The Youth Scientific Academy as a New Form of University Educational Strategy

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Abstract

The paper presents the Youth Scientific Academy (YSA) at the University of Library Studies and Information Technologies (ULSIT) as a new and effective form of university educational strategy implemented in practice. Established as an institutional framework for supporting young researchers, the Academy is based on the principle "Learning by Doing" and applies an interdisciplinary approach that integrates education, research, and innovation. YSA brings together students, doctoral candidates, young academics, and experts from diverse scientific fields, encouraging collaborative knowledge creation and active participation in real research environments. The Academy is managed and developed through the collective efforts of young researchers within the university, which strengthens academic self-governance, responsibility, and peer learning. Its core mission is to make science attractive and accessible to young people by engaging them directly in the organization and implementation of scientific and educational activities. This mission is realized through a wide range of initiatives, including scientific conferences, round tables, exhibitions, seminars, practical workshops, hackathons, winter and summer schools, and interdisciplinary field research. Students and doctoral candidates are not only participants but also active contributors to the planning, execution, and dissemination of these activities, which enhances their research skills, critical thinking, teamwork, and academic communication competencies. The Academy functions as a dynamic educational environment that complements formal curricula and supports experiential learning across the fields of humanities, social sciences, information and communication sciences, computer sciences, and national security studies. The experience of the Youth Scientific Academy demonstrates that such a practice-oriented, interdisciplinary, and youth-driven model can serve as a sustainable university educational strategy, fostering motivation for scientific engagement, strengthening research culture among young people, and contributing to the development of an innovative and inclusive academic community.

Keywords: *interdisciplinary approach; learning by doing; university educational strategy; young researchers; Youth Scientific Academy.*

1. Introduction

Contemporary higher education is increasingly challenged to develop educational strategies that move beyond traditional knowledge transmission and respond to the dynamic demands of digital transformation, interdisciplinary research, and societal change. Universities are expected not only to provide high-quality academic knowledge, but also to create sustainable learning environments that integrate education, research, innovation, and social engagement.

In this context, the development of innovative educational strategies has become central to improving the quality of teaching and learning processes, fostering student motivation, and strengthening the connection between theoretical preparation and practical application. The University of Library Studies and Information Technologies (ULSIT) addresses these challenges through the institutionalization of the Youth Scientific Academy (YSA) as a structured and research-oriented educational framework embedded within the university's academic ecosystem. Established as a methodological and scientific unit under the direct governance of the university, the Academy operates as a complementary educational environment that extends formal curricula through interdisciplinary collaboration, project-based activities, digital research practices, and active student participation in scientific initiatives. Grounded in a regulatory framework that defines its mission, governance, and operational structure, YSA promotes a model of shared academic responsibility, where students, doctoral candidates, and young researchers actively contribute to the organization and implementation of scientific events, research projects, conferences, exhibitions, hackathons, field studies and others. This paper positions

the Youth Scientific Academy as a strategic institutional response to the need for innovative university educational models, examining how its interdisciplinary, practice-oriented, and digitally supported activities contribute to enhancing educational quality, strengthening research culture, and shaping a sustainable strategy for academic development in contemporary higher education.

2. Theoretical Context and Strategic Dimensions of University Education

The transformation of higher education in the 21st century is closely linked to the need for universities to rethink their educational strategies in response to digitalization, globalization, and the increasing interdependence between science and society. Contemporary universities are no longer perceived solely as institutions for knowledge transmission, but as dynamic ecosystems that integrate teaching, research, innovation, and public engagement. This strategic shift is reinforced by international policy frameworks such as the European Strategy for Universities, which emphasizes the role of universities as drivers of quality education, diversity, inclusion, and cross-border cooperation in higher education and research across Europe [1]. The Strategy calls for universities to be supported as "actors of change" in societal transitions and to strengthen their partnerships with stakeholders to improve quality and relevance for future-proof skills development.

Educational strategies in modern universities increasingly emphasize student-centered approaches, collaborative learning environments, and research-based education. Rather than positioning students as passive recipients of information, innovative academic models encourage their active involvement in knowledge production, critical inquiry, and interdisciplinary problem-solving. Such approaches contribute to strengthening academic motivation, improving learning outcomes, and building competences that are transferable beyond the university context. Within this framework, research-oriented structures embedded in the institutional fabric of the university play a key role in connecting theoretical preparation with practical and scientific application.

Interdisciplinarity represents another central dimension of contemporary educational strategies. Complex societal challenges – ranging from digital transformation and cultural heritage preservation to sustainability and civic engagement – require analytical perspectives that transcend disciplinary boundaries. Universities are therefore encouraged to create platforms where students and young researchers from different professional fields collaborate within shared methodological and research environments. Interdisciplinary academic initiatives not only enhance the quality of education, but also contribute to the development of integrated thinking, communication skills, and professional orientation.

In this context, the institutionalization of complementary academic structures within universities emerges as a strategic response to the limitations of conventional teaching formats. By establishing organized frameworks that support scientific events, field research, project-based activities, and digital collaboration, universities can expand the scope of student engagement and create conditions for sustainable academic development. Such models reflect a broader understanding of educational quality – one that encompasses not only curriculum delivery, but also the cultivation of research culture, academic responsibility, and lifelong learning readiness.

3. Methodological Framework of the Study

The present study adopts a qualitative institutional case study approach in order to examine the Youth Scientific Academy (YSA) at the University of Library Studies and Information Technologies (ULSIT) as a structured university educational strategy. The case study methodology is appropriate for analyzing complex educational models embedded within specific institutional contexts, as it allows for an in-depth exploration of governance mechanisms, strategic objectives, operational practices, and educational outcomes. By focusing on a single institutional framework, the study aims to identify structural characteristics and strategic dimensions that contribute to the Academy's sustainability and impact on educational quality.

The object of analysis is the Youth Scientific Academy as an officially established academic unit within ULSIT. The research is based on multiple sources of data to ensure analytical verification. These include: (1) the regulatory framework defining the Academy's structure, mission, governance, and operational principles; (2) the annual activity report documenting implemented initiatives, participation rates, and academic outputs; and (3) publicly available documentation of events and activities disseminated through the Academy's official communication channels, including its social media presence. The latter provides qualitative evidence of student engagement, interdisciplinary collaboration, and the diversity of implemented initiatives.

The methodological approach combines document analysis with institutional and educational practice analysis. Document analysis is applied to examine the strategic positioning, formal objectives, and governance model of the Academy. The analysis of educational practices focuses on the types of activities implemented – such as scientific conferences, field research, hackathons, exhibitions, and digital initiatives – and their contribution to student engagement, competence development, and research culture formation. Rather than measuring outcomes through quantitative indicators alone, the study evaluates the Academy's impact through qualitative criteria, including interdisciplinarity, sustainability, active student participation, and alignment with contemporary university educational strategies.

Through this methodological framework, the paper seeks to move beyond a descriptive account of activities and instead provide an analytical interpretation of the Youth Scientific Academy as a sustainable institutional strategy for enhancing educational quality and fostering an innovative academic environment within higher education.

4. Institutional Model of the Youth Scientific Academy

The Youth Scientific Academy (YSA) at the University of Library Studies and Information Technologies (ULSIT) represents an institutionalized educational model embedded within the formal structure of the university. Unlike temporary project-based initiatives, the Academy operates as a regulated academic unit with clearly defined governance mechanisms, objectives, and operational principles. Its establishment through an officially approved regulatory framework ensures institutional legitimacy, continuity, and alignment with the university's broader strategic priorities in education and research. This formal positioning distinguishes the Academy as a sustainable educational strategy rather than an isolated extracurricular initiative. Like every successful organization, the Academy has undergone transformation since its creation back in 2013, with the most recent restructuring in 2025. The changes aim to address the constantly changing educational environment, the new trends in students' interests and to support the growth of a new crop of young scientists.

The governance model of the Academy is characterized by structured academic leadership combined with active participation of young researchers. The management framework includes defined executive roles and expert groups organized according to accredited professional fields within the university. A distinctive feature of the model is the inclusion of students, doctoral candidates, and young academics (up to a defined age threshold) as active members of the Academy, not merely as beneficiaries of its activities. This participatory structure fosters shared academic responsibility, peer collaboration, and the development of leadership competences within a supervised institutional environment.
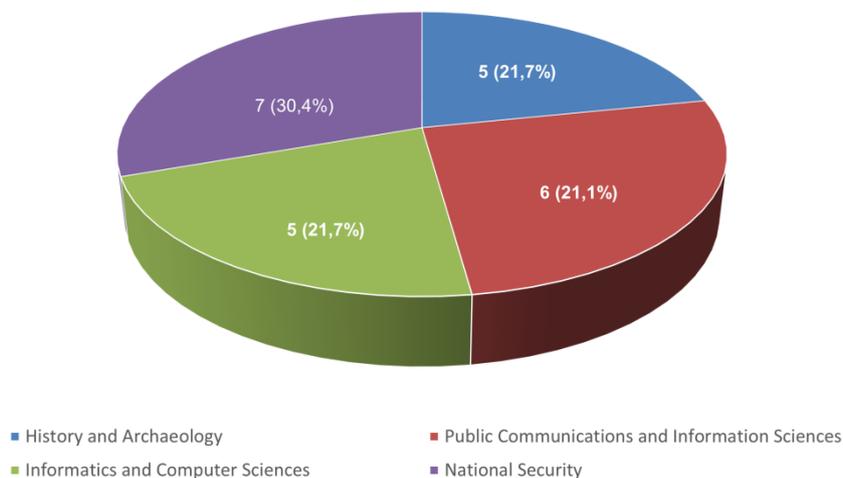
As illustrated in Figure 1, the composition of the Youth Scientific Academy by the status of its members proves that the Academy is indeed a platform oriented towards students and young researchers. The diagram shows that the main component of the unit consists mainly of students and PhD students. What is more, 4 PhD students and 1 student are part of the Executive Council of the Academy, which constitutes more than half of the Council's members. Decisions about the general strategy for development, ongoing activities and membership are made by the Council, which guarantees the representation of students in governing the Academy, thus encouraging their active participation and establishing a sense of responsibility.

- Students (Bachelor/Master) ■ PhD Students ■ Post-doctoral Students
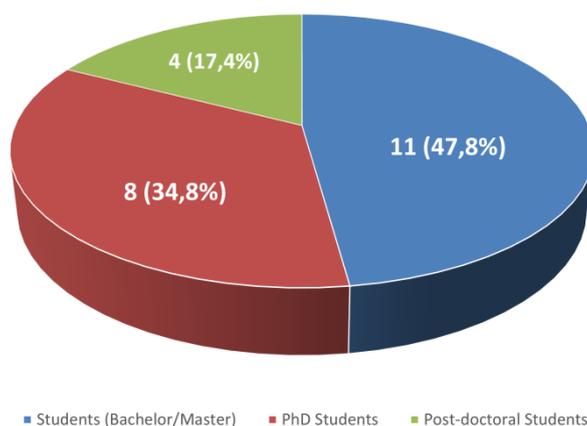
Fig. 1. Members: Type of Educational Programme

The interdisciplinary nature of the Academy is also evident from the diverse composition of its members, depending on the bachelor, master or PhD programme they are enrolled in. The following figure presents the professional fields in which the members of the Youth Scientific Academy are studying/developing professionally.

- History and Archaeology
- Public Communications and Information Sciences
- Informatics and Computer Sciences
- National Security

Fig. 2. Members by Professional Field

Strategically, the Youth Scientific Academy is positioned as a methodological and scientific support unit that complements formal curricula. It creates a parallel yet integrated academic space where education, research, and practical application intersect. Through its structured organization, the Academy facilitates interdisciplinary cooperation across fields such as history and archaeology, public communication and information sciences, informatics and computer sciences, and national security studies. By bringing together participants from different academic backgrounds within coordinated research and educational initiatives, the model strengthens horizontal academic integration within the university.

Another defining characteristic of the institutional model is its alignment with contemporary university strategies focused on quality enhancement, innovation, and societal engagement. The Academy's mission emphasizes making science accessible and attractive to young people while simultaneously fostering research culture and academic responsibility. This dual orientation – toward both educational quality and long-term professional development – positions the Academy as a bridge between undergraduate and doctoral education and as a preparatory environment for future academic careers.

The institutional sustainability of the model is further reinforced by regular reporting procedures, strategic planning, and integration within the university's governance system. Annual activity reports, structured decision-making processes, and collaboration with internal and external partners ensure transparency and continuity. As a result, the Youth Scientific Academy functions not only as an educational platform, but as a strategic instrument contributing to the university's identity as a research-oriented and innovation-driven institution.

5. Implementation of the Educational Strategy through Academic and Practice-Oriented Activities

5.1 Scientific and Academic Initiatives

The strategic objectives of the Youth Scientific Academy are operationalized through a structured portfolio of scientific and academic initiatives that actively involve students and doctoral candidates in the processes of knowledge production and dissemination. Among the core activities are annual student scientific conferences, thematic round tables, interdisciplinary seminars, and academic forums that provide participants with opportunities to present research findings, engage in scholarly debate, and publish their work in conference proceedings. Such initiatives extend learning beyond conventional course requirements and create authentic academic contexts in which students assume the role of young researchers.

The organization of these forums is not limited to faculty-led coordination. Students and doctoral candidates actively participate in the preparation, moderation, and documentation of events, which strengthens their academic communication skills and organizational competences. Publicly documented activities on the Academy's official communication channels illustrate the diversity of events implemented throughout the academic year, including thematic exhibitions, public lectures, and collaborative discussions with representatives of cultural and research institutions. The visibility of these initiatives in the public sphere reinforces the perception of students as contributors to academic discourse rather than passive observers.

Furthermore, participation in scientific initiatives encourages early academic publication and research dissemination. By providing structured opportunities for presenting and publishing research outputs, the Academy contributes to the formation of research identity and academic confidence. These initiatives serve as an intermediary stage between formal coursework and independent scientific activity, thus expanding the scope of student engagement within the institutional academic environment.

5.2 Interdisciplinary and Practice-Based Activities

Complementing academic forums, the Youth Scientific Academy implements a wide range of interdisciplinary and practice-oriented activities designed to connect theoretical preparation with real research environments. A central element of this strategy is the organization of field-based initiatives such as the International South-East Summer University, where students and doctoral candidates collaborate under academic supervision in conducting archaeological surveys, cultural heritage documentation, archival research, and interdisciplinary field studies. The active involvement of students and PhD candidates in research, documentation, and visualization processes corresponds to previously established findings regarding their role in cultural heritage research and documentation [2]. These activities enable participants to apply research methodologies in authentic contexts and to develop analytical, organizational, and collaborative skills.

Practice-oriented engagement also includes participation in hackathons, winter schools, digital workshops, and museum documentation projects. For instance, student involvement in digitalization processes, data systematization, and the application of technological tools demonstrates the integration of digital solutions within the Academy's educational strategy. As noted in contemporary research, one appropriate model developed by an Alumni member of the Academy and implemented in practice "proposes an integrated approach combining different technologies and methods to achieve efficient information processing and detection of deviations." [3] This approach mirrors how interdisciplinary and automated analytical methods are introduced within Academy-supported initiatives, enabling students to engage with complex data-driven problems.

Such initiatives align with contemporary expectations for digitally competent graduates capable of navigating complex information environments. As emphasized in the context of future-oriented learning models, "cooperation between universities and industry enhances practical learning experiences and bridges the gap between academic knowledge and professional requirements." [4]

Visual and descriptive records available through the Academy's public communication platforms further confirm the active role of students in fieldwork, exhibitions, interdisciplinary research teams, and collaborative projects. These documented examples illustrate that participation is not symbolic but substantive, involving direct contribution to data collection, analysis, organization of events, and public presentation of results. Through this diversified portfolio of activities, the Academy effectively expands student participation in structured academic practice and reinforces the connection between education, research, and societal engagement. The role of academic research projects as instruments for supporting and motivating students within the university information environment has been previously emphasized in scholarly research [5].

### 6. Conclusions. Educational Impact, Sustainability and Strategic Value

6.1 Contribution to Educational Quality and Student Engagement

The implementation of the Youth Scientific Academy as an institutional educational model generates measurable qualitative impact on student engagement and educational quality. By integrating students and doctoral candidates into structured scientific and interdisciplinary initiatives, the Academy creates conditions for active participation that extend beyond formal curriculum requirements. This model

strengthens academic motivation by providing authentic research contexts in which theoretical knowledge is transformed into applied competences.

As evidenced by the following figure 3, the Academy involves a growing number of students in its activities, which serves as an indicator for recognition and interest from the students. Furthermore, the development of the Academy is a part of *Politics for development of the University* and the number of students involved in the organized activities is reported on an annual basis. The indicator is grouped together with the participants in events by the Students' Scientific Community, which is another unit in the university. The results present a significant increase in numbers of students due to diverse activities throughout 2025, such as 2 exhibitions, 1 conference, 1 round table (abroad), 1 hackathon, 1 summer school practice and 1 winter school, among other events, in which the Academy is co-organizer.
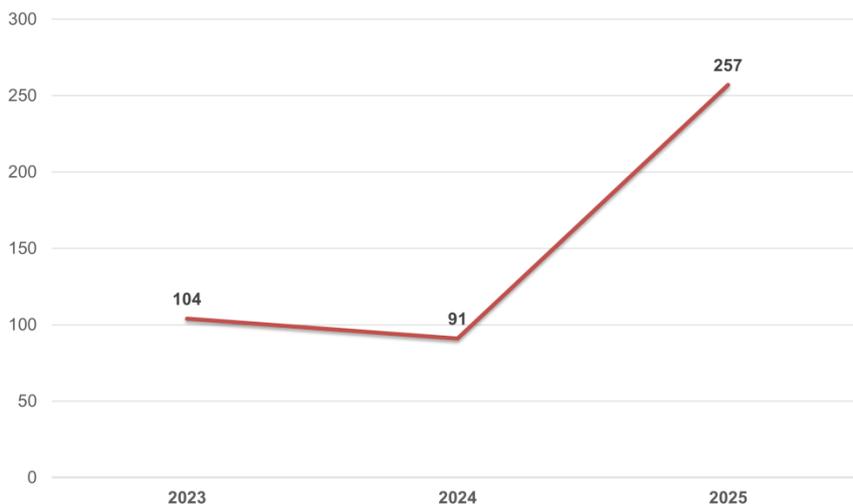
Fig. 3. Number of students enrolled in Academy's activities per year (2023 – 2025)

Through involvement in conferences, field research, digital initiatives, and collaborative projects, participants develop research competences, critical and analytical thinking, teamwork skills, and research independence. The continuous interaction between students, doctoral candidates, and academic mentors supports the development of academic responsibility. Moreover, early exposure to research dissemination – through presentations and publications – contributes to the formation of academic identity and clearer professional orientation.

An additional impact dimension concerns the enhancement of institutional learning culture. By positioning students as contributors to academic initiatives rather than passive recipients of instruction, the Academy reinforces participatory academic governance and peer collaboration. This approach improves not only individual competences but also the overall quality of the university's educational environment.

6.2 Long-Term Sustainability and Institutional Relevance

The sustainability of the Youth Scientific Academy derives from its formal institutionalization, regulatory grounding, and integration within the governance framework of ULSIT. Unlike temporary project-based initiatives, the Academy operates as a continuous academic structure supported by strategic planning, reporting mechanisms, and institutional oversight. This stability ensures continuity of activities and long-term impact on students and doctoral candidates.

Sustainability is further strengthened through interdisciplinary integration and the diversification of activities, ranging from scientific forums and exhibitions to digital innovation events and field-based research. The expansion of partnerships with national and international academic, cultural, and research institutions reinforces the Academy's external visibility and strategic relevance. These collaborations contribute to knowledge exchange, mobility opportunities, and broader academic networking.

From a strategic perspective, the Youth Scientific Academy represents a replicable model for universities seeking to enhance educational quality through structured student engagement. By combining governance stability, interdisciplinary collaboration, research integration, and digital components, the model demonstrates how institutional educational strategies can effectively bridge

teaching, research, and societal interaction. In this sense, the Academy functions not only as a complementary academic platform, but as a strategic instrument for strengthening the university's research orientation and innovation capacity.

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