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Tournament rituals and experiential competence development in higher education: A case of a unique conference series

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ABSTRACT

The Hungarian Student Research Society (HSRS) movement is a unique, experience-based tournament ritual promoting student-centered learning via instructors working as facilitators. Within the framework of this 70-year-old conference series, students conduct mentor-supported research activities on self-chosen topics, prepare academic papers, and present their research work to peers and expert juries within their institutions. The best research is included in the National Student Research Conference (NSRC), organized by discipline. The present study reviews and analyzes this process from the perspective of tournament rituals, skill development, and student experience. The study utilizes student opinions, perceptions, and feedback from a Student Research Conference in Economics to illustrate the method's effectiveness. Findings suggest that such conference event series – which function as tournaments, professional conferences, and festivals via community events – effectively develop the soft skills that are becoming increasingly important in the 21st century. In addition to professional competencies, Student Research Conferences (SRC) provide student participants with positive experiences.

1. Introduction

Higher education competence development activities extend beyond the classical educational frameworks. In a broader sense, all professional content activities, events, and processes offer the potential for competence development. This study examines the competence-developing potential of a unique series of Hungarian higher education competitions and conferences, primarily through student perceptions and feedback. This series of events combines scientific and social experiences. In addition to publishing and discussing scientific results, it is also a festival, with ceremonies, workshops, concerts, social, and networking activities. The conferences are multi-level structures where development, community, and fun are experienced together in a unique way. In its 70-year history, the National Student Research Conference (NSRC) has accumulated a wealth of student experiences that are highly relevant to an international audience. The relevance of our study is further enhanced by the nature of the conference, which includes community-building and competitive elements, resulting in partially contrasting motivations and expectations. Although the tournament aspect of the events is stimulating, it does not eclipse the underlying conference aspect nor the academic and professional dialogue, which all play inspiring, developmental roles.

In Hungarian higher education, students have traditionally been allowed to choose their own research topics and mentors. Within

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this framework, mentors support independent student research work. Students prepare a research thesis about their results individually or with student co-authors. Professional reviewers evaluate the papers before students present them to expert juries at their institutions within the Student Research Conference (SRC) framework. SRC theses are diverse, current, and relevant, primarily because students who are open-minded are provided the opportunity to formulate questions related to topics of current interest and extend their research beyond the classical/standard curriculum. Juries nominate the best papers for the National Student Research Conference, a series of conferences in 16 scientific fields (therefore 16 parts) organized every two years with a total of about 5000 submitted theses. The present study examines this student-oriented, experience-based form of learning and skill development. The examination is based on participant and organizer feedback from one of the most popular conference sections, the NSRC in Economics. Our study also highlights the ritual elements of this unique event series and how these elements contribute to competence development as an output of business and management training. The literature contains a research gap in linking rituals and competencies. The Student Research Conference framework presented in the study offers practical ideas for adapting similar event series and provides insights into triggering different rituals together within such events.

2. Research background

Student research activities performed in the SRC framework can be interpreted as a tournament ritual where participants develop meaningful skills. The present study begins with an overview of the background and traditions of SRSs, then examines the most important tournament characteristics and the roles of profession-specific and soft-skill competence development, emphasizing the pedagogical possibilities that help deepen this development. Within this context, we analyze the process and spirit of the Student Research Society movement.

2.1. The Student Research Society tradition

Student Research Societies have a seven-decade tradition in Hungary.

2.1.1. The beginnings

The movement began spontaneously as an innovative approach to collaborative teacher-student work at a few Hungarian universities in the early 1950s. The approach involves instructors supporting students working on non-compulsory topics. The completed research activities underwent strict evaluations, and the best “papers” were presented at university-organized conferences that functioned simultaneously as tournaments. The method allowed students to become familiar with writing academic research articles and provided them with an opportunity to become a part of the academic/scientific community. The first National Student Research Conference, featuring 109 studies in 19 specialized conferences, was organized in 1955. It represented 300 local student research societies and about 3000 students.

The number of students participating in the biennial national conference increased dramatically in the following 25–30 years. The Student Research Society movement became a tournament platform and extended beyond student competition to include competition between research supervisors, universities, and their faculties. The defining milestone came after the National Council of Student Research Societies became the official regulatory body of the event in 1972 (Anderle, 2011).

2.1.2. The period in which conferences became an institutionalized part of higher education

By the beginning of the 1980s – a decade that witnessed increased academic options available to Hungarian higher education institutions – the National Council of Student Research Societies had become a self-regulated, professional, coordinative organization. The higher education legislation passed in 1995 affirmed the organization’s legitimacy and solidified the movement as a legalized, vital part of Hungarian higher education. About 10% of Hungarian higher education students (4000–5000) were scientific research society members then. That was the point in National Student Research Society history when the movement evolved from being a competition between the students to one that also involved tutors, mentors, university faculties, and universities themselves.

The introduction of the Bologna Process, whereby the formerly predominant five-year Hungarian higher education programs were split into bachelor and master programs, did not alter the movement’s mission. Its chief objectives remain to familiarize students with academic research, encourage students to extend beyond conventional educational and research frameworks, ensure quality education, and develop student skills and talents. The development of the economics section has been fuelled by the increase in the number of students enrolled in business programs and the emphasis on business education (Bakacsi & Zsidi, 2011).

Since 1988, NSRC winners can apply for the Pro Scientia gold medal for the cumulative achievements of an entire higher education academic career. Outstanding instructors receive the honorary title of Master Teacher. A maximum of 50 students and 50 mentors are honored biennially with such awards, which are highly recognized and denote great prestige in the academic field (Baranyainé Réti & Koósné Török, 2006).

2.1.3. Present days

Nowadays, over 4500–5000 nominated theses are presented in 16 sections (16 conferences as a series) every two years. The submitted theses emanate from fields like Agricultural Sciences, Law and Political Sciences, Biology, Physics, Earth Sciences, Mathematics, Military Sciences, Humanities, Information Technology Sciences, Chemistry and Chemical Industry, Economics, Engineering, Fine Arts and Arts Sciences, Medical Sciences, Pedagogical, Psychological, Cultural Education, and Library Science; Subject Pedagogy and Education Technology; Social Sciences; and Physical Education and Sports Sciences (Fig. 1). The Ministry of Education recognized

the National Council of Student Research Societies as a higher educational professional body on January 1, 2022, granting the organization a higher legal status.

The biennial event comprises thirteen to fifteen thousand students who present their work at local, institutional-level conferences. Conference theses submitted at Institutional Student Research Conferences undergo a rigorous evaluation process (generally involving two opponents), where they are presented and defended before institutional jury committees. Students receive supporting feedback, and the subsequent discussions broaden student perspectives and strengthen communication skills. The Institutional Student Conference Committee and the Institutional Student Research Society nominate the best theses for the biennially-held NSRC. About 450–500 students emerge as winners at each national conference within the framework of the 16 organized conference series sections. Many of these students initiate doctoral studies and eventually join the academic sphere, while others become leading practical specialists in the private sector.

Many forms of student tournaments/competitions on specific topics exist. Higher education case study competitions take place globally, but these do not include having students choose their research questions based on their interests. About 6–10% of Hungarian higher education students conduct research according to their interests on a topic of their choice within the Hungarian Student Research Society framework. Such freedom in topic selection increases motivation (self-realization) (Iyengar & Lepper, 1999) and grants the Hungarian Student Research Society movement a unique element. With a seven-decade tradition encompassing all scientific fields, the Hungarian SRS (HSRS) movement is a stable yet simultaneously professionally and methodologically renewing framework for mentored, student-centered, experience-based learning and skill development (Cziráki & Szendrő, 2016).

The uniqueness of the movement lies not only in its national coverage but also in the organizational structure and its acceptance in education policy. Hungarian higher education institution rankings include criteria like research and international publication performance, student-to-instructor ratios, and SRC performances at national conferences.

The combination of conference and competition aspects creates a context in which we can claim that Student Research Societies, as a Hungarian form of talent management, are unique.

2.2. Student research societies as a tournament ritual

The SRC series is a collective academic experience consisting of a series of rites, combining competition with a conference and a festival, which allows participants to reach a higher level of academic and professional development.

Rituals are performative and emphasize efficiency (Schechner, 1994), education, improving social solidarity, and celebration.

Rituals consist of the challenge of writing an SRCthesis, during which students create order out of chaos with the help of a mentor, in the heightened excitement around the submission deadline, in the presentation to the jury, in the announcement of results, and in the ceremonial award ceremony. During the NSRC event, the festival character is fortified with more intense, more inclusive, and more celebratory opening and closing events, as well as accompanying events that bring the community closer together. The ritual nature of the NSRC is also reflected in the fact that it takes place at specific times (every two years), in specific venues, with a large number of visitors, regardless of weather conditions.

Rituals are the collective symbolic ceremonial form through which the community creates order out of chaos. During value building, it not only expresses its interests, needs, and desires but also recognizes itself in them and morally identifies with them (Moore & Meyerhoff, 1977).

The SRCevent series can also be described as an alternating and pulsating balance between chaos and order, extending to the path an individual student takes in research and the innate logic supporting the entire event series. At the beginning of the process, participants perceive mostly chaos, yet as the process progresses, order emerges and solidifies. Students who initially find research topic selection challenging or who gather and accumulate knowledge non-linearly can eventually organize their thoughts and present them in a structured form. At the same time, the experience of chaos is essential for understanding order.

Students must perform increasingly better in an ever-changing environment where the challenges continuously increase. Surviving

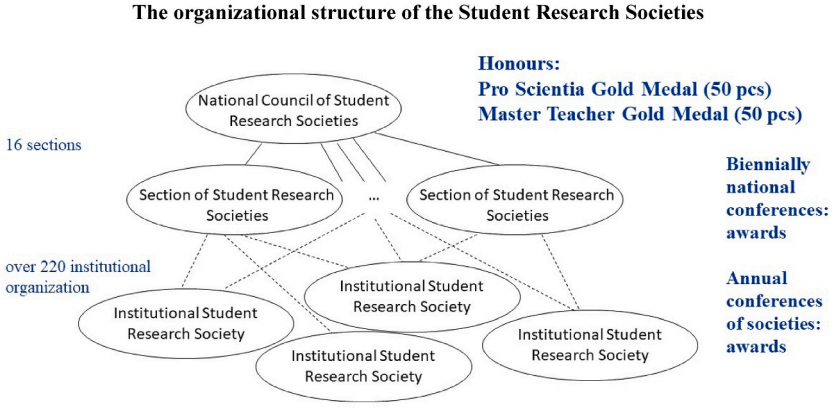

Fig. 1. The organizational structure of the Student Research Societies. Source: Takács-György and Takács (2018).

in this dynamically changing environment entails shifting towards greater degrees of complexity, change, and adaptability, in which systems evolve by self-organization on the "edge of chaos" (Kauffman, 1995; Morrison, 2008). Chaos also creates opportunity because the closer one gets to the edge of chaos, the more creative, open, and imaginative one becomes. As the behaviors, ideas, and practices of individuals and systems become more varied and complex, the greater the networking and information sharing among participants become (Stacey, Griffin, & Shaw, 2000).

Although the preparation process is seemingly disorganized and creative theme ideas are often born from chaos, the mentors and organizers participating in national and institutional Student Research Societies eventually draw order from the chaos.

The SRC process is designed to combine sporadic creative energies and channel them in a single direction so they do not emerge chaotically but move towards some performative order.

Brutus and Bothello (2021) analyzed case study competitions within the ritual framework and stressed the three main tournament ritual functions, solidarity, struggle, and interpretation, all present in SRCs.

2.2.1. Solidarity

Rituals fulfill a networking function because they connect tournament participants to other event stakeholders such as co-authors, mentors, jury members, fellow competitors, and the conference audience. Student Research Societies are intellectual meeting points for young scientists, researchers, and academics because they provide participants with the physical space and rituals needed to create and maintain social networks (Anand & Watson, 2004). Durkheim (1965) observed that such rituals consolidate identity and social cohesion, thus creating a sense of "solidarity."

As with case study competitions, SRC tournaments offer participants the experience of an immersive and intense event focused on rituals and ceremonies aimed at selecting outstanding students or groups. Tournaments challenge students to withstand the stress of analysis and presentation (Carter, Burke, & Hughey, 2019). At the same time, rituals help individuals experience social euphoria and the joy of celebrating and participating in mass social occasions.

The biennially-held NSRC is a national celebration of academics and science for students, mentors, organizers, jury members, and opponents who all contribute to the student research activity process. The decades-old Student Research Societies movement retains its strong traditions – reflected by the slogan "The Student Research Society Movement is forever" – and concentrates on passing these down with its values.

The SRS process creates collective experiences multiple times during an event. The group assignments inspire the joy of joint creation. Cheering and anticipation fill the ISRC and NSRC competitions, and the prize winners create a euphoric atmosphere of celebration.

Driver (1991) observed that rituals not only gather people physically but unite them emotionally since the nature of ritual activity is interactive and social. Rituals also exert social control by conveying messages about appropriate and expected behaviors. Rituals also help individuals experience social euphoria or the joy of participation (Anand & Watson, 2004).

2.2.2. Agon

According to the agonistic view, every social system is a field of tensions oscillating between conflict and cooperation. The role of the ritual is twofold. It strengthens unity and reveals the conflicts inherent in any social group. Ritual helps groups within a social system exercise control (Anand & Watson, 2004). Maintaining a healthy competitive spirit is vital in an SRC, and this responsibility falls on the participants, the jury, and the student jury members. SRCs create a controlled arena for the participants, where intellectual energies creatively erupt. Competition rituals serve to reinforce status differences, not only between participants and non-participants but also between the participants themselves (Brutus & Bothello, 2021).

Caillois (2001) divided the world of games into four main groups. Agon comprises one of these groups. Agon includes all games whose main feature is competition. Student Research Conference participants clash in an artificially created arena in which the triumph of the winners is clear, but the real victory lies in the skill and personal development of all participants. In agon-style games, participants must develop their skills to a level from which they can challenge their opponents. An SRC aims to instill a healthy competitive environment where participants tap their potential when challenged. At the same time, Csikszentmihályi (1990) notes that competition enriches our experiences only as long as attention remains focused on the activity. When attention focuses on external goals (e.g., defeating an opponent, dazzling the audience, collecting prizes), the competition tends to distract attention from the activity rather than toward it.

2.2.3. Sensemaking

Sensemaking is the process by which people construe their collective experiences. The effectiveness of rituals arises from their ability to ensure a collective understanding of social reality during ritual implementation (Anand & Watson, 2004). The activity shapes the participants, creating experiences that reveal what an organization represents (Bell, 1992). At the end of the student research activity process, the participants better understand the essence of being a young academic or scientist and undergo a process similar to researching and writing a research article. From the emergence of the initial idea to the research itself, the double-blind review, the selection of the best paper awards, and the awarding of the Pro Scientia Gold Medal, SRCs replicate the challenges of being an academic researcher and provide a controlled framework for experiencing failures and successes.

Participants create new knowledge independently in the student research activity process but in a guided (facilitated) manner. Students must keep order from descending into chaos during the activity. In this student-centered learning process skill development focuses on the competencies required for academic career challenges and on strengthening many general competencies essential to professional life, which the present study will cover via examples. The pedagogical approaches of student-centered learning can also

develop such competencies, which we outline by reviewing these approaches and critically comparing them to Student Research Conferences.

2.3. Student-centered learning and skills development

Within the student-centered learning model, teachers become facilitators rather than primary and exclusive input providers in the student-learning process. Instead of focusing on subject mastery, the model concentrates primarily on output competencies and skills that ensure acquired knowledge application (de Justo & Delgado, 2015).

Student research activities are excellent examples of student-centered learning. Instructors (mentors) assume facilitator roles and help students explore self-chosen topics more extensively by prompting independent investigation and learning. Student-centered learning happens in an unstructured environment within a given time. Facilitator-instructors expect knowledge application from their students and provide them with opportunities to solve complex, undefined problems. Facilitators also expect students to analyze unpredictable situations, observe the interconnectedness of facts and decisions, implement decisions for critical thinking, develop interpersonal relations, and communicate ideas.

The constructivist pedagogical approach concentrates on active learning (Dziubaniuk & Nyholm, 2021). The learner constructs new knowledge by interpreting his own experiences. Students actively participate in the learning process; the new knowledge elements relate to prior student knowledge and attitudes. Acquired knowledge includes new knowledge and its critical application (i.e., acquired competence). The constructivist approach does not reject traditional direct instruction but emphasizes the instructor's role as a facilitator in student activities and explorations. Kayes (2002) was concerned with the critical examination of experiential learning and its role in management education. The moral background of experiential learning is examined by Dean, Wright, and Forray (2020).

Table 1 details active, i.e., student-centered learning includes various techniques.

These active learning environments encourage students to reach the higher-order thinking levels of the revised Bloom's taxonomy (Lee, 2020; Nkhoma et al., 2017; Shabatura, 2022). The six levels that build on one another are: Remember, Understand, Apply, Analyze, Evaluate, and Create (Anderson et al., 2001). Many action verb lists have been developed to help with classification and to formulate the appropriate learning outcomes. Newton, Da Silva, and Peters (2020) have assembled an overlapping selection of these lists.

The pedagogical alternatives contained within the dashed-line square in Table 1 can develop competencies in a way that is similar to Student Research Societies.

Table 1
Student-centered learning alternatives.

Directions	Online strategies	Learning dynamics	Activities (during class or outside the university)
Recent digital technologies	Blended learning e-Learning	Technology-enabled active learning (TEAL)	Blended and e-learning activities Interactive simulations Social media activities Videos of real cases Virtual learning activities
Active learning		Challenge-based learning (CBL) Problem-based learning Team-based learning (TBL) Project-based learning (PBL) Flipped classrooms Reflective learning Serious games[a]	Case studies Discussions Gamification activities Interdisciplinary activities Problem-solving activities Storytelling
Practical and real-life experiences		Industry-community projects Internships Placements Dual (vocational) education and training (Dual VET)	Real material practices Hands-on activities Roleplay Site visits

[a] Castillo-Parra, Hidalgo-Cajo, Vásconez-Barrera and Oleas-López, (2022); Buzády, Wimmer, Csesznak and Szentesi (2022)
Source: Pons-Valladares, Hosseini and Franquesa (2022) expanded

The task received during problem-based learning is the driving force for acquiring and incorporating new knowledge. Understanding and solving the problem is the main objective of this method (de Justo & Delgado, 2015; Justo, Delgado Trujillo, Vázquez-Boza, & Branda, 2016). Project-based learning also includes a central problem students attempt to solve through teamwork while organizing and evaluating the project. This method promotes student commitment and involvement. *"Project-based learning is an efficient method for skill development, including team innovation, as it promotes critical thinking, problem-solving, interpersonal communication, information and media literacy, collaboration, teamwork, leadership, creativity, and innovation."* (Venter, Coetzee, & Schmulian, 2022).

Gamification can mobilize natural human and organizational features such as competition and co-dependence. Cooperative and competitive games can combine the rites of cooperation and competition (Spanellis, Pyrko, & Dörfler, 2022). But the learning how to be relational in conversations can also be a type of active learning (Hinz, Stephens, & Van Oosten, 2022).

Practical and real-life experiences (Kent, Tilton, Lewis, & Pipes, 2023; Ramsey, 2014) clearly support the acquisition of expected labor market competencies; however, achieving this at a mass level is typically impossible due to a lack of resources. Research activities examining operational problems – such as industry-community projects, placements, real material practices, and site visit learning alternatives –help build similar competencies.

Zhu and Engels (2014) prove the influence of organizational culture on perceptions and implementation of instructional innovations like student-centered learning, collaborative learning, and the use of educational technologies. Upon examining business schools, Farashahi and Tajeddin (2018) confirmed that simulation was the most effective form of education for problem-solving skills, interpersonal skills, and self-awareness competencies. The case study method, which achieves roughly similar results, and the simulation method were both more effective than lectures alone in this regard. According to Mainga, Murphy-Braynen, Moxey, and Quddus (2022), the combination of the lecture-centric teaching method and active, student-centered learning with practical and real-life experiences is the most effective way to develop the required labor market competencies.

Student research activity is a form of problem and project-based learning with practical and real-life research experiences on a self-chosen topic. Based on the above, it is an excellent competence development method combining the most notable features of student-centered learning and providing a framework for a series of conferences and tournament rituals. The process, strengths, and challenges of student research activity are explored in more detail below.

2.4. Student Research Conferences as a tool for competency development

Based on the previously mentioned Bologne process, lifelong learning – with the improved competitiveness of the European economy (Lisbon Strategy) – presented higher education with a challenge as the number of students entering higher education increased.

Competence-based education should meet practice requirements oriented toward business and academic life at the beginning of the three stages system (Abrahão & Lucchesi, 2009). When student numbers increase, institutional interest shifts to the output side: Who will employ the graduated students? What kind of skills will they need? How important will "business thinking be"? This shifts the focus and expectations of higher education institutions toward the "student as consumer" conceptualization (George, 2007; Takács-György & Takács, 2012).

Katinienė, Jezerskė, and Vaičiūtė (2021) group several definitions of competence to provide the following overarching definition: "A competence is a set of personal applied abilities, skills and professional knowledge required to choose the necessary operational methods and to perform the activities/functions/work of a particular type." This definition of competence is the mutually reinforcing connection of knowledge and the ability to act (de Justo & Delgado, 2015), which is also a vital characteristic of student research activities.

In addition to the profession-specific competencies required for a given job, the labor market also requires many general competencies (Jackson & Chapman, 2012). This also applies to graduates of higher education in economics. Extracurricular activities can play a particularly significant role in the joint development of these competencies. While preparing student research projects, students develop general skills and deepen their knowledge in a specific field. In the following, we provide examples of the skill groups identified in the literature.

In addition to professional competencies, the abilities Berková and Holečková (2022) define also include information literacy, linguistic literacy (Hungarian or English language usage), and soft competencies: independence, accuracy, reliability, responsibility, cooperation, effective communication, flexibility, decision-making, problem-solving, all of which are developed through the student research activity process.

The student research activity process emphasizes the skills de Justo and Delgado (2015) identify, including the ability to work autonomously; the ability to solve problems; the capacity for analysis and synthesis; the ability to apply knowledge in practical situations; the ability to plan and manage time skills, as students can experience the responsibility of working individually and in groups, the importance of time management in the process supported by deadlines, the challenges, and opportunities of applying theoretical knowledge to problem solving and analysis.

Soft skills developed by student research activities were at the top of the ranking. Dolce, Emanuel, Cisi, and Ghislieri (2020) prove that *"employers often prioritize soft skills over technical ones."* Mainga et al. (2022) investigated graduate students of business courses and determined that *"the four most important employability skills for recruitment to entry-level positions are communication skills, learning skills, positive attitudes, and behaviors and problem-solving skills."* Bogdány, Cserháti, and Raffay-Danyi (2023) also underline communication, critical thinking, time management, initiative, and ability to learn as crucial competencies in their research in the field of HRM. Richards (2012) highlights the leadership for learning as a crucial factor for better learning from a student's viewpoint.

The student-oriented learning process Student Research Societies provide through mentorship support coupled with the opportunity to participate in competitions and conferences builds on all these skills through active leadership by example. The relationship between mentor and student is crucial. According to the Leader-Member Exchange Theory, high-quality leader-member exchanges are built on mutual trust, respect, liking, and reciprocal influence (Horne, du Plessis, & Nkomo, 2016). This high-quality relationship is the basis of competence development during the student research activities.

In today's rapidly changing environment, acquired knowledge quickly becomes outdated, placing even more emphasis on the "soft" competencies that support the proactive renewal of knowledge, adaptation, development, and joint work. Student Research Conferences, as a form of student-centered learning, also ensure the attitude and skills development necessary for improvement and effective work in this environment.

The Student Research Societies movement is a tournament ritual with a long tradition that provides a platform for developing professional and soft skills. Our empirical research further examines this process from the perspective of student participants.

3. Methods

This study used several types of triangulation to ensure the quality of the analysis (Denzin, 1989). On the one hand, we used multiple data sources (data triangulation) because the data originates from subjects with different points of view. In addition to student feedback, we rely heavily on our self-reflections and observations. We have been participating in the organization, evaluation, and jury processes of Institutional Student Research Conferences and National Student Research Conferences for several decades and are well acquainted with the Student Research Society system and its operating principles. The research team composition is diverse in gender (two women and two men), age, university representation (three different universities), and research focus. Several researchers with varying backgrounds and life histories analyzed the data and noted the same phenomenon from multiple perspectives, thereby ensuring researcher triangulation. We used several methods (methodological triangulation) when investigating the problem. In addition to our observations and self-reflections, we also relied on participant feedback.

This study used a mixed-method approach, i.e., a combination of data collection methods that gather quantitative and qualitative data, making it richer, more meaningful, and more useful in answering the research questions (Johnson, Onweghuzie, & Turner, 2007). To ensure methodological triangulation, the mixed methodology used included questionnaires, open-ended questions, and expert observations.

While the questionnaire provides a structured response option for the respondents, the open-ended questions allowed for freely expressed opinions. The authors' extensive experience and expertise made the observations possible, the lessons of which were incorporated into the results iteratively through ongoing discussions (researcher triangulation).

We analyzed the Economics Section of the 35th National Student Research Conference (2021), the largest section of the largest conference of the 2021 conference series. The Economic Section conference was held virtually because of the pandemic. A total of 576 students from 53 higher education institutions presented 563 theses (563 of the 595 papers submitted were presented). The juries awarded 187 prizes in 50 professional categories/sessions. More than 220 lecturers – of which 215 were oral session jury members – participated in evaluating the projects. A total of 1147 written reviews were prepared. Two or three reviewers evaluated each submitted work. Barring any institutionally-related conflict of interest rules, NSRC reviewers (also the jury members of the oral session) are selected from university lecturers according to their professional and SRC experience.

The theses originate from the economics, management sciences, and decision-making sciences, covering a broad range of subjects and methodologies. Table 2 shows the distribution of sessions and theses according to the Scimago Subject areas classification, highlighting some of the more popular subject categories. Slightly less than two-thirds of the research papers emerged from the various

Table 2
Figures from the Economics Section of the 35th National Student Research Conference in relation to the Scimago classifications.

Scimago subject areas	Scimago subject categories	Number of sessions	Number of theses	Session ratio	Theses ratio
Business, Management and Accounting		31	381	62.0%	64.0%
	Marketing	8	98	16.0%	16.5%
	Sustainable development	5	65	10.0%	10.9%
	Organizational Behavior and Human Resources	4	51	8.0%	8.6%
	Strategy and management	4	39	8.0%	6.6%
	Tourism	4	51	8.0%	8.6%
	Others: Accounting, Business economics, Management Information Systems, Supply chain and operations management	6	77	12.0%	12.9%
Decision Sciences		***2***	***17***	***4.0%***	***2.9%***
Economics, Econometrics and Finance		***17***	***197***	***34.0%***	***33.1%***
	Economics, Econometrics	1	10	2.0%	1.7%
	Finance	5	69	10.0%	11.6%
	Other Economics, Econometrics and Finance	11	118	22.0%	19.8%
Total		**50**	**595**	**100.0%**	**100.0%**

Source: own construction

fields of Business, Management, and Accounting subject areas, one-third in the fields of Economics, Econometrics, and Finance, and three percent can be linked to the discipline of Decision Sciences. (There are many multidisciplinary works among the theses.) Looking at the original departmental classifications, most of these arise from marketing and its related fields (8 departments, 98 papers), finance, capital, and financial markets (5 departments, 69 papers), and sustainable development (5 departments, 65 papers); however, over 50 papers were submitted from the fields of human resource management and tourism. Furthermore, over 30 papers focused on

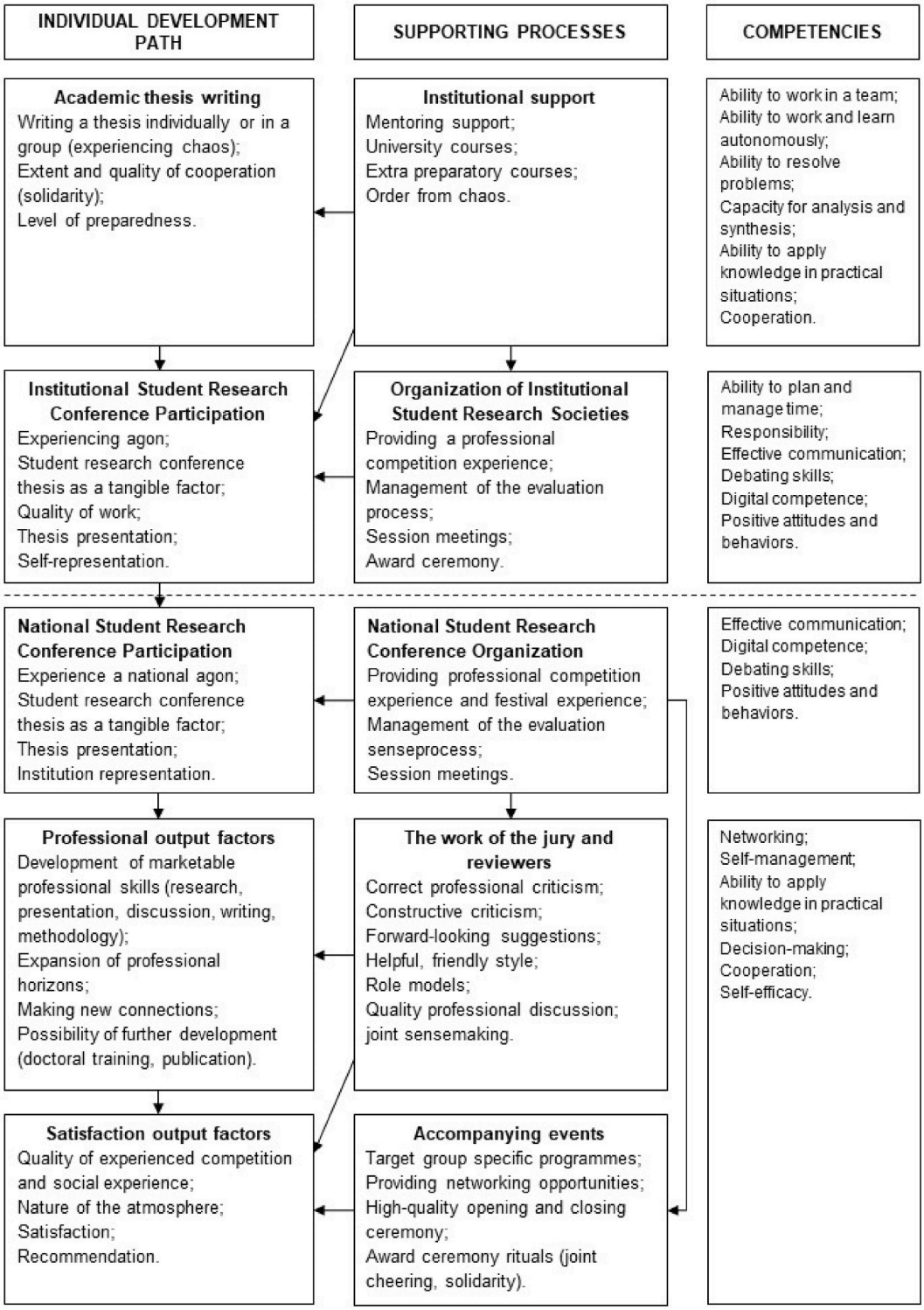

Fig. 2. Student Research Conference professional experience construction process. Source: own construction.

corporate strategy and management, corporate economics, and global economics.

The questionnaire conducted after the Economics Section of the 35th National Student Research Conference yielded the opinions of 246 students (42.6% of the participants) after data cleaning. Most of the respondents (173, 70.3%) wrote their SRC thesis at the bachelor level, 1 (0.4%) at the high school level, and the others (72, 29.3%) during their master's studies. At the time of the NSRC, slightly more than a third of the respondents were studying at the BSc level, the majority (149, 60%) were studying at the MSc level, and 11 (4.5%) had started their PhD studies. As the NSRC is held every two years, papers may have been written two years earlier: the papers nominated in 2021 were selected from among the SRC papers presented at the institutional conferences held in 2019–2020. Of the respondents, 64% (157) said that they were working so developing competencies vital for the labor market was not only important in the longer term but also relevant and topical in their daily lives. The range of respondents illustrates the diversity of the conference, with respondents representing 28 different educational institutions (which sent 98.2% of participants) and 49 different sessions (out of 50). In terms of results, the number of first, second, and third place winners was 37, 33, and 34 respectively, with 45 special prize winners and 97 students who presented papers successfully but did not achieve a place or prize (According to the NSRC rules, one first place can be awarded per session, a maximum of one-third of the presenters can be winners, and the total number of winners and special prize winners cannot exceed half of the number of papers presented. Taking all this into account, the range of respondents covers the NSRC participants well.).

Concerning the student responses to the questionnaire (scores on a scale of 1–5), the expressed feedback in the open questions in the questionnaire and the above triangulations will illustrate how the students experienced conference participation, how they perceived participating, what kind of experience it provided them, and how it contributed to the development of their abilities.

4. Results

The system of the Student Research Conferences is an integrated and complex experiential competency development that uniquely and incrementally builds the skills needed for professional competitiveness.

4.1. Student Research Conference professional experience construction process

As we have noted, the community creates order out of chaos through rituals and expresses its interests, needs, and desires by constructing values while recognizing and morally identifying with itself. Student Research Conferences are also a tournament ritual, allowing participants an intense experience of agon, solidarity, and sensemaking. This creates a learning process that transforms the experience into an inner experience, creating deep-rooted understanding.

Every participant begins the SRC independently, but the journey is far from lonely as the institutions and the NSRC organizers work to fill the process with rich professional and community content.

Fig. 2 presents the incremental process through which the SRCparticipant starts individually (individual development path), the supporting processes that facilitate the journey, and the most salient competencies that can be developed during this process. Of course, competency can be relevant in many stages; thus, the present study lists only the most significant stages. The individual sections are illustrated with participant answers to open-ended questions (what did you like best about the NSRC?) conducted in 2021.

4.1.1. Writing the research thesis

The research thesis-writing phase is about the creative process when the participant prepares the thesis individually or in a group (the ability to work autonomously or in a team). The initially creative but chaotic branching and path-finding are channeled by institutional support (professional help from mentors, participation in traditional and extra-preparatory courses) and event organization (Institutional Student Research Conference), i.e., it creates an institutionalized order out of chaos. This involves a problem-oriented phase (Ability to resolve problems), an extremely thorough literature summary, and a primary research phase, in which the data must be comprehensibly analyzed and synthesized (Capacity for analysis and synthesis). The results must then be put into practice (Ability to apply knowledge in practical situations). Throughout the process, students must cooperate with co-authors and the mentor (Cooperation) and effectively utilize institutional support services, including university courses or Student Research Conference competition preparation courses. Successful students enter the competition with more than one student research thesis by being the authors or co-authors of several theses in the same year, thus deepening their knowledge and skill development.

> "The Institutional and National Student Research Conferences are a great and unique opportunity for young people to delve into a topic of interest to them. I think that writing and presenting the research activity develops very useful skills."

> "The attitude of the organizing institution and the attitude of the mentor are decisive."

4.1.2. Institutional Student Research Conference phase: professional competition experience

Successful participation in the student research activity process entails the creation of a tangible product (Student Research Conference thesis) that depends upon a student's discipline and time management (Ability to plan and manage time). Students must also be able to present submitted work convincingly (Effective communication) and respond appropriately to reviewer criticisms or jury questions. Institutional Student Research Conferences primarily provide a professional and competitive experience in which authors represent themselves. This tournament ritual phase emphasizes the agon character of the competition via the intense dialogues that develop with the jury members. The institution contributes to this event by managing the assessment processes and organizing

departmental meetings. The most successful (placed) can continue their journey at the National Student Research Conference.

National Student Research Conference phase: providing professional competition experience and festival experience.

The hundreds of students from different institutions ensure that the festival atmosphere is higher at the national conference than at the institutional conference.

Review and jury work are decisive at Institutional and National Student Research Conferences, where professional and constructive criticism is expected. Recognized professionals who act as role models for the student participants deliver forward-looking suggestions in a helpful, friendly style. A well-assembled jury guarantees a high-quality professional debate and helps the joint reporting process.

> "The reviewers made useful and forward-looking suggestions for improvement, encouraging the continuation of scientific work."

> "The departmental meeting was held in a good atmosphere, pleasantly while maintaining professional standards. The professional questions, opinions, constructive criticism, and positive thoughts of the jury members have a supportive effect on the work of all of us in the future."

> "… the helpful, friendly, yet professional environment."

> "The criticism, the opportunity to present, the subsequent scientific discourse, which I was able to be a part of."

> "The high-quality presentations that characterized the section, as well as the jury's constructive criticisms, comments, and high level of professionalism."

> "The person of professional excellence, their cheerfulness at the beginning of the classes."

> "The informal, yet forward-looking atmosphere of the class meeting…"

Students who undergo the entire process develop their professional skills (research, presentation, debate, writing, methodology), broaden their professional horizons, open opportunities for building academic careers (doctoral training, publication), and gain new contacts.

> "After the presentation, one of my competitors contacted me because he liked my research results so much. He reassured me that no matter what the outcome of the competition is, my methodology will stand its ground even now on the market and will play a particularly key role in the future."

> "I was able to raise the topic that was important to me to a higher level."

While the Institutional Student Research Conference mainly focuses on individual theses, the National Student Research Conference involves institutions competing against each other. Thus, the National Student Research Conference expands beyond a competition experience and becomes a festival experience – the multi-day event where participants from different institutions and jury members from the included academic fields meet, communicate, and nurture potential collaborations.

The festival experience strengthens solidarity, and the accompanying events provide an opportunity to build relationships. Relationship-building activities target group-specific programs and high-quality opening and closing events. National Student Research Conference results and winners are only announced at the award ceremony at the end of the event, intensifying the experience of cheering and celebrating together.

> "I liked the opening ceremony; it was moving."

> "It's very cool that the organizers invited such a great musician (and one that means a lot to me personally)."

> "I liked the daily preparation of the organizers, the quality of the organization; a big congratulations and congratulations to them!"

Overall, the quality of the social and professional experience and the atmosphere determine student satisfaction with the Student Research Conference process.

> "A wonderful atmosphere was created, there was a lot of exchange of ideas, which builds the further work of each speaker. It gave me a wonderful experience and knowledge!"

> "The environment was very inspiring; I became familiar with many new perspectives."

> "It was a great atmosphere; I definitely want to be a part of it again and again.)"

> "The fact that the National Student Research Conference phenomenon exists at all.)"

Student Research Conferences are decisive, unique experiences for the participants, one in which the tournament ritual offers intensive skill and personal development.

4.2. National Student Research Conference impact and effectiveness

Student opinions indicate that the perception of the conference is extremely positive: based on student feedback, decades of experience have shown that the majority of participants recommend or would recommend the conference to their friends and

acquaintances. Conference participants evaluated the sessions as generally good and the professional atmosphere as supportive. Table 3 summarizes the oral session evaluations (respondents rated their level of agreement with the statements on a scale of 1–5).

Students feel that they have developed several skills in the run-up to the NSRC and that the conference is vital to their future careers. They perceive less immediate improvement in career prospects, but this is also perceived positively (Table 4).

More than half of student respondents (52.8%) considered it likely that their thesis would be published (rating 4 or 5 on a scale of 1–5), 36.5% have applied for a PhD or consider it likely that they will apply, and 43% would like to put their ideas in the SRC into practice. (These possibilities are, of course, strongly influenced by the student research thesis topic.) Table 5 shows the average rating and the standard deviations for the three questions.

Because we interviewed students immediately after they participated in the NSRC, our research does not provide an opportunity to examine longer-term effects. An earlier study by Bugyik, Gér, Király, and Tóbi (2013) investigated students awarded the Pro Scientia Gold Medal for outstanding NSRC and professional achievements (40–45 students per year in all disciplines combined). The cited research followed the life histories of nearly 600 award winners over 25 years by analyzing biographies, questionnaires, and interviews. The results show that around two-thirds of the laureates have remained in academia. The majority continued in some form of academic work after the NSRC and Gold Medal, with 42.86% continuing their scientific research, 40.11% expanding their thesis as a PhD topic, and 16.48% of respondents continuing to work on their topics after graduation. The cited research covers a narrow and prominent group of NSRC participants, not only in economics but in all disciplines. This sample is not the same as the one we have studied, but the results are indicative of the impact SRCs have on motivations and career paths.

In terms of the overall evaluation of the NSRC, our survey results show that most students agree that the SRC is a good initiative. They would recommend it to their fellow students and most would be happy to participate again (Table 6). The proportion of responses with a rating of 4 and 5 to the previous questions is 92.7%, 85.8%, and 88.6%, respectively.

Student feedback communicates a positive overall picture. At the same time, for the event to fulfill its role, it is vital to focus on critical comments and challenges highlighted by the experiences of organizers and mentors, direct student comments, and questionnaire feedback. The following sub-section provides a brief overview of these.

Table 3
Student evaluations of oral sessions (N = 246).

	Mean	Std. Deviation
The atmosphere in the oral session was good.	4.49	0.856
The oral session featured an academic debate.	3.64	1.220
Jury members asked professional, sound, and fair questions.	4.17	1.136
The oral session met a high professional standard.	4.24	1.045
The final result of the panel was in line with my assessment.	3.76	1.201
The oral session was conducted in a forward-looking/supportive professional atmosphere.	4.14	1.150
The oral session was helpful to the further research/economic work of the participants.	4.07	1.153

Source: own construction

Table 4
Perception of skills development and career impacts (N = 246).

	Mean	Std. Deviation
I consider NSRC participation vital for my future career.	4.05	1.189
During the work leading up to the NSRC, I developed several skills that I will use in the future.	4.48	0.832
My NSRC participation will help me improve my career prospects in the years to come.	3.63	1.27

Source: own construction

Table 5
The longer-term impact of SRC according to student opinions (N = 246).

	Mean	Std. Deviation
My NSRC thesis will be the basis for a publication.	3.42	1.434
I am applying for doctoral studies.	2.85	1.517
I will put the idea from my NSRC thesis into practice.	3.11	1.422

Source: own construction

Table 6
Overall assessment of the NSRC based on students' opinions (N = 246).

	Mean	Std. Deviation
The NSRC is a very good initiative and an important part of student life.	4.62	0.729
If I had to enter today, I would be happy to enter the NSRC again.	4.46	0.996
I would gladly recommend that my fellow students enter the NSRC.	4.56	0.854

Source: own construction

4.3. Challenges and opportunities for improving the national Student Research Conference process

A relatively small number of critical comments highlight the challenges and opportunities for improving organization, mainly concerning competition features. The heterogeneity of the papers (in terms of subject and methodology) in the different sessions makes comparability difficult. Students sometimes raise the issue of professional/methodological bias among the referees and indicate comparing papers with varied subjects and methodologies is difficult. Perceptions of the judging/evaluation process (e.g., rigor, judge competence, the supportive nature of the textual evaluation, style, and level of detail) are particularly salient to the perception of the competition. How these factors may be perceived can move student experience in positive and negative directions. Some student feedback on assessments relates to clear facts and measurable characteristics (e.g., timeliness, assessment length). Others are more difficult to measure (professionalism, suggestions, style), but they formulate expectations and recommendations to assessors based on the perceptions of shortcomings and values in talent management. The related challenges and how they can be addressed as prerequisites for a good conference experience are briefly covered in the Discussion and Recommendations/Implications sections.

5. Discussion

Examining the previously reviewed processes (summarized in Fig. 2), we can conclude that participating in student research activities contributes to the development of student competencies in many areas.

- Student research activities help students explore a specific professional (scientific and/or practical professional) area more thoroughly and delve into it. They also permit students to engage in topics that extend beyond university studies and to do so via an interdisciplinary, multi-faceted approach. Choosing a student research thesis topic in economics and management science involves learning and analyzing current economic phenomena and applying novel approaches and methods. It is also popular to create works including the perspectives and approaches of several courses and professional fields, independent of subjects.
- Student research activities develop analytical skills, the ability to formulate questions and ask them, and solve problems. They also help to expand methodological knowledge and methodological tools and test their practical application.
- Multi-author works, as well as presentations and discussions at the conference, develop the ability to cooperate in a group. Similar interests and different abilities can be the basis of multi-author works. The professional and social events of the oral conference also help develop communication and networking skills.
- Entrance to the academic career. University students can experience and test themselves in research and the forms of scientific communication (presentation of results, writing a study, oral presentation), the answers to written criticisms, and the opinions and questions expressed at the conference help to learn about and practice the different forms of scientific communication. Student research activities can be a vital step in preparing for doctoral studies.
- Integrating academic research into corporate practice also shows a gap (Tucker, Waye, & Freeman, 2019). Student research activity is also an opportunity for future practitioners to use the competencies acquired in their future careers to better integrate the latest research results of their profession into their daily work.
- It is a good option for how academic staff can improve and guide an extracurricular co-creation activity as Fossatti et al. (2023) suggested.

In addition to expanding academic knowledge and gaining professional experience, the above competencies are crucial to the labor market. The future competency trends revealed in the literature analysis suggest that the competencies student research activities develop are vital. If we look at the World Economic Forum (2020) The Future of Jobs Report, we can conclude that student research activities support the development of meaningful and necessary skills. The World Economic Forum lists the five most prominent skill groups as critical thinking and analysis, problem-solving, self-management, working with people, management, and the communication of activities. Based on the Future of Jobs Survey 2020, the TOP 15 skills for 2025, student research activities help develop the first five (analytical thinking and innovation, active learning and learning strategy, complex problem solving, critical thinking and analysis, creativity, originality, and initiative), and more (systems analysis and evaluation, persuasion, and negotiation). (Note: additional skills may be associated with these in different science fields, e.g., technological skills in technical sciences.)

Student Research Conferences are both a competition and a conference. The nature of the conferences ensures the existence of positive attitudes and behaviors, a keen sense of community, and an ethical arena for the competition ritual, securing the effective and complex development of competencies recognized by the labor market. Table 7 summarizes the correlations between the competition ritual functions and developed competencies.

In addition to identifiable skills (e.g., analytical skills, collaboration), the particular discipline, sub-discipline, research topic, question, and methodology, influence which skills can be developed. Participants are students in different years, studying in different disciplines, with varied professional backgrounds. Their performance and progress are challenging to compare directly. Also, development potential is influenced by the study field, student personalities and attitudes, mentor interactions, conference judge and referee attitudes, the professional dialogue that develops, and the perceptions of students participating in the processes. These are all vital determinants of effectiveness and could be the subject of future research.

SRC activities and events are a series of rites, a collective academic experience combining competition with conference and festival aspects, resulting in participants attaining a higher level of academic and professional development. The conference character ensures scientific openness and dialogue, while the festival character plays a key role in creating a community experience. During the rituals, students create order out of chaos with the help of a mentor. As Table 7 demonstrates, this organizing force also facilitates the

Table 7
Soft competencies developed by competition rituals in the student research activity process.

Tournament ritual pillars of legitimization	Main motivations	Developed competencies
Solidarity	Social networking Celebration Collective experiences	Ability to work in a team; Cooperation; Networking; Decision-making; Self-management; Self-efficacy; Positive attitudes and behaviors.
Agon	Conflict and cooperation Supervised contest space Activity-focused attention	Creativity; Ability to plan and manage time; Responsibility; Effective communication; Debating skills; Positive attitudes and behaviors.
Sensemaking	A shared understanding of social reality The challenges of being a scientist Validation of quality	Creativity; Ability to plan and manage time; Ability to work and learn autonomously; Ability to resolve problems; Capacity for analysis and synthesis; Decision-making; Ability to apply knowledge in practical situations; Digital competence; Self-efficacy; Positive attitudes and behaviors.

Source: own construction

organized development of competence. However, rites can also entail risks.

Brutus and Bothello (2021) also analyzed the risks associated with tournament ritual functions like solidarity, agon, and sensemaking. The hazard of the solidarity function is exclusion because large amounts of financial and education resources are allocated to a selected small group of students rather than the student body as a whole. The hazard of the agonistic perspective is consequentialism: when outcomes at both the individual and institutional levels become more important than the learning process, the focus shifts to output at the detriment of competency development. Overcommitment may pose a hazard in sensemaking. Students who devote much time and effort to extracurricular activities may become overcommitted to such pursuits at the expense of their compulsory academic duties. Likewise, the competitive aspect of the activity may dominate their learning processes. Such risks can be present in student research activities.

The diversity of topics can scale up to even the entire teaching staff as mentors, so there is more capacity available than the student demand for self-development in this direction. National Student Research Conference financing is arranged at the government level, so there is no exclusion (hazard of solidarity) phenomenon in the financial field.

The competition is packaged as a conference, but relatively small and unannounced prize money ensures that the emphasis remains on learning and development. Although the event contains competition aspects, Student Research Conferences offer many other benefits. For example, independent Hungarian higher education ranking makers have begun to incorporate the Student Research Conference results into their criteria, thus strengthening competition at the institutional level. This strengthens the consequentialism (hazard of agon).

Although student research activities require considerable time, energy, and serious commitment, the risk of overcommitment (hazard of sensemaking) is less than in the process up to the conference. Research work and the surrounding learning process are emphasized, with intrinsic motivation being the main driving force. The competitive nature of the event only appears at the conference following the conclusion of the work. The internal driving force of the Student Research Conference experience is so strong that many participants go on to develop their topic further and are well-positioned in the given subject when seeking employment.

5.1. Challenges in implementing experiential skills development at the Student Research Conference

SRCs are both a competition and a conference. The competitive nature of the conference means that there are certain challenges that the organizers, mentors, contributing teachers, and researchers (judges, jury members) need to be aware of to ensure that the conference experience and experiential skill development can be successfully delivered. Two issues worth highlighting are the challenges arising from session heterogeneity and the quality of judging.

The starting point session classification is the session list announced in the call for submissions, which is further shaped by the number of submissions and the topics submitted. It is crucial, but not always feasible, to strive for homogeneity in session content. Heterogeneous sessions are not a problem at a conference because they provide an opportunity for broader discussions and insights, but they make evaluation in a competition more difficult. The challenge in comparing results is not only the diversity of disciplines but also the diversity of methodologies. Inevitably, there are situations where the jury must select the only first-prize winner from among entries that are all excellent in their field and use different methodologies. This involves a choice of values, both in terms of questioning and methodology. For example, the jury is forced to compare a strong quantitative methodology with a demanding qualitative research

study and not only evaluate but also choose (since there can be only one first-prize winner per session). In this process, communication, written thesis reviews, and a supportive, developmental approach to comments during the discussion at the conference's session meeting are vital to ensure that students – often attending their first scientific professional event – leave with a positive experience.

The professional and methodological diversity of the portfolios of participating papers presents a challenge in organizing the NSRC. Even with the best intentions, the resulting sessions must comprise many credible, recognized, and professionally and methodologically prepared judges experienced in the higher education talent management process. The competitive nature of the competition means that comparisons, in addition to individual assessments, and comparisons of performance should also be ensured. For a conference/competition of more than 500 participants, this means preparing more than a thousand qualitative, peer-reviewed reviews and determining the outcome based on these and presentation and debate evaluations.

The scores must be "realistic," credible, and also comparable in a way that is relevant to the results of other participants. This is based on the prior development and publication of evaluation criteria. The evaluation will only have the desired impact if the stakeholders accept the measurement as credible. The perception of the participating students is crucial to the recognition and credibility of the SRC and, indirectly and in the longer term, to the attractiveness of research careers and the training of young researchers. All involved must perceive the evaluations as justified, fair, and equitable. This is influenced, inter alia, by.

(a) the perceived credibility, professional and human, of the evaluation participants,
(b) the style, thoroughness, and supportive nature of the evaluation,
(c) the perceived consistency of the textual assessment and the score obtained,
(d) the absolute magnitude of the score obtained and its comparison with the perceived performance and achievement of others,
(e) the professional quality and atmosphere of the oral session,
(f) the perceived objectivity and fairness of the competition results (placements, advancement),
(g) additional (oral) explanations, justifications, and discussions (whether by judges, reviewers, mentors, or trainers involved in the process) to the feedback, results, or evaluation.

We have been working for several cycles on the continuous improvement and development of the review process in the Economics Section of the SRC. Our experience has shown that prior information for reviewers, guidelines, professional ethical guidelines, pre-published assessment criteria, prior interpretation of the content of scales and overall scoring categories, communication between assessment stakeholders, sharing and analysis of good and bad practices all reduce problems and improve the quality of assessments and assessment processes. Dialogue is important for the evaluators, the students, and their mentors: Discussing perceived problems, incorporating opinions, and justifying the situation (for example, discussing the trade-offs of the session assignments) has been shown to improve perceptions and the overall image of the event (competition and conference). Attention to these challenges is vital to ensure that the potential of the NSRC can be put into practice, that the rites identified in this research can create a good conference and competition experience, that the conference and competition can be a compelling professional and community experience, and that it encourages continuation.

6. Conclusion

The present study is based on student opinions, perceptions, feedback, and our own expert experience from an SRC. We reviewed the competency development process of a unique conference and competition series, which we interpreted as a student-centered learning alternative and a competition ritual. The included literature sources strongly suggest that Student Research Conferences develop the specific competencies needed in academic life and nurture the soft skills expected in the labor market. Student Research Conferences also play a role in competency development. Student Research Conferences focus on academic and scientific challenges and build on individual interests, topic choice, and participant commitment, all of which the instructor mentors and supports. Student Research Conferences achieve these results by managing the risks presented in the previous chapter. Such risks appear during tournament rituals and should be kept at a moderate level. The Student Research Society movement has attained its current level in Hungary through seventy years of organic development. At the same time, we believe that higher education in other countries can also benefit from this system, first at the institutional level and then at the national level. A good example of institutional adaptation was the cross-border involvement of the higher education institutions of Hungarian minorities in neighboring countries twenty years ago. These institutions had to organize at the institutional level to join the Hungarian Student Research Society system. Two decades of Hungarian (home country) support has motivated participating foreign higher education institutions offering programs in Hungarian to achieve significant conference results, leading to more institutions also assuming national-level organizing tasks within the Student Research Societies movement.

6.1. Implications

This example can also encourage the international community to adapt its key features to the specificities of their own national higher education systems and develop their own practices. Competition rituals are rooted in universal human qualities. Therefore, they can be built upon universally. Based on the Hungarian practice presented, the foundations of the movement need to be built at the micro-level, at individual universities, through the promotion of student research, the cooperation between mentor and student, and university-level competitions and conferences. This could be followed by the dissemination of good practice and institutionalization at a higher level. We encourage everyone to start an initiative within their own institution, in their own field of expertise, initially with

just a few students, which could later be joined by representatives of other disciplines, creating a critical mass within the institution that could give the event a festival character, in addition to bringing together academics and competition.

6.2. Limitations and further research

Our research provides the first comprehensive picture of the wide range of skill development opportunities associated with the NSRC. Further research could explore how skill development impacts students from varied professional backgrounds and skills – based on the specific research, the chosen topic and methodology, working method, collaboration, etc. The effectiveness and efficiency of skills development may vary and be hard to measure objectively, but the perception of participants and their progress in their academic careers may provide feedback. The opinions of students and teachers (mentors, judges) involved in the process can provide meaningful input and can be compared as part of further research. Further research into Student Research Societies and Conferences could involve constructing models based on student perceptions to examine the relationships between several factors of experience and professional development.

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László Koloszár: Conceptualization, Data curation, Investigation, Methodology, Supervision, Visualization, Writing – original draft, Writing – review & editing. **Ágnes Wimmer:** Conceptualization, Data curation, Investigation, Methodology, Supervision, Visualization, Writing – original draft, Writing – review & editing. **Katalin Takácsné György:** Conceptualization, Formal analysis, Investigation, Methodology, Validation, Writing – original draft, Writing – review & editing. **Ariel Mitev:** Conceptualization, Formal analysis, Investigation, Methodology, Validation, Writing – original draft, Writing – review & editing.

Declaration of competing interest

None.

Data availability

Data will be made available on request.

References

Abrahão, M., & Lucchesi, S. (2009). Higher education policies for the XXI Century: The future of emerging countries. *Problems of Education in the 21st Century, 15*, 90–98.

Anand, N., & Watson, M. R. (2004). Tournament rituals in the evolution of fields: The case of the Grammy Awards. *Academy of Management Journal, 47*(1), 59–80.

A magyar tudományos diákköri konferenciák története (1951–2011) [History of the Hungarian Student Research Conferences (1951-2011)]Anderle, Á. (Ed.). *Diáktudós, XXII*, (2011), 1–4. https://otdk.hu/konyvtar/mediatar.

Anderson, L. W., Krathwohl, D. R., Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., et al. (Eds.). (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives (Abridged edition). Longman*.

Bakacsi, G., & Zsidi, V. (2011). Közgazdaságtudományi Szekció. [Section of economics. Diáktudós. In Á. Anderle (Ed.), *Vol. XXII. A magyar tudományos diákköri konferenciák története (1951-2011) [History of the Hungarian Student Research Conferences (1951-2011)]* (pp. 257–276). Budapest: OTDT, 1-4.

Baranyainé Réti, G., & Koósné Török, E. (2006). A fiatal tudós nők az Országos tudományos diákköri Konferenciákon és a Pro Scientia Aranyérmesek körében [young scientists at national students' scientific Conferencies and among the Pro Scientia prize-winners.]. *Magyar Tudomany*, 616–622, 2006/5.

Bell, C. (1992). *Ritual theory, ritual practice*. Oxford University Press.

Berková, K., & Holečková, L. (2022). Attitudes of employers and university students to the requirements for accountants in the Czech Republic. *Journal on Efficiency and Responsibility in Education and Science, 15*(1), 53–62. https://doi.org/10.7160/eriesj.2022.150106

Bogdány, E., Cserháti, G., & Raffay-Danyi, Á. (2023). A proposed methodology for mapping and ranking competencies that HRM graduates need. *International Journal of Management in Education, 21*(2), Article 100789. https://doi.org/10.1016/j.ijme.2023.100789

Brutus, S., & Bothello, J. (2021). Pageantry, prizes, and pedagogy: A "tournament ritual" view on business school case competitions. *The Academy of Management Learning and Education, 20*(4), 596–609. https://doi.org/10.5465/amle.2020.0258

Bugyik, E., Gér, A. L., Király, P., & Tóbi, I. (2013). *Érmes életutak – gyorsjelentés [Medal-winners life paths - research report]*. Budapest: Országos Tudományos Diákköri Tanács. https://otdk.hu/upload/files/7.%20Pro%20Scientia%20Ermes%20eletutak_2013.pdf.

Buzády, Z., Wimmer, A., Csesznak, A., & Szentesi, P. (2022). Exploring flow-promoting management and leadership skills via serious gaming. *Interactive Learning Environments*, 1–15. https://doi.org/10.1080/10494820.2022.2098775

Caillois, R. (2001). *Man, play, and games*. University of Illinois Press.

Carter, J. D., Burke, M. G., & Hughey, A. (2019). The influence of business case study competitions on students' perceptions of learning. *Business and Professional Communication Quarterly, 82*(4), 475–494. https://doi.org/10.1177/2329490619829900

Castillo-Parra, B., Hidalgo-Cajo, B. G., Vásconez-Barrera, M., & Oleas-López, J. (2022). Gamification in higher education: A review of the literature. *World Journal on Educational Technology: Current Issues, 14*(3), 797–816. https://doi.org/10.18844/wjet.v14i3.7341

Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper & Row.

Cziráki, S., & Szendrő, P. (2016). Nézd más szemmel a világot! A sikeres XXXII. Országos Tudományos Diákköri Konferencia. In *2015. [Keep your eye on the word! Successful XXXII. Students' scientific conference, 2015.] magyar tudomány* (pp. 357–363). *2016*/3.

Dean, K. L., Wright, S., & Forray, J. M. (2020). Experiential learning and the moral duty of business schools. *The Academy of Management Learning and Education, 19*(4), 569–583. https://doi.org/10.5465/amle.2018.0335

Denzin, N. K. (1989). *The research act* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.
Dolce, V., Emanuel, F., Cisi, M., & Ghislieri, C. (2020). The soft skills of accounting graduates: Perceptions versus expectations. *Accounting Education, 29*(1), 57–76. https://doi.org/10.1080/09639284.2019.1697937
Driver, T. (1991). *The magic of ritual*. New York: Harper Collins.
Durkheim, E. (1965). *The elementary forms of the religious life*. New York: Free Press.
Dziubaniuk, O., & Nyholm, M. (2021). Constructivist approach in teaching sustainability and business ethics: A case study. *International Journal of Sustainability in Higher Education, 22*(1), 177–197. https://doi.org/10.1108/IJSHE-02-2020-0081
Farashahi, M., & Tajeddin, M. (2018). Effectiveness of teaching methods in business education: A comparison study on the learning outcomes of lectures, case studies and simulations. *International Journal of Management in Education, 16*(1), 131–142. https://doi.org/10.1016/j.ijme.2018.01.003
Fossatti, P., Chiappetta Jabbour, C. J., Ratten, V., Pereira, G. M., Borchardt, M., Milan, G. S., et al. (2023). What do (should) we know to leverage students' employability and entrepreneurship? A systematic guide to researchers and managers. *International Journal of Management in Education, 21*(2), Article 100788. https://doi.org/10.1016/j.ijme.2023.100788
George, D. (2007). Market overreach: The student as customer. *The Journal of Socio-Economics, 36*, 965–977.
Hinz, J., Stephens, J. P., & Van Oosten, E. B. (2022). Toward a pedagogy of connection: A critical view of being relational in listening. *Management Learning, 53*(1), 76–97. https://doi.org/10.1177/13505076211047506
Horne, A. L., du Plessis, Y., & Nkomo, S. (2016). Role of department heads in academic development: A leader–member exchange and organizational resource perspective. *Educational Management Administration & Leadership, 44*(6), 1021–1041. https://doi.org/10.1177/1741143215587305
Iyengar, S. S., & Lepper, M. R. (1999). Rethinking the value of choice: A cultural perspective on intrinsic motivation. *Journal of Personality and Social Psychology, 76*(3), 349–366. https://doi.org/10.1037/0022-3514.76.3.349
Jackson, D., & Chapman, E. (2012). Empirically derived competency profiles for Australian business graduates and their implications for industry and business schools. *International Journal of Management in Education, 10*(2), 112–128. https://doi.org/10.1016/j.ijme.2012.04.002
Johnson, B., Onweghuzie, A., & Turner, L. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research, 1*(2), 112–133. https://doi.org/10.1177/1558689806298224
de Justo, E., & Delgado, A. (2015). Change to competence-based education in structural engineering. *Journal of Professional Issues in Engineering Education and Practice, 141*(3), Article 05014005. https://doi.org/10.1061/(ASCE)EI.1943-5541.0000215
Justo, E., Delgado Trujillo, A., Vázquez-Boza, M., & Branda, L. (2016). Implementation of problem-based learning in structural engineering: A case study. *International Journal of Engineering Education, 32*, 2556–2568.
Katinienė, A., Jezerskė, Ž., & Vaičiūtė, K. (2021). Research on competencies of logistics specialists in transport organisations. *Journal of Business Economics and Management, 22*(5), 1308–1322. https://doi.org/10.3846/jbem.2021.15299
Kauffman, S. A. (1995). *At Home in the Universe: The search for the laws of self-organization and complexity*. Harmondsworth: Penguin.
Kayes, D. C. (2002). Experiential learning and its critics: Preserving the role of experience in management learning and education. *The Academy of Management Learning and Education, 1*, 137–149. https://doi.org/10.5465/AMLE.2002.8509336
Kent, J., Tilton, J., Lewis, M., & Pipes, J. (2023). Client-based student consulting: Insights for course design and delivery. *International Journal of Management in Education, 21*(3), Article 100854. https://doi.org/10.1016/j.ijme.2023.100854
Lee, K.-W. (2020). Learning management knowledge: Integrating learning cycle theory and knowledge types perspective. *The Academy of Management Learning and Education, 19*(2), 192–222. https://doi.org/10.5465/amle.2016.0029
Mainga, W., Murphy-Braynen, M. B., Moxey, R., & Quddus, S. A. (2022). Graduate employability of business students. *Administrative Sciences, 12*(3). https://doi.org/10.3390/admsci12030072. Article 3.
Moore, S. F., & Meyerhoff, B. G. (1977). Introduction: Secular ritual: Forms and meanings. In S. F. Moore, & B. G. Meyerhoff (Eds.), *Secular ritual*. Amsterdam: Van Gorcum/Assen.
Morrison, K. (2008). Educational philosophy and the challenge of complexity theory. *Educational Philosophy and Theory, 40*(1), 19–34. https://doi.org/10.1111/j.1469-5812.2007.00394.x
Newton, P. M., Da Silva, A., & Peters, L. G. (2020). A pragmatic master list of action verbs for Bloom's taxonomy. *Frontiers in Education, 5*. https://doi.org/10.3389/feduc.2020.00107
Nkhoma, M. Z., Lam, T. K., Sriratanaviriyakul, N., Richardson, J., Kam, B., & Lau, K. H. (2017). Unpacking the revised Bloom's taxonomy: Developing case-based learning activities. *Education + Training, 59*(3), 250–264. https://doi.org/10.1108/ET-03-2016-0061
Pons-Valladares, O., Hosseini, S. M. A., & Franquesa, J. (2022). Innovative approach to assist architecture teachers in choosing practical sessions. *Sustainability, 14*(12), 70–81. https://doi.org/10.3390/su14127081
Ramsey, C. (2014). Management learning: A scholarship of practice centred on attention? *Management Learning, 45*(1), 6–20. https://doi.org/10.1177/1350507612473563
Richards, D. (2012). Leadership for learning in higher education: The student perspective. *Educational Management Administration & Leadership, 40*(1), 84–108. https://doi.org/10.1177/1741143211420617
Schechner, R. (1994). Ritual and performance. *Companion encyclopedia of anthropology*, 613–647.
Shabatura, J. (2022). *July 26. Using Bloom's taxonomy to write effective learning outcomes | teaching innovation and pedagogical support*. https://tips.uark.edu/using-blooms-taxonomy/.
Spanellis, A., Pyrko, I., & Dörfler, V. (2022). Gamifying situated learning in organisations. *Management Learning, 53*(3), 525–546. https://doi.org/10.1177/13505076211038812
Stacey, R. D., Griffin, D., & Shaw, P. (2000). *Complexity and Management: Fad or radical challenge to systems thinking*. London: Routledge.
Takács-György, K., & Takács, I. (2012). Students' research societies as tools of talent management. *Problems of Education in the 21st Century*, (42), 115–124.
Takács-György, K., & Takács, I. (2018). Talent management in higher education – a case study from Hungary. *International Journal of Contemporary Management, 16*(3), 157–188. https://doi.org/10.4467/24498939IJCM.17.027.7547
Tucker, B. P., Waye, V., & Freeman, S. (2019). The use and usefulness of academic research: An EMBA perspective. *International Journal of Management in Education, 17*(3), Article 100314. https://doi.org/10.1016/j.ijme.2019.100314
Venter, J., Coetzee, S. A., & Schmulian, A. (2022). Developing accounting students' team innovation through assessment. *International Journal of Management in Education, 20*(3), Article 100673. https://doi.org/10.1016/j.ijme.2022.100673
World Economic Forum. (2020). *The future of jobs report*. https://www3.weforum.org/docs/WEF_Future_of_Jobs_2020.pdf.
Zhu, C., & Engels, N. (2014). Organizational culture and instructional innovations in higher education: Perceptions and reactions of teachers and students. *Educational Management Administration & Leadership, 42*(1), 136–158. https://doi.org/10.1177/1741143213499253