

PREPARING STUDENTS FOR THE FUTURE OF WORK: THE ROLE OF AGILITY IN HIGHER EDUCATION

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ABSTRACT

This study examines the contemporary labor market's demand for continuous upskilling in response to the digital era. It delves into the profound impact of digital technology on higher education, emphasizing the necessity for innovation in learning methods, teaching, and access to resources. The research highlights the crucial role of organizational agility in enabling higher education institutions to swiftly adapt to evolving environments. The quantitative study, conducted through an online questionnaire in October 2023, included 95 respondents from Bucharest University of Economic Studies, representing all three main education levels: doctoral studies, master's degree, and undergraduate studies. The research investigates students' readiness for the agile workforce, placing emphasis on the role of higher education in cultivating an agile mindset. It serves as a guide for individuals entering the labor market, providing insights into the mindset required to excel in their professional journey.

KEYWORDS: *Agile Mindset, educational innovation, labor market, learning agility, workforce readiness.*

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1. INTRODUCTION

A consensus exists in relation to the contemporary dynamic labor market, wherein organizations are tasked with the perpetual upskilling of individuals to meet the demands of the digital era (Besson & Rieffel, 2014). The proliferation of digital technology has had a profound and far-reaching impact on institutions of higher education (Doueïhi, 2008). Whether it is in terms of learning methods (Devauchelle, 2012) and teaching (Davidenkoff, 2014), or access to informational resources (Liquète, 2014), universities are facing new challenges today. Their dual mission of disseminating knowledge and advancing research necessitates innovation at both the organizational (Alter, 2013) and pedagogical (Tricot, 2017) level. In the current landscape, higher education institutions are tasked with agile adaptation, necessitating not only the anticipation of profound changes but also the demonstration of flexibility. This flexibility is viewed by many authors (Badot et al., 2010) through the lens of organizational agility. Organizational agility is delineated as the capacity to effectuate swift and efficacious adaptations within a dynamic environment. It enables an organization to reconfigure its structure, technology, production and decision-making processes in a timely and appropriate manner to embrace change (De Nanteuil & El Akremi, 2005). This approach seeks alternatives to predictive methods that no longer meet the expectations of modern projects or the new behaviors of stakeholders. Trust, transparency, perpetual enhancement, and receptivity to change have emerged as pivotal tenets of an agile mindset.

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In this context, the future of the world of work demands new skills and a workforce capable of adapting and pivoting, as highlighted in the 2019 report "How the Workforce Learns" by Degreed. According to the report, eight out of ten CEOs surveyed by PwC expressed concerns that skill shortages pose a threat to their companies' growth (Tauber, 2022). However, addressing this trend reveals a readiness gap. To bridge these skill gaps, organizations must empower their workforce to acquire new skills, including those yet to be defined. Thus, higher education institutions need to keep up with the continuous requirements of the world of work.

Professionals engaged in learning and development assume a pivotal role in cultivating a culture of ongoing learning, where everyone is encouraged to integrate learning into their daily work. This approach should encompass efforts to address specific skill gaps and nurture a mindset focused on rapid and ongoing learning.

One of the key areas of emphasis for organizations today is the development of learning agility, which involves a mindset and a set of behaviors enabling individuals to learn, adapt, unlearn, and relearn in response to constantly changing conditions. Agile learners tend to be more resilient, adaptable, and better positioned to seize new opportunities. In fact, research from Mercer Mittl has shown that learning agility is the most significant predictor of an individual's potential for success in both their current and future job roles (Kanchan, 2019).

The subject matter of this investigation offers an opportunity to scrutinize the preparedness of students as they transition into the dynamic realm of the workforce. This study places particular emphasis on the higher education system and the cultivation of an agile mindset. This research paper may serve as an instructive resource for novices in the labor force and students seeking guidance in navigating the intricacies of the job market. It elucidates the requisite mindset for effectively accommodating skill deficiencies, overcoming challenges, and surmounting obstacles in the professional sphere. Furthermore, higher education institutions may contemplate its implications as they align their strategies with contemporary agile methodologies. Concretely, this research paper engages with two primary inquiries pertaining to the higher education landscape and the concept of agility as a mindset:

1. To what extent is the agile mindset creation applicable to higher education?
2. To what extent are the higher education students prepared for the transition to an agile world of work?

The formulation of the research inquiries was underpinned by the intricacies inherent in the subject matter and the paramount aspects within the realm of students' vocational advancement.

In light of these premises, a rigorous quantitative research endeavor was undertaken to probe into students' perceptions regarding the university's alignment with the principles of an agile organization and the congruence of their mindset with the exigencies of the contemporary labor market. To glean these insights, a meticulously crafted closed-ended questionnaire was employed. The objectives which stand at the base of this study are the following ones:

1. Identify to what extent the higher education members possess an agile mindset.
2. Identify to what extent the higher education institution in cause is an agile organization.

The research paper is structured in two main sections. The first section contains a conceptual framework, offering details about agility, organizational agility and the importance of an agile mindset and learning agility process in the students' transition to the world of work. The literature review contextualizes this research within existing knowledge, showing how this study contributes to the field by addressing gaps in the current literature. The purpose is to facilitate the understanding of the specific terms and notions used in the research, to contextualize the current research within the existing literature and to create a connection between the most important notions that can help in building the answers to the research questions. The second section is based on the research design, description of the methodology used for the study, presenting the data collection

and data analysis processes. It also contains a detailed interpretation of the questionnaire's results in concordance with the objectives of the study. Finally, this research paper presents discussions and conclusions which analyze the significance of the findings and current limitations of the study together with possible directions for further research.

2. THE NEED FOR AGILITY – A BRIEF LITERATURE REVIEW

2.1 Establishing an Environment Focused on Agility

The current business environment finds itself enveloped in unprecedented speed and intensity of transformation. Confronted with this rapid change, numerous esteemed companies have faded into oblivion (such as Amoco, Arthur Andersen, Bear Sterns, Blockbuster, Kodak, General Foods, Netscape, Sears). The predominant driving force behind this era of hyperchange is technology, notably artificial intelligence, cloud computing, machine learning, and robotics, creating digital information asymmetries that swiftly reshape the work context.

Within this framework, a pertinent question arises: how does an organization navigate a landscape of hyperchange? The lexicon describing this response is diverse, encompassing terms such as transform, innovate, adapt, flex, change, reinvent, re-engineer, shift, pivot, and renew. In this remarkable compilation, the term agility encapsulates the core of these divergent concepts (Harvey & De Meuse, 2021).

The contemporary operational landscape of organizations is undergoing a profound and unpredictable transformation. This shift in context is attributed to escalating levels of globalization, heightened customer expectations, and an accelerated pace of innovation, rendering markets more dynamic, competitive, and challenging (Breu et al., 2002). To navigate these challenges, an increasing number of organizations are turning to agile workforces, recognizing the potential benefits they can offer. Agile workforces are characterized as more responsive and competent, demonstrating a heightened ability to adapt to new environments and circumstances (Breu et al., 2002). The anticipation is that such workforces can enhance individual performance (Braun et al., 2017), facilitate business growth in the face of unforeseen and continuous change, and boost overall productivity.

In addition to the organizational advantages, the impact of workforce agility extends to the well-being of individual employees. It is expected that employees within agile organizations experience higher levels of well-being, reduced work-related stress (Laanti, 2013), and an overall greater job satisfaction (Maurer & Melnik, 2006). Consequently, fostering and building an agile workforce may hold significant value for organizations seeking to thrive in the evolving landscape. For instance, Deakin University in Australia, has integrated AI technology from IBM to support students during their orientation and enrollment procedures. This implementation not only alleviates stress for new students but also allows staff members to redirect their efforts towards more value-adding tasks. In light of this noticeable trend, it was discovered that 52% of institutions intend to enhance the skills of over half of their workforce to navigate the changing landscape of the work environment over the next five years. These findings underscore the foresight of higher education institutions, evident even before the onset of the COVID-19 pandemic, in anticipating the future trajectory of the education sector and world of work (Krist, 2020).

The foundation of agility in management theory is underscored by Gunasekaran et al. (1999). Originating in the early 1990s, agility emerged as a novel solution for navigating dynamic and evolving environments. Specifically, agile manufacturing embodies the capacity to not only survive but be also competitive in conditions of continuous and unpredictable changes. This entails the swift and effective response to evolving markets shaped by customer-defined products and services (Gunasekaran, 1999). The conceptualizers of agility at the Iacocca Institute, Lehigh University (USA), define it as a manufacturing system equipped with the necessary capabilities, encompassing hard and soft technologies, human resources, educated management, and information, to meet the

swiftly changing demands of the marketplace, including speed, flexibility, customer needs, competition, supplier dynamics, infrastructure, and responsiveness.

Agility is the adept application of competitive bases such as speed, flexibility, innovation, and quality (Gunasekaran et al., 1999). This is accomplished by combining reconfigurable resources with best practices within a knowledge-rich environment, ultimately delivering customer-driven products and services in a rapidly changing context. The core attributes of an agile organization, emphasized by Gunasekaran (1999), include speed and flexibility, with an equal emphasis on effective responses to change and uncertainty (Goldman et al., 1995). Agility, in this context, encompasses proactive responses to changes and views changes as inherent opportunities in a turbulent environment (Sharifi & Zhang, 2001). Furthermore, agility represents the ability to not only survive but progress in a variable and unpredictable environment (Dove, 2002).

Organizational flexibility, a vital component, signifies an organization's ability to adapt its internal structures and processes in a predetermined response to environmental changes. While adaptability pertains to the alignment of organizational operations with the environment, flexibility emphasizes the preparedness of organizational resources and the ease of mobilizing those resources. The concept of *agility* encapsulates both flexibility and adaptability, originally coined in the manufacturing context, particularly in relation to flexible manufacturing systems (Christopher & Towill, 2001).

The root of agility is traced back to agile production, a concept gaining prominence in recent years and recognized as a successful strategy by producers, preparing them for significant performance (Allameh et al., 2013).

It is important to mention that agility and Agile are two terms commonly used in the context of organizational adaptability and software development. While they share similarities, they represent distinct concepts. Agility refers to the organizations' ability to fastly respond and adapt to changing circumstances, while Agile is a specific software development methodology that emphasizes iterative and collaborative project management as shown in table 1.

In the current landscape of the labor market, a sense of uncertainty prevails, with certain sectors witnessing substantial contractions while others boast more job opportunities than available candidates. Across diverse industries, there is a rapid evolution in the required skill sets, a transformation hastened by the pandemic's impact on digitalization and the fundamental shift in collaborative practices spurred by the increasing prevalence of remote work. CEOs are placing a paramount focus on cultivating workforces equipped to navigate and adapt to continual change.

Leadership acknowledges that achieving success hinges on fostering organizational agility, with learning emerging as the driving force behind this imperative. Recent data from LinkedIn reveals that 89% of organizations concur that actively cultivating skills is a crucial strategy for successfully navigating the evolving landscape of the future of work (Cai, 2023).

The unprecedented surge in employee resignations over the past two years has imparted a valuable lesson to all companies: those organizations that comprehend and prioritize the desires of their individuals are the ones that will thrive. Companies that underestimate the significance of employee growth run the risk of fostering a workforce that is anxious, fearful, and resistant to change.

However, there exists a pathway to expedite the learning process and cultivate a culture that ignites continual transformation and innovation. To hasten skill development, organizations must adopt a learning approach focused on individual career paths.

This strategy taps into a potent motivator: each employee's aspiration for professional growth. Organizational Agility comprises a suite of principles centered on ongoing enhancement, flattened organizational structures, collaborative work teams, waste reduction, optimal resource utilization, and streamlined preparation processes. Japanese corporations have incorporated the concept of Organizational Agility, particularly in the context of cost reduction achieved through waste elimination (David, 2008).

Table 1. Agility versus Agile as key concepts used in this paper

	Agility	Agile
Definition	The ability to fastly and effectively respond to evolving conditions and adapt to changing circumstances and requirements.	A distinct software development methodology aligned with the Agile Manifesto and its guiding principles.
Methodology	A methodology not confined to a specific framework, placing emphasis on adaptability, collaboration, and continuous improvement.	Adheres to a structured framework, such as Scrum or Kanban, incorporating defined roles, ceremonies, and artifacts.
Process Orientation	Centers around refining processes and approaches in response to feedback and evolving needs.	Prioritizes adherence to pre-established processes and practices, placing a premium on consistency and repeatability.
Measurement	Challenging to measure directly, involves relying on indirect metrics.	Supplies concrete metrics such as velocity, cycle time, and customer feedback.
Team Focus	Encourages the formation of self-organizing and cross-functional teams, granting them the authority to make decisions and adapt as needed.	Highlights the significance of collaborative teamwork and effective communication within the specified roles and responsibilities.
Flexibility	Exhibits high flexibility and adaptability to changing circumstances, enabling swift adjustments and course corrections.	Establishes a framework for flexibility within the prescribed Agile practices and ceremonies, enabling teams to respond to changes effectively.
Tools and Practices	It is based on a diverse array of tools and practices that bolster agility, including lean thinking, Kanban boards, and continuous integration.	Deploys specific Agile tools and practices, including user stories, backlog management, sprint planning, and retrospective meetings.

Source: adapted from Quick (2023)

A recent survey involving 416 Romanian companies, each with over 250 employees and representing diverse industries, indicates that nearly all of these companies have implemented organizational changes in response to challenges arising from COVID-19. Of the changes made by 97 percent of these companies, remote work stands out as the most beneficial, according to

a majority of employees. Additionally, remote work is expected to persist as a standard practice in the medium term. Although operational models vary across industries, 56 percent of the organizations have adopted either hybrid or fully remote working models.

Agility has become a crucial attribute for many global organizations grappling with the complexities of the COVID-19 crisis. Faced with disruptions in business operations, staff lockdowns, and heightened uncertainty, virtually every organization, whether inherently agile or not, has had to devise new crisis management strategies. The pandemic has underscored the necessity for all organizations to address unforeseen disruptions in an agile manner, blending speed with stability, innovation, and operational discipline.

Assessing the agility of Romanian companies using the Organizational Agility Index across dimensions such as strategy, structure, people, processes, and technology reveals an overall score of 4.3 out of 10.0, indicating a relatively low level of agility. Multiple gaps are identified across various dimensions, with a particular concentration around behavioral elements, including team autonomy, empowered decision-making, servant leadership, coaching, and feedback. While a shared vision and a customer-centric approach display medium to high agility across the board, the people and structural elements behind them register significantly lower levels of agility.

Across industries, there is notable variation in agility levels, with IT and financial services leading the way. These sectors exhibit overall scores up to 9 percentage points higher than those in other industries. Agility is not just for navigating crises like the current pandemic; it's a strategy for any fast-changing, competitive environment. Organizations wanting to retain benefits from the COVID-19 crisis, like quicker decision-making, should decide now to shift to an agile model. Reflecting on crisis lessons, they must intentionally choose which practices to keep (Drăgan et al., 2020).

In consideration of this, the convergence of the terms *learning* and *agility* holds significant relevance. Agility denotes the capability to adapt and undergo change, a quality observed in certain organizations engaged in experimentation, benchmarking, and continuous improvement. Learning, in turn, consolidates these instances of change into sustainable patterns. Agility, when divorced from learning, results in disorder, lack of focus, and events and activities that seem haphazard. Conversely, learning bereft of change equates to making rapid progress without forward movement. When amalgamated, the concept of learning agility manifests as the proficiency to shape the future, foresee opportunities, promptly respond, and sustain an ongoing learning process (Harvey & De Meuse, 2021). In this context, As underscored by Marsick and Watkins (2003), the contemporary workforce places a premium on an individual's innate capacity for continuous learning and development, given the swift transformations within organizations and their operational contexts. This expectation extends beyond the corporate realm and is notably evident in higher education across various institutions and classifications. In the whitepaper titled *The Future of Higher Education – Will higher education seize the future or fall victim to it?*, Mrig and Sanaghan (2018) depict the current landscape of higher education as marked by imminent changes, acknowledged in diverse forums such as boardrooms, cabinet meetings, professional conferences, news outlets, and whitepapers. They stress that even the most adept leaders will grapple with these challenges for an extended duration.

Hempsall (2014) articulates a concern that leadership in higher education exhibits inadequate readiness or capability to confront contemporary challenges. The author asserts that the challenges faced by individuals and organizations in this era demand the ability to adapt and respond to continual fluctuations and change. She references the term *agility imperative* introduced by Joiner and Josephs (2006) to underscore the critical need for agility in leadership.

2.2 The growth mindset as an important attribute of students' agility

The velocity of change and innovation in higher education has traditionally been slow, attributed to the sector's historical insulation from the urgent demand for rapid innovation, owing to its established role as the primary bestower of significant credentials (Mrig & Sanaghan, 2018). Nevertheless, the landscape is evolving, with Fortune 500 companies now exploring collaborations

with entities like Udacity to offer nanodegree programs in newly established fields absent from university curricula. The viability of alternative credentialing is evident, as emphasized in the research by Holland and Kazi (2019), underscoring the importance of students pursuing personalized specializations for both career advancement and lifelong learning. This expanding array of options and alternative pathways to credentials in the dynamic market poses a substantial challenge to degree-granting institutions, as highlighted in a report by Driessen (2017).

Institutional leaders grasp the challenges confronting their establishments and recognize the imperative for adaptation and change (Jaschik & Lederman, 2021). However, a notable dissonance exists, with twice as many presidents expressing disagreement compared to those expressing agreement that faculty members comprehend the challenges institutions face and the necessity for changes to address them. Based on this, learning agility can be seen as a vital component in the students' transition to the world of work which is under a continuous change, improvement and digitalization. To facilitate this transition, it is essential for students to possess an agile, growth mindset, a characteristic that should be instilled from the early stages of the higher education cycle.

A growth mindset as a collection of attitudes and behaviors characterized by an openness to change, a commitment to continual improvement, and a belief in the potential for individual development, learning, and growth (Dweck, 2015). Dweck's research reveals that individuals with a growth mindset not only embrace challenges and navigate obstacles with resilience but also rebound from setbacks more swiftly. They are more receptive to feedback and criticism, utilizing such input to enhance their performance. Furthermore, they draw inspiration from the success of others, propelling them to higher levels of achievement.

Moreover, a growth-mindset culture functions as a recruitment tool, attracting like-minded talent. Organizations that nurture a growth mindset and recognize these attributes cultivate a workforce characterized by greater happiness, innovation, and a culture open to informed risk-taking.

While not new, concepts like Dweck's work, spanning over three decades, have gained renewed attention amid the ongoing COVID-19 pandemic. Organizations, facing the need for swift adjustments to strategies and guidelines, are experiencing debates over previously unquestioned measures. The central goals remain ensuring safety and productivity. Many organizations are accelerating automation efforts, bringing potential transformative changes for their workforce.

An example is seen in highway toll collections, where a decade-long business strategy for automation has been expedited due to COVID-19. Toll processes rapidly shifted to automation, incorporating technologies like automatic license plate billing across the United States.

This trend toward automation is expected to continue post-pandemic, requiring employees to adapt to new roles. Simultaneously, organizations will persist in accelerating strategies for long-term resilience. Success in navigating increased automation is likely to favor organizations with a growth mindset over those with a fixed mindset (Dweck & Elliott, 1988).

Microsoft provides a notable example of the power of a growth mindset. Under CEO Satya Nadella's leadership since 2014, Microsoft transformed into a growth-mindset culture, prioritizing its position as the preferred platform for machine learning, artificial intelligence, cloud computing, and more. Embracing a growth mindset, Microsoft outperformed the Standard and Poor 500 index, a market value-weighted index composed of the prices of 500 large stocks traded in the US market, by over 80% during the initial five years of Nadella's tenure (O'Leonard et al., 2021).

Concurrently with the burgeoning acceptance of these neuroscientific discoveries, researchers began unraveling the association between mindsets and achievement. The key insight was that individuals exhibit distinct behaviors when they hold the belief that their brains can undergo growth. This prompted researchers to inquire if it is possible to modify mindsets. Such a transformation is correlated with heightened motivation and increased levels of achievement. In this context, a study developed and tested a growth-mindset teaching pedagogy to instill a growth-mindset belief system in undergraduate students about their abilities. The pedagogy, validated

through a pretest-posttest control group design, was implemented in 17 sections across two courses, with 14 additional sections using lecture-style teaching as control groups. Students exposed to the growth-mindset pedagogy showed a significant 3.44% increase in growth-mindset beliefs and a corresponding 3.48% decrease in fixed mindset compared to those in lecture-style teaching groups (Moser et al., 2021).

Considering this perspective, the literature review provides support for the prospect of molding and modifying mindsets within the higher education curriculum. This adaptation can be tailored to align with the prevailing requirements of the labor market, particularly emphasizing agility. This incrementally develops the answers to the research inquiries associated with the higher education landscape and the notion of agility as a mindset.

3. RESEARCH METHODOLOGY

3.1 Objectives and hypotheses

As stated in the introduction, this research paper aims to respond to the following research questions:

1. To what extent is the agile mindset creation applicable to higher education?
2. To what extent are the higher education students prepared for the transition to an agile world of work?

In this particular context, the study is driven by two theoretical objectives, each realized through the utilization of diverse research methods and strategies:

3. Identify to what extent the students possess an agile mindset.
4. Identify to what extent the higher education institution in cause is an agile organization.

Drawing from contemporary organizational agility frameworks, we endeavor to gauge the extent to which higher education institutions can cultivate and nurture an agile mindset among their student cohorts.

Based on the ideas above, at this stage we were particularly interested to measure the agility and to test three main hypotheses:

- *Hypothesis 1:* There is a positive correlation between individual agility and perceived organizational agility.
- *Hypothesis 2:* There is a significant difference in agility across different education levels (doctoral studies, master's degree, undergraduate studies).
- *Hypothesis 3:* Students who are concurrently employed demonstrate higher levels of agility compared to those who exclusively focus on their studies.

3.2 Participants

A quantitative research was conducted on a non-probability sample of 95 students at the Bucharest University of Economic Studies, Romania (65.26% women and 34.74% men). The participants were between 18 and 56 years old, with an average age of 25 years and a standard deviation of 9.35. In table 2, we present the profiles of the participants with respect to education level and current job status.

Table 2. Profile of participants

		<i>Job status of students</i>		
		Only Study	Study and Work	Total
<i>Education level</i>	Doctoral Studies	1 (1.05%)	17 (17.89%)	18 (18.95%)
	Master's Degree	5 (5.26%)	29 (30.53%)	34 (35.79%)
	Undergraduate Studies	38 (40.00%)	5 (5.26%)	43 (45.26%)
	Total	44 (46.32%)	51 (53.68%)	95 (100.00%)

3.3 Instruments, design and procedure

The methodology for data collection centered on the utilization of a questionnaire as the primary method. This instrument was meticulously designed to evaluate respondents' agility levels from both an individual and organizational standpoint, quantifying their preparedness for the continuous transformations within the labor market. The distribution of the questionnaire was facilitated through online channels, utilizing a survey platform, specifically Google Forms. Participation was voluntary, ensuring confidentiality.

In order to measure individual agility, we utilized an instrument developed by Sung (2021), comprising 29 items rated on a Likert scale ranging from 1 to 5. The internal consistency of this instrument is presented in table 3. As shown, the questionnaire demonstrated a good internal consistency, and no item was removed.

Table 3. Individual agility – Internal consistency of the instrument

	Estimate	McDonald's ω
1	Point estimate	0.917
2	95% CI lower bound	0.893
3	95% CI upper bound	0.941

For measuring the organizational agility, we were interested at this level only to understand the perception of our students from this point of view. In order to do this, we used the instrument developed by Alshoraty and Qtairi (2022). The internal consistency was again a very good one and no item needed to be removed, as presented in table 4.

Table 4. Organizational agility – Internal consistency of the instrument

	Estimate	McDonald's ω
1	Point estimate	0.975
2	95% CI lower bound	0.967
3	95% CI upper bound	0.982

The research design adopted for this study is characterized as non-experimental, transversal, and exploratory in nature. The methodology involved the administration of an online questionnaire through Google Forms in October 2023. The distribution of the questionnaire link occurred via email, and the data collection spanned a period of three weeks.

Participants were not provided with any incentives to encourage their responses. The decision to participate was entirely voluntary, and respondents were under no time constraints, thereby ensuring the confidentiality of both their data and responses.

In order to maintain consistency and comparability across all responses, the questionnaire was structured with uniform questions presented in the same order for every participant. Additionally, all items within the questionnaire were mandatory, preventing partial completion and ensuring a comprehensive dataset for analysis. This meticulous approach aimed to enhance the reliability and validity of the study's findings.

4. RESULTS

4.1 Descriptive analysis

In table 5, we present descriptive statistics for individual agility and perceived organizational agility, highlighting the central tendency and variability of our data.

Table 5. Individual agility and perception on organizational agility, descriptive data

	Indicator	Individual agility	Organizational agility
1	Median	120	99
2	Mean	120.021	98.263
3	Std. Deviation	15.294	19.588
4	Skewness	-0.691	-0.141
5	Std. Error of Skewness	0.247	0.247
6	Kurtosis	2.058	-0.387
7	Std. Error of Kurtosis	0.49	0.49
8	Shapiro-Wilk p	0.009	0.043
9	Minimum	58	43
10	Maximum	150	130

As it can be observed, neither of the two variables passed the Shapiro-Wilk test for normality. Consequently, non-parametric methods are employed to test our hypotheses.

4.2 Hypothesis testing

4.2.1 Hypothesis 1

There is a positive correlation between individual agility and perceived organizational agility. The scatter plot is presented in figure 1.

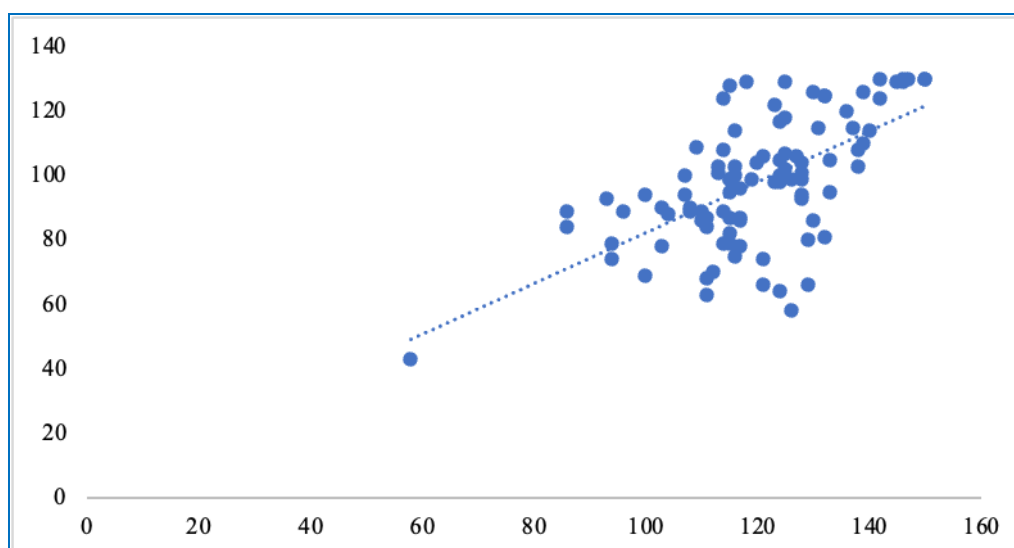


Figure 1. Correlation between individual agility and organizational agility

There is a statistically significant moderate positive correlation between the variables, as indicated by Spearman's rank correlation coefficient ($\rho = 0.583$, $p < .001$).

Therefore, hypothesis 1 has been confirmed through statistical analysis.

4.2.2 Hypothesis 2

There is a significant difference in agility across different education levels (doctoral studies, master's degree, undergraduate studies).

In table 6, we present the results the outputs obtained after performing the Kruskal-Wallis test for each of the two variables (individual agility and perceived organizational agility).

Table 6. Kruskal-Wallis test – agility across groups based on education levels

	Indicator	Statistic	df	p-value
1	Individual agility	4.202	2	0.122
2	Organizational agility	3.175	2	0.204

Therefore, hypothesis 2 was not supported for either of the two agility variables. Consequently, we retain the null hypothesis, suggesting that the distribution of agility is the same across different education levels.

4.2.3 Hypothesis 3

Students who are concurrently employed demonstrate higher levels of agility compared to those who exclusively focus on their studies.

Independent-samples Mann-Whitney U test was used, and results are presented in table 7.

Table 7. Mann-Whitney U test – differences between groups based on job market status

	Indicator	Mann-Whitney U	p-value	Rank-Biserial Correlation
1	Individual agility	776.000	0.010	-0.308
2	Organizational agility	1270.000	0.271	0.132

As it can be seen, there are differences between groups, but only for the individual agility ($p = 0.010$). Effect size is given by the rank biserial correlation. 0.308 indicates a moderate-sized effect. Table 8 presents descriptive data illustrating the distribution of individual agility across different job market statuses, for which a statistically significant difference between groups was observed.

Table 8. Individual agility across groups based on job market status – descriptive data

	Group	N	Mean	Standard deviation	Standard error
1	Only study	44	116.909	13.657	2.059
2	Study and work	51	122.706	16.232	2.273

These results are also presented in figure 2.

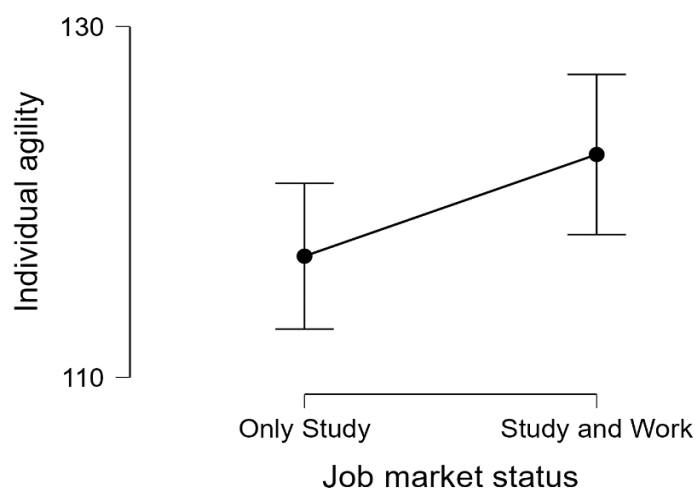


Figure 2. Individual agility across groups based on job market status – descriptive plot

As expected, students who are also working have a higher level of agility. Therefore, hypothesis 3 has been confirmed through statistical analysis. The fact that there is no difference in terms of perception of the organizational agility would have also been expectable.

5. DISCUSSION AND CONCLUSIONS

Organizations today place significant emphasis on cultivating learning agility, a concept encompassing both a mindset and a set of behaviors that empower individuals to learn, adapt, unlearn, and relearn in the face of ever-changing conditions. Achieving agility is a cultivated journey, requiring continuous learning and active engagement. To seamlessly embed agile learning into their culture, organizations must dedicate themselves to continuous learning and proactively address any challenges that may arise along the way.

Our paper was primarily focused on identifying to what extent the students possess an agile mindset, and also how they perceive the higher education institution they are part of.

Results of our survey have shown a positive correlation between individual agility and perceived organizational agility. The positive correlation between individual agility and perceived organizational agility aligns with the idea that students with a proactive and adaptable mindset contribute significantly to an organizational culture that values agility. This connection is pivotal for educators and administrators aiming to cultivate agility within the institution, emphasizing the symbiotic relationship between individual and organizational agility. Discussing practical implications adds a pragmatic dimension to the research. Understanding the correlation between individual and organizational agility can guide educational institutions in tailoring programs that enhance students' adaptive capacities. Institutions may consider integrating agility-focused curricula or providing experiential learning opportunities to nurture the desired mindset among students, fostering a dynamic learning environment.

There are no significant differences in agility across different education levels (doctoral studies, master's degree, undergraduate studies). This outcome offers intriguing insights. It prompts exploration of the multifaceted nature of agility, considering that factors beyond education levels may influence individual and organizational agility. Possible reasons could include the homogeneity of educational experiences or the presence of other variables that overshadow the impact of education levels.

Students who are concurrently employed demonstrate higher levels of agility compared to those who exclusively focus on their studies. Exploring why students concurrently employed exhibit

higher agility levels is a pivotal extension. This observation suggests a potential interplay between academic and work experiences in shaping agility. The discussion could delve into theories on the transferability of skills between academia and the job market, shedding light on the dynamics that contribute to heightened agility among working students.

Higher education institutions need to keep up with the continuous requirements of the world of work. Learning and development professionals play a crucial role in fostering a culture of continuous learning, where everyone is encouraged to integrate learning into their daily work. This approach should encompass efforts to address specific skill gaps and nurture a mindset focused on rapid and ongoing learning.

Acknowledging the inherent limitations in our research is crucial, and prompts consideration of potential avenues for future investigation. Firstly, it is imperative to note the relatively modest sample size of 95 participants, and the non-probabilistic sampling method employed, both of which may constrain the generalizability of our findings to a broader population.

As that our data relies on self-reported responses, the specter of social desirability bias looms. This phenomenon suggests that participants may be inclined to present themselves as more agile than they truly are, possibly influencing the accuracy of our results.

While we employed a robust instrument for gauging organizational agility within a university setting, it's worth acknowledging that our focus was exclusively on students. This limitation arises from the assumption that students seamlessly might not possess comprehensive awareness of all aspects pertaining to the university environment. An intriguing avenue for future research involves broadening the scope to include faculty and staff, allowing for a more comprehensive understanding of organizational agility through diverse perspectives. Additionally, a mirror study, incorporating responses from both students and university employees, could provide a valuable comparative analysis.

To deepen our insights, a longitudinal study tracking students' agility levels over time could be an enriching prospect. Such an investigation would enable us to discern the impact of the educational environment on the development of individual agility, shedding light on the potential long-term effects of the university experience. A longitudinal study could capture changes in agility levels throughout the academic journey, offering valuable insights into the sustainability of agile mindsets. Understanding the trajectory of agility development provides a more nuanced perspective for educators and policymakers, informing strategies for long-term agility cultivation.

Lastly, our study, centered on quantitative data, inevitably lacked the nuanced understanding achievable through qualitative methods. Future research endeavors could benefit from a mixed-methods approach, incorporating qualitative insights to capture a more comprehensive understanding of participants' experiences and perspectives.

In conclusion, while our research contributes valuable insights, it is essential to recognize these limitations as stepping stones for future investigations, each presenting an opportunity to refine and expand our understanding of agility within educational settings.

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