact on the need for independence (N.INDEP) of primary school teachers.</td>
<td>N.INDEP &lt;-- EDU</td>
<td>0.016 (ns)</td>
<td>Partially Supported There is no statistically significant relationship between entrepreneurial education and need for independence, but SELF has weak, direct and statistically significant positive impact on N. INDEP ($\beta = 0.309; p &lt; 0.01$)</td>
</tr>
<tr>
<td></td>
<td>N.INDEP &lt;-- SELF</td>
<td>0.309***</td>
<td></td>
</tr>
<tr>
<td>H5. Entrepreneurial education (EDU) and self-confidence (SELF) have a direct and positive impact on the locus of control (locus) of primary school teachers.</td>
<td>LOCUS &lt;-- EDU</td>
<td>-0.142***</td>
<td>Partially Supported EDU has weak, direct and statistically significant negative impact on LOCUS ($\beta = -0.142; p &lt; 0.01$); SELF has weak, direct and statistically significant positive impact on LOCUS ($\beta = 0.355; p &lt; 0.01$)</td>
</tr>
<tr>
<td></td>
<td>LOCUS &lt;-- SELF</td>
<td>0.355***</td>
<td></td>
</tr>
</tbody>
</table>

**Legend:** EI - entrepreneurial intentions, EDU - entrepreneurial education, SELF - self-confidence, LOCUS - the locus of control, N. ACHI - the need for achievement, N. INDEP - the need for independence.

**Note:** *** - p value < 0.000; ns - p value > 0.05

(Source: own research)

### 4 DISCUSSIONS

The examined model, which investigated specific individual and educational factors hypothesized to foster entrepreneurial intentions among primary teachers, yielded insightful findings. The analysis demonstrated that the need for independence, self-confidence, and entrepreneurial education exert a significant, direct, and positive influence on the entrepreneurial intentions of primary school teachers.
This substantiates the assertion that both personal attributes (such as self-confidence and need for independence) and educational factors, notably entrepreneurial education, are pivotal determinants of entrepreneurial intentions, corroborating the findings of prior studies (Bae et al., 2014; Cera et al., 2020; Fayolle, 2005; Fernández-Pérez et al., 2019; Ilomo & Mwantimwa, 2023; Jones & Iredale, 2006; Kassean et al., 2015; Lee et al., 2005; Linán & Fayolle, 2015; Osman et al., 2023; Ripolles & Blesa, 2023; Zhang et al., 2022; Zhao et al., 2005).

Contrastingly, the locus of control was found to be inconsequential in shaping the entrepreneurial intentions of primary school teachers. This finding is particularly intriguing and counterintuitive, especially when juxtaposed with the principles of self-efficacy theory (Bandura, 1997) and empirical evidence from preceding research (Burke et al., 2009; Hewes & Hailman, 2001; Schunk & Pajares, 2009), which collectively suggest that an internal locus of control typically predisposes individuals to proactive engagement and diverse behaviors. The implication here is that, for primary school teachers, the locus of control—whether internal or external—does not significantly differentiate their entrepreneurial intentions. This unexpected outcome could be attributed to the unique nature of the teaching profession, where entrepreneurial attributes and activities are not conventionally predominant. Consequently, it is plausible that for teachers, external factors may play as pivotal a role in influencing entrepreneurial intentions as internal factors do (Cromie, 2000; Cui & Bell, 2022; Devkota et al., 2022; Fagbohungbe & Jayeoba, 2012; Kasilingam & Sudha, 2010; Le et al., 2023; Lopes & Gomes, 2022; Luthje & Franke, 2003; Osman et al., 2023; Perez-Macias et al., 2022; Tingting et al., 2022; Wach et al., 2023; Wigfield & Eccles, 2000).

The research findings distinctly highlight the profound impact of entrepreneurial education and self-confidence on the need for achievement among primary school teachers. It is elucidated that self-confidence significantly elevates teachers' aspirations and goal-setting propensities. Individuals who possess a positive evaluation of their capabilities and maintain an affirmative self-concept are predisposed to aspire for higher achievements across varied domains (Erol & Orth, 2011; Graziano et al., 1997; Hassan, 2020; Kassean et al., 2015; Le et al., 2023; Maheshwari & Kha, 2022; Robins et al., 2001; Sušanj et al., 2015). Entrepreneurial education, in this context, plays a pivotal role by enriching personal aspirations. It fosters the development of individual attributes conducive to the enhancement of personal knowledge, skills, and attitudes, thereby catalyzing progression (Karimi et al., 2016; Pittaway & Cope, 2007; Şeşen & Pruett, 2014; Von Graevenitz et al., 2010).

Moreover, the study reveals that self-confidence exerts a direct and positive influence on the need for independence among primary school teachers, empowering them to rely on their capacities without necessitating external support. This is a testament to the fact that heightened self-confidence enhances the overall self-concept and bolsters individual assertiveness (Erol & Orth, 2011; Kassean et al., 2015; Robins et al., 2001). However, the relationship between entrepreneurial education and the need for independence does not exhibit statistical significance. This outcome, though somewhat unexpected, sheds light on the nuanced nature of entrepreneurial education. While it is typically associated with fostering personal strength and autonomy, entrepreneurial education also accentuates the value of collaboration and reliance on social resources and support systems (Bellotti et al., 2012; Fayolle & Gailly, 2015; Karimi et al., 2016; Lindh & Thorngren, 2016; Sánchez, 2013). Hence, the influence of entrepreneurial education extends beyond fostering independence, emphasizing the significance of teamwork and interconnectedness within entrepreneurial endeavors.

The direct and positive impact of need for independence, self-confidence, and entrepreneurial education on the entrepreneurial intentions of primary school teachers corroborates the theoretical and empirical consensus within the literature. It is widely recognized that self-confidence, a predisposition towards independent behavior, and the acquisition of entrepreneurial knowledge and skills are instrumental in nurturing entrepreneurial intentions and capabilities (Kassean et al., 2015; Le et al.,
Teachers who exhibit high levels of self-confidence and autonomy, and who have been exposed to rigorous entrepreneurial education, are inherently more inclined towards entrepreneurial thought and action. This propensity is not only pivotal for their entrepreneurial endeavors but also plays a crucial role in shaping the entrepreneurial mindset of their pupils, thereby underscoring the broader educational and societal implications of fostering entrepreneurial spirit within the teaching profession.

Conversely, the study surfaced a counterintuitive finding regarding the need for achievement. Contrary to expectations, a strong need for achievement was observed to inversely correlate with entrepreneurial intentions among primary school teachers. This unexpected phenomenon can be attributed to the distinct professional orientation and career trajectory of teachers, whose primary vocation is not inherently entrepreneurial. Teachers with a marked need for achievement are likely to be more committed to and fulfilled by traditional educational roles, thereby exhibiting lesser flexibility and inclination towards entrepreneurial pursuits (Brixiova, 2013; Gerry et al., 2008; Karimi et al., 2016; Pittaway & Cope, 2007).

Furthermore, the research elucidates the intricate relationship between entrepreneurial education, self-confidence, and locus of control. While self-confidence fosters an internal locus of control, empowering individuals to perceive control over their life events, entrepreneurial education appears to tilt the locus of control externally. This is reflective of the collaborative nature of entrepreneurial education, which emphasizes the significance of teamwork, networking, and external support systems, thereby fostering an awareness and appreciation of the external factors that influence entrepreneurial success (Cera et al., 2020; Fernández-Pérez et al., 2019; Ilomo & Mwantimwa, 2023; Lee et al., 2005; Linán & Fayolle, 2015; Fayolle & Gailly, 2015; Lindh & Thorgren, 2016; Maheshwari & Kha, 2022; O’shea et al., 2005; Papayannakis et al., 2008; Ripolles & Blesa, 2023; Sánchez, 2013).

CONCLUSIONS

The research examining the factors influencing entrepreneurial intentions among primary school teachers reveals a complex interplay between individual traits and educational influences.

Findings confirm that the presence of self-reliance, self-assurance, and exposure to entrepreneurial education is positively correlated with the entrepreneurial tendencies among this cohort of educators. This aligns with existing scholarly perspectives, suggesting that inherent qualities like self-assurance and a drive for independence, paired with structured entrepreneurial education, are crucial in fostering an entrepreneurial mindset (Cera et al., 2020; Kassean et al., 2015; Lindh & Thorgren, 2016; Martin et al., 2013; Ripolles & Blesa, 2023; Zhao et al., 2010). Educators who possess strong self-confidence and a sense of autonomy, and who receive comprehensive entrepreneurial education, are naturally inclined toward entrepreneurial thought and activities. This inclination is important not only for their entrepreneurial pursuits but also in their role as educators, as they shape the entrepreneurial mindset of their students.

However, the study also presents a surprising finding regarding the need for achievement. Contrary to expectations, a high need for achievement correlates negatively with entrepreneurial intentions among primary school teachers. This finding suggests that teachers who are deeply invested in their professional achievements within the educational sector may show less interest in entrepreneurial activities, preferring the stability and familiarity of their teaching roles (Brixiova, 2013; Gerry et al., 2008; Karimi et al., 2016; Pittaway & Cope, 2007).
Furthermore, the study sheds light on the nuanced relationship between entrepreneurial education, self-confidence, and locus of control. While self-confidence promotes an internal locus of control, making individuals feel in command of their life events, entrepreneurial education appears to shift the locus of control externally. This indicates that entrepreneurial education, while nurturing individual abilities, also emphasizes the significance of teamwork, networking, and external support, highlighting the impact of external factors on entrepreneurial success (Cui & Bell, 2022; Fayolle & Gailly, 2015; Lindh & Thorgren, 2016; O’Shea et al., 2005; Osman et al., 2023; Papayannakis et al., 2008; Sánchez, 2013; Tingting, 2022; Wach et al., 2023; Zhang et al., 2022).

This research offers valuable insights but also acknowledges certain limitations. The convenience sampling from Serbian primary school teachers and the cross-sectional design may limit the generalizability and causal interpretation of the results. Methodologically, the reliance on PCA, CFA, and SEM, and the use of specific questionnaires like the Entrepreneurial Propensity Questionnaire and the Entrepreneurial Intentions Questionnaire, provides robust analysis but may not fully capture all the influencing factors, as suggested by some unexpected findings. Despite these constraints, the study significantly contributes to understanding entrepreneurial intentions in education, highlighting the role of entrepreneurial education and offering important insights for curriculum development and policymaking, also enriches our understanding of entrepreneurial intentions among primary school teachers, skillfully interweaving the nuances of individual psychological traits with the structured realm of entrepreneurial education, and offering key insights for educational stakeholders.

REFERENCES


**BRIEF DESCRIPTION OF AUTHOR/AUTHORS:**

**Vesna Rodić Lukić, Ph.D., associate professor**
ORCID ID: https://orcid.org/0000-0003-0345-3606
Affiliation: Department for Natural Sciences and Management in Education, University of Novi Sad, Faculty of Education in Sombor, Podgorička 4, 25 000 Sombor, Serbia, www.pef.uns.ac.rs.
Email: vesna.rodic@pef.uns.ac.rs

Vesna Rodić Lukić is associate professor at the Faculty of Education in Sombor, University of Novi Sad. The focus of her research is education of primary school teachers and enhancing the quality of education at the universities.

**Mia Marić, Ph.D., full professor**
ORCID ID: https://orcid.org/0000-0002-4132-2183
Affiliation: Department for Social Sciences, University of Novi Sad, Faculty of Education in Sombor, Podgorička 4, 25 000 Sombor, Serbia, www.pef.uns.ac.rs.
Email: mia.maric@pef.uns.ac.rs, corresponding author

Mia Marić is a full professor at the Faculty of Education in Sombor, University of Novi Sad. The focus of her research is the psychology of education, especially the education of primary school and preschool teachers, and developmental psychology.

**Nataša Branković, Ph.D., full professor**
ORCID ID: https://orcid.org/0000-0003-1993-9686
Affiliation: Department for Natural Sciences and Management in Education, University of Novi Sad, Faculty of Education in Sombor, Podgorička 4, 25 000 Sombor, Serbia, www.pef.uns.ac.rs.
Email: natasa.brankovic@uns.ac.rs

Nataša Branković is a full professor at the Faculty of Education in Sombor, University of Novi Sad. Her research focuses on the education of primary school teachers and management in education.