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BRIDGING THE GAP: STRUCTURED AND SUSTAINABLE MENTORSHIP MODELS FOR ENHANCING PARTICIPANT PERFORMANCE IN COMPETITION ENVIRONMENTS

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Abstract

This study was conducted to examine structured and sustainable mentorship models in enhancing participant performance within competitive environments. Competitive environments are no longer merely understood as arenas to achieve victory, but also as learning platforms that demand participants possess critical thinking skills, strategy, teamwork, communication, adaptability, and mental readiness. This research employs a systematic literature review method on 10 peer-reviewed journal articles published during the 2016–2026 period. The analysed literature focuses on mentorship, structured mentorship, sustainable mentorship, participant performance, and competitive environments. The findings indicate that relevant mentorship models in competitive environments include technology-enabled mentorship, case competition mentorship, near-peer mentorship, student-led mentorship, structured competence-based mentorship, business plan competition mentorship, as well as project- and team-based mentoring. The findings also reveal that mentorship implementation still faces challenges such as time constraints, mentor-mentee mismatch, weak program structures, digital communication barriers, and suboptimal monitoring and evaluation. This study concludes that sustainable mentorship needs to be designed through clear objectives, precise mentor-mentee matching, structured mentoring agendas, technology utilization, performance evaluation, and post-competition reflection. Thus, mentorship not only supports the achievement of competitive outcomes but also strengthens participants' capacity, autonomy, and long-term learning

Keywords: *Please Provide 3-5 Words Of Keywords Separated By Comas*

INTRODUCTION

The competitive environment in various fields is currently experiencing significant changes, which can be observed as a shift from competitions being merely simple challenges to requiring critical problem-solving, where participants are demanded to utilize creativity to win (Nur Hendrasto et al., 2025). Simple examples can be found across education, entrepreneurship, innovation, science, technology, sports, and services. These changes are accompanied by increasing demands on participants' competence, performance, adaptability, and competitiveness. Competitions are no longer solely understood as arenas to achieve victory, but also as experiential-based learning spaces that can shape technical skills, critical thinking abilities, self-confidence, teamwork, and readiness to face real-world challenges.

In the context of higher education and entrepreneurship, for instance, competitions have proven to play a role in enhancing students' entrepreneurial competencies, strengthening practical experience, and encouraging the development of innovative ideas relevant to the needs of the professional world and society (Konak et al., 2025; Wang et al., 2022). However, competition participants often face various challenges during the preparation and execution phases, such as limited experience, psychological pressure, a lack of strategic direction, skill gaps among team members, limited access to competent mentors, and the absence of a structured and sustainable mentoring system. In the context of team performance, the quality of the relationship between mentors and participants including trust, communication, engagement, and emotional support—is a crucial factor that can influence training effectiveness, competition readiness, and performance outcomes (Katrrien Fransen, 2022; Mckenzie, 2022).

Therefore, structured and sustainable mentorship becomes an essential need to bridge the gap between participants' potential and competition demands, while simultaneously ensuring that the competition process yields long-term learning rather than just momentary achievements. As a response to these challenges, mentorship programs have emerged as a strategic approach to support participants in improving their readiness, performance, and continuous development. Mentorship in the context of competition does not only serve as a process of providing technical direction but also functions as a mentoring mechanism that helps participants understand competition standards, formulate strategies, manage pressure, rectify weaknesses, as well as build self-confidence and facilitate learning reflection. In an in-depth interview, a competition mentor for the Indonesian Contact Center stated that the mentoring activities conducted include analyzing and mapping needs, creating a comprehensive mentoring agenda, and providing reports on the participants' mentoring outcomes. Another example is in entrepreneurship competitions; student involvement in competitive activities has been proven to correlate with fostering an independent entrepreneurial spirit from an early age, exploring potential, building strategic collaborations, and creating businesses that yield a positive impact on the surrounding community ecosystem (Nur Hendrasto et al., 2025). Another figure revealed that the limited number of certified coaches and the suboptimal application of sports science in training programs represent main obstacles in preparing athletes for competitions (Putra et al., 2026). Therefore, structured mentorship is required so that the mentoring process does not operate spontaneously or rely solely on the mentor's personal experience, but rather possesses clear objectives, a planned process, feedback mechanisms, and continuous evaluation to ensure that participants are not only oriented toward competition outcomes but also toward long-term competency growth.

Mentorship practices in competitive environments still exhibit considerable variation, whether in terms of the form of mentoring, the intensity of the mentor-mentee relationship, or program evaluation mechanisms. In some contexts, mentorship has been developed through formal programs that have specific goals, structures, schedules, and monitoring processes. However, in many competition practices, mentoring still occurs informally, spontaneously, and without a clear framework. An over-reliance on informal mentorship can lead to several issues, such as unequal access to mentoring, varying qualities of guidance among mentors, a lack of documentation of the learning process, and the difficulty of assessing whether mentorship truly contributes to improving participant performance. Wu & Olagunju (2024) emphasize the importance of integrating formal and informal mentorship to strengthen participants' learning experiences, while Den & Gulseren (2022) indicate that the success of a mentorship program is highly influenced by mentor-mentee compatibility based on the matching process and individual characteristics. In line with this, the implementation of a structured mentorship program requires an efficient monitoring and evaluation system to ensure that program objectives are met and stakeholder satisfaction can be maintained (Tamale & Atuhairwe, 2024). Consequently, in the context of competitions, mentorship needs to be developed as a mentoring system that is oriented not only toward final competition results but also toward the learning process, capacity building, performance sustainability, and participant regeneration.

Mentorship models in competitions must not merely be temporary, but rather structured, measurable, inclusive, and sustainable. A study by Xie et al. (2021) on engineering competition teams showed that mentor actions in assisting the team encompass nine crucial aspects, such as building relationships, developing ways of thinking, engaging in the design process, maintaining team focus, empathizing, monitoring team dynamics, providing support, supplying information, and giving career advice. Furthermore, research by Lee et al. (2025) in the context of inter-school STEM competitions demonstrated that the matching or mismatching process between mentors and mentees can affect identity formation, expectations, communication, and team learning. This indicates that mentorship in competitions requires a more systematic design, starting from goal setting, mentor selection, matching participant needs, scheduling mentoring sessions, to evaluating outcomes. Therefore, this article aims to examine relevant mentorship models in the context of competitions, identify key challenges in the implementation of structured mentorship, and formulate best practices for building an effective and sustainable mentorship system based on a systematic literature review of 10 peer-reviewed journal articles published during the 2016–2026 period

CONCEPTUAL FRAMEWORK

Mentorship

The facilitative learning theory proposed by Rogers (1983) serves as the foundation of this research, as its approach emphasizes student-centered learning. Within the mentoring concept, a personal relationship is forged between the mentor as the learning facilitator and the mentee as the learner. Mentors must create a psychologically safe environment so that mentees, upon receiving instruction, feel comfortable and open enough to express ideas

and experiences, which enables them to work on personal development (McKenzie, 2021). Structured mentorship and formal mentorship are closely interrelated terms. Both describe a type of mentorship wherein the organization or competition committee assigns a formal mentor to participants or novice competitors (Chavda, Mehta, & Patel, 2021). The matching process between mentor and mentee is conducted by observing individual characteristics and processes (Anisah et al., 2021; Indra, 2016). Structured mentorship in competitions is characterized by a systematic approach to learning, focusing on clear objectives (competition standards), specific content scope (preparation strategies), and an explicit philosophy (Chiang & Birtch, 2023; Hairon, 2020). Structured mentorship differs from informal mentorship as it is planned for a specific timeframe (throughout the competition duration), focuses on completing specific tasks (competition preparation), and features a clear feedback framework (Jackevicius et al., 2014). Furthermore, structured mentorship in competitions is designed based on the overarching goals of the competition with a clear program vision, structure, and action plan (Treasure, 2022). This program possesses a clear monitoring and evaluation framework to track preparation progress and competition outcomes, while the roles, responsibilities, as well as the do's and don'ts for both mentors and mentees are clearly defined within the implementation framework. Mentors are tasked with conducting needs analyses, creating comprehensive mentoring agendas, and providing outcome reports (such as in the Indonesian Contact Center competition), whereas mentees actively set goals, communicate their needs, and engage in learning reflections.

Similar to other forms of mentorship, structured mentorship in competitions has generated significant value for mentors, participants, and the organizing committee as a whole (Fornari et al., 2014). It serves as a model for professional behavior, success, empowerment, support, and identity development for competitors (Babarinde et al., 2021). Structured mentorship enhances technical skills, self-confidence, teamwork, and participant retention in subsequent competitions, while simultaneously equipping protégés with the confidence, skills, and knowledge to excel in the competition (Tenorio-Lopes, 2023). For instance, Xie & Kogut (2021) state that domain-focused mentors must possess several crucial aspects, namely relationship building, cognitive development, empathy, and monitoring team dynamics. Meanwhile, Chavda et al. (2021) observe that mentor-mentee compatibility will undoubtedly influence identity formation, expectations, communication, and team learning. Therefore, a well-organized structured mentorship program is essential for participant development and competition sustainability.

Structured Mentorship in Competition Environments

Structured mentorship in a competitive environment can be understood as a mentoring process that is formally and systematically designed, and oriented toward achieving participant performance in competitive situations. Kinunda et al. (2025) describe structured mentorship as a form of formal mentoring involving mentor assignment, mentor-mentee matching, clear learning objectives, specific material scope, as well as planned feedback and evaluation frameworks (Den & Gulseren, 2022; Hairon, 2020; Kinunda et al., 2025). This concept aligns with Nuis et al. (2023), who assert that the effectiveness of mentorship is difficult to measure without clear concepts, objectives, and measurement indicators. Therefore, in a competitive environment, structured mentorship functions not only as a guidance relationship but also as a performance development strategy that directs participants toward technical readiness, mental preparedness, teamwork capabilities, and the achievement of measurable competitive targets.

In the context of competitions, structured mentorship is crucial because participants are required to think analytically, formulate strategies, argue effectively, make quick decisions, and deliver their best performance under pressure. A study by Stoller (2024) on case competition teams shows that "mentor hours" and "effort invested as a team" are vital variables associated with competition rankings, indicating that mentor guidance can enhance the quality of analysis, presentations, Q&A sessions, and team coordination. These findings are reinforced by Joo & Cruz (2023), who indicate that formal mentoring is related to leadership development, as well as Grocutt et al. (2020), who emphasize that mentoring can serve as a means of leadership development when directed through clear learning objectives and processes. Thus, structured mentorship in a competitive environment must be directed toward actual performance needs, such as simulation exercises, regular feedback, strategy formulation, role distribution, and practice result evaluations.

The success of structured mentorship in a competitive environment is also heavily influenced by the quality of the mentor-mentee matching. Deng, Gulseren, and Turner (2022) explain that the success of a formal mentorship program is influenced by two main aspects: the matching process and individual characteristics, such as experience, values, interests, goals, personality, and the backgrounds of both the mentor and mentee. In a competitive context, this matching becomes increasingly vital as every participant or team has different needs, such as requirements in technical aspects, communication, creativity, leadership, strategy, or psychological resilience (Kinunda, Kamugisha, & Kilugwe, 2025; Bedinghaus & Hillman, 2024; Diggs-Andrews, Mayer, & Riggs, 2021). Therefore,

mentors should not be selected at random; rather, they must be tailored to the demands of the competition and the participants' weaknesses so that the mentoring process can yield more relevant and targeted performance improvements. Structured mentorship in competitive environments also needs to address the participants' psychological and social aspects, not just the technical ones. In a study on mentoring in sports, Jovanova-Mitkovska et al. (2025) emphasize that mentorship plays a role in enhancing athlete performance while shaping discipline, values, responsibility, and mental readiness. This aligns with Mallett & Bercia (2026), who view high-performance sports coaching as a form of both formal and informal mentoring, as well as Haugan et al. (2021), who demonstrate that mentor programs for coaches can affect the quality of communication in coach-athlete relationships. Consequently, in a competitive environment, structured mentorship must be designed not only to increase the chances of winning but also to build self-confidence, the ability to handle pressure, team collaboration, competition ethics, and reflection on the participants' learning processes. Based on these descriptions, structured mentorship in a competitive environment can be positioned as a sustainable mentoring model that integrates preparation, practice, guidance, feedback, evaluation, and participant capacity building. Referring to the baseline journals, an effective mentorship program requires clear objectives, mentor training, appropriate matching, organizational support, time allocation, voluntary engagement, mentor compensation, as well as consistent monitoring and evaluation (Nowell, n.d.; Trejo et al., 2022). In the context of competitions, these elements need to be directed toward specific performance indicators, such as the quality of ideas, accuracy of strategy, strength of arguments, presentation readiness, teamwork effectiveness, adaptability to pressure, and competition results (Stoller, 2024; Joo & Cruz, 2024; Nuis, Segers, & Beausaert, 2023). Thus, structured mentorship serves not only as a short-term guidance mechanism leading up to a competition but also as a continuous participant development model to enhance performance in academic, professional, and competitive environments.

Research Questions

This study begins by examining the development of research on mentorship, structured mentorship, and sustainable mentorship across various competitive contexts, whether in academic, professional, or performance-based competition environments. Referring to the baseline journal, the formulation of research questions in a systematic literature review is conducted after researchers review the development of the literature, extract information from relevant articles, and connect preliminary findings with the research problems to be addressed. In the baseline journal, the research questions are directed at identifying mentorship models, implementation challenges, and best practices for building effective and sustainable mentorship. This pattern is relevant to this study because mentorship in a competitive environment also requires clarity regarding models, implementation processes, performance indicators, and sustainability mechanisms to deliver a tangible impact on competition participants.

The selection of literature in this study also considers global developments since 2016, as that year marked a crucial juncture in the global education development agenda through the adoption of the Sustainable Development Goals (SDGs). The baseline journal utilizes 2016 as the foundation for literature selection because it coincides with the adoption of the SDGs, particularly Goal 4, which emphasizes inclusive and equitable quality education and lifelong learning opportunities. In the United Nations' agenda, SDG 4 is formulated to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Thus, research on sustainable mentorship in competitive environments holds relevance to SDG 4, as mentorship can be understood as a strategy for capacity building, enhancing learning quality, equalizing access to guidance, and strengthening participants' skills to enable sustainable growth (Adipat & Chotikapanich, 2022).

In the context of a competitive environment, the connection to SDG 4 is evident in how mentorship can support participants in attaining more targeted, equitable, and continuous learning. Competitions do not merely demand participants to produce achievements or victories but also drive the learning process through the reinforcement of analytical skills, problem-solving, teamwork, communication, leadership, and adaptability to pressure (Adeleke et al., 2025). UNESCO also asserts that SDG 4 is a commitment to ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all. Therefore, sustainable mentorship in a competitive environment can be positioned as a lifelong learning support mechanism, as participants gain experience, feedback, reflection, and skill development that do not cease after a single competition but extend to their future academic and professional readiness. Consequently, the research questions in this study are formulated to explore suitable mentorship models, factors influencing their implementation, and best practices that can enhance participant performance in competitive environments while simultaneously supporting the principles of

quality and sustainable learning as emphasized in SDG 4.

Based on the preliminary review of the literature and alignment with the research focus, the research questions utilized in this systematic literature review are formulated as follows:

RQ1. What mentorship models can be implemented in a competitive environment to enhance participant performance?

RQ2. What are the primary factors and challenges influencing the implementation of sustainable mentorship models in a competitive environment?

RQ3. What are the best practices in developing sustainable mentorship models that can enhance participant performance in a competitive environment?

METHOD

Inclusion and Exclusion Criteria

Based on the formulated research questions, this study establishes a number of Inclusion and exclusion criteria were established to guide the article selection process. These criteria are designed to ensure that the selected articles are highly relevant to the focus of the systematic literature review, specifically in examining sustainable mentorship models, mentorship implementation challenges, and best practices for enhancing participant performance in competitive environments. Furthermore, these criteria assist the researchers in filtering articles that directly address mentoring, structured mentorship, sustainable mentorship, participant development, and performance enhancement within the context of competitions, such as academic, STEM, entrepreneurship, leadership, innovation, and sports competitions, as well as team-based business competitive environments.

Tabel 1
Inclusion and Exclusion Criteria

Inclusion Criteria (IC)	Exclusion Criteria (EC)
IC1. Articles related to mentoring, mentorship, structured mentoring, formal mentoring, or sustainable mentorship applied within a competitive environment.	EC1. Articles not related to mentoring, mentorship, structured mentoring, formal mentoring, or sustainable mentorship in a competitive environment.
IC2. Articles discussing mentorship models, mentoring processes, mentoring practices, mentoring challenges, or best practices for enhancing participant success.	EC2. Articles that do not discuss mentorship models, mentoring processes, mentoring challenges, or best practices related to participant success.
IC3. Articles focusing on competitive or performance-based contexts, such as academic competitions, STEM competitions, entrepreneurship competitions, innovation competitions, leadership competitions, sports competitions, or team-based competitive environments.	EC3. Articles solely focusing on general education, vocational training, supervision, coaching, or counseling without a clear relevance to competitive or performance-based environments.
IC4. Articles containing empirical research, systematic reviews, scoping reviews, or peer-reviewed conceptual studies that provide relevant evidence regarding mentoring and participant performance.	EC4. Articles lacking empirical research, systematic review evidence, or clear conceptual contributions related to mentoring.
IC5. Articles published in peer-reviewed journals between 2016 and 2026.	EC5. Articles published prior to 2016.
IC6. Articles written in English or Indonesian that provide adequate methodological or conceptual information for analysis.	EC6. Articles not written in English or Indonesian, inaccessible in full text, or lacking sufficient information for review.

Search Approach

Based on the research needs, Google Scholar was selected as the primary database to search for literature relevant to the topic of sustainable mentorship models in competitive environments. Google Scholar was utilized because it provides broad access to peer-reviewed journal articles, systematic literature reviews, scoping reviews, and empirical studies related to mentoring, mentorship, structured mentorship, sustainable mentorship, participant performance, and competitive environments. The literature search was conducted systematically by employing Boolean operators "AND" and "OR" to connect various keywords corresponding to the research focus. Several keyword combinations used in the search process included: "mentorship" AND "competition environments",

"structured mentorship" AND "participant performance", "sustainable mentorship" AND "competition", "mentoring model" AND "competition", ("formal mentoring" OR "structured mentoring") AND "performance improvement", "mentoring" AND "entrepreneurship competition", as well as "mentor–mentee relationship" AND "competition". Additionally, the terms "mentorship" and "mentoring" were used interchangeably to retrieve relevant literature. In the initial search phase, several articles relevant to these keywords were downloaded and screened based on their titles, abstracts, keywords, and alignment with the research questions. Articles not directly related to mentorship, mentorship models, mentorship challenges, best practices, or participant performance enhancement in competitive environments were excluded from the selection process. Subsequently, the articles that passed the initial phase were examined more thoroughly through a full-text review to ensure their compliance with the inclusion and exclusion criteria. From the total articles obtained in the initial phase, only 10 peer-reviewed articles published between 2016 and 2026 met the inclusion criteria utilized in this systematic literature review. The list of authors and reviewed articles will be presented in the subsequent table.

Table 2
List of Authors of Reviewed Articles

1	(Choudhary et al., 2024)	Enhancing Mentorship through Technology: A Comprehensive Review of Current Practices and Future Directions
2	(Stoller, 2024)	Mentorship Methods for Successful Case Competition Teams
3	(Induru et al., 2026)	Be a buddy: implementation and trainee perspectives on a near-peer mentorship
4	(Damnjanovic et al., 2020)	Mentoring development at student international business case competitions
5	(Putri Justine, 2025)	Community Organizing for Student Capacity Building in Business Case Competition: The Liaison Officer's Role in Facilitating Mentoring and Participation
6	(Dolenc et al., 2016)	Hands Off: Mentoring a Student-Led Robotics Team
7	(Harbishettar et al., 2025)	Building competence in systematic reviews and meta-analyses through Structured mentorship: An IPS Karnataka chapter initiative
8	(Saripah et al., 2022)	Mentoring Model of Business Plan Competition Program in Improving Social Entrepreneuship
9	(Raharti et al., 2018)	The Identification of Factors of Mentoring In the Context of Science Project Competition
10	(Pluzhnikova & Erofeeva, 2026)	Diversity of Mentoring Practices in the Training of Highly Qualified Specialists

RESULT AND DISCUSSION

This section presents the primary findings obtained from the systematic literature review of the selected articles discussing mentorship in competitive environments. The findings are structured based on the previously formulated research questions, namely relevant mentorship models in competitive environments, the primary challenges in the implementation of structured and sustainable mentorship, and the best practices that can be utilized to enhance participant performance. In general, the reviewed literature indicates that mentorship in competitions serves not only as a process for providing technical direction but also as a participant development mechanism through strategic, emotional, reflective, digital, collaborative, and performance-based support The results section presents the main findings of the study. It shows the final data, including the results of hypothesis testing, without explaining the full analysis process. The results can be shown in tables or graphs to make them easier to understand. The discussion section explains the meaning of the findings. It answers the research questions, interprets the results, connects the findings with existing knowledge, and may help develop new theories or improve existing ones.

Mentorship Models Applicable in Competitive Environments

Tabel 3
Mentorship Models Used in Competitive Environments

No	Key Findings	Authors
1	Technology-enabled mentorship atau digital mentorship	Choudhary et al. (2024)
2	Case competition mentorship model	Stoller (2024); Damnjanovic et al. (2020); Justine (2025)
3	Near-peer mentorship model	Induru et al. (2026); Anderson et al. (2015)
4	Student-led or hands-off mentorship model	Dolenc (n.d.)
5	Structured mentorship for competence building	Harbishettar et al. (2025)
6	Business plan competition mentorship model	Saripah et al. (2022)
7	Science project competition mentorship factors	Raharti (n.d.)
8	Diverse mentoring practices for highly qualified specialists	Pluzhnikova and Erofeeva (n.d.)

Technology-Enabled Mentorship or Digital Mentorship

Technology-enabled mentorship is one of the emerging mentorship models in the literature because it can expand access, flexibility, communication, and personalization in the mentoring process. Choudhary et al. (2024) explain that technology has transformed mentorship practices through e-mentoring, AI-supported mentoring, digital communication, and broader mentor–mentee interaction. In the context of competitive environments, this model is relevant because competition participants often face time limitations, geographical distance, and the need for rapid feedback during preparation. Digital mentorship enables mentors to review drafts, provide feedback on presentations, monitor project progress, and maintain communication continuity even without face-to-face meetings. However, the effectiveness of this model still requires digital readiness, clear communication rules, structured mentoring schedules, and documentation systems so that technology does not merely function as a communication tool but also supports measurable participant performance development.

Case Competition Mentorship Model

Case competition mentorship is highly relevant to this study because it directly relates to mentoring participants in case-based competitions. Damnjanovic et al (2020) found that mentoring in student international business case competitions creates knowledge flow between mentors and students during the preparation process, while also supporting the development of skills, knowledge, and leadership potential. Stoller (2024) also emphasizes that mentorship in case competitions helps participants understand the case, develop analytical structures, formulate recommendations, and improve presentation readiness. In addition, Justine (2025) shows that the liaison officer plays an important role in bridging communication between participants, mentors, and competition stakeholders. Thus, case competition mentorship does not only focus on solving cases, but also strengthens strategic thinking, teamwork, communication readiness, and mentoring coordination that supports participant performance.

Near-Peer Mentorship Model

Near-peer mentorship is a relevant model for building sustainable mentorship in competitive environments because it involves mentors whose experiences are relatively close to those of the mentees. Induru et al. (2026) show that near-peer mentorship provides an additional layer of support for participants and that mentors at a closer level of experience are often an underutilized source of guidance. In competition contexts, alumni or former participants can serve as near-peer mentors because they understand the competition process, technical challenges, assessment criteria, preparation strategies, and pressures faced by participants. This model also supports psychological safety because mentees tend to feel more comfortable asking questions to mentors who have experienced similar situations. Therefore, near-peer mentorship can strengthen participant performance while sustaining the regeneration of knowledge and competition experience from one cycle to the next.

Structured Competence-Based Mentorship

Structured competence-based mentorship focuses on developing specific competencies through planned, gradual, and measurable mentoring activities. Harbishettar et al. (2025) examined structured mentorship for

building competence in systematic reviews and meta-analyses through a program that included peer-based learning, interactive learning, regular online seminars, regular meetings, expert guidance, the use of PRISMA and Cochrane Handbook guidelines, and support from experienced faculty mentors. Although the study was not conducted directly in a competition context, this model is relevant to competitive environments because many competitions require specific skills, such as research ability, analytical thinking, proposal writing, pitching, robotics design, business modelling, and problem solving. Therefore, structured competence-based mentorship indicates that mentoring in competitions should not be spontaneous, but should be designed with clear goals, learning stages, mentor responsibilities, practical exercises, regular feedback, and measurable outcome evaluation.

Business Plan Competition Mentorship Model

Business plan competition mentorship is a mentoring model that focuses on developing business ideas, social entrepreneurship concepts, and the quality of competition outputs. Saripah et al. (2022) discuss a mentoring model in a business plan competition program aimed at improving social entrepreneurship, showing that mentoring can help participants strengthen their entrepreneurial understanding, develop business ideas, and improve the quality of competition outcomes. In competitive environments, this model confirms that mentorship should be adapted to the type of competition being followed. In business plan competitions, mentors need to provide guidance on market analysis, business model development, social value, financial planning, and pitch presentation. Thus, the effectiveness of mentorship depends strongly on the alignment between mentor expertise and participant needs, as mentors with knowledge of entrepreneurship and business planning can help participants produce stronger ideas and become better prepared to present them before judges.

Institutional and Diversified Mentoring Practices

Institutional and diversified mentoring practices show that mentorship in competitive environments cannot be implemented through a single rigid model, but must be adjusted to participant needs, competition type, and institutional context. Pluzhnikova and Erofeeva (2026) identify and systematise various mentoring practices in higher education and emphasise that effective mentoring requires the integration of a stable formal structure and flexible informal content. This finding is relevant to competitive environments because each competition may require different mentoring formats, such as one-to-one mentoring, peer mentoring, group mentoring, digital mentoring, expert mentoring, or alumni mentoring. Therefore, sustainable mentorship models need to combine formal structures, such as goals, schedules, mentor roles, evaluation mechanisms, and outcome indicators, with informal flexibility that allows mentors and mentees to adapt the mentoring process to team dynamics, participant readiness, and emerging challenges during competition preparation.

Key Challenges Affecting Structured and Sustainable Mentorship in Competitive Environments

Tabel 4
Major Challenges Facing Mentorship in Competitive Environments

No	Key Challenges	Authors
1	Time constraints, scheduling conflicts, and limited mentoring intensity	Stoller (2024); Justine (2025); Induru et al. (2026)
2	Over reliance on digital communication and connectivity barriers	Choudhary et al. (2024); Justine (2025)
3	Mismatch between participant needs and mentor expertise	Damnjanovic et al. (2020); Stoller (2024); Saripah et al. (2022)
4	Structural limitations, and suboptimal program	Harbishettar et al. (2025); Choudhary et al. (2024)
5	Low autonomy or lack of readiness among participants	Dolenc (n.d.); Saripah et al. (2022)
6	Mentor quality and mentors' personal characteristics	Cho et al. (2011)
7	Diversity in mentoring practices and variations across implementation contexts	Pluzhnikova and Erofeeva (n.d.)

Based on the reviewed articles, mentorship models in competitive environments can be classified into several primary forms. First, technology-enabled or digital mentorship utilizes technological platforms to enhance communication flexibility, facilitate progress tracking, and provide rapid feedback, making it highly effective for overcoming geographical dispersion and time constraints in online or hybrid settings. Second, business case and business plan competition mentorship focuses on elevating participant readiness, analytical depth, presentation skills, and team collaboration. This model often incorporates structured coordination, such as utilizing liaison officers and fosters cross-cultural learning and strategic thinking to help participants navigate complex business contexts. Near-peer mentorship leverages a proximity in experience or learning stages between mentors and mentees, offering highly relatable, empathetic, and contextual support regarding competition expectations and practical strategies. This model also reinforces long-term program sustainability as successful competition alumni transition into mentors for the subsequent generation. Fourth, student-led or hands-off mentorship shifts the mentor's role to a purely facilitative posture, particularly in project-based competitions like robotics. By granting participants the autonomy to make decisions, solve problems, and manage the competition process directly, this approach fundamentally fosters independence, creativity, and team ownership.

Best Practices for Sustainable Mentorship Models in Competitive Environments

Tabel 4
Best Practices for Effective and Sustainable Mentorship in Competitive Environments

No	Best Practices	Authors
1	Establishing clear mentoring objectives and performance targets	Stoller (2024); Saripah et al. (2022); Harbishettar et al. (2025)
2	Leveraging technology to expand access and monitor the mentoring process	Choudhary et al. (2024); Justine (2025)
3	Fostering highly structured mentoring coordination	Justine (2025); Damnjanovic et al. (2020)
4	Implementing near-peer or alumni mentoring to ensure program sustainability	Induru et al. (2026); Anderson et al. (2015)
5	Providing spaces for participant autonomy and independence	Dolenc (n.d.)
6	Ensuring the personal and professional quality of mentors	Cho et al. (2011)
7	Developing competence-based mentoring frameworks	Harbishettar et al. (2025)
8	Tailoring mentoring approaches to the specific competition type and participant characteristics	Damnjanovic et al. (2020); Raharti (n.d.); Pluzhnikova and Erofeeva (n.d.)

First, establishing clear mentoring objectives and performance targets such as refining proposal quality, presentation delivery, and technical execution is essential to align expectations and ensure measurable progress tracking. This goal-oriented approach is augmented by the second-best practice: fostering structured coordination and robust communication channels. Implementing systematic frameworks for scheduling, task allocation, and feedback monitoring, occasionally facilitated by operational roles like liaison officers, significantly minimizes miscommunication and optimizes team readiness.

Second, building a sustainable mentoring ecosystem relies heavily on near-peer frameworks, alumni networks, and documentation-based learning. Engaging competition alumni allows for the organic transfer of experiential knowledge, strategic insights, and practical navigation of competition dynamics to subsequent generations, preventing valuable knowledge loss. When paired with institutionalized post-competition reflections and standardized performance evaluations, this comprehensive approach transforms cyclical mentoring into a continuous repository for long-term capacity building.

Synthesis of Findings

Based on the reviewed literature, sustainable mentorship in competitive environments must be developed as a structured, adaptive, and performance-driven system. Synthesized model ranging from digital and case competition to near-peer, student-led, and structured competence-based mentorship collectively drive participant readiness, technical refinement, and meaningful learning. However, maximizing their institutional efficacy requires systematically mitigating prevalent operational barriers, including acute time constraints, coordination friction,

technology dependence, mentor-mentee mismatch, and suboptimal monitoring frameworks. Overcoming these hurdles demands a deliberate design that integrates precise matching protocols, synchronized communication pathways, and process-oriented evaluation mechanisms. Ultimately, these sustainable mentorship models transcend the traditional paradigm of mere competitive victory, prioritizing long-term capacity building, autonomy, and continuous knowledge regeneration instead. By embedding core competencies, strategic teamwork, and institutionalized post-competition reflections, the framework ensures that the cognitive and psychological gains extend far after the event concludes. Consequently, the definitive metric of mentorship success shifts from short-term trophies to enduring performance improvement, self-reliance, and lifelong learning readiness across subsequent academic and professional landscapes.

CONCLUSION

This systematic literature review maps mentorship models within competitive environments, identifying structural challenges and articulating best practices to optimize participant performance. Synthesizing diverse paradigms including technology enabled, case competition, near peer, student led, and competence-based mentorship the study conceptualizes mentoring not as isolated technical instruction, but as a multidimensional ecosystem spanning strategic, emotional, digital, and reflective support. However, the efficacy of these models is frequently bottlenecked by operational barriers such as acute time constraints, mentor-mentee misalignment, deficient monitoring frameworks, and the qualitative volatility of informal, undocumented mentoring, which underscores the urgent need for systematic institutionalization. To cultivate a self-sustaining ecosystem, institutions must deploy structured frameworks utilizing needs analyses, strategic matching, performance logs, and near-peer or alumni networks that secure intergenerational knowledge retention. A primary limitation of this research, however, rests in its purely descriptive synthesis, which lacks empirical validation regarding how individual mentorship models perform relative to distinct competition typologies (e.g., STEM versus corporate simulations). Future mixed-methods and longitudinal studies are required to empirically test these frameworks against objective metrics such as cognitive problem-solving, psychological resilience, and post-competition skill conversion thereby redefining sustainable mentorship as a vehicle for lifelong learning rather than short-term triumph.

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