

Leadership Development in United States Higher Education: A Systematic Review of Integrated Approaches for University Students

ABSTRACT

Authors: Zurina Ahmad Saidi, and Mohd Faiq Abd Aziz

Affiliation: Faculty of Educational Studies, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

*Corresponding author:

mohdfaiq@upm.edu.my

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Leadership skill development has become a strategic priority in higher education as universities seek to prepare graduates for increasingly complex professional and societal roles. Although research on leadership development has expanded, existing studies often examine specific approaches in isolation, limiting an integrated understanding of how leadership capacities are cultivated among university students. This study systematically synthesises leadership development strategies within United States higher education to identify coherent patterns that support student leadership learning and career readiness. Guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, a systematic search of the Scopus database was conducted in December 2025. This review focuses exclusively on studies conducted within United States higher education contexts. Following screening and eligibility assessment, 59 peer-reviewed journal articles were included in the final synthesis. Thematic analysis identified six interconnected dimensions of leadership development: experiential learning, student-led co-curricular engagement, formal leadership education, mentored leadership development, professional and soft skill development, and research and innovation-based learning. The findings suggest that leadership development is strengthened when approached as an integrated, student-centred process that aligns curricular, co-curricular, relational, and inquiry-based learning environments. An integrated leadership development framework is proposed to inform comprehensive leadership initiatives in higher education.

Keywords: Leadership development, higher education, university students, experiential learning, co-curricular leadership, systematic review, mentoring, leadership education

1. Introduction

Leadership development has become a central priority in higher education as universities are increasingly expected to prepare graduates who are not only academically competent but also capable of leading within complex professional and societal environments. Rapid changes in the global labour market, coupled with rising expectations for graduate employability, have intensified the demand for leadership skills such as communication, adaptability, problem solving, and collaboration. As a result, leadership development is no longer viewed as an optional or elite activity but as an essential outcome of the university experience (Knight & Yorke, 2004; Dugan, 2017).

Existing research demonstrates that leadership learning within higher education is multifaceted and extends beyond classroom instruction. Studies emphasise experiential learning, student led co-curricular involvement, formal leadership education, mentoring relationships, professional and soft skill development, as well as research and innovation based learning as key pathways through which leadership capacity is cultivated (Astin & Astin, 2000; Komives et al., 2005; Brungardt et al., 2006; Crisp & Cruz, 2009; Healey & Jenkins, 2009). Collectively, these studies suggest that leadership development is a developmental and contextual process shaped by both structured and informal learning experiences.

However, despite the growing body of scholarship on leadership development, the literature remains conceptually fragmented. Many studies examine individual strategies in isolation, focusing separately on classroom-based leadership education, co-curricular participation, mentoring relationships, or experiential engagement (Dugan & Komives, 2010; Seemiller, 2016; Guthrie et al., 2017). While these contributions provide valuable insights, limited attention has been given to how these diverse approaches intersect, complement one another, or collectively contribute to coherent leadership learning pathways within higher education institutions. The absence of integrative synthesis constrains the development of comprehensive frameworks capable of guiding holistic leadership initiatives across curricular and co-curricular domains.

In response to this gap, the present study systematically examines leadership skill development strategies among university students by synthesising evidence across six interconnected themes. By drawing on empirical studies within higher education, this study seeks to provide a comprehensive understanding of how leadership skills are developed and how these skills contribute to student's future career readiness. Through this integrative approach, the study aims to inform educators, policymakers, and higher education institutions seeking to design effective and inclusive leadership development initiatives.

Leadership development in higher education is increasingly recognised as a key contributor to graduate employability and long term career success. Research demonstrates that leadership skills developed during university studies, such as teamwork, communication, critical thinking, and self-awareness, are closely aligned with the competencies demanded by employers and professional environments (Robles, 2012; Jackson, 2014; Heckman & Kautz, 2012). Leadership learning is therefore not confined to preparing students for formal leadership positions but plays a broader role in enhancing students capacity to navigate complex workplace and societal challenges. Existing studies indicate that effective leadership development is supported through a combination of experiential learning, student led co-curricular engagement, structured leadership education, mentoring support, professional skill development, and research based learning environments (Komives et al., 2006; Owen et al., 2009; Allen & Hartman, 2008; Packard, 2016; Fung, 2017).

Given these considerations, there is a need for systematic synthesis that consolidates existing evidence and clarifies how various leadership development strategies collectively support student learning and professional readiness. Addressing this gap, the present study is guided by the following research question:

What leadership development strategies are identified in higher education literature, and how do these approaches collectively contribute to university students' leadership skill development and career readiness?

Accordingly, this study systematically synthesises leadership development strategies in higher education and examines how these interconnected approaches support the cultivation of leadership capacity among university students. By integrating diverse leadership development pathways within a unified analytical framework, the study contributes to a more coherent conceptualisation of student-centred leadership learning and proposes an integrated model to inform comprehensive institutional leadership initiatives.

2. Methodology

2.1. Research Design

This study adopted a systematic literature review design guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework to ensure transparency, procedural clarity, and reproducibility. A systematic approach was employed to identify, screen, evaluate, and synthesise empirical evidence concerning effective strategies for leadership skill development among university students in higher education. The use of PRISMA enabled structured documentation of the identification, screening, eligibility, and inclusion stages, thereby enhancing procedural clarity and minimising selection bias.

2.2. Database Selection and Search Strategy

The literature search was conducted in December 2025 using the Scopus database. Scopus was selected due to its comprehensive coverage of peer-reviewed journals across social sciences and education-related disciplines, as well as its advanced search functionalities that allow precise Boolean structuring and field-specific filtering. To ensure conceptual alignment with the research objective, the search was restricted to the TITLE-ABS-KEY fields. The following Boolean search string was applied:

Table 1. Search Strings

Searching keyword
(TITLE-ABS-KEY("leadership") AND TITLE-ABS-KEY("skill" OR "competence" OR "capability") AND TITLE-ABS-KEY("development" OR "training") AND TITLE-ABS-KEY("higher education" OR "university students" OR "college students") AND TITLE-ABS-KEY("strategies" OR "approaches" OR "methods"))

The initial search yielded 1477 records. To refine the search results and enhance disciplinary relevance, filters were applied to include only peer-reviewed journal articles (document type: article) written in English. Following the application of these filters, 275 records remained for screening. While Scopus was selected due to its comprehensive coverage of peer-reviewed literature in social sciences and education, it is acknowledged that relevant studies indexed in ERIC, PsycINFO, and Web of Science may not have been captured. The use of a single database was intended to ensure consistency and manageability of the review process, although it may limit the breadth of coverage and introduce potential publication bias.

2.3. Inclusion and Exclusion Criteria

The review was limited to studies conducted in the United States to ensure contextual consistency across higher education systems, particularly in relation to institutional governance structures, the maturity of co-curricular leadership ecosystems, and the integration of student affairs and academic development frameworks. The United States higher education context is characterised by well-established leadership

development infrastructures, including structured co-curricular programmes, mentoring systems, and experiential learning initiatives, which provide a relatively comparable basis for synthesis. However, this restriction may limit the transferability of findings to other national contexts, as leadership development practices are shaped by cultural, institutional, and policy differences. As such, the findings of this review should be interpreted as being strongly informed by United States higher education contexts, while offering indicative insights that may require contextual adaptation in other settings.

2.4. Article Selection Process (PRISMA)

The study selection process followed the four-stage PRISMA procedure: identification, screening, eligibility, and inclusion. During the identification stage, 1477 records were retrieved from Scopus. After applying document type and language filters, 275 records remained. These 275 articles underwent title and abstract screening to assess relevance to leadership skill development strategies within higher education settings. At this stage, 163 articles were excluded for failing to meet the inclusion criteria. The remaining 112 articles progressed to full-text assessment for eligibility. Each article was evaluated for methodological suitability, empirical focus, and alignment with leadership development strategies targeting university students. During this stage, 53 articles were excluded due to conceptual misalignment, insufficient empirical evidence, or lack of explicit focus on leadership development strategies. Following full-text assessment, 59 studies met all inclusion criteria and were included in the final synthesis. The selection process is illustrated in the PRISMA flow diagram. Title and abstract screening was conducted by the authors, with a subset of studies independently double-screened to ensure consistency. Full-text screening was subsequently carried out, and any discrepancies were discussed and resolved through consensus among the authors.

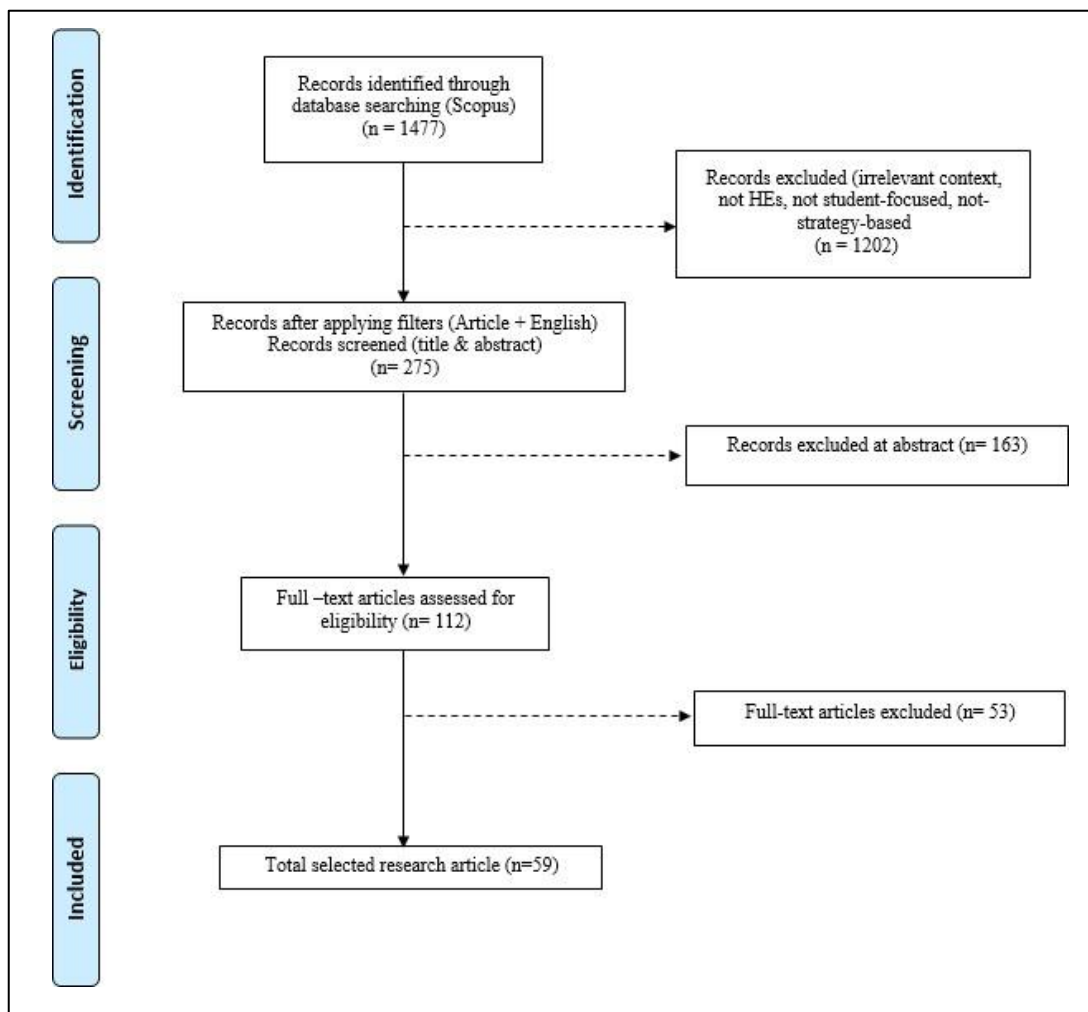


Figure 1. PRISMA Flow Diagram of the Article Selection Process

To enhance transparency and reproducibility of the screening process, the reasons for exclusion at each stage are summarised in Tables 2.

Table 2: Reason for Exclusion During Initial Screening, Abstract Screening Stage and Full Text Exclusion

Stage	Reason	Number	Total
Initial screening	<ul style="list-style-type: none"> • Not related to leadership development • Not focused on higher education context • Not student-focused (e.g., organisational leadership) • Not aligned with leadership development strategies • Duplicate or irrelevant records 		1202
Abstract screening	<ul style="list-style-type: none"> • Insufficient focus on leadership development outcomes • Not empirical study • Weak relevance to research objectives • Conceptual or theoretical only (no data) • Incomplete or unclear findings 		163
Full-text screening	<ul style="list-style-type: none"> • Not aligned with leadership development focus • Not conducted in higher education context • Not conducted in United States • Insufficient methodological rigor • Insufficient data for analysis 	18 12 10 7 6	53

2.5. Data Extraction and Synthesis

A structured data extraction process was implemented to ensure systematic documentation and comparability across studies. A standardised data extraction form was developed using Microsoft Excel to capture key study characteristics, including author(s), year of publication, research design, sample characteristics, institutional context, leadership development strategy examined, and principal findings related to leadership skill development. The data extraction process was conducted by the authors and cross-checked to ensure consistency and accuracy. Any discrepancies identified during extraction were discussed and resolved through consensus.

Thematic synthesis was employed to analyse the extracted data. An inductive coding process was undertaken, in which study findings were examined line-by-line to generate initial codes. This process resulted in the identification of a broad set of preliminary codes capturing recurring concepts across the included studies. Through iterative comparison and refinement, these initial codes were progressively grouped into higher-order categories. Following two rounds of coding and thematic consolidation, the codes were synthesised into six overarching themes representing key leadership development pathways within higher education: experiential leadership learning; student-led co-curricular leadership; formal leadership education; mentored leadership development; professional and soft skill development; and research and innovation-based leadership learning.

Microsoft Excel was used to support the organisation and categorisation of codes during the analysis process. Where necessary, analytical discussions were conducted between the authors to ensure conceptual clarity and consistency in theme development. This iterative and collaborative approach enhanced the transparency and reliability of the thematic synthesis.

During the data organisation and synthesis process, AI-assisted tools (ChatGPT and Elicit) were used to support the structuring of extracted information and the identification of potential thematic patterns. Elicit was used to assist in identifying potential patterns and organising extracted data into preliminary thematic groupings. These outputs were not used directly but were critically reviewed, compared against the original studies, and substantially refined by the authors. All final coding decisions and thematic interpretations were determined solely by the authors. These tools were utilised as supportive analytical

aids rather than as primary sources of interpretation. All AI-generated outputs were critically reviewed, validated against the original source materials, and refined by the authors to ensure accuracy, consistency, and conceptual integrity.

2.6. Consideration of Methodological Quality

To enhance methodological transparency and address potential risk-of-bias concerns, a structured qualitative assessment of methodological quality was incorporated into the review process. Although a formal numerical scoring system was not applied, each included study was evaluated based on key criteria, including clarity of research design, appropriateness of methodological approach, adequacy of sample size, transparency of data collection procedures, and alignment between findings and conclusions. Based on these criteria, studies were categorised into three levels of evidence strength: strong, moderate, and limited. Studies classified as strong typically employed robust research designs (e.g., quasi-experimental, longitudinal, or large-scale quantitative studies) with clear methodological reporting. Moderate studies included well-conducted qualitative or mixed-methods research with adequate transparency, while limited studies were generally small-scale, single-institution, or descriptive program evaluations with less methodological detail.

This classification informed the interpretive weighting of evidence during thematic synthesis, allowing greater emphasis to be placed on studies with stronger methodological rigour. The evidence strength classification is reflected in the synthesis tables to provide readers with a clearer understanding of the robustness of the underlying evidence base. This approach ensures that the review maintains inclusivity across diverse study designs while enhancing transparency in how evidence is interpreted and synthesised.

3. Results and Discussion

3.1. Theme 1: Experiential Leadership Learning

The literature consistently positions experiential leadership learning as a fundamental pathway through which leadership capacity is developed among university students. Rather than relying on abstract or purely classroom-based instruction, leadership learning is understood to emerge through direct engagement in real and meaningful contexts. Early conceptual contributions emphasise leadership as a socially embedded and developmental process, shaped by students' active participation in institutional and community environments. Through involvement, interaction, and responsibility, students gradually construct their understanding of leadership, highlighting that leadership learning is rooted in experience and social practice rather than passive knowledge acquisition (Astin & Astin, 2000; Komives et al., 2005).

Empirical evidence further reinforces the importance of practising leadership in authentic settings. Studies show that students who take on leadership roles within university contexts develop higher levels of leadership competence, confidence, and efficacy as they are required to make decisions, coordinate with others, and respond to real challenges (Dugan & Komives, 2010). Experiential leadership programmes that incorporate group problem solving, applied projects, and real-world leadership tasks are found to promote deeper and more sustained learning outcomes compared to purely instructional approaches (Eich, 2008). These findings suggest that experiential learning is particularly effective because it allows leadership behaviours to be enacted, tested, and refined through practice.

Reflection emerges as a critical element that transforms experience into meaningful leadership learning. Experiential pedagogy is most effective when students are supported in reflecting on their actions, challenges, and outcomes, enabling them to interpret experiences and adapt their leadership approaches accordingly (Roberts, 2012). Leadership development is therefore viewed as a dynamic process shaped by challenge, feedback, and reflection, rather than a fixed set of skills acquired at a single point in time (Day et al., 2014). Reflective engagement also supports the development of leadership identity, as

students internalise leadership values and gain greater self-awareness through experiential learning (Owen, 2016).

Experiential leadership learning also plays a vital role in bridging theory and practice across diverse learning environments. High-impact practices such as service learning, internships, applied leadership projects, and outdoor or adventure-based programmes connect leadership concepts to real-world application, strengthening students' confidence and practical understanding of leadership (Guthrie & Jenkins, 2018; Priest & Gass, 2018). Engagement in community-based and experiential contexts further exposes students to complex social and organisational challenges, fostering adaptability and problem-solving skills (Soria et al., 2015). At the institutional level, leadership development is most effective when universities intentionally embed experiential engagement across the student experience, rather than treating it as an isolated or optional component (Kezar & Holcombe, 2019). Critical service-learning approaches further extend experiential leadership learning by linking leadership practice with social responsibility and community problem solving (Mitchell et al., 2015).

Overall, there is strong consensus across conceptual and empirical studies that experiential leadership learning represents a core pathway for leadership development in higher education. Leadership emerges through direct experience, is strengthened through reflection, and is deepened when theory is meaningfully connected to practice. By engaging students in authentic, challenging, and reflective learning environments, experiential approaches support leadership identity development, skill acquisition, and adaptive capacity, underscoring their central role in preparing students for leadership in complex real-world contexts. Importantly, experiential leadership learning does not operate in isolation but often intersects with co-curricular, mentoring, and research-based environments. This suggests that experiential engagement functions as a foundational mechanism through which other leadership development strategies gain practical meaning and developmental depth.

The evidence within this theme is predominantly derived from qualitative and program-based studies, with limited experimental validation, suggesting that while experiential learning is widely recognised as foundational to leadership development, the strength of causal evidence remains relatively constrained.

3.2. Theme 2: Student-Led Co-Curricular Leadership

Student-led co-curricular leadership is consistently identified as a significant context for leadership development, particularly through forms of engagement that extend beyond formal academic settings. Leadership learning in these spaces is closely tied to students' active participation in campus life, where leadership emerges through interaction, shared responsibility, and collective decision making. Student involvement in organisations and activities provides opportunities for leadership to be experienced as a lived practice rather than a theoretical concept, reinforcing the idea that leadership development is most effective when students are directly involved in shaping their own learning environments (Astin, 1999; Kezar & Moriarty, 2000).

Empirical research demonstrates that co-curricular settings offer important opportunities for students to practise leadership by organising activities, coordinating initiatives, and leading peers. Leadership roles within student organisations and governance structures allow students to engage with real responsibilities, strengthening leadership competence through experience rather than instruction alone (Zimmerman-Oster & Burkhardt, 1999; Dugan & Komives, 2007). Co-curricular leadership learning is driven by collaboration, accountability, and peer interaction, which together create conditions for the development of practical leadership skills and confidence (Haber, 2011).

A defining feature of co-curricular leadership learning is its informal and authentic nature. Student organisations often function as communities of practice in which leadership is shared, negotiated, and enacted through everyday interactions rather than formal hierarchies (Komives et al., 2006). These environments allow students to experiment with leadership roles in meaningful yet relatively low-risk contexts, supporting leadership identity development over time. Through trial, reflection, and social

engagement, students are able to explore different leadership approaches and develop a deeper understanding of themselves as leaders (Owen et al., 2009).

Beyond individual skill development, student-led co-curricular engagement also contributes to broader civic and social outcomes. Participation in student-led initiatives has been shown to enhance leadership confidence, interpersonal competence, and a sense of social responsibility (Saidi et al., 2025; Soria et al., 2012). Leadership and representation roles further support students' civic awareness and engagement with institutional decision making, positioning leadership as both a personal and collective endeavour (Luescher-Mamashela, 2013). Sustained involvement in co-curricular leadership activities is therefore closely associated with positive leadership outcomes, particularly when students are actively involved in leading peers and shaping shared goals (Dugan, 2017).

Overall, the literature highlights student-led co-curricular leadership as a vital pathway for leadership development in higher education. Through active participation in student-initiated activities, students learn to organise, collaborate, and lead in authentic and informal settings that complement formal learning. These experiences foster leadership confidence, identity development, and transferable skills, underscoring the central role of co-curricular engagement in cultivating leadership capacity among university students. While co-curricular engagement offers authentic leadership practice, its developmental impact appears strongest when intentionally connected to reflective or instructional components. This highlights the importance of institutional coordination in aligning co-curricular leadership opportunities with broader leadership learning objectives.

The evidence supporting this theme is largely based on cross-sectional and self-reported studies, with limited longitudinal or experimental designs, indicating that observed positive outcomes may be influenced by self-selection effects rather than direct causal impact.

3.3. Theme 3: Formal Leadership Education

Formal leadership education is commonly described in the literature as a deliberate and structured approach to cultivating leadership capacity within higher education. Rather than emerging incidentally, leadership learning in this context is intentionally designed through curriculum planning and instructional strategies. Leadership is treated as an area of study that can be systematically taught, learned, and assessed, distinguishing formal leadership education from more informal or experiential approaches (Brungardt et al., 2006). Credit-bearing leadership courses play an important role in this process by providing coherent learning pathways that introduce students to leadership concepts, models, and competencies in a structured manner (Jenkins, 2012).

Classroom-based leadership courses contribute significantly to students' understanding of leadership by offering conceptual clarity and theoretical grounding. Through guided instruction and structured learning activities, students are able to engage critically with leadership theories and examine how these frameworks apply to practice (Rosch & Caza, 2012). Structured classroom environments also allow for the intentional integration of discussion, reflection, and applied exercises, reinforcing students' theoretical understanding and supporting deeper intellectual engagement with leadership concepts (Allen & Hartman, 2008). These approaches suggest that formal leadership education provides a level of conceptual organisation that may not always emerge through experience alone.

Curriculum-based leadership programmes further strengthen leadership development by aligning learning objectives, pedagogical strategies, and assessment practices. Leadership education frameworks embedded within academic curricula promote consistency and coherence in learning outcomes, ensuring that leadership development is intentional rather than incidental (Komives et al., 2013). Competency-based approaches extend this alignment by clearly defining leadership skills and developmental goals, allowing curricula to be designed around measurable and developmentally appropriate outcomes (Seemiller, 2016). Well-structured leadership programmes have been shown to enhance students' leadership learning by providing clarity, progression, and purposeful assessment (Guthrie et al., 2017).

Formal leadership education is also understood as a developmental process that unfolds over time through carefully sequenced instruction. Leadership learning is supported by curriculum design that recognises development as longitudinal, enabling students to build leadership knowledge progressively across courses and academic experiences (Day et al., 2014). When leadership training modules are systematically integrated into academic programmes, they contribute more effectively to leadership growth and application (Priest & Thorpe, 2017).

Academic leadership courses further strengthen leadership understanding by offering structured opportunities for both knowledge acquisition and practical application within classroom contexts (Boatman et al., 2019). However, formal leadership education alone may be insufficient without experiential reinforcement, suggesting that structured instruction and applied practice must function in complementary rather than isolated roles. Overall, the literature reflects strong agreement that formal leadership education plays a critical role in leadership development through structured and intentional instruction. By providing systematic knowledge, conceptual frameworks, and clearly defined learning pathways, formal courses and curriculum-based programmes strengthen students' theoretical understanding of leadership. When leadership education is embedded within academic curricula, higher education institutions create purposeful learning environments that support consistent, reflective, and conceptually grounded leadership development.

Compared to other themes, this area includes a relatively stronger methodological base, with some quasi-experimental and curriculum-based evaluations; however, the overall evidence remains uneven and context-dependent across institutions.

3.4. Theme 4: Mentored Leadership Development

Mentored leadership development is widely acknowledged as a significant pathway through which leadership capacity is cultivated in higher education. Rather than focusing solely on skill transmission, mentoring emphasises relational learning supported by guidance, dialogue, and ongoing support. Mentoring is commonly understood as a multidimensional developmental process that provides students with academic, psychosocial, and career-related support, all of which contribute to leadership growth (Crisp & Cruz, 2009). Similarly, mentoring has been described as an intentional relationship that facilitates learning through interpersonal exchange and guided reflection, positioning it as a structured yet relational approach that complements both formal leadership education and experiential learning (Allen & Eby, 2007).

A key strength of mentoring lies in the feedback, role modelling, and encouragement provided by mentors. Through close interaction, mentors model leadership behaviours and values that students observe and gradually internalise, contributing to the development of leadership identity (Komives et al., 2006). Mentoring relationships also enhance leadership outcomes by reinforcing effective leadership behaviours and offering personalised feedback tailored to individual experiences (Dugan & Komives, 2010). Coaching-oriented mentoring further supports learning by creating opportunities for students to reflect on leadership challenges with more experienced individuals, deepening understanding through guided dialogue (Dominguez & Hager, 2013).

Mentoring is also strongly associated with the development of leadership confidence and a more coherent sense of leadership identity. By providing affirmation, encouragement, and constructive feedback, mentoring supports students' belief in their leadership abilities and sustains motivation over time (Murphy & Johnson, 2011). This supportive function is particularly important during periods of transition and uncertainty within higher education, where mentoring can help emerging leaders navigate challenges and make sense of their leadership experiences (Packard, 2016). Intentional mentoring relationships therefore play a crucial role in fostering confidence and self-efficacy in leadership development (Johnson, 2016).

Beyond individual outcomes, mentoring supports leadership development as a continuous and evolving process across students' educational journeys. Adult guidance and sustained mentor engagement have been shown to influence leadership readiness and capacity, particularly when mentoring is embedded within broader developmental structures (Campbell et al., 2012). Reviews of mentoring models in higher education further highlight the value of long-term mentoring relationships in providing continuity, developmental alignment, and ongoing support that extend beyond isolated learning moments (Gershenfeld, 2014). These findings suggest that mentoring functions not as a one-time intervention, but as an ongoing mechanism that supports leadership growth over time.

Overall, there is strong agreement in the literature that mentored leadership development plays a vital role in cultivating leadership capacity among university students. Leadership develops through guided relationships that offer feedback, role modelling, and encouragement, while simultaneously strengthening confidence and leadership identity. By supporting continuous development across different stages of students' educational experiences, mentoring complements experiential, co-curricular, and formal leadership learning, affirming its importance as a relational and sustained pathway for leadership development in higher education. Mentoring therefore functions as a relational bridge that connects experiential, co-curricular, and formal learning contexts, reinforcing leadership identity development across multiple domains.

The evidence within this theme is primarily qualitative and relational in nature, with limited large-scale empirical validation, suggesting that while mentoring is conceptually significant, its measurable impact on leadership outcomes requires further rigorous investigation.

3.5. Theme 5: Professional and Soft Skill Development

The literature consistently identifies professional and soft skill development as a central outcome of leadership development within higher education. Leadership is commonly conceptualised as a competency-based construct that extends beyond positional roles to include a broad range of professional capabilities, such as communication, collaboration, and self-management (Seemiller, 2013). Soft skills are therefore viewed not as supplementary attributes, but as essential leadership outcomes that enable individuals to function effectively in organisational and professional contexts (Robles, 2012). From this perspective, leadership development serves as an important mechanism through which higher education cultivates skills that go beyond disciplinary or technical knowledge.

A strong emphasis is placed on communication, teamwork, and interpersonal competence as core components of leadership learning. Employability and professional capability are closely linked to students' ability to communicate clearly, work collaboratively, and engage effectively with others (Saidi & Abd Aziz, 2025; Knight & Yorke, 2004). Employers consistently value these attributes, particularly skills related to teamwork, adaptability, and interpersonal interaction, which are often developed through leadership-related learning experiences rather than traditional academic instruction alone (Andrews & Higson, 2008). Leadership learning environments provide practical opportunities for students to practise these skills through interaction, collaboration, and shared responsibility, strengthening their capacity for effective communication and relationship building (Crosbie, 2005).

Professional and soft skills are also widely recognised as enhancing both leadership effectiveness and employability. Evidence suggests that non-cognitive and soft skills play a critical role in long-term professional success, often exerting a stronger influence than purely technical abilities (Heckman & Kautz, 2012). Leadership engagement within higher education contributes significantly to employability by fostering transferable skills that align closely with workplace expectations, including problem solving, teamwork, and interpersonal effectiveness (Jackson, 2014). Students who actively participate in leadership activities consistently demonstrate stronger development of these professional skills, highlighting the practical value of leadership learning experiences (Dugan, 2017). This positioning reframes leadership development not merely as preparation for formal leadership roles, but as the cultivation of adaptive professional capacity across diverse career trajectories.

Emotional and social competencies further reinforce the connection between leadership learning and professional skill development. Emotional intelligence has been strongly associated with effective leadership, particularly through qualities such as self-awareness, empathy, and relationship management (Goleman, 2000). Leadership training initiatives have been shown to support the development of these competencies, equipping students with soft skills that are transferable across a wide range of professional contexts (Laker & Powell, 2011). Collectively, these findings suggest that leadership learning provides a critical foundation for preparing students to navigate complex interpersonal and organisational demands.

Overall, the literature clearly demonstrates that leadership development plays a vital role in supporting professional and soft skill growth among university students. Through leadership learning, students develop communication, teamwork, and interpersonal skills that enhance leadership effectiveness and employability. These transferable competencies equip graduates with the professional capabilities needed to succeed across diverse career pathways, underscoring the importance of professional and soft skill development as a fundamental dimension of leadership learning in higher education.

The supporting evidence for this theme is mixed, comprising survey-based and program evaluation studies, with varying levels of methodological rigor, indicating moderate strength but limited consistency across different institutional contexts.

3.6. Theme 6: Research and Innovation-Based Leadership Learning

Research and innovation-based learning is increasingly recognised as a meaningful pathway for developing leadership capacity within higher education. Leadership learning in this context is closely linked to inquiry, problem solving, and active participation in knowledge creation. Undergraduate research is widely viewed as a powerful learning environment in which students develop leadership by engaging directly in investigation, collaboration, and intellectual responsibility (Healey & Jenkins, 2009). Research-based learning further supports leadership development by encouraging critical inquiry and participation in the construction of knowledge, positioning students as active contributors rather than passive recipients of information (Brew, 2013).

Inquiry-driven and problem-based pedagogies play a central role in fostering leadership through research and innovation. Collaborative problem solving and decision making are key features of problem-based learning, which has been shown to support leadership development by placing students in situations that require initiative, coordination, and shared responsibility (Prince & Felder, 2006). Inquiry-centred learning environments similarly promote leadership growth by requiring students to manage learning processes, work in teams, and engage with complex problems that mirror real-world challenges (Hmelo-Silver, 2004). Project- and problem-based learning further strengthen innovation-oriented leadership by situating students in authentic research contexts that demand creativity, accountability, and sustained collaboration (Kolmos et al., 2009).

The integration of research into academic curricula also contributes significantly to leadership development. Undergraduate research is widely recognised as a high-impact educational practice that enhances leadership learning by promoting deep engagement, independence, and responsibility for learning outcomes (Kuh, 2008). Student-as-researcher approaches extend this engagement by empowering students to take ownership of inquiry processes and participate actively in research communities, thereby strengthening leadership through responsibility and collaboration (Levy & Petruilis, 2012). Through these experiences, students move beyond knowledge consumption toward leadership through inquiry and innovation.

Research-led and innovation-oriented learning environments further support leadership development through collective knowledge production. Inquiry-based learning encourages leadership by engaging students in collaborative investigation, dialogue, and reflection, creating opportunities for shared leadership and critical engagement (Justice et al., 2009). Research-led teaching approaches similarly integrate innovation, teamwork, and reflective inquiry into learning processes, strengthening students'

leadership capacities through sustained and meaningful engagement (Walker et al., 2010). Embedding inquiry and innovation across curricula reinforces leadership development by enabling students to develop leadership capabilities through ongoing research engagement (Fung, 2017).

Research and innovation-based leadership learning thus extends leadership development into epistemic domains, positioning students as knowledge creators rather than passive recipients and reinforcing leadership as inquiry-driven practice. Overall, there is strong agreement in the literature that research and innovation-based learning provide an effective pathway for leadership development in higher education. Leadership emerges through inquiry, problem solving, and participation in knowledge creation, where students practise initiative, collaboration, and critical thinking. By integrating research and innovation into teaching and learning, higher education institutions create environments that support both independent and collective leadership learning, affirming the central role of research-based approaches in developing leadership capacity in contemporary higher education.

The evidence base for this theme is comparatively limited and often derived from conceptual or case-based studies, indicating that this area remains emergent and underexplored within the broader leadership development literature.

3.7. Integrative Synthesis of Leadership Development Pathways

Across the six themes, a clear pattern emerges whereby leadership development in higher education is most robust when multiple developmental pathways operate in alignment rather than isolation. Experiential engagement provides practical grounding, co-curricular spaces offer authentic leadership enactment, formal education contributes conceptual clarity, mentoring sustains identity development, professional skill formation strengthens employability, and research-based learning fosters critical inquiry and innovation. Together, these pathways form an interconnected ecosystem of leadership learning. The findings therefore support an integrated, student-centred framework in which leadership development is distributed across curricular, co-curricular, relational, and inquiry-based domains, rather than confined to a single pedagogical strategy.

While the synthesis identifies six coherent and interconnected pathways of leadership development, the strength of empirical evidence across these themes varies considerably. A substantial proportion of the reviewed studies are based on qualitative designs, single-institution case studies, or program evaluations, which, although rich in contextual insight, may limit generalisability. In particular, research on co-curricular leadership and mentoring is frequently associated with self-selection bias, as students who choose to participate in leadership activities may already possess higher levels of motivation or leadership inclination. As such, positive outcomes reported in these contexts should be interpreted with caution.

Furthermore, relatively few studies employ experimental or quasi-experimental designs capable of establishing causal relationships between leadership development interventions and student outcomes. This suggests that while there is strong conceptual and experiential support for integrated leadership development approaches, the robustness of causal evidence remains uneven across the literature.

In addition, contradictory or context-dependent findings are not extensively explored in existing studies. For instance, while co-curricular engagement is often associated with positive leadership outcomes, its effectiveness may vary depending on institutional support, programme quality, and student engagement levels. Similarly, the impact of formal leadership education may depend on the extent to which it is integrated with experiential and relational learning environments. These limitations indicate that the current evidence base, although conceptually coherent, would benefit from more rigorous, multi-institutional, and methodologically diverse research to strengthen the empirical foundations of integrated leadership development in higher education.

The proposed framework extends existing leadership development models by integrating multiple developmental pathways into a unified, student-centred ecosystem, offering a more holistic and practice-oriented approach compared to traditionally fragmented models.

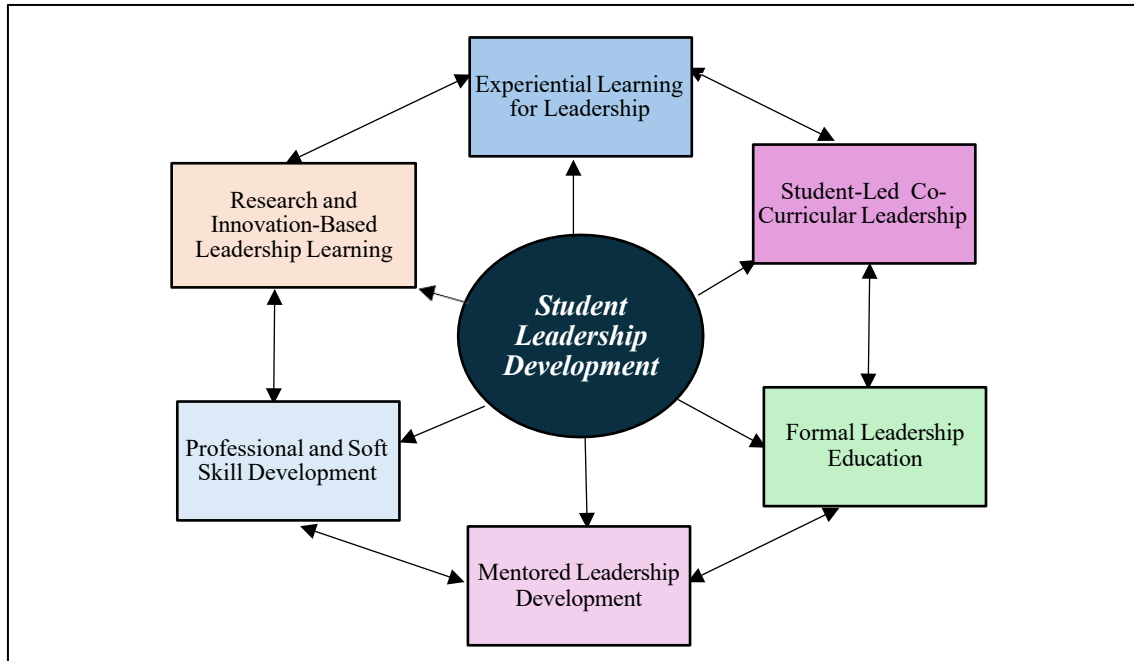


Figure 2. Integrated Student-Centred Leadership Development Framework

This figure illustrates the integrated student-centred leadership development framework, in which leadership development among university students emerges through the dynamic interaction of six interconnected pathways: experiential learning, student-led co-curricular engagement, formal leadership education, mentored leadership development, professional and soft skill development, and research and innovation-based learning.

At the centre of the framework is student leadership development, conceptualised as a holistic outcome shaped by the alignment of multiple learning environments. The surrounding pathways operate as an interconnected ecosystem, where each dimension reinforces and extends the others across curricular, co-curricular, relational, and inquiry-based domains. This model reflects the integrated nature of leadership learning, particularly within United States higher education contexts where these developmental pathways are institutionally embedded.

Table 3 summarises the six leadership development pathways identified in this review, along with their conceptual focus and supporting empirical evidence.

Table 3. Description of Integrated Student-Centred Leadership Development

Theme	Description	References	Evidence Type / Strength
Experiential Leadership Learning	<ul style="list-style-type: none"> • Leadership Develops Through Direct Experience • Students Learn by Practising Leadership in Real Contexts • Reflection Strengthens Leadership Understanding • Experience Helps Connect Theory And Practice 	Astin & Astin (2000); Komives Et Al. (2005); Dugan & Komives (2010); Roberts (2012); Guthrie & Jenkins (2018); Eich (2008); Day Et Al. (2014); Priest & Gass (2018); Soria Et Al. (2015); Owen (2016); Kezar & Holcombe (2019); Mitchell Et Al. (2015)	Mixed (Predominantly Qualitative and Program-Based Studies) Limited Experimental Evidence
Student-Led Co-Curricular Leadership	<ul style="list-style-type: none"> • Leadership Develops Through Student-Led Activities and Initiatives • Students Practise Leadership by Organising and Leading Peers • Co-Curricular Spaces Offer Authentic, Informal Leadership Experiences • Engagement Outside The Classroom Supports Practical Leadership Development 	Astin (1999); Dugan & Komives (2007); Komives Et Al. (2006); Kezar & Moriarty (2000); Soria Et Al. (2012); Haber (2011); Zimmerman-Oster & Burkhardt (1999); Owen Et Al. (2009); Luescher-Mamashela (2013); Dugan (2017)	Mostly Cross-Sectional and Correlational Studies Moderate Evidence
Formal Leadership Education	<ul style="list-style-type: none"> • Leadership Learning Is Supported Through Structured and Planned Instruction • Formal Courses Provide Systematic Leadership Knowledge and Framework • Curriculum-Based Programmes Ensure Intentional Leadership Development • Classroom Learning Strengthens Theoretical Understanding Of Leadership 	Brungardt Et Al. (2006); Jenkins (2012); Rosch & Caza (2012); Komives Et Al. (2013); Priest & Thorpe (2017); Seemiller (2016); Guthrie, Jones, & Osteen (2017); Boatman Et Al. (2019); Day Et Al. (2014); Allen & Hartman (2008)	Include Quasi-Experimental and Curriculum-Based Evaluations Relatively Stronger Evidence
Mentored Leadership Development	<ul style="list-style-type: none"> • Leadership Develops Through Guided Support and Mentoring Relationships • Mentors Provide Feedback, Role Modelling, And Encouragement • Mentoring Strengthens Leadership Confidence and Identity 	Crisp & Cruz (2009); Allen & Eby (2007); Komives Et Al. (2006); Dugan & Komives (2010); Packard (2016); Campbell Et Al. (2012); Gershenfeld (2014); Murphy & Johnson (2011); Johnson (2016); Dominguez & Hager (2013)	Largely Qualitative and Relational Studies Moderate Evidence

	<ul style="list-style-type: none"> • Guided Relationships Support Continuous Leadership Development 		
Professional And Soft Skill Development	<ul style="list-style-type: none"> • Leadership Development Supports Professional and Soft Skill Growth • Students Build Communication, Teamwork, And Interpersonal Skills • Soft Skills Enhance Leadership Effectiveness and Employability • Leadership Learning Contributes To Transferable Professional Competencies 	Seemiller (2013); Robles (2012); Heckman & Kautz (2012); Dugan (2017); Jackson (2014); Andrews & Higson (2008); Knight & Yorke (2004); Goleman (2000); Crosbie (2005); Laker & Powell (2011)	Mixed Evidence Including Survey-Based Studies Moderate To Strong
Research And Innovation-Based Leadership Learning	<ul style="list-style-type: none"> • Leadership Develops Through Research and Inquiry-Based Learning. • Students Practise Leadership by Solving Problems and Generating Knowledge. • Innovation-Oriented Activities Encourage Initiative and Critical Thinking. • Research Engagement Supports Independent and Collaborative Leadership Learning. 	Healey & Jenkins (2009); Brew (2013); Prince & Felder (2006); Kolmos Et Al. (2009); Hmelo-Silver (2004); Fung (2017); Kuh (2008); Levy & Petrulis (2012); Justice Et Al. (2009); Walker Et Al. (2010)	Primarily Conceptual and Case - Based Studies Emerging Evidence

5. Limitations

This systematic literature review is subject to several limitations. First, the study was limited to publications indexed in the Scopus database. Although Scopus provides broad coverage of peer reviewed literature in social sciences and education, relevant studies indexed in other databases may not have been captured. Second, the search was restricted to English language publications, which may introduce language bias and limit the inclusion of scholarship published in other languages. Third, the review focused exclusively on studies conducted in the United States in order to ensure contextual consistency across higher education systems. While this strengthens comparability across institutional settings, it may limit the transferability of findings to other national or cultural contexts. In addition, although methodological quality was considered during the full text evaluation and thematic synthesis process, a formal risk of bias appraisal tool with numerical scoring was not applied. The synthesis therefore reflects interpretive assessment rather than structured quality grading. Future systematic reviews may incorporate formal appraisal instruments and extend the search across multiple databases and geographical contexts to further strengthen evidentiary breadth and methodological comparability.

6. Practical Implications and Implementation Roadmap

To translate the findings into actionable institutional strategies, Table 3 presents a prioritised implementation roadmap that categorises leadership development practices according to their implementation timeline, resource requirements, and potential institutional impact.

Table 4. Implementation Roadmap for Integrated Leadership Development

Timeline	Strategy	Resource Level	Expected Impact
Immediate	Embed leadership development within existing coursework and classroom activities	Low	Moderate
Medium-term	Expand structured mentoring and co-curricular leadership programmes	Medium	High
Long-term	Develop institution-wide integrated leadership development frameworks across multiple domains	High	Very high

This staged approach provides practical guidance for institutions to progressively implement integrated leadership development strategies based on available resources and institutional readiness.

7. Conclusion

This study synthesises leadership development in higher education into six interconnected pathways, highlighting that leadership development is most effective when experiential learning, co-curricular engagement, formal education, mentoring, professional skill development, and research-based learning are aligned within an integrated framework. The findings demonstrate that leadership development is inherently multidimensional and is best supported through a student-centred approach that spans curricular, co-curricular, relational, and inquiry-based domains.

Based on evidence derived from United States higher education contexts, an integrated approach to leadership development appears to be more effective. However, institutions are encouraged to adapt and evaluate these strategies within their own local contexts to ensure relevance and effectiveness across diverse educational environments. These findings carry important implications for higher education institutions, suggesting the need to design leadership development initiatives that are systematically integrated across multiple learning environments rather than implemented in isolation. Institutional stakeholders may consider embedding leadership development within both academic and co-curricular structures to enhance student engagement, leadership identity formation, and graduate employability.

Future research should prioritise more rigorous methodological designs, including longitudinal and experimental approaches, to strengthen causal understanding of leadership development outcomes. In addition, comparative studies across different national and institutional contexts would be valuable in assessing the transferability and applicability of integrated leadership development frameworks beyond the United States.

7. Ethics Statement

This study did not involve human participants, primary data collection, or the use of confidential data. The review was conducted using publicly available published literature. Therefore, ethical approval was not required.

8. Data Availability Statement

All data supporting the findings of this study are derived from publicly available peer reviewed journal articles indexed in the Scopus database. The list of included studies is available within the manuscript. No new datasets were generated or analysed beyond the published literature included in this review.

Generative AI Statement

During the preparation of this manuscript, AI-based tools were used to support specific aspects of the writing and analytical process. ChatGPT 4.0 assisted in refining language clarity and improving overall readability, while Elicit was used to help organise and interpret thematic patterns emerging from the reviewed studies. All outputs generated through these tools were carefully reviewed, critically evaluated, and substantively revised by the authors. The authors take full responsibility for the accuracy, integrity, and final content of the published work.

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