



Regular article

Agile Coaching: A Hybrid Systematic Literature Review and Bibliometric Analysis

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ARTICLE INFO

Article history:

Received 04 July 2025

Accepted 01 August 2025

Available online 08 August 2025

Keywords:

Agile coaching

Leadership

Mentoring

Conflict resolution

ABSTRACT

This paper explores the evolving role of Agile coaching, synthesizing findings from a hybrid systematic literature review (SLR) and bibliometric analysis. It investigates the competencies and challenges faced by Agile coaches in supporting successful Agile transformations at both the team and organizational levels. By reviewing 16 articles from the Scopus database, the study identifies key skills, including leadership, mentoring, conflict resolution, and facilitation of collaboration, that are essential for Agile coaches. The research also discusses common challenges, including resistance to change, knowledge gaps, and organizational barriers. This study contributes to the growing body of knowledge on Agile coaching by providing insights into the practical and theoretical implications of the field and offering recommendations for future research.

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Introduction

Agile methodologies have become a cornerstone of modern software development, offering flexibility, iterative progress, and enhanced collaboration. As organizations increasingly adopt agile practices, the role of the agile coach has emerged as a critical enabler of successful agile transformations. Agile coaching is a multifaceted role that involves not only facilitating agile practices but also developing agile teams and navigating organizational challenges. Agile coaches are instrumental in guiding teams through the transition to agile methodologies, with key objectives that include fostering the adoption of agile principles, enhancing team collaboration, and ensuring the long-term sustainability of agile methods (Daljajev et al., 2020; Stray et al., 2020).

Operating at both the team and organizational levels, agile coaches influence strategic decisions, transfer knowledge, and build essential skills across stakeholders (Stray et al., 2021). They are also responsible for training and developing software development teams, as well as

other stakeholders involved in the agile adoption process (Stray et al., 2020). Despite the growing importance of this role, the body of knowledge surrounding agile coaching remains fragmented and continues to evolve. In this context, a Systematic Literature Review (SLR) serves as a rigorous and structured method for synthesizing existing research, offering valuable insights into the practices, challenges, and future directions of agile coaching.

SLRs play a pivotal role in facilitating agile adoption and sustainability by clarifying the tasks, responsibilities, and competencies required of agile coaches. These include leadership qualities, project management capabilities, technical expertise, and a deep understanding of agile frameworks (Stray et al., 2020). By consolidating this knowledge, SLRs help organizations better define the agile coach role and support the integration of agile practices into their culture and workflows.

Moreover, agile transformations often encounter significant challenges, including resistance to change, a lack of stakeholder buy-in,

and constraints on team autonomy. Agile coaches play a crucial role in addressing these issues, and SLRs offer empirical evidence and practical guidelines to support them in this endeavor (Stray et al., 2020). These insights contribute to smoother transitions and more resilient agile implementations.

In addition to supporting practice, SLRs enhance training and development efforts for both agile coaches and the teams they serve. By synthesizing best practices and lessons learned from prior studies, SLRs inform the design of effective training programs and professional development initiatives (Stray et al., 2020). This is particularly valuable in ensuring that agile coaching remains aligned with evolving industry needs and organizational contexts.

Finally, as agile coaching is still a relatively new and dynamic field, SLRs are essential for identifying research gaps and proposing future research directions. They highlight underexplored areas and emerging trends, guiding scholars and practitioners toward the most pressing and impactful topics (Perides & Vasconcellos, 2023; Rath et al., 2025; Stray et al., 2020). This study presents a comprehensive SLR on agile coaching, aiming to map the current state of research, identify key themes and challenges, and offer actionable insights for both academic and practical advancement in the field.

Systematic Literature Reviews (SLRs) significantly impact the effectiveness of agile coaching by providing insights into the challenges and strategies within agile environments. SLRs help identify common challenges such as user involvement issues, knowledge gaps, and organizational barriers (Omerkhel et al., 2023; Rahmah et al., 2024; Soares, 2022), allowing coaches to develop tailored strategies to address these issues. For example, strategies like using mind maps, workshops, and continuous delivery can enhance user engagement (Omerkhel et al., 2023). Additionally, SLRs highlight the essential skills and traits necessary for effective coaching, such as empathy, communication, and technical expertise (Stray et al., 2021; Stray et al., 2020), while emphasizing the importance of continuous learning (Stray et al., 2021). SLRs also reveal organizational barriers like resistance to change and lack of top-management support (Stray et al., 2020; Santos et al., 2013), guiding coaches in advocating for cultural and organizational changes. Furthermore, SLRs identify factors that influence team dynamics and productivity, such as team management and motivation (Fatema & Sakib, 2017), enabling coaches to focus on improving these aspects to enhance team performance. Finally, empirical evidence provided by SLRs supports the adoption of best practices, such as Open Space and Lightning Talks, which facilitate knowledge sharing and organizational learning (Santos et al., 2013; Annosi et al., 2017). Overall, by leveraging these insights, agile coaches can better address challenges, enhance team dynamics, and adopt effective practices, ultimately leading to more successful agile transformations (Wendorff, 2007).

This study focuses on exploring the current landscape of Agile Coaching research and evaluating the ongoing relevance of this topic as a focus for future research. This study also reviews the evolution of the academic discourse on Agile Coaching and aims to identify how this work can contribute to leadership theories and organizational practices. The research questions posed are.

RQ1: Is the exploration of Agile Coaching a subject that continues to hold significance for future scholarly inquiry?

RQ2: What are the key challenges faced by agile coaches in supporting the adoption and sustainability of Agile methods in organizations?

RQ3: What skills and competencies are most needed for agile coaches to support successful Agile transformation at the team and organizational level?

This study uses Systematic Literature Review (SLR) and Bibliometric Analysis to answer three research questions. The systematic literature review method is appropriate for synthesizing existing research and helping to identify gaps, trends, and future research directions while providing evidence-based insights that can influence policy, practice, and further research. This study used a systematic literature review of Scopus-indexed articles and emphasized the importance of using a broad and representative sample to uncover evolving trends and guide future research (Adriana et al., 2024). The bibliometric analysis will complement the review by quantifying the distribution and impact of publications related to Agile Coaching. Using VOSviewer and the Scopus database, this study will analyze publications related to Agile Coaching from various journals, with a focus on articles published up until June 29, 2025. This methodology enables a comprehensive mapping of the development of this field and provides a deeper understanding of its growth and future research directions.

Literature Review

Agile coaching has become a cornerstone in the successful adoption and scaling of Agile methodologies across diverse organizational contexts. As Agile practices evolve to meet the demands of dynamic and complex environments, the role of Agile coaches has expanded beyond technical facilitation to encompass leadership development, cultural transformation, mindset cultivation, and organizational alignment. This literature review synthesizes findings from multiple studies to explore the multifaceted contributions of Agile coaching in Agile transformation, with a focus on risk management, mindset, psychological safety, hybrid project environments, and role clarity.

Muntés-Mulero et al. (2019) emphasize the foundational role of Agile coaching in guiding organizations and teams to adopt Agile methodologies, particularly in enhancing agility and collaboration. Their research introduces a framework that supports Agile risk management

and team collaboration by enabling users to contribute new risks to a shared knowledge database. This system incorporates automation to enhance risk assessment, especially for less experienced teams, and leverages historical user behavior to suggest relevant risks. The framework has been validated through real-world applications, demonstrating its practical effectiveness and adaptability in dynamic software development environments.

Beyond technical facilitation, Agile coaching plays a critical role in shaping team dynamics and organizational culture. Bäcklander (2019) defines Agile coaching as a role that supports teams in discovering effective ways of working, fostering autonomy, ownership, and motivation to create a more enjoyable and productive work environment. Agile coaches are portrayed as culture bearers and change agents who promote continuous improvement and embody the values of the organizations they serve. Drawing from interviews with Agile coaches at Spotify, the study emphasizes the practice of enabling leadership—a leadership style that balances autonomy and alignment in complex and fast-changing settings. This approach enhances context sensitivity, supports other leaders, and facilitates constructive dialogue. Furthermore, Bäcklander underscores the importance of balancing formal and informal organizational structures to drive innovation and sustain Agile transformation.

In hybrid project environments, where Agile and traditional methodologies coexist, Agile coaching continues to play a pivotal role. Zasa et al. (2021) explore the integration of Agile with traditional models such as Stage-Gate, identifying integration, organizational culture, and perception as key challenges. In these contexts, Agile coaches are instrumental in aligning Agile practices with existing workflows, facilitating workshops to build shared understanding, and promoting transparency to reduce inter-team conflict. Their involvement is crucial in aligning strategic objectives across departments, which in turn unlocks team potential and fosters a positive working environment that supports creativity and innovation. The study emphasizes that successful hybrid implementation requires not only technical adjustments but also cultural transformation—areas where Agile coaches provide essential guidance.

Agile coaching also plays a central role in the scaling of Agile practices across large, distributed teams. Marinho et al. (2021) present 95 components essential for implementing Agile practices and discuss the challenges of scaling Agile in global software development. The study highlights the importance of Agile coaching in mentoring global teams, particularly in coding practices, and in fostering continuous learning and improvement. Rather than prescribing fixed solutions, Agile coaches support team development through teaching and guidance, enhancing overall team effectiveness. The study also aligns Agile coaching with the SAFe 5.0 framework, which provides structured

support for scaling Agile across enterprise-level organizations. In this context, Agile coaches contribute to cultivating collaboration, skill development, and adaptability in geographically dispersed teams.

Klünder et al. (2022) offer a complementary perspective by emphasizing that Agile implementation requires a suitable mindset, not just methods. Their study, based on the perspectives of nine Agile coaches, identifies twelve categories essential for developing an Agile mindset. These include motivation, collaboration, and mutual listening—elements that are deeply rooted in individual attitudes and personal prerequisites. The research underscores that success in Agile transformation depends heavily on these internal factors, suggesting that technical training alone is insufficient without a parallel focus on mindset development. Agile coaching, in this context, involves supporting individuals and teams in adopting and improving Agile methods, facilitating the understanding of Agile practices, and fostering an Agile mindset within organizations. Coaches help define values, build trust, and enhance teamwork while addressing obstacles and misconceptions that may hinder transformation.

The importance of psychological safety in Agile environments is further explored by Jovic (2024), who investigates the impact of Agile coaching in the healthcare sector. In a study involving 54 licensed pharmacists, significant improvements in psychological safety were observed in the Agile coaching group compared to the control group. Although no significant difference was found between the coaching and education groups, the findings suggest that Agile coaching may offer unique benefits in fostering a safe and supportive work environment. Jovic defines Agile coaching as a specialized form of coaching that combines mentoring, training, and consulting to guide individuals and organizations through Agile transformation. The goal is to cultivate a culture of collaboration, adaptability, and continuous improvement—key components of organizational agility. While the small sample size limits the generalizability of the findings, the study highlights the potential of Agile coaching to enhance psychological safety, which is increasingly recognized as a prerequisite for innovation, team performance, and employee well-being.

Organizational readiness and structural challenges also play a significant role in the success of Agile adoption. Fissalma et al. (2025) analyze the obstacles faced by organizations in implementing Agile methodologies, identifying key barriers such as organizational culture, communication issues, and the absence of a dedicated Scrum Master. Their findings, based on expert interviews and a systematic literature review, reveal common challenges in both developing and developed countries. The study emphasizes the importance of a top-down strategic approach, where leadership commitment and cultural alignment are essential for overcoming resistance and enabling transformation. In this context, Agile coaching is closely linked to the role of the Scrum Master

or Agile Coach, who is responsible for guiding teams through the complexities of Agile implementation. This role includes addressing communication breakdowns, ensuring adherence to Agile practices, and fostering a supportive environment. However, the effectiveness of Agile coaching can be hindered by a lack of commitment from top management and misalignment between Agile values and existing organizational norms. The study recommends a gradual introduction to Agile culture, supported by targeted training and team capability development, to mitigate these challenges.

Another critical area where Agile coaching proves indispensable is in managing role clarity within Agile teams. Barke & Prechelt (2019) explore the dynamics of role negotiation and clarity, noting that role definitions in Agile teams are often transient and implicit. This ambiguity can lead to friction, misunderstandings, and even employee turnover. The authors argue that local and team-wide role clarity is essential for team effectiveness and that Agile coaches play a vital role in maintaining this clarity. Agile coaches facilitate team reflection and self-organization, helping members navigate the complexities of defining roles and responsibilities. They employ a variety of techniques from their coaching toolkits to support this process, ensuring that teams can function smoothly despite the fluid nature of Agile roles. Barke & Prechelt (2019) characterize the “roles-finding problem” as a holistic challenge that requires continuous attention and adaptation—an area where Agile coaches are uniquely positioned to provide guidance and stability.

The transition from traditional project management methodologies to Agile frameworks also highlights the importance of Agile coaching. Ganesh & Thangasamy (2012) examine this transition in the context of software development, emphasizing the need to respond to changing customer requirements. Their study demonstrates that Agile coaching contributes to improved team dynamics, continuous delivery, and enhanced responsiveness. Agile coaches guide teams through the cultural shift toward collective ownership and self-organization, mentoring them in realistic estimations and early testing practices. These efforts result in more effective project delivery and a stronger alignment with customer needs. According to Ganesh & Thangasamy (2012), Agile coaches play a crucial role in mentoring teams, facilitating discussions, and addressing both business and technical challenges. Their presence is essential for fostering a self-organized team culture that can adapt to evolving requirements and maintain high performance.

In summary, the literature consistently portrays Agile coaching as a multifaceted and dynamic practice that extends far beyond process facilitation. Agile coaches are instrumental in shaping mindsets, enhancing psychological safety, clarifying roles, and aligning organizational structures with Agile principles. They serve as mentors, facilitators, and change agents who guide teams through the

complexities of Agile transformation. While challenges such as cultural resistance, role ambiguity, and leadership misalignment persist, the presence of skilled Agile coaches significantly increases the likelihood of successful Agile adoption and sustainability.

As Agile continues to evolve and expand into new domains, the role of Agile coaching will remain central to its success. Future research should continue to explore the long-term impact of coaching interventions, the development of coaching competencies, and the integration of Agile coaching into broader organizational strategies. By doing so, organizations can better harness the full potential of Agile methodologies and create environments that support innovation, collaboration, and continuous growth.

Table 1 Defining elements of Agile Coaching

No	Defining factors of Agile Coaching	Reference
1	Agile coaching involves guiding organizations and teams in adopting Agile methodologies, focusing on enhancing their agility and collaboration, in addressing the challenges of managing risks in Agile software development	(Muntés-Mulero et al., 2019)
2	Agile coaching provides direction and support to teams and individuals as they implement Agile principles, enhancing their understanding of Agile techniques and improving productivity and workflows	(Sathe & Panse, 2024)
3	Agile coaching is defined as a role that helps teams find effective ways of working, fosters a sense of autonomy and ownership, and enhances motivation, making work enjoyable.	(Bäcklander, 2019)
4	Agile coaching involves guiding organizations in adopting and implementing Agile principles and methodologies, such as Scrum and Kanban, to enhance their project management practices.	(Zasa et al., 2021)
5	Agile coaching is a practice that focuses on training global teams in the agile process, particularly in coding skills, and is linked to continuous learning and improvement within the team members.	(Marinho et al., 2021)
6	Agile coaching involves supporting individuals and teams in adopting and improving agile methods, facilitating the understanding of agile practices, and fostering an agile mindset within organizations.	(Klinder et al., 2022)
7	Agile coaching is defined as a specialized form of coaching that guides individuals, teams, or organizations in adopting and implementing agile methodologies and principles.	(Jocic, 2024)
8	Agile coaching involves the role of a Scrum Master or Agile Coach, who is essential for guiding teams in the effective implementation of Agile methodologies.	(Fissalma et al., 2025)
9	Agile coaching involves facilitating a team's self-organization, where coaches play a crucial role in promoting team reflection and achieving role clarity among team members.	(Barke & Prechelt, 2019)
10	Agile coaching is a process that involves guiding teams and organizations in adopting Agile methodologies effectively.	(Jovanović et al., 2017)
11	Agile coaching involves guiding large-scale agile teams by understanding various product owner roles, such as Groom, Prioritizer, and Risk Assessor, which help arbitrate between conflicting customer requirements and facilitate effective communication across teams.	(Hobbs & Petit, 2017)
12	Agile coaching is a role that facilitates student teams in understanding and implementing Scrum methodologies effectively.	(Rodríguez et al., 2016)
13	Agile coaching involves guiding teams through the transition from traditional methodologies to agile practices, focusing on collective ownership and realistic estimations to enhance project delivery.	(Ganesh & Thangasamy, 2012)

Methodology

A systematic literature review employing a bibliometric approach quantitatively assesses literature to discern trends, patterns, and key research entities within a discipline. Using frameworks such as PRISMA, this approach ensures a comprehensive and replicable literature examination, providing a clear and transparent picture of the topic being studied (Chotisarn & Phuthong, 2025). The inclusion criteria established were: (1) articles published up until June 29, 2025, (2) publications in English, and (3) focusing on the topic of Agile Coaching. Bibliometric analysis was performed using VOSViewer, visualizing bibliographic data to analyze citation networks, author collaborations, and co-occurring keywords, revealing the intellectual structure and dynamics

of the research field. The combination of bibliometric analysis and systematic review helps researchers synthesize empirical findings and map the landscape of research activity, including identifying key contributors and emerging trends (Mohammad et al., 2025). The integration of both approaches provides a comprehensive understanding of the development, historical flow, and future direction of the research field, making it highly beneficial in interdisciplinary studies for gaining deeper insights (Marzi et al., 2025). The primary goal of bibliometric analysis is to provide insights into the structure, impact, and evolution of a given research field (Garfield, 1972). At its core, bibliometrics measures and evaluates the influence and relationships among publications, authors, institutions, and even countries (Hallinger, 2019).

The preliminary phase in this scholarly examination involves the selection of keywords, which can be accomplished through a macro methodology (top-down), progressing from expansive search trajectories to more narrowly defined studies and topics. Consequently, after evaluating the limitations inherent in prior research and the scarcity of studies addressing Islamic Leadership, this investigation incorporates the keywords "Agile Coach" and "Agile Coaching" as a focal point within the article's title, abstract, and keyword sections. Furthermore, the Scopus database is employed by researchers for a myriad of investigational purposes, including the execution of literature reviews, identifying subject-matter experts, and monitoring research trends.

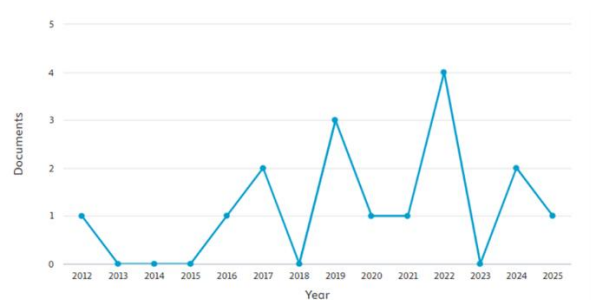
"Agile AND Coaching OR Coach" across diverse academic disciplines, spanning from the earliest publication in 2012 to the most recent in 2025, the total number of articles about Agile Coaching is 301 documents (refer to Figure 1). Following these findings, a screening process filters documents according to their classification. Articles are eliminated based on the document type: conference paper (52), book (14), book chapter (6), conference review (6), and non-English (1), culminating in a total of 79 documents. The screening results, categorized by document types, yielded 16 articles. This document is then further analyzed in this study to answer RQ1: Is the exploration of Agile Coaching a subject that continues to hold significance for future scholarly inquiry? RQ2: What are the key challenges faced by agile coaches in supporting the adoption and sustainability of Agile methods in organizations? RQ3: What skills and competencies are most needed for agile coaches to support successful Agile transformation at the team and organizational level?

Results and Discussion

The results of this study focus on findings from 16 articles in the Scopus database on agile coaching. This data is sourced from identifying the number of articles published, publications throughout the years, and journal sources. This study will also highlight the most influential elements in agile coaching, including the authors, affiliations, and the countries involved.

RQ1: Is the exploration of agile coaching a subject that continues to hold significance for future scholarly inquiry?

According to the data retrieved from the Scopus database. It has been ascertained that over one decade of scholarly work about agile coaching comprises 16 articles; this suggests that investigations into agile coaching remain comparatively scarce, as illustrated in Figure 2. The exploration of agile coaching commenced its progressive development during the last decade, specifically from 2016.



Source: Processed by researchers (2025)

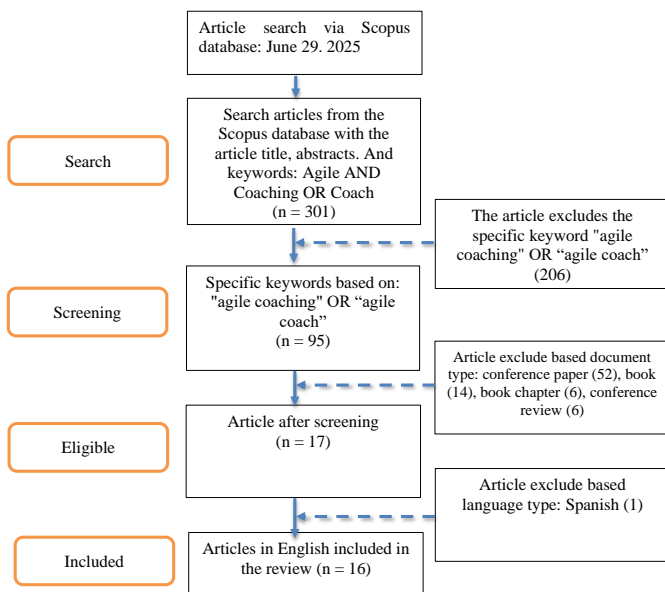


Figure 1 Systematic Literature Review Information Flow Using PRISMA

According to the search outcomes retrieved on June 29, 2025, from the Scopus database utilizing the article title, abstract, and keywords:

Figure 2 Systematic Literature Review Information Flow Using PRISMA

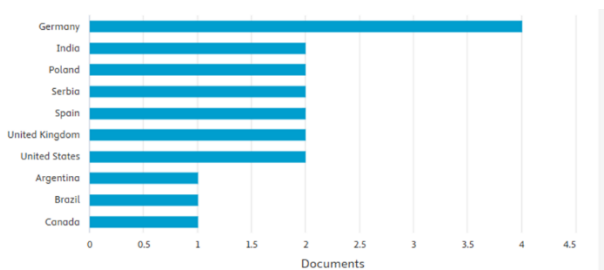
The inaugural study was executed by Ganesh & Thangasamy (2012) and was entitled "Lessons learned in transforming from traditional to agile development", which signified the advent of the term now

recognized as Agile Coaching. At present, the evolution of research on Agile Coaching has begun to captivate a substantial number of scholars. There has been a notable increase in research related to agile coaching, which reflects the growing importance of agile methodologies across various industries. This rise in interest is evidenced by the increasing use of agile coaches within organizations, as they play a critical role in facilitating agile adoption and transformation (Daljajev et al., 2020; Stray et al., 2020). Furthermore, this trend has been accompanied by a surge in empirical studies and systematic literature reviews that aim to understand the role, tasks, responsibilities, and essential skills of agile coaches (Daljajev et al., 2020; Stray et al., 2021). Together, these developments highlight the expanding recognition of agile coaching as a key component in successful agile implementation and organizational change.

Since 2012, there has been limited literature on Agile Coaching due to the lack of research published in reputable journals, creating an opportunity for future researchers to fill this gap. This research is significant for advancing insights into Agile Coaching, affecting both personal conduct and the evolution of the Agile Coaching framework. This may facilitate a more profound comprehension of Agile Coaching's practical and sustainable application in diverse sectors.

The analysis of the distribution of Agile Coaching research in the 16 articles was executed by categorizing the articles according to classifications such as nation, region, affiliation, source, and author, with a constraint of solely the top 10 articles in each classification. Acumen regarding the allocation of scholarship pertinent to Agile Coaching will be advantageous for scholars and practitioners in elucidating the forthcoming research agenda, particularly in the sustainable advancement of the Agile Coaching paradigm.

First, the allocation of scholarly inquiry pertinent to Agile Coaching categorized by nation or geographical area is dominated by Germany with 4 articles, India with 2 articles, Poland with 2 articles, Serbia with 2 articles, Spain with 2 articles, the United Kingdom with 2 articles, the United States with 2 articles, Argentina with 1 article, Brazil with 1 article and Canada with 1 article (see Figure 3).

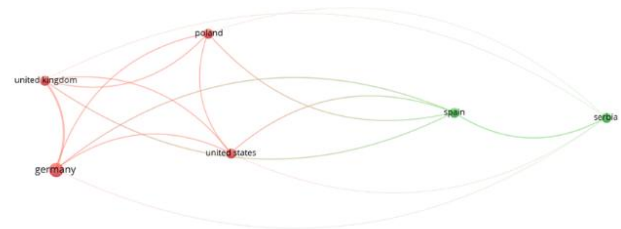


Source: Processed by researchers (2025)

Figure 3 Number of articles by country or territory (top 10 countries)

The allocation of scholarly inquiries pertinent to Agile Coaching, as categorized by nation or territory, reveals the preeminence of Germany with 4 manuscripts. Additionally, several other countries that have made significant contributions to this research include India, Poland, Serbia, Spain, the United Kingdom, and the United States, with 2 manuscripts. Germany stands out with 4 manuscripts, indicating a strong academic interest and possibly a more mature research community or institutional focus on agile practices and coaching. Countries such as India, Poland, Serbia, Spain, the United Kingdom, and the United States each contributed 2 manuscripts. These findings imply that the concentration of research in Germany may indicate the presence of regional centers of excellence or specific academic-industry collaborations. Additionally, the relatively even distribution of contributions from other countries highlights a growing, yet still fragmented, global research landscape—suggesting valuable opportunities for cross-national collaboration and comparative studies. This suggests a diverse international engagement with the topic, reflecting the global relevance of agile coaching in software development and organizational transformation. The relatively low number of contributions from each country (even the highest being only 4) suggests that Agile Coaching remains an underexplored area, warranting further investigation and broader academic engagement.

Researchers will also analyze the relationships between the countries involved in Agile Coaching research using VOSviewer software. This phase is imperative in formulating a systematic prospective research agenda. The examination's VOSviewer findings demonstrate the interrelations among nations in investigating the Agile Coaching subject (see Figure 4).

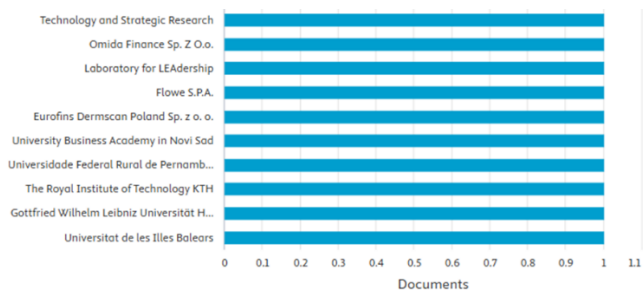


Source: Processed by researchers (2025)

Figure 4 Network country visualization

The geographical distribution of scholarly inquiries into Agile Coaching reveals notable regional trends. Germany emerges as the most prominent contributor, with four manuscripts, suggesting the presence of strong academic or industry-driven interest in agile practices within the country. This concentration may reflect the existence of regional centers of excellence, dedicated research groups, or robust academic-industry collaborations focused on agile transformation. In contrast, countries such as India, Poland, Serbia, Spain, the United Kingdom, and

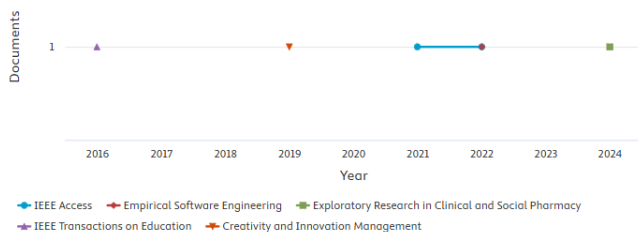
the United States have each contributed two manuscripts. While these contributions are fewer in number, their even distribution indicates a growing global interest in Agile Coaching. However, the relatively low volume of publications across all countries also highlights the fragmented nature of the current research landscape. This fragmentation presents an opportunity for increased cross-national collaboration and comparative studies, which could enrich the field by incorporating diverse organizational contexts, cultural perspectives, and implementation strategies. Such efforts would not only strengthen the empirical foundation of Agile Coaching but also support the development of more universally applicable coaching frameworks.



Source: Processed by researchers (2025)

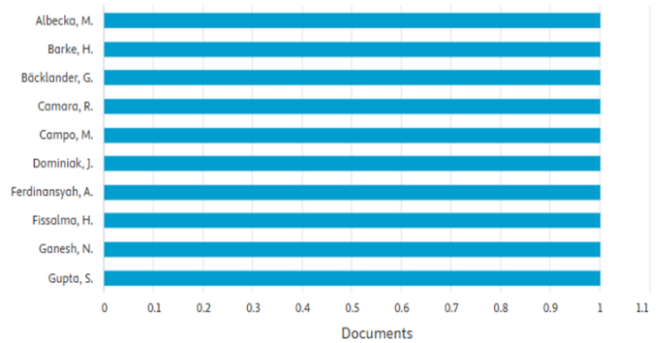
Figure 5 Number of articles by affiliation (top 10 affiliations)

The distribution of Agile Coaching scholarship across institutions is highly decentralized, with each contributing a single article. This includes institutions from various countries such as the United States, Poland, Brazil, and Germany, suggesting that Agile Coaching is of global interest but lacks centralized research leadership. This dispersion reflects the emerging nature of the field, where contributions come from both academic and industry-driven contexts. The absence of dominant institutions may hinder the development of unified frameworks but offers opportunities for cross-institutional collaborations and interdisciplinary research, which could enrich the field and enhance its theoretical and practical development. Future research should encourage institutional partnerships, longitudinal studies, and the creation of dedicated research centers to consolidate knowledge and advance Agile Coaching (Stray et al., 2020).



Source: Processed by researchers (2025)

Figure 6 Number of articles by sources (top 10 sources)



Source: Processed by researchers (2025)

Figure 7 Number of articles by author (top 10 authors)

Agile Coaching research is published across a variety of sources, with IEEE Access contributing two articles in 2021 and 2022, reflecting growing interest within the engineering and technology fields. Other journals, such as Creativity and Innovation Management (2019), Empirical Software Engineering, and IEEE Transactions on Education (2016), highlight the interdisciplinary nature of Agile Coaching (see Figure 5). This distribution underscores the cross-sectoral relevance of Agile Coaching but also points to the lack of a centralized publication venue, which may hinder knowledge consolidation. Future research should promote interdisciplinary collaboration and consider creating specialized publication channels to enhance engagement and development in the field (Stray et al., 2020). Fourth, the distribution of research related to Agile Coaching based on authorship reveals no clear dominance. Among the top ten contributing authors—Albecka, M.; Barke, H.; Bäcklander, G.; Camara, R.; Campo, M.; Dominiak, J.; Ferdinansyah, A.; Fissalma, H.; Ganesh, N.; and Gupta, S.—each has authored only a single article. This indicates a highly dispersed authorship landscape, suggesting that Agile Coaching is still an emerging field with limited concentration of expertise or sustained scholarly output from individual researchers. (see Figure 6).

Agile Coaching research exhibits a decentralized authorship pattern, with ten institutions each contributing a single article, indicating a lack of centralized leadership and cohesion within the field. This global distribution, spanning countries like the United States, Poland, and Germany, reflects a fragmented research landscape. While this decentralization presents an opportunity for cross-institutional collaboration and comparative studies, it also suggests that Agile Coaching is still an emerging research domain. Future efforts should focus on fostering institutional investment, research networks, and sustained academic engagement to support the field's maturation (Stray et al., 2020). The bibliometric analysis using VOSviewer further highlights areas of extensive research and gaps, offering valuable

insights for future studies and practical implementations in Agile Coaching.

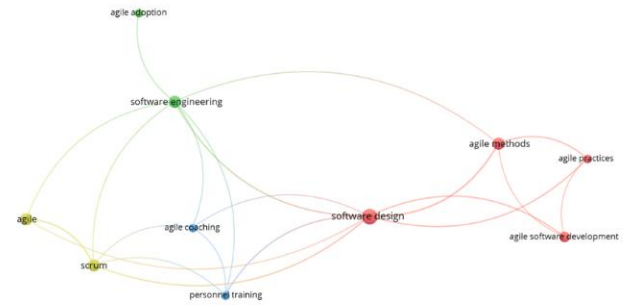
As shown in Figure 7, the most frequently occurring keywords in the reviewed literature include Software design (7 occurrences), Agile methods (4), Software engineering (4), Scrum (4), Agile (4), Agile software development (3), Agile practices (2), Personal training (2), Agile coaching (2), and Agile adoption (2). These ten keywords reflect the core thematic areas explored in Agile Coaching research. A summary of these keywords is presented in Table 2.

Table 2 Defining elements of Agile Coaching

Rank	Key	Total link strength
1	Software design	19
2	Agile methods	11
3	Software engineering	11
4	Scrum	9
5	Agile practices	7
6	Agile	6
7	Agile software development	5
8	Personal training	5
9	Agile coaching	4
10	Agile adoption	2

Source: Output VOSviewer software

As shown in Figure 7, the most frequently occurring keywords in the reviewed literature provide valuable insight into the core thematic areas of Agile Coaching research. The keyword “Software design” appears most frequently, with 7 occurrences, indicating a strong emphasis on how Agile Coaching influences or integrates with software architecture and design processes. Keywords such as “Agile methods,” “Software engineering,” “Scrum,” and “Agile” –each appearing 4 times–reflect the foundational frameworks and methodologies that Agile Coaching supports and enhances. Meanwhile, “Agile software development” (3 occurrences) and “Agile practices” (2) suggest a focus on the practical implementation of agile principles within development teams. The presence of “Agile coaching” itself (2 occurrences) highlights the emerging recognition of the coaching role as a distinct area of study. Interestingly, keywords like “Personal training” and “Agile adoption” (each with 2 occurrences) point to the human and organizational dimensions of Agile Coaching, emphasizing its role in capability building and change management. Overall, this keyword distribution underscores the multidimensional nature of Agile Coaching research –spanning technical, methodological, and human-centric themes–and suggests that while scholarly attention is growing, there remains significant room for deeper exploration and more consistent terminology in future studies.



Source: Processed by researchers (2025)

Figure 8 Co-occurrence framework and representation of key term

RQ2: What are the key challenges faced by agile coaches in supporting the adoption and sustainability of Agile methods in organizations?

Agile coaches are responsible for guiding this transformation, but they face numerous challenges in their efforts to foster long-term, effective Agile practices. These challenges are multifaceted, involving resistance to change, cultural and organizational barriers, team dynamics, and process integration. This article will explore the key challenges faced by Agile coaches, supported by recent research and findings in the field.

Resistance to Change and Lack of Higher Management Support

One of the primary challenges for Agile coaches is the resistance to change that exists at multiple levels within an organization. This resistance is often most pronounced in leadership, where managers may be hesitant to relinquish control and adopt a more decentralized decision-making approach, which Agile promotes. According to Jovanović et al. (2017), a lack of commitment and support from higher management is a significant barrier to the successful adoption of Agile methods. Without the endorsement and active involvement of senior leadership, the organizational culture and systems are unlikely to align with Agile principles, resulting in ineffective or superficial implementation.

Agile coaches face the difficult task of not only promoting Agile methodologies to team members but also ensuring that management understands the value of Agile practices. Coaches must work to gain buy-in from leadership by illustrating how Agile can enhance productivity, improve customer satisfaction, and lead to more flexible, responsive organizational processes. Jovanović et al. (2017) stress that fostering a culture of trust and commitment from top management is crucial for the sustainability of Agile practices.

Cultural and Organizational Barriers

The existing organizational culture presents another formidable challenge for Agile coaches. Many organizations, particularly those with

a long history of traditional hierarchical structures, face difficulties in adopting Agile's emphasis on autonomy, self-management, and cross-functional collaboration. Agile coaches often encounter a deeply ingrained culture of siloed departments, strict hierarchies, and top-down decision-making that conflicts with Agile's values of collaboration and decentralization (Zasa et al., 2021).

Shifting an organization's culture is a complex and long-term endeavor, and Agile coaches must navigate these cultural obstacles carefully. Zasa et al. (2021) note that managing this cultural transformation requires coaches to address both the mindset of employees and the organization's structural elements. Coaches must work to break down silos, encourage open communication, and promote shared decision-making across teams. This cultural shift is essential to creating an environment where Agile practices can thrive, but it requires persistent effort, especially when organizational leaders are not fully committed to the process.

Knowledge Gaps and Role Clarity

Another significant challenge that Agile coaches face is the lack of knowledge and understanding of Agile methods among team members. Agile practices are often introduced in organizations where employees are unfamiliar with the principles and techniques that underpin Agile methodologies. According to Jovanović et al. (2017), this knowledge gap can impede the adoption process, as employees may be skeptical or resistant to new practices without a clear understanding of their benefits and implementation strategies.

Agile coaches must not only teach the methods and frameworks but also address the underlying mindset shifts required for successful adoption. They need to help teams understand the importance of continuous improvement, collaboration, and adaptability. Additionally, Agile coaches often encounter challenges in clarifying roles within self-organizing teams. The shift to team autonomy can create confusion and role ambiguity, which can undermine the effectiveness of the team (Barke & Prechelt, 2019). Coaches must facilitate explicit discussions about roles and responsibilities to ensure that team members understand how to function effectively in an Agile environment.

Integration with Existing Processes

Integrating Agile methods with existing organizational processes can be a significant challenge for Agile coaches. Organizations often have well-established workflows, project management systems, and communication structures in place that may not be compatible with Agile practices. Coaches are required to tailor Agile methods to fit the specific needs and constraints of the organization, which can be a difficult balancing act (Jovanović et al., 2017).

The process of tailoring Agile practices to integrate with existing structures without compromising the core principles of Agile requires a

deep understanding of both the organization's processes and Agile methodologies. This challenge is particularly evident in large organizations or those with complex project management systems. For example, integrating Agile with traditional Stage-Gate processes or existing waterfall methodologies can present barriers to Agile adoption, as these systems are often rigid and sequential, whereas Agile methods emphasize flexibility and iterative development (Zasa et al., 2021).

Coordination and Communication in Large-Scale Projects

Agile coaches working in large organizations or on large-scale projects often face additional challenges related to coordination and communication among multiple Agile teams. As Agile methods are scaled across an organization, the need for synchronized work efforts, shared goals, and cohesive team dynamics becomes more pronounced. Marinho et al. (2021) highlight that managing the interdependencies between teams, synchronizing work schedules, and ensuring consistent communication across globally distributed teams are crucial challenges for Agile coaches in large-scale environments.

This challenge is particularly significant when teams are spread across different time zones or have conflicting priorities. Agile coaches must find ways to ensure that teams are aligned in terms of goals, timelines, and deliverables. They also need to establish efficient communication channels and collaboration tools that facilitate real-time updates, decision-making, and feedback sharing. These logistical challenges can make Agile adoption more difficult in large, complex organizations, requiring the coach to devise scalable and adaptable solutions.

Managing Diverse Personalities and Experience Levels

Agile coaching is not a one-size-fits-all endeavor; it requires tailored approaches to accommodate the diverse needs, experiences, and personalities of team members. Jovic (2024) emphasizes that individual characteristics, such as prior experience with Agile methods and personal traits, can significantly influence the effectiveness of coaching efforts. Coaches must adapt their strategies to the varying levels of experience and readiness for change within their teams. Some team members may have extensive Agile experience, while others may be new to the framework or resistant to the change.

Managing such diversity requires Agile coaches to be skilled in interpersonal communication and flexible in their coaching approaches. Coaches must be able to identify potential conflicts, address team dynamics, and tailor their coaching style to the individual needs of team members. This ability to balance diverse personalities and experiences is crucial for ensuring that the adoption process is both effective and sustainable.

Ensuring Long-Term Sustainability of Agile Practices

The final challenge that Agile coaches face is ensuring the long-term

sustainability of Agile methods within the organization. Agile adoption is often initially met with enthusiasm, but maintaining momentum and commitment over time can be difficult. Jovanović et al. (2017) point out that without continuous reinforcement and ongoing support from leadership, Agile practices may lose their effectiveness, leading to a regression to old methods.

Agile coaches must work to embed Agile values into the organization's culture and operations, ensuring that Agile practices become ingrained in everyday workflows. This involves fostering a mindset of continuous improvement, ensuring regular retrospectives, and reinforcing the importance of adaptability and responsiveness to change. Additionally, coaches must provide ongoing support to teams and leadership, helping them navigate challenges and overcome obstacles that may arise during the scaling or long-term implementation of Agile.

RQ3: What are the theoretical and practical implications from the perspective of future research?

Agile coaches play a crucial role in driving Agile transformations within organizations, and their competencies span a variety of skills necessary to facilitate successful change at both the team and organizational levels. According to the research compiled in the systematic literature review (SLR), several key competencies are required for agile coaches to effectively support these transformations.

1. Deep Understanding of Agile Principles and Practices

Agile coaches must possess an in-depth understanding of Agile principles and methodologies, such as Scrum and Kanban, to guide teams and organizations through the transformation process. This knowledge is foundational for supporting teams in adapting to Agile practices and fostering an Agile mindset (Jocic, 2024; Zasa et al., 2020).

2. Interpersonal and Conflict Resolution Skills

Strong interpersonal skills are essential for agile coaches, as they need to manage resistance to change, address conflicts, and facilitate open communication. Being able to navigate complex team dynamics and organizational structures helps coaches in fostering collaboration and creating psychologically safe environments (Fissalma et al., 2025; Klünder et al., 2022).

3. Leadership and Change Management

Agile coaches must exhibit strong leadership abilities and change management skills, particularly in dealing with resistance and ensuring that the transformation aligns with organizational goals. They also need to engage with senior management to ensure top-down support for the transformation (Fissalma et al., 2025). Effective leadership ensures that coaches can act as agents of change, guiding teams toward the Agile mindset.

4. Mentoring and Training Abilities

The ability to mentor and train individuals is another critical skill for agile coaches. This includes the capacity to facilitate workshops and discussions tailored to the specific needs of teams, helping them overcome challenges and refine their Agile practices. The emphasis is on hands-on learning and continuous interaction, ensuring that coaches remain actively involved with the teams (Jocic, 2024).

5. Facilitation of Collaboration

Fostering collaboration is a cornerstone of Agile methodologies. Agile coaches need to create environments where team members feel empowered to collaborate openly, share ideas, and solve problems together. This is facilitated by creating a culture where diversity and inclusion are prioritized, and where individuals from different backgrounds can contribute to the success of the Agile transformation (Zasa et al., 2020).

6. Problem-Solving and Critical Thinking

Coaches should also possess strong problem-solving abilities. As obstacles and misconceptions often arise during Agile transformations, agile coaches must be able to identify and address these challenges through critical thinking and by facilitating discussions that promote solutions (Klünder et al., 2022).

7. Understanding Team Dynamics and Organizational Alignment

Observing and understanding team dynamics is essential for agile coaches to tailor their support to individual team needs. A deep understanding of team behavior helps coaches implement Agile practices in ways that resonate with team members. Furthermore, aligning the transformation with the broader goals of the organization ensures that the change is sustainable and has a lasting impact (Klünder et al., 2022).

In conclusion, the competencies required for agile coaches to support successful transformations include a blend of technical knowledge, interpersonal skills, leadership, and the ability to manage both individual and team dynamics. Coaches need to possess a deep understanding of Agile methodologies, strong facilitation and mentoring capabilities, and the strategic insight to ensure that Agile practices are integrated effectively at both the team and organizational levels. These competencies, along with the ability to address resistance and foster a collaborative culture, are essential for driving the success of Agile transformations (Jocic, 2024; Fissalma et al., 2025; Klünder et al., 2022; Zasa et al., 2020).

Conclusions

Agile coaching plays a pivotal role in the successful implementation and sustainability of Agile practices within organizations. Through the systematic literature review (SLR) and bibliometric analysis, this study

has highlighted the essential competencies and challenges faced by Agile coaches. Key skills, such as leadership, deep knowledge of Agile frameworks, mentoring abilities, and interpersonal skills, are fundamental for ensuring a smooth transition to Agile methodologies. However, despite the significant contributions of Agile coaches, they face substantial challenges, including resistance to change, role ambiguity, organizational culture barriers, and the complexities of scaling Agile practices across large organizations. To overcome these challenges, Agile coaches must combine technical expertise with strategic leadership and effective communication. These efforts can lead to enhanced collaboration, greater innovation, and long-term success in Agile transformations.

Based on the conclusions obtained from the above research, the following suggestions are made:

Future Research Directions

- a) Given the emerging and fragmented nature of the field, future research should aim at creating comprehensive, standardized frameworks for Agile coaching. There is a need for longitudinal studies to examine the long-term impact of Agile coaching interventions on team performance and organizational outcomes.
- b) Expanding the scope of research beyond English-language publications and integrating diverse cultural and organizational perspectives could provide valuable insights into how Agile coaching functions in different contexts (Jocic, 2024; Zasa et al., 2020).
- c) There is also a need for further exploration into the integration of Agile practices with traditional project management methodologies, especially in hybrid work environments, as highlighted in studies by Zasa et al. (2021) and Marinho et al. (2021). This would help refine coaching strategies that align Agile with existing business models.

Practical Implications

- a) Organizations should focus on developing Agile coaching programs that emphasize both technical competencies and leadership qualities, ensuring that coaches are equipped to handle complex team dynamics and organizational resistance.
- b) To overcome cultural and organizational barriers, Agile coaches must engage in top-down advocacy, securing leadership buy-in and fostering a culture of continuous learning and improvement. This can be achieved by involving senior management early in the Agile transformation process and aligning the organization's strategic goals with Agile principles (Fissalma et al., 2025).
- c) Coaches should also invest in improving their conflict resolution

and facilitation skills, as these are crucial for maintaining team morale and ensuring a smooth Agile adoption process. Additionally, training in creating psychologically safe environments will support teams in navigating challenges more effectively (Klunder et al., 2022).

Social Implications

- a) The role of Agile coaching in fostering inclusive, collaborative, and adaptive team environments can lead to increased employee engagement and job satisfaction. As organizations evolve, creating such environments will not only improve team dynamics but also contribute to greater organizational resilience.
- b) By promoting Agile principles such as transparency, empowerment, and autonomy, Agile coaches contribute to building organizational cultures that prioritize collaboration and adaptability, which are essential in the modern, fast-paced business landscape (Jocic, 2024; Stray et al., 2020).

Educational Recommendations

Training programs for Agile coaches should focus on both the theoretical foundations and practical skills needed to lead successful transformations. Moreover, future educational curricula should include an emphasis on managing change and fostering an Agile mindset to equip future coaches with the tools to address the wide range of challenges they will face in the field.

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