

## A systematic review of managerial competencies in global higher education

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**Abstract:** The purpose of this study is to explore and synthesize essential managerial competencies required in higher education institutions amid globalization. Utilizing a systematic literature review methodology, this research examines peer-reviewed articles published within the last five years to identify key managerial skills that support institutional performance and adaptability. The review reveals that transformational leadership, strategic management, digital fluency, human resource effectiveness, and sustainability practices are among the most emphasized competencies. Findings indicate that institutional competitiveness is anchored in five foundational competencies: conceptual thinking, interpersonal communication, technical expertise, time management, and effective decision-making. The study concludes that higher education leaders must continually adapt by integrating emerging competencies such as data analytics, cross-cultural leadership, and crisis management. These skills are essential for navigating the dynamic demands of global education. The practical implication of this review lies in its potential to inform leadership development programs, institutional policies, and human capital strategies within higher education institutions. Future research is recommended to explore the dynamic interplay between traditional competencies and evolving global trends in educational leadership.

**Keywords:** *Higher education, Managerial competence, Systematic review.*

### 1. Introduction

Higher education is the stage pursued after completing secondary education, leading to higher educational levels such as diplomas, bachelor's degrees, master's degrees, doctorates, and professions, as well as specialized programs, all of which are organized by higher education institutions in accordance with Indonesian cultural wisdom [1]. Based on the Indonesian Law No. 12/2012 concerning higher education, higher education institutions in Indonesia aim to develop the potential of students to become individuals who are faithful, devoted to the One Almighty God, noble in character, healthy, knowledgeable, skilled, creative, independent, competent, and cultured for the nation's interests [2]. Higher education plays an important role in supporting the development of a country, involving a strategic role in shaping a society that not only has intelligence and good quality but also has the ability to innovate, respond to changes, and face global challenges [3, 4]. Services in higher education encompass academic and professional programs, while higher education institutions can be universities, academies, institutes, polytechnics, and colleges [5]. As an organization, higher education institutions have three main activities (education, research, community service) that need to be planned, organized, directed, and measured. The management of these activities must be comprehensive, both institutionally and in terms of their activities. University management will play a significant role in ensuring the sustainability of activities in universities [6]. Management is the art of achieving goals through the utilization of human resources [7]. Similarly, universities as non-profit organizations or institutions

require art in achieving their goals in three activities known as the Tri Dharma of Higher Education, namely: Education, Research, and Community Service. The art of achieving these goals consists of planning, organizing, directing, and controlling [8].

The existence of various state universities and private universities at the district, provincial, and national capital levels make competition between them an inevitable reality. Institutional leaders strive to attract prospective students according to their admission capacities. If capable of accommodating as many prospective students as possible in each faculty, promotions are done through various media such as brochures, banners, or communication technologies accessible to the public seeking information about higher education services in the era of globalization. In general, globalization is the process of making the world more interconnected or universal [9].

The Republic of Indonesia Law No. 12 of 2012 on Indonesian Higher Education states that the objectives of higher education in Indonesia are: (1) the development of students' potential to become individuals who are faithful and devoted to the One Almighty God, possess noble character, are healthy, knowledgeable, skilled, creative, independent, competent, and cultured for the nation's interests; (2) the production of graduates who master branches of science and/or technology to meet national needs and enhance the nation's competitiveness; (3) the production of science and technology through research that considers and applies humanistic values for the benefit of the nation's progress, as well as the advancement of civilization and human welfare; and (4) the realization of community service based on reasoning and beneficial research works in advancing public welfare and enlightening the nation's life. From this Law, it is evident that the purpose of education is to fully develop Indonesian individuals, meaning education should maintain unity and diversity, develop individual aspirations within a unified activity encompassing teaching, research, and community service. These noble objectives can be achieved through responsible educational activities and ensuring academic quality in education design, management processes, relying on concepts of growth, development, renewal, and sustainability, thus education administration must be managed professionally [10].

To be prepared for the era of globalization, education is generally required to prepare competent individuals to compete in the global job market, and as important partners of the government in providing manpower, higher education institutions must actively play a role in producing graduates with competitive advantages in the global competition [11]. In this regard, efforts that can be made include creating effective human resource management. According to Hanafi, et al. [12] effective human resource management is the key to the success of higher education institutions because competent human resources will help institutions achieve achievements and remain competitive amid increasingly challenging industries [13, 14]. Conversely, less competent human resources can hinder the achievement of goals and the growth of higher education institutions [15]. Therefore, ensuring that human resources have competencies that match job requirements is crucial [16]. To develop human resources with excellence and roles in the era of globalization, Indonesian universities need to build and develop good university management. Higher education should be conducted using flexible and dynamic management principles to enable each university to develop according to its own potential and external demands it faces [17]. Managerial activities themselves encompass many aspects, but the main aspects that can be implemented in managing universities are planning, organizing, leadership, and control Connolly, et al. [18]; Pellegrini, et al. [19].

Turmidzi [17] argues that planning is the fundamental process through which management decides on objectives and how to achieve them [20]. Planning activities in university management can proceed through the following four stages: The first stage is setting goals or a series of goals [21]. Planning begins with decisions about the desires or needs of the organization or workgroup. Without clear goal formulations, the organization will use its resources ineffectively. The second stage involves formulating the current situation. Understanding the current position in relation to the goals to be achieved or the resources available for goal attainment is crucial because goals and plans concern future time [22, 23]. Only after the current situation is analyzed can plans be formulated to describe further activities. This second stage requires information obtained through communication within the

organization. The third stage involves identifying all facilitators and barriers. All strengths and weaknesses as well as facilitators and barriers need to be identified to gauge the organization's ability to achieve its goals [24]. Therefore, it is necessary to know the internal and external environmental factors that can help the organization achieve its goals or may pose problems. Although difficult to accomplish, anticipating future conditions, problems, and opportunities, as well as threats that may arise in the future, is an essential part of the planning process. The fourth stage involves developing plans or a series of activities for goal attainment. The final stage in the planning process includes developing various alternative activities for goal attainment, evaluating these alternatives, and selecting the best (most satisfying) alternative among the various options available [25].

Management or organizing is typically done after planning and reflects how the organization attempts to realize the planning [26]. Management (organizing) involves determining tasks, grouping tasks, delegating authority, and allocating resources throughout the organization [27]. The next aspect is leadership, which means using influence to motivate employees to achieve organizational goals. Effective leadership directs and influences the behavior of all elements within the university, following agreed-upon organizational values, norms, ethics, and culture, and is capable of making timely and appropriate decisions. Leadership can predict the future, formulate and articulate a realistic and credible vision, and communicate a forward-looking vision, emphasizing harmonious human relationships and stimulating intellectual and prudent contributions from members to achieve the organizational vision [28-32]. Leadership is also capable of providing guidance, objectives, roles, and tasks to all elements within the university. The implementation of leadership tasks in universities is based on 10 principles of good governance, namely: (1) accountability principle; (2) oversight principle; (3) transparency principle; (4) professionalism principle; (5) efficiency and effectiveness principle; (6) adherence to the rule of law within governance systems principle; (7) equality principle; (8) forward-looking principle; (9) participation principle; (10) justice principle [33]. Another aspect that can be implemented in managing universities is control or supervision. Controlling means monitoring employee activities, determining whether the organization is aligned with its goals, and making corrections if necessary [34]. Managers must ensure that their organizations are moving toward their goals [35]. All previous functions will not be effective without the supervisory function (controlling).

Bhaskar, et al. [36] stated that the quality of education needs to be continuously improved, optimized, and still has the potential for further improvement. Education must be planned, managed, regulated, and organized well in order to improve the standard of living of society, the nation, and the country. To achieve these goals, educational institutions cannot ignore educational management. Educational management is a variety of efforts aimed at optimizing all available resources to achieve educational goals set by an educational institution [37]. This is a process involving all activities in the field of education by utilizing all available facilities, including personnel, material, and spiritual, to achieve educational goals that have been set Hanafi, et al. [12].

Diamantidis and Chatzoglou [38] believes that one of the important skills for a manager is managerial skills, which affect the role and performance of a manager. Mastery of these skills can influence the direction of development of the institution he leads in accordance with the institution's vision and mission. However, conversely, it can have detrimental effects on educational institutions in the future. These skills are the main indicators of a person's professionalism in carrying out their duties [39]. Therefore, this article is written with the intention of providing information in the form of a review of managerial competencies in higher education in the era of globalization. This study aims to synthesize global trends and essential competencies for higher education leadership in a rapidly evolving educational landscape.

## 2. Methods

This study employed a systematic literature review methodology, collecting peer-reviewed journal articles, scholarly books, and relevant documents from both national and international databases. Articles published between 2018 and 2023 were included based on relevance, credibility, and thematic

focus on managerial competencies in higher education. Data were analyzed using thematic synthesis and narrative comparison to extract prevailing competency frameworks and global trends. Reliability was ensured through cross-referencing and iterative reading.

This article utilizes the article review writing method, conducted by collecting and comparing various data from journal articles related to managerial competencies in higher education. The data collection technique employed involves gathering data and information from various sources (literature reviews), which will later be used as references from several relevant sources, including books and scholarly journals both nationally and internationally [40]. Literature review, according to Linnenluecke, et al. [41] is any effort made by researchers to gather relevant information on the topic or issue being studied or researched. The main characteristics of literature reviews according to Connaway and Radford [42] include: (1) researchers directly dealing with texts or numerical data rather than direct knowledge from the field or eyewitness accounts of events, people, or other objects; (2) literature data is ready to use, meaning researchers do not go anywhere except dealing directly with source materials available in the library; (3) literature data is generally secondary sources, meaning researchers obtain materials from secondary sources rather than original data from primary sources in the field; and (4) literature data conditions are not limited by space and time. In this article, secondary data obtained from previous studies are used, not through direct observation.

The data collection method applied is the documentation method, where researchers search for and collect data from literature related to the research problem formulation. The data collection process in this documentation method is systematically conducted using specific scientific techniques for analytical purposes such as content analysis, bibliometrics or citation analysis, meta-analysis, thematic analysis, temporal analysis, and similarity analysis [43]. The approach used in this documentation method is the narrative method, where the extracted data is synthesized and grouped based on similarities to address the formulated problems. At this stage, the collected data will undergo analysis. Research articles that meet the criteria will be compiled, and journal summaries will be prepared. To maintain the accuracy of the review process and prevent and overcome misinformation (human understanding errors that may occur due to the author's lack of understanding), cross-referencing between sources is conducted, and literature is re-read, taking into account the guidance comments [44].

### 3. Results and Discussion

In the era of globalization, higher education institutions need to develop managerial competencies relevant to the demands of the time, including understanding globalization, transformational leadership, strategic management, collaborative leadership, effective human resource management, sustainable financial management, the use of information technology, and awareness of ethics and policies. Managers in higher education institutions must have a strong understanding of the dynamics of globalization in the context of higher education. They need to be able to identify opportunities and challenges arising from globalization and integrate global perspectives into management strategies. The significant impact of globalization is not limited to economic management but extends to almost all aspects of human life [45]. Therefore, globalization becomes inevitable for higher education institutions. Currently, the impact of globalization on higher education institutions is mostly informal, with only a few formalized. The impact of globalization on higher education is strongly felt in the field of information and communication technology, where institutions no longer monopolize knowledge sources, and teaching can be conducted from anywhere and anytime [46]. Faced with such impacts, higher education institutions need to anticipate them effectively. Jaeyong Song and Kyungmook Lee, authors of *The Samsung Way* Song, et al. [47] teach how to address future challenges for organizational management. Firstly, organizations need strategic agility in responding to major paradigm shifts. Secondly, to survive and excel in extremely tight competition, every company aspiring to be a global leader must pursue paradox management by pursuing seemingly contradictory goals, such as global-scale economics and speed, differentiation and low-cost leadership, or innovation and

efficiency. Thirdly, the importance of creating a versatile learning organization, making long-term investments in essentials and non-physical assets such as technology, brands, and designs.

Transformational leadership is essential to inspire positive change and innovation in higher education. Managers need to be able to motivate staff and lead with a clear vision, enabling higher education institutions to adapt quickly to environmental changes [48]. According to Robbins in Greimel, et al. [49] transformational leadership is a modern leadership theory where leadership and subordinates continuously strive to achieve higher levels of morality and motivation than before. Transformational leadership in the world of leadership can be an answer to various challenges in today's era, where many changes occur. It is no longer a time when people can accept everything that happens to them, but in today's era, it is very different from the past because in today's era, many people criticize and demand what is appropriate from what they give humanely. Maslow's motivation terminology cities that humans are individuals who have the desire to actualize themselves, which implies forms of service and recognition of the individual [48]. Therefore, transformational leadership in the current era is not only based on the need for self-esteem, but also fosters the awareness of leaders to take over the responsibility of providing the best for the organization. Modern management and leadership development studies see people, performance, and organizational growth as interrelated and mutually supportive aspects to achieve common goals. In this context, managerial competencies in higher education continue to evolve following trends influenced by social, technological, and economic changes. Trends in managerial competencies in higher education in recent years include mastery of digital technology, crisis management capabilities, and data-based decision-making skills. The following are trends in managerial competencies in world universities in the last five years.

**Table 1.**

Trends on Managerial Competencies in World Universities in The Last Five Years.

No	Year	Trends on Managerial Competencies in Higher Education of the World
1	2019	Trends in managerial competencies in higher education in 2019 emphasize the importance of strategic leadership, mastery of management technology, and the ability to manage organizational change. There is a strong focus on managerial skills that support efficiency, such as human resource management, as well as the use of digital information systems to support decision-making Karam and Tasmin [48]
2	2020	In 2020, trends in managerial competencies in higher education increasingly emphasized adaptability and crisis management, especially in response to the challenges of the COVID-19 pandemic. Colleges must develop digital leadership skills to support the shift to online learning and remote management of staff. Competence in quick decision-making and flexibility in responding to change are priorities, with a focus on student and staff wellbeing and the use of technology for operations and communications Barnett and Jung [50].
3	2021	In 2021, trends in managerial competencies in higher education focused on post-pandemic recovery and continuous digital transformation. Managerial competencies sought include the ability to manage hybrid learning, optimize technology in learning and administration, and maintain financial stability under conditions of uncertainty. In addition, inclusive leadership and operational sustainability are in the spotlight, as colleges increasingly adjust to the need for flexible learning and stronger engagement with communities Leal, et al. [51].
4	2022	By 2022, trends in managerial competencies in higher education will increasingly emphasize sustainability, digital innovation, and improving the quality of education. Higher education managers need to be competent in implementing sustainability and ESG (Environmental, Social, Governance) practices that are increasingly prioritized Shenkoya and Kim [52].
5	2023	By 2023, the trend of managerial competencies in higher education will increasingly lead to mastery of data analytics and data-driven decision-making to improve education quality and institutional efficiency. Higher education managers are expected to have the ability to leverage data in strategic planning, performance monitoring, and personalization of learning experiences Gaftandzhieva, et al. [53].

In addition, the ability to plan, implement, and evaluate long-term strategies is key to facing global challenges. Higher education managers need to have a deep understanding of SWOT analysis, strategy development, and effective implementation. In the era of globalization, cross-disciplinary and cross-cultural collaboration is crucial. Managers need to have the ability to build strong networks both within

and outside higher education institutions and to facilitate collaboration among various departments, institutions, and external partners. Furthermore, effective human resource management is essential. Higher education institutions are highly dependent on human resources. Managers need to have the ability to recruit, develop, and retain high-quality staff, as well as to create a work environment that supports growth and innovation.

In the context of globalization, higher education institutions often face pressure to manage financial resources efficiently and effectively. Managers need to have a deep understanding of financial management, including alternative financing, income diversification, and risk management. Additionally, information technology plays an increasingly important role in higher education in the era of globalization. Managers need to be able to leverage information technology to improve operational efficiency, expand access to education, and enhance the learning experience of students. In the complex global context, managers of higher education institutions also need to have a high awareness of ethical and policy issues, including social and environmental responsibilities. They must be able to make ethical decisions and comply with applicable regulations and standards. These managerial competencies are crucial for higher education institutions in facing the dynamics and challenges of the globalization era, ensuring sustainability, and enhancing the quality of education and research.

Sule and Priansa [54] stated that to achieve competitiveness between state universities and private universities, managerial leadership must possess at least five competencies: conceptual competency, interpersonal communication competency, technical competency, time management competency, and decision-making ability. At the conceptual competency level, leaders need the ability to develop ideas, concepts, and strategic thinking in planning and implementing tasks. Understanding the differences in backgrounds and resources in state universities and private universities, as well as collaboration in achieving established goals, is a crucial aspect. Leaders are expected to play a dual role as figures, leaders, and connectors. The contribution of conceptual competency in the context of the journey of a university is 35%, according to research conducted by Griffin [55].

Leadership must have the ability to formulate ideas, concepts, and ideas aimed at the progress of both state universities and private universities. This concept must be reflected in the Vision and Mission, and to achieve these goals, programs need to be created covering short, medium, and long term. The key point of conceptual competence is the leadership's ability to plan steps in state universities and private universities to improve their quality, making both types of institutions well-known, quality-driven, and competitive among others. Therefore, leaders need to have extensive academic knowledge and deep insights. According to Sudore, et al. [56] focus should be given to crucial points that influence quality in every planning stage, as part of the quality points concept. In addition, leaders also need to be able to design work strategies based on intelligence and experience, following the continuous improvement approach [57]. Continuous improvement is a paradigm that forms an organizational framework involving all elements of the organization, focusing on the future to address problems, weaknesses, potential, and threats using strategies, innovation, system controls, and user-oriented development [58]. This approach can be applied in various educational aspects, including curriculum development and is considered key to mobilizing resources to face future challenges and sustain against changes [59]. By implementing continuous improvement, systematically sustainable improvement processes can be supported by various established strategies [60, 61].

Leaders with broad insights and brilliant ideas require strong conceptual competence. This is important so that these concepts and ideas can be effectively implemented in work programs. Therefore, it is important to consider concepts and ideas based on SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats). According to Rohmad, et al. [58] SWOT analysis is a technique to describe and evaluate the condition of a problem, project, or business idea by considering internal and external factors, namely strengths, opportunities, weaknesses, and threats. Strengths are positive internal factors that provide advantages, in the context of schools/madrasahs or universities, these strengths may include special abilities, excellent human resources quality, strong organizational image, competent leadership, and other factors [62]. Weaknesses refer to limitations or deficiencies in

resources, skills, and capabilities that significantly hinder effective company or organization performance, opportunities are external environmental conditions advantageous to an educational institution, while threats are factors that disrupt the desired position of the organization. Such as the entry of new competitors, slow market growth, increased bargaining power of buyers or key suppliers, technological changes, and new or revised regulations that can jeopardize the company's success [63].

In addition to conceptual competence, success also depends on good interpersonal communication skills with various parties, including staff and the wider community, as well as the society who are users of both state universities and private universities. This indicates that good concepts and planning will not have a significant impact without being supported by effective interpersonal communication. According to DeVito [64] interpersonal communication skills are the ability to communicate effectively with others. This includes an understanding of rules in nonverbal communication, such as touch, physical distance, knowledge of context-appropriate interactions, awareness of the interlocutor, and voice volume control. These rules also include ethical aspects. Interpersonal communication can be grouped into three categories, namely involvement, control, and attachment. According to Suhanti, et al. [65] involvement includes a desire to maintain satisfaction in relationships with others and feel connected and have a strong bond; control is the urge to influence and show strength; while attachment indicates the need for friendship, closeness, and affection. They concluded that the interpersonal needs of each individual vary. There are six main motivations for individuals in interpersonal communication, namely control, emotional attachment, involvement, relaxation, escape, and pleasure [66].

According to Griffin [55] maintaining close relationships with customers is important, and this is developed through the concept of public relations or community relations. In the context of interpersonal communication competence, it relates to the ability to provide information to subordinates about tasks, implementation schedules, and responsibility for work results. As a monitor, distributor, and spokesperson, managers must be able to optimize interpersonal communication to ensure understanding and implementation of programs by subordinates. According to Griffin [55] the contribution of interpersonal communication to the success of achieving goals is 10%.

Technical competence focuses on specific abilities in using techniques, tools, and specific knowledge in carrying out tasks. Through control, monitoring, inspection, evaluation, and improvement functions, managers strive to prevent deviations, utilize resources, and perform tasks to achieve goals. The resource contribution in this case, according to Griffin [55] is 15%. Technical competence is the ability to carry out tasks and responsibilities in a specific position or function, and to supervise specific tasks. Griffin [55] revealed that control, or management, is the process of measuring actual performance by comparing it with organizational standards and goals, and taking corrective action when necessary. Therefore, supervision is very important to assess success or failure, and to make improvements in the future. Technical competence involves the ability to perform tasks appropriate to the role in an organization. For example, a supervisor must have sufficient skills and knowledge to perform assigned tasks well and be accountable. This involves practical attitudes, skills, and techniques to achieve optimal results.

Time management skills refer to a leader's capacity to use time wisely according to tasks and responsibilities. Leaders are expected to allocate time for planning, job organization, resource allocation, communication, leadership, motivation, and control. The PORCLMC principle (Planning, Organizing, Resourcing, Communicating, Leading, Motivating, Controlling) serves as a guide for managers in time management. Time management competence is the ability to effectively use time well, in a planned manner. This includes the ability to schedule or program activities so that time is used optimally. Griffin [55] outlined that in managerial functions, such as planning, organizing, resource procurement, communication, leadership, motivation, and control, efficient time management allows problem-solving to be done accurately and according to the established schedule.

The ability to make decisions includes the ability to define problems and determine the best solutions. In the scope of higher education, decision-making becomes a participatory process involving all stakeholders within the institution through deliberation. These collective decisions form the basis of



solid teamwork, in line with the upstream management principle. All decisions made in the context of higher education involve participation, not just authority alone. Thus, it can be concluded that in decision-making, all parties considered to have competence are involved. This is a consideration for leaders to make quick, accurate, efficient, and effective decisions.

The importance of managerial competence in higher education in the era of globalization is very significant. Therefore, managerial competence is crucial for higher education institutions in this era of globalization because it helps them manage resources efficiently, lead wisely, develop appropriate strategies, enhance quality and competitiveness, and innovate and adapt quickly.

Future research on managerial competencies in higher education is essential to explore the roles and skills needed by leaders in higher education institutions, especially in light of rapid technological advances, global challenges, and the changing educational landscape. One area that needs further research is the development of a comprehensive framework on managerial competencies that includes traditional managerial skills, such as strategic planning, financial management, and organizational behavior, as well as modern skills such as data analytics Munsamy, et al. [67] digital leadership Munsamy, et al. [67] and sustainability [68]. As more universities adopt hybrid learning models and digital platforms, research could focus on identifying the competencies required to effectively manage these changes, such as leadership in digital transformation and the ability to drive innovation in teaching and learning environments [69].

In addition, future research also needs to explore cross-cultural competencies among academic leaders, especially in light of the globalization of education. Research could examine how managerial competencies vary across different cultural contexts and how international collaboration affects leadership effectiveness in higher education [70]. As demands for inclusiveness and diversity increase, research on how leaders can develop competencies related to diversity, equity and inclusion (DEI) in academic settings is crucial [71]. This area of research can help identify strategies for creating an inclusive campus culture that supports the needs of diverse students, faculty, and staff. Further research could also explore the relationship between managerial competencies and institutional performance, particularly in identifying how leadership practices influence organizational outcomes such as student satisfaction, retention, and institutional reputation [69].

In another hand, research into the role of continuing professional development for higher education leaders, especially in developing adaptive leadership and lifelong learning, is highly relevant to creating leaders who are responsive to the changing educational landscape. Finally, studying the implications of leadership during a crisis, such as the COVID-19 pandemic, can provide valuable insights into college resilience and agility as well as the specific competencies needed for effective crisis management [72]. Overall, future research should aim to develop a deeper understanding of the dynamics of the interplay between managerial competencies and organizational success in the context of higher education, ultimately contributing to the development of more effective and adaptive leadership in academic institutions.

#### 4. Conclusion

In an increasingly competitive and globalized academic environment, managerial competencies are critical to institutional success. This review identifies five foundational competencies conceptual thinking, interpersonal communication, technical skill, time management, and decision-making as key drivers of institutional performance. The study also highlights evolving trends, such as digital leadership, sustainability, and data-informed decision-making. Future research should focus on integrating these competencies into leadership development programs and explore their impact on institutional outcomes such as student satisfaction, resilience, and international collaboration.



## Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

## Acknowledgement:

We extend our sincere appreciation to the Rectors of Universitas Bengkulu, and Universitas PGRI Palembang, as well as our colleagues for their valuable contributions to this study.

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