



Exploring the "Can Do" and "Will Do" factors of human capital to enhance university performance

F. Fairuzzabadi ^{a,1,*}, Mohamad Shaharudin Samsurijan ^{b,2}, Syarifah Rahmawati ^{a,3}, Zahri Hamat ^{c,4}, Rustam Effendi ^{d,5}

- ^a Department of Management, Faculty of Economics and Business, Universitas Syiah Kuala, Jl. Teuku Nyak Arief, Kopelma Darussalam, Kec. Syiah Kuala, Banda Aceh City, Aceh, 23111, Indonesia.
- ^b Development Planning and Management, School of Social Sciences, Universiti Sains Malaysia, Level 1, Building E42, Chancellory II, Universiti Sains Malaysia, 11800, Pinang, Malaysia
- ^c Department of Management, Faculty of Economics and Management, Universiti College Bestari, Setiu, Bandar Permaisuri, Setiu, 22100, Terengganu, Malaysia
- ^d Department of Economics and Development, Faculty of Economics and Business, Universitas Syiah Kuala, Jl. Teuku Nyak Arief, Kopelma Darussalam, Kec. Syiah Kuala, Banda Aceh City, Aceh, 23111, Indonesia.
- ¹ airuzzabadi@usk.ac.id*; ² msdin@usm.my; ³ syarifahrahmawati@usk.ac.id; ⁴ zahri@ucbestari.edu.my; ⁵ rust_effendi@usk.ac.id
- * Corresponding author

Abstract: This study explores the "Can Do" and "Will Do" elements of human capital that impact university performance. Human capital, comprising both "Can Do" and "Will Do" elements, plays a pivotal role in driving organizational success, particularly in academic institutions. To investigate these elements within the university context, we conducted an exploratory qualitative research design using semi-structured face-to-face interviews with 12 purposely selected university practitioners and experts. The study results show that a high knowledge level, skills, capabilities, and experiences characterize the "Can Do" mindset. In contrast, the "Will Do" attitude encompasses personal traits, achievement motivation, and engagement with the job and institution. In conclusion, this research underscores the importance of cultivating a synergistic relationship between human capital's "Can Do" and "Will Do" aspects for driving sustainable improvements in university performance. By leveraging these insights, academic institutions can optimize their resources and empower their faculty to achieve greater success and impact.

Keywords: can do element; human capital; will do element; university performance

1. Introduction

The performance and ranking of a university often serve as significant measures in the endeavor to transform the education system within a country (Aburizaizah, 2022; Boyadjieva, 2017; De La Poza et al., 2021; Tilak, 2016), including in Aceh, Indonesia. The excellence in performance and position of a university is consistently associated with its substantial contributions to the innovation system, economic growth, and social development of a region (Anggraini & El Pebrian, 2021; Chankseliani et al., 2021; Cricelli et al., 2018; Passaro et al., 2018; Tjahjadi et al., 2019; Wright & Horta, 2018). The contributions of universities to such development and progress can manifest in various forms, including research outputs yielding licenses, patents, and high-quality publications, fostering an elite cohort of graduates who are skilled and professionally employable, and the contributions of academic staff who provide services towards regional development (Anggraini & El Pebrian, 2021; Forliano et al., 2021; Pugh et al., 2022; Tee, 2016).

Constructing high-performing and competitive universities is of utmost importance due to the significant contribution of universities to development in the region and their role as key drivers in achieving sustainable development goals (Al-Kuwari et al., 2021; Angelaki et al., 2024; Awuzie & Emuze, 2017; Hanushek, 2016; Mohamed Hashim et al., 2022; Novo-Corti et al., 2018). This importance is evident through the alignment of

Citation: Fairuzzabadi, F., Samsurijan, M. S., Rahmawati, S., Hamat, Z., & Effendi, R. (2024). Exploring the "Can Do" and "Will Do" factors of human capital to enhance university performance. *Research and Development in Education* (*RaDEn*), 4(1), 428-449. https://doi.org/10.22219/raden.v4i1 /32481

Received: 26 February 2024 Revised: 19 April 2024 Accepted: 23 April 2024 Published: 23 May 2024



Copyright © 2024, Fairuzzabadi et al.

This is an open access article under the CC–BY-SA license universities with Goal Four of the Sustainable Development Goals, which aims to ensure inclusive and quality education for all and promote lifelong learning. Goal Four emphasizes enhancing the quality of human life to achieve sustainable development through access to quality higher education, reflecting the Education for Sustainable Development (ESD) concept launched by the United Nations (Uddin, 2024; Vargas-Merino et al., 2024). ESD aims to educate, motivate, and empower human resources, especially the younger generation, with knowledge, skills, and awareness of sustainability to change attitudes and behaviors and engage in sustainable development (Al-Kuwari et al., 2021; Awuzie & Emuze, 2017; Chankseliani et al., 2021; Kioupi & Voulvoulis, 2019; Novawan & Aisyiyah, 2020; Novo-Corti et al., 2018; Pauw et al., 2015; Wu & Shen, 2016). In this context, the role of Higher Education Institutions (HEIs) is crucial in developing outstanding human resources with sustainability-oriented knowledge, attitudes, and behaviors through teaching, research, and community service activities focused on sustainability achievement. Therefore, ensuring the construction of high-performing and competitive universities is imperative (Awuzie & Emuze, 2017; Pauw et al., 2017).

To maintain continuous excellence in university performance and sustained competitiveness, numerous studies suggest that human capital plays a crucial role (Amin et al., 2014; Anggraini et al., 2018; Martin-Sardesai & Guthrie, 2018; Nurmahmudah & Putra, 2020; Pedro et al., 2019; Osei et al., 2019; Velayutham & Rahman, 2018). Human capital is defined as the knowledge, skills, and abilities of individuals used to generate specified outputs and outcomes (England & Folbre, 2023). Martin-Sardesai and Guthrie (2018) defines human capital as individual characteristics such as training, experience, decisionmaking ability, intelligence, relationships, and perceptions from managers and employees within an institution. This aligns with Becker's (1993) perspective that human capital refers to inherent qualities and attributes in individuals with productive workplace value. It is also supported by Ployhart et al. (2014) who define human capital as the capacity of individuals or units based on knowledge, skills, abilities, and various individual characteristics to achieve organizational unit goals. Consistent with Ployhart et al. (2014), human capital now encompasses different ideas, including efficiency, intelligence, knowledge, entrepreneurial spirit, and process capital, all classified as intangible resources. These expert views indicate that all human capital attributes positively impact the performance excellence institutional units achieve. This is consistent with the Resource-Based Theory (RBT), which states that resources, including human capital along with various intangible resources, are key factors determining the effectiveness and competitive advantage of institutions when these resources are VRIN (valuable, rareness, inimitable, and non-substitutable (J. B. Barney, 2021; J. B. Barney et al., 2021; Davis & DeWitt, 2021; Nayak et al., 2023).

This phenomenon also applies to universities, where human resources and inherent intangible elements such as intellectual capital, knowledge, social capital, and other tacit dimensions form the backbone and frontline in achieving university performance and sustained competitive advantage. Human resource factors with various intangible elements constitute the core competencies of a university and serve as the primary inputs and sources for various Tridharma activities (teaching, research, and publication, as well as community and industry service), which are the three main missions of a university's existence (Anggraini & El Pebrian, 2021; Barra & Zotti, 2017; Martin-Sardesai & Guthrie, 2018; Ramírez & Gordillo, 2014; Tjahjadi et al., 2019; Ulum, 2019). Additionally, human resources are the main driving force behind the governance and management of higher education institutions, encouraging various efforts to improve performance continuously (Anggraini & El Pebrian, 2021; Cricelli et al., 2018). Therefore, in line with this resourcebased approach, universities must invest in developing these intangible resources as the primary sources contributing to long-term institutional performance and competitiveness (Jancenelle, 2021). The facts indicate that there is no suitable substitute for various intangible elements inherent in human resources, such as human capital, knowledge and learning, creativity and innovation, abilities, and capabilities, which are a gift to universities

together with the health and well-being of human resources (Martin-Sardesai & Guthrie, 2018).

However, many studies on human resource management and human capital in universities primarily examine this phenomenon at the aggregate (macro) level or institutional human resource policies and practices. For example, Cricelli's et al. (2018) study on universities in Colombia measures human capital using indicators such as the number of full-time academic staff, expenditure on non-academic staff salaries, and the number of students enrolled in Ph.D., Bachelor's, and specialization programs. Similarly, studies conducted by Tjahjadi et al. (2019) on universities in Indonesia measure human capital using indicators such as the academic and professional qualifications of educational and research staff, scientific productivity, lecturer and researcher quality, graduate quality, professional qualifications of administrative staff, teaching competence, research competence, human capital efficiency, teamwork skills, leadership skills, and training activities. As a result, when the unit of analysis focuses on the macro level, the differences in human capital characteristics among individuals are obscured (Morris et al., 2016). However, it is precisely these individual differences that play a crucial role in determining university performance. Therefore, in line with Morris et al.'s (2016) suggestion to explore the concept of human resources at a more micro level, studies analyzing various intangible elements of human resources at the individual or micro level are needed. This situation also aligns with many studies by scholars who explore human resources and human capital at the micro level (Fulmer & Ployhart, 2014; Ployhart et al., 2014).

The question arises: what intangible elements of human capital will enhance university performance? Some previous studies suggested that human capital can be viewed from two dimensions (Aryee et al., 2016; Khoo & Lim, 2019; Lenihan et al., 2019; Osei et al., 2019; Salman et al., 2020; Tajeddini & Martin, 2020). First, the competency dimension consists of individuals' knowledge, skills, abilities, and capabilities. Second, the behavioral dimension recognizes that individual traits do not provide value to the institution unless they are utilized through work activities. Therefore, according to these previous studies, human capital must consider both these elements because individuals must possess the necessary competencies to demonstrate their strengths in their work. This perspective aligns with the views of many experts who divide human capital into two main elements: "Can Do" and "Will Do" elements (Coff & Rickley, 2021; Osei et al., 2019; Ployhart et al., 2014). The "Can Do" element reflects the cognitive abilities of human resources in the institution (Nyberg et al., 2014; Osei et al., 2019; Ployhart et al., 2014). Meanwhile, the "Will Do" element consists of characteristics closely related to the non-cognitive aspect of an academic. It reflects their motivation to remain engaged in various activities to achieve university goals and performance (Coff & Rickley, 2021; Osei et al., 2019). Therefore, this study will explore and identify various intangible elements of specific human resources that determine performance achievements at the individual and university levels. This is conducted to understand better the differences among each academic's resources in terms of "Can Do" and "Will Do" elements. A better understanding of these elements will assist universities in designing human resource development practices or models that align with the developmental needs of each academic in helping the university achieve its various functions and missions for the advancement of civilization and the welfare of humanity.

2. Materials and Methods

The methodology employed in this study is qualitative research and is entrenched in interpretivism, which acknowledges that individuals and their social contexts significantly shape their experiences and perceptions (Djamba & Neuman, 2002). The rationale for using qualitative methods is based on the context and objective of the study, which is to explore and identify the essential "can do" and "will do" elements of human capital to increase the university's performance. This approach allows exploration and comprehension of the meaning of individual actions, new insights, and the development of theories

or models based on the observed patterns and themes in the data (Djamba & Neuman, 2002).

The study conducted 12 in-depth semi-structured face-to-face interviews to collect data. Twelve academicians and experts from 4 public universities in Aceh who are experienced in managing human capital in university are involved (as detailed in Table 1). Participants were chosen using a purposeful elite sampling method, selecting prominent and highly knowledgeable individuals in the subject matter under investigation. These experts are expected to have a deep understanding of the concepts and operations to "shed light on the hidden elements" (Ebekozien et al., 2023) of the human capital element in the university, which is relevant to the study's objectives. The study reached data saturation when no additional new insights emerged from the participants (Braun & Clarke, 2019). We emphasize that saturation is attained when no further evidence of new insights exists.

No.	Informant Code	Position	Expertise
1	I01	Professor at Ar-Raniry State Islamic University	Islamic Studies and Islamic Human
		(UIN) Banda Aceh	Resource Development
2	I02	Lecturer at Syiah Kuala University and Teuku	Human Resource Management
2		Umar University	
3	I03	Professor at Syiah Kuala University	Management
4	I04	Professor at Syiah Kuala University	Human Resource Development and
4			Management
5	I05	Professor at Ar-Raniry State Islamic University	Islamic Studies and Islamic Human
5	105	Banda Aceh	Resource Development
6	I06	Professor at Malikussaleh University	Economics and Development Planning
7	I07	Professor at Syiah Kuala University	Mechanical Engineering
8	I08	Professor at Syiah Kuala University and Teuku	Management
0		Umar University	
9	I09	Lecturer at Syiah Kuala University and Teuku	Economics and Development Planning
フ		Umar University	
10	I10	Lecturer at Ar-Raniry State Islamic University	Islamic Studies and Islamic Human
10		and Universitas Muhammadiyah Aceh	Resource Development
	I11	Executive Member of the National Accredita-	Organic Chemistry
11		tion Board for Higher Education, Ministry of	
11		Education, Culture, Research, and Technology	
		of the Republic of Indonesia	
	I12	Assessor of the National Accreditation Board	Management
12		for Higher Education, Ministry of Education,	
		Culture, Research, and Technology of the Re-	
		public of Indonesia	

Table 1. Summary of interviewees' description

The semi-structured method was chosen for the interviews because it provides a balance between having a predetermined set of questions and allowing the participants to freely express their views, experiences, and feelings to construct "what" happened and "why" regarding the "can do" and "will do" element of human capital in university (Djamba & Neuman, 2002; Ebekozien et al., 2023). This approach allows for a deeper exploration of the topics and ensures that sufficient information is gathered to address the research problems and objectives of the study. To enhance the rigor and validity of the findings, we used the same set of pre-established questions for all interviewees to minimize researcher bias, increase generalizability, ensure consistency in data collection, and facilitate systematic analysis (Buschle et al., 2022; Young et al., 2018). On the ethical front, the participants were provided information about the paper's objectives and willingly consented to participate in the study (Ebekozien et al., 2023).

The questions focused on the informant's feelings and experiences as a human capital practitioner or HRD expert in managing human capital. Informants were asked to reflect on their understanding and experience of successfully managing and developing the general condition of human capital element needed to perform effectively in university. The examples of the questions included: Can you describe your role within the university and how it relates to human capital development and performance enhancement? What is your view on the current condition of universities' human capital in Aceh? From your perspective, what are the key "can do" factors that influence human capital performance within the university setting? In your experience, how do these "can do" factors contribute to individual and organizational success within the university? Moving on to the "will do" factors, from your perspective, what are the key "will do" factors that influence human capital performance within the university setting? In your experience, how do these "will do" factors contribute to individual and organizational success within the university? Can you provide examples of initiatives or strategies implemented within the university to foster these "can do" and "will do" factors among faculty members and staff? What do you believe are the key areas of focus for further enhancing human capital development and performance within the university context?

The respondent's responses to a series of questions were recorded. The audio recording was then documented and exported into verbatim transcripts, and human transcription was used to verify the accuracy of the verbatim transcript. We collected twelve documents; the most relevant ones are cited in the findings and discussion sections. The limited interview sample could be supplemented with a comprehensive literature review, as applied in this study (Ebekozien et al., 2023). The transcripts were analyzed using thematic analysis (Braun & Clarke, 2019) to generate the codes. The data gathered from the interviewees were subjected to manual analysis. We read and reviewed 12 transcript documents repeatedly to identify and establish themes and sub-themes (categories). To enhance the study's validity, we employed member checking, triangulation, and researcher reflexivity (Creswell & Creswell, 2023).

3. Results

In analyzing the dimensions of human capital, this study focuses on the individual or micro level. Analysis at the micro level is crucial for exploring the differences in human capital characteristics in everyone at the university. The study argues that the variation in various individual characteristics will have significant effects and implications on enhancing university performance and serve as determining factors for sustained competitive advantage for the University.

3.1. The "Can Do" Element

Based on the analysis of interview findings, this study identifies two elements of human capital: the "can do" element and the "will do" element, along with various indicators, as demonstrated in Table 2. Table 2 illustrates that the human capital at Universities in Aceh is divided into two main elements: the "can do" element and the "will do" element. The "can do" element represents the cognitive abilities of human resources within the institution (Aryee et al., 2016; Fulmer & Ployhart, 2014; Lenihan et al., 2019; Osei et al., 2019; P. M. Wright et al., 2018). For Universities in Aceh, the "can do" element is the primary competency that determines its operational effectiveness, particularly in the implementation process of Tridharma activities aimed at developing excellent human resources, research and publication, and community service, aimed at supporting economic, political, and social development in Aceh. This study identifies three main elements of the "can do" human capital construct in Aceh universities: academic staff's knowledge and intellect, expertise and skills, and experience. Knowledge and intellect are the first themes most frequently mentioned by the study informants. All informants believe that knowledge and intellect are crucial indicators that every university academic staff member must possess. This aligns with the viewpoint of Informant I1, who argued:

"At universities, lecturers must have good quality. We can see from the level of knowledge and intellect they possess. They have up-to-date knowledge in their expertise and understand teaching methods, transformation methods, consistent teaching material content, research methods, and so on. I think this is what will make us and our educational institutions good. Our institution won't be good if it's not good."

The viewpoint of I1 is also reinforced by the perspective of I5, who stated:

"We are concerned about the physical condition of the generation we leave behind at universities. But what we fear more is their weak knowledge. Because knowledge is power, with knowledge, we can empower ourselves. This is evident now; we in Aceh are lagging in science."

This is quite reasonable, as universities are perceived as institutions where individuals with high knowledge and intellect gather, enabling them to conduct various knowledge transfers, research, and community service activities and provide the latest knowledge stock required for regional development. Knowledge is an individual's fundamental understanding of something, whether it be information or facts, principles, or specific processes (Guo & Chen, 2022; Kuzminov et al., 2019; Marginson, 2019; Mohd Ali et al., 2020; Scuotto et al., 2022). The knowledge possessed by these academic members can consist of both general and specific knowledge tailored to their areas of expertise (Dimov, 2017; Guo & Chen, 2022; Kuzminov et al., 2019).

No.	Themes	Informants Codes	Number of In- formants	
1.	The "can do" elements			
	a. Knowledge and intellect	I1; I2; I3; I4; I5; I6; I7; I8; I9;	12	
		I10; I11; I12		
	b. Expertise and ability	I1; I2; I3; I4; I5; I6; I7; I8; I9;	12	
		I10; I11; I12		
	c. Experience	I2; I3; I4; I5; I7; I8; I11; I12	8	
2.	The "will do" elements			
	a. Personal Traits	I1; I2; I3; I4; I5; I6; I7; I8; I10;	11	
		I11; I12	11	
	b. Achievement motivation	I2; I3; I4; I5; I6; I7; I8; I10; I12	9	
	c. Engagement with work and Institutions	12; 13; 14; 15; 18; 112	6	

Table 2. Human capital with various dimensions at universities in Aceh

Furthermore, the second theme frequently mentioned by the informants, which constitutes one of the dimensions of "can do," is the level of expertise and skills. Expertise refers to an individual's ability and capacity to apply knowledge and know-how to accomplish tasks and solve problems in various fields of work or their profession (Ballesteros-Rodríguez et al., 2022; Hecklau et al., 2016; Kuzminov et al., 2019; Mohd Ali et al., 2020). Meanwhile, skills are attributes of an individual who can perform well in specific job tasks or work environments (Ballesteros-Rodríguez et al., 2022). This study finds that the expertise and skills of an academic staff member are essential "can-do" elements that must be developed and aligned with job demands and desired performance achievements. This aligns with the viewpoint of Informant I1, who stated:

"Personally, academic staff must have expertise and skills, strong mental fortitude, not be easily discouraged, have strong methodology, and be professional. What does it mean to be professional? Well, if it's in economics, they must understand economics and have a certification of expertise in economics. This certification indicates that they are an expert and proficient in their field of expertise, their analytical abilities are good, they can solve problems in economics, and so on."

The same sentiment is also expressed by Informant I4, who holds the view:

"Human resources must be professional; they must have knowledge and expertise as well as competency to perform their work functionally and professionally because our performance demands are increasing."

The views of these informants indicate that an academic staff member must be an expert in their field of expertise, enabling them to perform every task functionally and professionally, in line with the increasing job performance demands. Functionally and professionally, expertise and skills are closely related to the technical competence of an academic staff member. Technical competence refers to the knowledge, expertise, and skills required by an academic staff member to fulfill their job duties and responsibilities, leading to acceptable performance achievement in the workplace (Flores et al., 2020; Hecklau et al., 2016). Additionally, the informants also emphasize the importance of their methodological competence. Academics require methodological competence to solve problems or make decisions regarding various issues they face in the workplace or the execution of their job duties. This methodological competence encompasses all individual abilities and expertise to solve problems and make decisions (Hecklau et al., 2016). An academic staff member will operate in an increasingly complex and autonomous environment in line with their expertise.

Finally, the informants mention the importance of experience as the third factor shaping the "can do" element of human capital for academic staff identified in this study. The experience reflects the opportunities for academic staff to learn and transfer knowledge from something general to a specific job (Aryee et al., 2016; Coff & Rickley, 2021; Dahiya & Raghuvanshi, 2022; Guo & Chen, 2022; Marginson, 2019; Tripathi & Dhir, 2022). In the workplace environment, an academic staff member accumulates experience through various engagements in numerous activities, such as holding positions within the university structure, becoming experts, or holding positions in industry and government agencies. Moreover, they may sometimes hold positions within the university structure while also serving as experts in industry and government agencies. This aligns with the viewpoint of Informant I3, who stated:

"As a lecturer, besides expertise and competence, they must have experience, which can be seen from their track record in publications, seminars, and teaching abroad. So that young lecturers will know the direction of their research, their peer group is clear."

This also aligns with the viewpoint of I11, who argues:

"So, if we look at the life journey of an academic, the challenges they face in life, the experience of working with the public, many institutions, industries, and government agencies, all of that will make the academic better than others, in terms of their knowledge, expertise, and even their level of resilience and perseverance in facing various life and work challenges."

The views of various informants indicate that gaining experience from their involvement in multiple activities within and outside the university significantly benefits academics in generating and enhancing specialized knowledge relevant to their expertise. Their participation in various activities, such as holding positions within the university structure, becoming experts, or gaining professional experience from one job to another, or even from one sector to another, will enhance their specialized expertise and continuous critical knowledge in addressing various new problems that arise in their field of expertise and work. Additionally, moving academics from one job and organization to another will be critical in transferring and disseminating knowledge among individuals across organizations. This will undoubtedly have implications for creating and maintaining diverse knowledge networks throughout their careers (de Frutos-Belizón et al., 2019; Jarlstrom et al., 2020), as well as implications for enhancing the career achievements and performance of academics and institutions (De Vos et al., 2020; Mishra & McDonald, 2017).

3.2. The "Will Do" Element

In addition to factors related to the "can do" element, this study also identified elements of human capital related to the "will do" element. The "will do" element comprises characteristics closely associated with the non-cognitive aspects of an academic staff member. It reflects their motivation to remain engaged in various activities to achieve the goals and objectives of the university (Coff & Rickley, 2021; Osei et al., 2019). This study found three factors that describe the "will do" element of academic staff's human capital: personal traits, achievement motivation, and job and institutional engagement.

"As educators, we must possess competence, a sense of responsibility, good attitudes and behavior, empathy and contextual sensitivity, excellent communication skills, and the ability to collaborate. These are the crucial elements prioritized for development. I dare to argue that, indeed, it is the good personality traits that are paramount, only after which comes their scientific capacity or IQ."

The same sentiment is echoed by informant I12, who argues:

"I believe 80 percent of someone's success is determined by their soft skills, not their hard skills. We all know everyone wants to be with good people, not just smart people. Better here is not more intellect but more on personal, spiritual, and moral aspects. For that, we need to shape their beliefs, we need to shape their personality, strong interactions, they can accept differences openly, their individualism is less dominant, their communication is good, and most importantly, they want to keep learning."

The perspectives of various informants indicate that developing personal traits is crucial for academics and other university human resources. This is especially important in circumstances where universities in Aceh are facing various rapidly changing issues in the work environment, with patterns of change that are irregular and disruptive, in this era of the fourth industrial revolution. University academic members also need to deal with various technologies in the fourth industrial revolution era, which will significantly affect productivity and change the dimensions and conditions of work, educational systems, and skill requirements for each academic (Flores et al., 2020; Gleason, 2018; Li et al., 2021). Indeed, all these conditions will cause individuals to feel very stressed and fatigued, resulting in decreased motivation to behave and perform (Flores et al., 2020). Therefore, various personal traits are essential for academics to adapt to these multiple demands for change and to maintain good performance while balancing their personal and professional lives.

The second indicator from the "will do" element of academic human capital is achievement motivation. Achievement motivation is an internal process that drives, directs, and sustains an individual's behavior and effort toward achieving goals (Robbins & Judge, 2024). Understanding what motivates an individual is critical to attaining institutional performance (Robbins & Judge, 2024). The informants agree that achievement motivation is a crucial factor in the "will do" element of academic human capital that determines the excellence of academic achievement and universities in Aceh. Achievement motivation complements the "can do" element of university human capital, helping academics achieve established performance indicators. Informant I3 expressed this viewpoint:

"Everyone has the desire, motivation, and enthusiasm to give their best for their institution. Therefore, universities must facilitate this by creating a supportive work environment and providing the resources they need to perform their work effectively."

Informant I4 also believes that:

"The task of HEIs is not only to allocate funds to enhance the qualifications of human resources but also, importantly, to motivate them to perform their best. They must be given autonomy in their work."

The views of informants indicate that the motivation of academic staff to perform continuously is a crucial factor in determining both personal and institutional performance excellence. This is because individuals who are motivated to achieve will sustain their efforts to deliver their best to the institution (Robbins & Judge, 2024). The presence of achievement motivation will also drive academic staff to utilize all their resources, thereby impacting their performance outcomes. Furthermore, this study also found the importance of universities in Aceh to continuously enhance the intrinsic achievement motivation of its academic staff. In general, intrinsic motivation relates to the enjoyment and pleasure derived from engaging in various activities at the university, such as satisfaction and self-esteem, personal happiness, intellectual challenge, scientific and social contribution, and various non-financial factors (Ballesteros-Rodríguez et al., 2022). This is echoed in the viewpoint of Informant I4, who stated:

"Most importantly, there should be recognition of the value of the lecturer's work so that they are more motivated to perform."

In line with Informant I4, Informant I12 argues:

"For me, what is very important is recognizing and appreciating each individual's contribution to the institution. No matter how small the contribution, we must appreciate it. This will boost their confidence and motivation."

The views of these informants underscore the importance for universities in Aceh to continuously intrinsically motivate academic staff to excel by assigning tasks that align with their expertise. Additionally, universities must value and appreciate all their achievements and contributions toward achieving the university's goals and performance indicators. Regardless of the contribution's size, the university must acknowledge and commend it. This approach will lead academic staff to perceive that the university values them and that their contributions are crucial to achieving its performance and goals.

Lastly, the third factor of the "will do" element identified in this study is the individual engagement with work and the institution. The unique engagement with work and the institution represents the ability to commit and utilize all personal resources and experiences to effectively carry out tasks (Goyal & Patwardhan, 2021; Kaiser et al., 2021; Mazzetti et al., 2023; Osei et al., 2019; Rahmadani & Schaufeli, 2022; van Tuin et al., 2021). The findings of this study indicate that individual engagement with work and the institution is a crucial element of the "will do" human capital that determines the performance achievement of academic staff at universities in Aceh. This aligns with the view of I2, which states: "Daily, we spend more than 8 hours in the office and sometimes work until late evening. Naturally, we will invest all our physical, cognitive, and emotional energy and resources to work and make the best contributions to the institution."

Furthermore, Informant I8 also argues:

"Most importantly, of course, is how lecturers feel more comfortable in the office than at home so they can work with enthusiasm and dedication."

The perspectives of these informants indicate that individuals who are engaged and committed to their work and institution will invest all their available resources, including physical, experiential, emotional, and cognitive resources, into their work, thereby fostering a strong psychological connection with their tasks. Academic staff members who have a psychological connection with their work and institution will demonstrate this through their behaviors in the workplace, such as working with enthusiasm dedication, and even becoming deeply engrossed in their work. Academics who work enthusiastically will have high energy and mental resilience in their tasks (Kaiser et al., 2021; Mazzetti et al., 2023; Rahmadani & Schaufeli, 2022; van Tuin et al., 2021). This condition ultimately impacts the enhancement of institutional performance (Goyal & Patwardhan, 2021). Based on the diverse viewpoints discussed by these informants, it can be concluded that human capital at universities in Aceh consists of two main elements: the "can do" element and the "will do" element, as depicted in Figure 1.

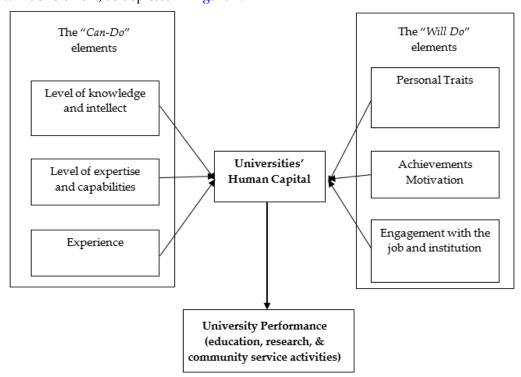


Figure 1. Elements of human capital determining performance in universities in Aceh

Figure 1 depicts that the "can do" element of human capital consists of 3 factors: knowledge and intellect, expertise and ability, and experience. Meanwhile, the "will do" element also consists of 3 factors: personal characteristics and competence, achievement motivation, and engagement with work and institution. Therefore, universities in Aceh need to ensure that their human resources have various dimensions of human capital adequately, whether in behavior, cognitive factors, or motivation to perform tasks effectively in helping the institution achieve its goals.

4. Discussion

The findings of this research have addressed the central question in this study, which is related to the "can do" and "will do" elements of human capital that will impact university performance. The results of this study indicate that the "can do" construct is formed by three leading indicators: the level of knowledge and intellect of academic staff, expertise and capabilities, and experience. Additionally, this study shows that the "will do" construct is formed by three leading indicators: personal traits, achievement motivation, and engagement to the job and institution. This suggests that universities in Aceh need to continuously improve all these human capital elements to ensure everyone has good self-efficacy. Self-efficacy refers to the academic staff's confidence in completing tasks (Osei et al., 2019). Considering the context of this study, every academic staff believes that they have sufficient resources, whether in behavioral, cognitive, or motivational elements, to perform tasks successfully (Blonder et al., 2022; Cardullo et al., 2021; Choong et al., 2020; Matos et al., 2022). Human resources with high self-efficacy will express positive outcome expectations as implications of their knowledge and behavior. This condition will lead to their willingness to perform tasks well (Azila-Gbettor & Abiemo, 2021; Osei et al., 2019).

The level of knowledge and intellect is an essential indicator that every university academic staff member must possess. This is reasonable because universities are perceived as institutions where individuals with high levels of knowledge and intellect gather, enabling them to conduct various knowledge transfer activities, research, and community services, as well as being a source of the latest knowledge required for regional development (Anggraini & El Pebrian, 2021; Lu, 2012; Ulum, 2019). Knowledge is the fundamental understanding of something, whether information, principles, or specific processes (Aryee et al., 2016; Guo & Chen, 2022). Academic staff must continuously develop this knowledge and intellect to remain current and aligned with universities' job requirements and development. An academic staff member is not only equipped with knowledge as a general human capital upon entering and becoming a member of the university, but it must continue to be built into specific human capital necessary to perform specific tasks effectively and align with the needs of universities' development (Kuzminov et al., 2019).

Meanwhile, it is commonly known that universities are places where knowledge and its results are continuously produced to meet the needs of an ever-changing environment; hence, specialized knowledge and human capital are essential (Capozza & Divella, 2019). The level of intellect and current knowledge significantly determines their contribution to the institution. In terms of teaching, they master scholarly substance in their field of expertise well, enabling them to teach and transfer knowledge effectively to students. A good mastery of intellectual substance and current knowledge also greatly assists them in various innovations to develop scholarship through research and publications, and most importantly, the benefits they provide to the community through knowledge transfer to aid in the economic improvement and welfare of the community in the area (Dimov, 2017; Guo & Chen, 2022; Kuzminov et al., 2019). Therefore, increasing the level of knowledge and intellect of academic staff becomes very important. It can be achieved through formal education at higher levels. As more academic staff obtain doctoral education, it will undoubtedly have implications for improving educational and institutional performance. The importance of the level of knowledge and intellect, then, makes it one of the performance indicators of universities in Indonesia (BAN-PT, 2023). A university's performance will be more outstanding when there is an increasing number of academic staff members educated to the Ph.D. level and a growing number of academic staff members reaching the positions of Senior Lecturer and Professor in their careers.

The second element of the "can do" dimension is the level of expertise and capabilities. Expertise refers to an individual's ability and capacity to apply knowledge and knowhow to complete tasks and solve problems in various fields or professions (Ballesteros-Rodríguez et al., 2022; Hecklau et al., 2016; Kuzminov et al., 2019; Mohd Ali et al., 2020). On the other hand, capabilities are an attribute of an individual with which they can perform well in specific job tasks or work environments (Ballesteros-Rodríguez et al., 2022). The findings of this study indicate the importance of academic staff members being experts in their field of expertise so that they can perform every task functionally and professionally, in line with the increasing demands of their job performance. Functionally and professionally, expertise and capabilities are related to the technical competence of an academic staff member. Technical competence is the knowledge, expertise, and skills required by an academic staff member to fulfill their job duties and responsibilities, leading to a performance achievement acceptable in the workplace. This is consistent with the views of Hecklau et al. (2016), who define technical competence as the skills and knowledge required by an individual to perform various tasks that require agility, training, and experience. Therefore, technical competence is usually specifically trained by universities because of its fixed nature and limited to specific work environments, directly impacting the operations of a university (Flores et al., 2020). For example, an academic staff member must have good pedagogical expertise to teach. Similarly, when an academic staff member conducts research and publications, they must be able to identify research topics, writing skills, language domain, etc. (Ballesteros-Rodríguez et al., 2022). Furthermore, the expertise and capabilities of academic staff members in their field of expertise are demonstrated by whether they have certification obtained from expert assessment institutions at the national and international levels. The more educated staff members with expertise and capabilities recognized at the national and international levels, the more the implications will lead to improved performance achievements and the position of universities. The importance of the level of expertise and capabilities then makes it one of the performance indicators of universities in Indonesia (BAN-PT, 2023). A university's performance will increase when there is an increasing number of academic staff members with expertise and capabilities recognized nationally and internationally.

The final element of "can do" identified in this study is experience. The experience reflects the opportunities for academic staff to learn and transfer knowledge from something general to a specific job (Aryee et al., 2016; Coff & Rickley, 2021; Dahiya & Raghuvanshi, 2022; Guo & Chen, 2022; Marginson, 2019; Tripathi & Dhir, 2022). In a work environment, an academic staff member gathers experiences through various engagements in many activities, such as holding positions in university structures, becoming experts, or holding professional positions in industries and government agencies. Therefore, gaining experience from their involvement in various activities within and outside the university significantly benefits academic staff in generating and enhancing specialized knowledge related to their expertise. Their participation in multiple activities, such as holding positions in university structures, being experis, or gaining professional experience from one job to another, or even from one sector to another, will enhance their specific expertise and continuous critical knowledge in solving various new problems emerging in their field of expertise and work (Capozza & Divella, 2019; de Sivatte et al., 2019; Lee, 2019; Tjahjadi et al., 2019).

Furthermore, moving academic staff from one job and organization to another will also be critical in transferring and disseminating knowledge among individuals across organizations. This will undoubtedly have implications for creating and maintaining diverse knowledge networks throughout their careers (de Frutos-Belizón et al., 2019; Jarlstrom et al., 2020), and for enhancing academic staff and institutions' career achievements and performance (De Vos et al., 2020; Mishra & McDonald, 2017). Additionally, the study findings also indicate that academic staff will gain experience from their involvement in various projects at national and international levels, as well as various collaborative research projects and consultations, both among fellow academic researchers with other researchers in government departments and industries. The study findings are consistent with the views of Anggraini and El Pebrian (2021), Aryee et al. (2016), and Cricelli et al. (2018) who concluded that any form of collaborative researchers from government departments and researchers from government departments and researchers from searchers or between researchers and researchers from government departments and industries.

In addition to factors related to the "can do" element, this study has also identified elements of human capital related to the "will do" aspect. The first indicator of the "will do" element of academic human capital is personal traits. Personal traits are behavioral characteristics and factors that differentiate one individual from another, such as motivation, attitudes, and social values (Guo & Chen, 2022; Liu & Liu, 2021; Mohd Ali et al., 2020; Sung & Choi, 2014). These characteristics are inherent to an individual, making them difficult to measure and train (Aryee et al., 2016; Chadwick, 2017; Crocker & Eckardt, 2014). According to informants, several factors have been identified as forming these individual characteristics, such as motivation for continuous learning, having a sustainable mindset, flexibility, ability to work under pressure, adaptability to ambiguity and change, compliance, responsibility, and the ability to collaborate and compromise. Therefore, developing personal characteristics is crucial for an academic and other human resource at universities, especially in the context where universities in Aceh are facing various rapidly changing issues in the work environment, with patterns of irregular and disruptive changes in this era of the Fourth Industrial Revolution (Flores et al., 2020). Additionally, individuals at university also need to deal with various technologies in the Fourth Industrial Revolution era, which will significantly affect productivity and change the dimensions and conditions of work, education systems, and skill requirements for each academic (Akour & Alenezi, 2022; Chaka, 2020; Flores et al., 2020; Saari et al., 2021). All these conditions can cause significant stress and fatigue among academics and decrease motivation to perform. Hence, various personal characteristics are essential for academics to adapt and be resilient to these multiple demands for change and to maintain good performance while balancing personal and professional lives (Aheleroff et al., 2022; Suciu et al., 2023). Every individual requires motivation for continuous learning, flexibility, the ability to work under pressure, adaptability to change, compliance with rules, responsibility, collaboration, and compromise to adjust. When academics are accustomed to change and flexibility, they can easily accept changes in their work lives. The turnover in tasks and work often requires flexible academics who can collaborate and compromise with the entire workforce to fulfill changing job responsibilities effectively (Flores et al., 2020). These circumstances enable academics to cope with various pressures, reduce fatigue at work, and balance work and personal life, resulting in increased motivation to perform and help the institution achieve its goals (Suciu et al., 2023).

The second indicator of the "will do" element of academic human capital is achievement motivation. Achievement motivation is an internal process that drives, directs, and maintains an individual's behavior and efforts toward achieving goals (Robbins & Judge, 2024). Achievement motivation is a complementary factor to the "can do" element of human capital, assisting academics in achieving performance indicators. This is because individuals motivated to succeed will sustain their efforts to give their best to the institution. The presence of achievement motivation will also encourage academics to utilize all their resources, thus impacting their performance outcomes. Therefore, when academics exhibit low levels of achievement motivation, they tend to show lower performance levels, even if they have good expertise and capabilities. Conversely, when academics are motivated and interested in their job tasks, the difference in skills and expertise becomes more critical in determining an individual's productivity and performance (Heng et al., 2020; Kwiek, 2016). Thus, academics with high abilities will demonstrate higher performance achievements. The individuals with high achievement motivation will continue to strive and work hard, persistently maintaining their efforts to achieve success by focusing on achievement-oriented activities and institutional goals. These findings are also reinforced by the studies of Cricelli et al. (2018) and Ballesteros-Rodríguez et al. (2022), who view an individual's motivation as a critical factor in determining individual and institutional performance achievements. Moreover, the results of this study also highlight the importance for universities in Aceh to continuously intrinsically motivate academics to excel by providing job assignments aligned with their expertise. Universities must also value and appreciate all their achievements and contributions towards achieving the university's goals and performance indicators. Regardless of how small the contribution may be,

universities must acknowledge and praise it. This will make academics perceive themselves as valuable to the university and their every contribution as crucial to their performance achievements and goals. As a result, academically intrinsically motivated individuals will undertake various job responsibilities such as teaching, conducting research and publications, and serving the community as a calling (Compare et al., 2024; Jensen & Bro, 2018; Kools et al., 2023; Wilkesmann & J. Schmid, 2014). These academics will regard their job calling as prestigious and their responsibility to contribute to science and society as far more important than the high salary and promotions they receive (Compare et al., 2024). These findings align with the study conducted by Ballesteros-Rodríguez et al. (2022), which suggests that the intrinsic motivation of a scientist significantly determines the productivity of their scientific output. In their research, Ballesteros-Rodríguez et al. (2022) argue that academics with high academic expertise also have higher and more favorable scores on intrinsic motivation than extrinsic motivation. In terms of expertise, they have an excellent human capital profile and competence, such as the ability to identify research topics, discuss them, and interpret their research findings. They may also have extensive theoretical and methodological knowledge, identify relevant journals and publications in their field, have a proactive perspective, and be receptive to criticism from others (Ballesteros-Rodríguez et al., 2022).

Lastly, the third factor of the "will do" element identified in this study is the individual engagement with work and the institution. The unique engagement with work and the institution represents the ability to commit and utilize all personal resources and experiences to effectively carry out tasks (Goyal & Patwardhan, 2021; Kaiser et al., 2021; Mazzetti et al., 2023; Osei et al., 2019; Rahmadani & Schaufeli, 2022; van Tuin et al., 2021). Individuals who are engaged in their jobs and institutions will invest all their available physical, emotional, and cognitive resources into their jobs, leading to a strong psychological connection with their tasks. Academics with this psychological connection with their job and institution will reflect it in their workplace behavior, such as working with enthusiasm and dedication and even getting absorbed in their work (Goyal & Patwardhan, 2021; Heng et al., 2020; Mazzetti et al., 2023; Rahmadani & Schaufeli, 2022). Academics who work enthusiastically will have high energy and mental resilience in performing their tasks. Meanwhile, dedicated people will take pride in their contributions to their work, leading them to immerse themselves joyfully in their tasks (Rahmadani & Schaufeli, 2022). For this reason, Osei et al. (2019) believe that the affiliation of academics with their work and institution is a crucial factor of the "will do" element of human capital. The findings align with Osei et al. (2019), who argue that academic engagement with their work and institution will have high levels of energy, enthusiasm, mental health, and resilience. This condition is a critical factor for individuals in performing challenging tasks and assisting the university in achieving its goals. Moreover, this study also found that individuals engaged in their jobs and institutions will identify themselves as inseparable parts of the university (Mazzetti et al., 2023). Thus, they will not move to another university. Conversely, academics are not engaged with their work, and universities will only spend time enjoying the situation without enhancing their performance achievements. Therefore, universities must treat academics well so that they become more engaged with the university. This situation aligns with the findings of Osei et al. (2019), who suggest that when individuals identify themselves with the institution and feel that they are part of it, being part of it is a matter of pride and honor. They will be willing to immerse themselves and invest in every institution's activity (Osei et al., 2019). They will be committed and put all their efforts into completing all tasks to achieve the best performance. Individuals with these characteristics will be highly needed to engage and immerse themselves in all institutional activities, especially for building human resources and contributing positively to regional and national development through various educational programs, research, publications, and community services. Conversely, when academics feel that they do not have an engagement with the university because the university does not treat them well, they will choose to leave or stay, but only to enjoy what is available at the institution, with moderate performance achievements or none.

5. Conclusions

This study demonstrates that human capital with both "can do" and "will do" elements is a crucial factor determining university performance. Human capital comprises the stock of knowledge, expertise, capabilities, and other characteristics possessed by individuals at university, which serve as resources and capabilities to help them achieve set performance goals satisfactorily, especially in accomplishing the Tridharma activities (teaching, research, & community service) of Higher Education. The study focuses on the individual or micro level, exploring the differences in human capital characteristics that have implications for enhancing university performance and serve as determinants of continuous competitive advantage. This study identifies two elements of human capital: the "can do" element, which reflects the cognitive abilities of university human resources, and the "will do" element, which indicates non-cognitive abilities and demonstrates the motivation of academics to remain engaged in various activities to achieve university's performance and goals. The "can do" element consists of three criteria: the level of knowledge and intellect, the level of expertise and capabilities, and experience. Meanwhile, the "will do" element consists of personal traits, motivation for achievement, and engagement with the job of the institution. Both elements of human capital determine the excellence of the operational performance of the university in Aceh. Therefore, a university in Aceh must ensure that its human resources have sufficient human capital, encompassing behavior, cognitive factors, and motivation to perform tasks effectively and assist the institution in achieving its goals.

This study analyzes human capital at the individual or micro level. It is conducted to understand better the differences in resources among each academic staff member regarding the "can do" and "will do" elements. A better understanding of these elements will assist the university in designing human resource practices or development models that align with each academic staff member's development needs. Therefore, an academic staff member must continually enhance various intangible elements through skills training practices, mentoring, coaching programs, and education up to the doctoral level. Universities must also continue developing academic staff with qualifications and competitive advantages in a constantly changing environment. Universities can achieve this by providing a comfortable learning environment for all academic staff to learn at the workplace through well-designed mentoring and coaching programs so junior academic staff can continue learning from their experienced seniors.

Although this study has contributed to the knowledge, thoughts, and empirical evidence regarding the "can do" and "will do" elements of human capital, especially in the context of public universities in Aceh, there are many other factors that have implications for the performance of a university. For example, the complementary relationships and interactions between intangible elements, tangible resources, and other university resources, such as institutional culture, human resource management systems, etc. Therefore, studies examining these variables are needed to provide a holistic understanding of the determinants of university performance effectiveness. Additionally, this study used a qualitative approach to identify the "can do" and "will do" elements of human capital that determine the effectiveness of university performance in Aceh. To establish causal relationships between the identified variables in this study, future research should use a quantitative research approach or triangulation (mixed methods) combining qualitative and quantitative research. Finally, this study was conducted only at a university in Aceh, resulting in a minimal sample. This leads to limitations in external validity or generalizability of the study findings to other universities. Therefore, further research could be conducted by expanding the study sample to generalize the findings.

Author Contributions: Fairuzzabadi, F.: methodology, analysis, writing—original draft preparation; Samsurijan, M.S.: validation, review, and editing; Rahmawati S.: methodology, writing—original draft preparation; Hamat, Z.: validation, analysis, review, and editing; Effendi, R; analysis.

Conflicts of Interest: Authors declare there are no conflicts of interest.

6. References

- Aburizaizah, S. J. (2022). The role of quality assurance in Saudi higher education institutions. *International Journal of Educational Research Open*, *3*, 1-8. https://doi.org/10.1016/j.ijedro.2022.100127
- Aheleroff, S., Huang, H., Xu, X., & Zhong, R. Y. (2022). Toward sustainability and resilience with Industry 4.0 and Industry 5.0. *Frontiers in Manufacturing Technology*, 2, 1–20. https://doi.org/10.3389/fmtec.2022.951643
- Akour, M., & Alenezi, M. (2022). Higher education future in the era of digital transformation. *Education Sciences*, 12(11), 1-13. https://doi.org/10.3390/educsci12110784
- Al-Kuwari, M. M., Al-Fagih, L., & Koç, M. (2021). Asking the right questions for sustainable development goals: Performance assessment approaches for the Qatar education system. *Sustainability*, *13*(7), 1-28. https://doi.org/10.3390/su13073883
- Amin, M., Ismail, W. K. W., Rasid, S. Z. A., & Selemani, R. D. A. (2014). The impact of human resource management practices on performance evidence from a public university. *TQM Journal*, 26(2), 125–142. https://doi.org/10.1108/TQM-10-2011-0062
- Angelaki, M. E., Bersimis, F., Karvounidis, T., & Douligeris, C. (2024). Towards more sustainable higher education institutions: Implementing the sustainable development goals and embedding sustainability into the information and computer technology curricula. *Education and Information Technologies*, 29, 5079-5113. https://doi.org/10.1007/s10639-023-12025-8
- Anggraini, F., Abdul-Hamid, M. A., & Azlina, M. K. A. (2018). The role of intellectual capital on public universities performance in Indonesia. *Pertanika Journal of Social Sciences and Humanities*, 26(4), 2453–2472. http://www.pertanika.upm.edu.my/pjssh/browse/regular-issue?article=JSSH-1927-2016
- Anggraini, F., & El Pebrian, D. (2021). Perception of lecturers of public and private universities on the importance of university's intellectual capital: A case study in west sumatra province of indonesia. *Kasetsart Journal of Social Sciences*, 42(4), 914–923. https://doi.org/10.34044/j.kjss.2021.42.4.27
- Aryee, S., Walumbwa, F. O., Seidu, E. Y. M., & Otaye, L. E. (2016). Developing and leveraging human capital resource to promote service quality: Testing a theory of performance. *Journal of Management*, 42(2), 480–499. https://doi.org/10.1177/0149206312471394
- Awuzie, B., & Emuze, F. (2017). Promoting sustainable development implementation in higher education: Universities in South Africa. *International Journal of Sustainability in Higher Education*, 18(7), 1176–1190. https://doi.org/10.1108/ijshe-09-2016-0167
- Azila-Gbettor, E. M., & Abiemo, M. K. (2021). Moderating effect of perceived lecturer support on academic self-efficacy and study engagement: Evidence from a Ghanaian university. *Journal of Applied Research in Higher Education*, 13(4), 991-1006. https://doi.org/10.1108/jarhe-04-2020-0079
- Ballesteros-Rodríguez, J. L., De Saá-Pérez, P., García-Carbonell, N., Martín-Alcázar, F., & Sánchez-Gardey, G. (2022). Exploring the determinants of scientific productivity: A proposed typology of researchers. *Journal of Intellectual Capital*, 23(2), 195-221. https://doi.org/10.1108/JIC-07-2019-0178
- Barney, J. B. (2021). The emergence of resource-based theory: A personal journey. *Journal of Management*, 47(7), 1663–1676. https://doi.org/10.1177/01492063211015272
- Barney, J. B., Ketchen, D. J., & Wright, M. (2021). Resource-based theory and the value creation framework. *Journal of Management*, 47(7), 1936–1955. https://doi.org/10.1177/01492063211021655
- Barra, C., & Zotti, R. (2017). Investigating the human capital development–growth nexus: Does the efficiency of universities matter? *International Regional Science Review*, 40(6), 638–678. https://doi.org/10.1177/0160017615626215
- Becker, G. S. (1993). Human capital: A theoretical and empirical analysis with special reference to education (3rd Edition). The University of Chicago Press.

https://www.nber.org/books-and-chapters/human-capital-theoretical-and-empirical-analysis-special-reference-education-third-edition

- Blonder, R., Feldman-Maggor, Y., & Rap, S. (2022). What can be learned from lecturers' knowledge and self-efficacy for online teaching during the Covid-19 pandemic to promote online teaching in higher education. *PLoS ONE*, *17*(10), 1–20. https://doi.org/10.1371/journal.pone.0275459
- Boyadjieva, P. (2017). Invisible higher education: Higher education institutions from Central and Eastern Europe in global rankings. *European Educational Research Jour*nal, 16(5), 529–546. https://doi.org/10.1177/1474904116681016
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589–597. https://doi.org/10.1080/2159676X.2019.1628806
- Buschle, C., Reiter, H., & Bethmann, A. (2022). The qualitative pretest interview for questionnaire development: outline of programme and practice. *Quality and Quantity*, 56(2), 823–842. https://doi.org/10.1007/s11135-021-01156-0
- Capozza, C., & Divella, M. (2019). Human capital and firms' innovation: evidence from emerging economies. *Economics of Innovation and New Technology*, 28(7), 741–757. https://doi.org/10.1080/10438599.2018.1557426
- Cardullo, V., Wang, C. hsuan, Burton, M., & Dong, J. (2021). K-12 teachers' remote teaching self-efficacy during the pandemic. *Journal of Research in Innovative Teaching and Learning*, 14(1), 32–45. https://doi.org/10.1108/JRIT-10-2020-0055
- Chadwick, C. (2017). Toward a more comprehensive model of firms' human capital rents. *Academy of Management Review*, 42(3), 499–519. https://doi.org/10.5465/amr.2013.0385
- Chaka, C. (2020). Skills, competencies and literacies attributed to 4IR/Industry 4.0: Scoping review. *IFLA Journal*, 46(4), 369–399. https://doi.org/10.1177/0340035219896376
- Chankseliani, M., Qoraboyev, I., & Gimranova, D. (2021). Higher education contributing to local, national, and global development: New empirical and conceptual insights. *Higher Education*, *81*(1), 109–127. https://doi.org/10.1007/s10734-020-00565-8
- Choong, Y. O., Ng, L. P., Ai Na, S., & Tan, C. E. (2020). The role of teachers' self-efficacy between trust and organisational citizenship behaviour among secondary school teachers. *Personnel Review*, 49(3), 864–886. https://doi.org/10.1108/PR-10-2018-0434
- Coff, R., & Rickley, M. (2021). Strategic human capital: Fit for the future. In I. M. Duhaime, M. A. Hitt, & M. A. Lyles (Eds.), *Strategic Management: State of the Field and Its Future* (pp. 579–593). Oxford Academic. https://doi.org/10.1093/oso/9780190090883.003.0032
- Compare, C., Rivero, C., Vargas Moniz, M. J., & Albanesi, C. (2024). Autonomy, competence, and relatedness: Unpacking faculty motivation in service-learning. *Higher Education Research & Development*, 1–17. https://doi.org/10.1080/07294360.2024.2325152
- Creswell, J. W., & Creswell, J. D. (2023). *Research Design: Qualitative, quantitative, and mixed methods approaches* (Sixth Edit). SAGE Publications, Inc. https://spada.uns.ac.id/pluginfile.php/510378/mod_resource/content/1/creswell.pdf
- Cricelli, L., Greco, M., Grimaldi, M., & Llanes Dueñas, L. P. (2018). Intellectual capital and university performance in emerging countries: Evidence from Colombian public universities. *Journal of Intellectual Capital*, 19(1), 71–95. https://doi.org/10.1108/JIC-02-2017-0037
- Crocker, A., & Eckardt, R. (2014). A multilevel investigation of individual- and unit-level human capital complementarities. *Journal of Management*, 40(2), 509–530. https://doi.org/10.1177/0149206313511862
- Dahiya, R., & Raghuvanshi, J. (2022). Measure human capital because people really matter: development and validation of human capital scale (HuCapS). *International Journal of Productivity and Performance Management*, 71(6), 2235-2261. https://doi.org/10.1108/IJPPM-11-2020-0594

- Davis, G. F., & DeWitt, T. (2021). Organization theory and the resource-based view of the firm: the great divide. *Journal of Management*, 47(7), 1684–1697. https://doi.org/10.1177/0149206320982650
- de Frutos-Belizón, J., Martín-Alcázar, F., & Sánchez-Gardey, G. (2019). Conceptualizing academic intellectual capital: Definition and proposal of a measurement scale. *Journal of Intellectual Capital*, 20(3), 306–334. https://doi.org/10.1108/JIC-09-2018-0152
- De la Poza, E., Merello, P., Barberá, A., & Celani, A. (2021). Universities' reporting on SDGs: Using the impact rankings to model and measure their contribution to sustainability. *Sustainability*, *13*(4), 1–30. https://doi.org/10.3390/su13042038
- de Sivatte, I., Gordon, J. R., Olmos, R., & Simón, C. (2019). The effects of site experience on job performance: A missing element in work experience. *International Journal of Human Resource Management*, 32(21), 4603–4628. https://doi.org/10.1080/09585192.2019.1687556
- De Vos, A., Van der Heijden, B. I. J. M., & Akkermans, J. (2020). Sustainable careers: Towards a conceptual model. *Journal of Vocational Behavior*, 117, 1–13. https://doi.org/10.1016/j.jvb.2018.06.011
- Dimov, D. (2017). Towards a qualitative understanding of human capital in entrepreneurship research. *International Journal of Entrepreneurial Behaviour and Research*, 23(2), 210–227. https://doi.org/10.1108/IJEBR-01-2016-0016
- Djamba, Y. K. & Neuman, W. L. (2002). Social research methods: Qualitative and quantitative approaches. *Teaching Sociology*, 30(3), 380. https://doi.org/10.2307/3211488
- Ebekozien, A., Aigbavboa, C., & Samsurijan, M. S. (2023). An appraisal of blockchain technology relevance in the 21st century Nigerian construction industry: perspective from the built environment professionals. *Journal of Global Operations and Strategic Sourcing*, *16*(1), 142–160. https://doi.org/10.1108/JGOSS-01-2022-0005
- England, P., & Folbre, N. (2023). Chapter 11: Reconceptualizing human capital. In M. Tåhlin (Ed.), A Research Agenda for Skills and Inequality. Edward Elgar Publishing. https://doi.org/10.4337/9781800378469.00017
- Flores, E., Xu, X., & Lu, Y. (2020). Human capital 4.0: A workforce competence typology for Industry 4.0. *Journal of Manufacturing Technology Management*, 31(4), 687–703. https://doi.org/10.1108/JMTM-08-2019-0309
- Forliano, C., De Bernardi, P., & Yahiaoui, D. (2021). Entrepreneurial universities: A bibliometric analysis within the business and management domains. *Technological Forecasting and Social Change*, 165, 1-16. https://doi.org/10.1016/j.techfore.2020.120522
- Fulmer, I. S., & Ployhart, R. E. (2014). "Our most important asset": A multidisciplinary/multilevel review of human capital valuation for research and practice. *Journal of Management*, 40(1), 161-192. https://doi.org/10.1177/0149206313511271
- Gleason, N. W. (2018). *Higher education in the era of the fourth industrial revolution*. Palgrave Macmillan Singapore. https://doi.org/10.1007/978-981-13-0194-0
- Goyal, C., & Patwardhan, M. (2021). Strengthening work engagement through high-performance human resource practices. *International Journal of Productivity and Performance Management*, 70(8), 2052–2069. https://doi.org/10.1108/IJPPM-03-2020-0098
- Guo, W., & Chen, M. (2022). Construction of structural dimensions of organizational human capital competitive advantage. *Journal of Intellectual Capital*, 23(5), 1081-1106. https://doi.org/10.1108/JIC-07-2020-0223
- Hanushek, E. A. (2016). Will more higher education improve economic growth? Oxford Review of Economic Policy, 32(4), 538–552. https://doi.org/10.1093/oxrep/grw025
- Hecklau, F., Galeitzke, M., Flachs, S., & Kohl, H. (2016). Holistic approach for human resource management in industry 4.0. *Procedia CIRP*, 54, 1–6. https://doi.org/10.1016/j.procir.2016.05.102
- Heng, K., Hamid, M. O., & Khan, A. (2020). Factors influencing academics' research engagement and productivity: A developing countries perspective. *Issues in Educational Research*, 30(3), 965–987. https://doi.org/10.3316/informit.465283943914964
- Jancenelle, V. E. (2021). Tangible–Intangible resource composition and firm success. *Technovation*, 108. https://doi.org/10.1016/j.technovation.2021.102337

- Jarlstrom, M., Brandt, T., & Rajala, A. (2020). The relationship between career capital and career success among Finnish knowledge workers. *Baltic Journal of Management*, 15(5), 687–706. https://doi.org/10.1108/BJM-10-2019-0357
- Jensen, U. T., & Bro, L. L. (2018). How transformational leadership supports intrinsic motivation and public service motivation: The mediating role of basic need satisfaction. *American Review of Public Administration*, 48(6), 535–549. https://doi.org/10.1177/0275074017699470
- Kaiser, S., Richardsen, A. M., & Martinussen, M. (2021). Burnout and engagement at the Northernmost University in the world. SAGE Open, 11(3). https://doi.org/10.1177/21582440211031552
- Khoo, S. L., & Lim, Y. M. (2019). Dissecting George Town's human capital challenges in built heritage: Voices from the stakeholders. *Journal of Cultural Heritage Management and Sustainable Development*, 9(3), 376–393. https://doi.org/10.1108/JCHMSD-10-2017-0072
- Kioupi, V., & Voulvoulis, N. (2019). Education for sustainable development: A systemic framework for connecting the SDGs to educational outcomes. *Sustainability*, 11(21). https://doi.org/10.3390/su11216104
- Kools, F. R. W., Fox, C. M., Prakken, B. J., & van Rijen, H. V. M. (2023). One size does not fit all: an exploratory interview study on how translational researchers navigate the current academic reward system. *Frontiers in Medicine*, 10(May), 1–14. https://doi.org/10.3389/fmed.2023.1109297
- Kuzminov, Y., Sorokin, P., & Froumin, I. (2019). Generic and specific skills as components of human capital: New challenges for education theory and practice. *Foresight and STI Governance*, 13(2), 19–41. https://doi.org/10.17323/2500-2597.2019.2.19.41
- Kwiek, M. (2016). The European research elite: a cross-national study of highly productive academics in 11 countries. *Higher Education*, 71(3), 379–397. https://doi.org/10.1007/s10734-015-9910-x
- Lee, B. (2019). Human capital and labor: the effect of entrepreneur characteristics on venture success. *International Journal of Entrepreneurial Behaviour and Research*, 25(1), 29– 49. https://doi.org/10.1108/IJEBR-10-2017-0384
- Lenihan, H., McGuirk, H., & Murphy, K. R. (2019). Driving innovation: Public policy and human capital. *Research Policy*, *48*(9). https://doi.org/10.1016/j.respol.2019.04.015
- Li, X., Nosheen, S., Haq, N. U., & Gao, X. (2021). Value creation during fourth industrial revolution: Use of intellectual capital by most innovative companies of the world. *Technological Forecasting and Social Change*, 163. https://doi.org/10.1016/j.techfore.2020.120479
- Liu, M. S., & Liu, N. C. (2021). Impact of human capital strategies on employee attitudes and behavior: a view of internal and external labor markets. *International Journal of Manpower*, 42(5), 756-776. https://doi.org/10.1108/IJM-06-2019-0280
- Lu, W. M. (2012). Intellectual capital and university performance in Taiwan. *Economic Modelling*, 29(4), 1081–1089. https://doi.org/10.1016/j.econmod.2012.03.021
- Marginson, S. (2019). Limitations of human capital theory*. *Studies in Higher Education*, 44(2), 287–301. https://doi.org/10.1080/03075079.2017.1359823
- Martin-Sardesai, A., & Guthrie, J. (2018). Human capital loss in an academic performance measurement system. *Journal of Intellectual Capital*, 19(1), 53–70. https://doi.org/10.1108/JIC-06-2017-0085
- Matos, M. da M., Iaochite, R. T., & Sharp, J. G. (2022). Lecturer self-efficacy beliefs: An integrative review and synthesis of relevant literature. *Journal of Further and Higher Education*, 46(2), 225–245. https://doi.org/10.1080/0309877X.2021.1905155
- Mazzetti, G., Robledo, E., Vignoli, M., Topa, G., Guglielmi, D., & Schaufeli, W. B. (2023). Work engagement: A meta-analysis using the job demands-resources model. *Psy-chological Reports*, 126(3), 1069–1107. https://doi.org/10.1177/00332941211051988

- Mishra, P., & McDonald, K. (2017). Career resilience: An integrated review of the empirical literature. *Human Resource Development Review*, 16(3), 207–234. https://doi.org/10.1177/1534484317719622
- Mohamed Hashim, M. A., Tlemsani, I., & Duncan Matthews, R. (2022). A sustainable university: Digital transformation and beyond. *Education and Information Technologies*, 27(7), 8961–8996. https://doi.org/10.1007/s10639-022-10968-y
- Mohd Ali, N. A., Shafii, Z., & Shahimi, S. (2020). Competency model for shari'ah auditors in Islamic banks. *Journal of Islamic Accounting and Business Research*, 11(2), 377– 399. https://doi.org/10.1108/JIABR-09-2016-0106
- Morris, S. S., Alvarez, S. A., Barney, J. B., & Molloy, J. C. (2016). Firm-specific human capital investment as a signal of general value: Revisiting assumptions about human capital and how it is managed. *Strategic Management Journal*, *38*(4), 912–919. https://doi.org/10.1002/smj.2521
- Nayak, B., Bhattacharyya, S. S., & Krishnamoorthy, B. (2023). Integrating the dialectic perspectives of resource-based view and industrial organization theory for competitive advantage – a review and research agenda. *Journal of Business and Industrial Marketing*, 38(3), 656–679. https://doi.org/10.1108/JBIM-06-2021-0306
- Novawan, A., & Aisyiyah, S. (2020). The role of leadership in education for sustainable development curriculum reform in Indonesian higher education. 22, 145–159. https://doi.org/10.1108/s2055-36412020000022014
- Novo-Corti, I., Badea, L., Tirca, D. M., & Aceleanu, M. I. (2018). A pilot study on education for sustainable development in the Romanian economic higher education. *International Journal of Sustainability in Higher Education*, 19(4), 817–838. https://doi.org/10.1108/IJSHE-05-2017-0057
- Nurmahmudah, F., & Putra, E. C. S. (2020). What makes employees productive and have high performance? Human capital investment in universities. *Asian Journal of Education and Social Studies*, 11(1), 21–36. https://doi.org/10.9734/ajess/2020/v11i130281
- Nyberg, A. J., Moliterno, T. P., Hale, D., & Lepak, D. P. (2014). Resource-based perspectives on unit-level human capital: A review and integration. *Journal of Management*, 40(1), 316–346. https://doi.org/10.1177/0149206312458703
- Osei, H. V., Agyapong, A., & Owusu Kwateng, K. (2019). The moderated mediation processes in firm-specific human capital development and task performance relationship. *International Journal of Organizational Analysis*, 27(3), 396–413. https://doi.org/10.1108/IJOA-11-2017-1274
- Passaro, R., Quinto, I., & Thomas, A. (2018). The impact of higher education on entrepreneurial intention and human capital. *Journal of Intellectual Capital*, 19(1), 135–156. https://doi.org/10.1108/JIC-04-2017-0056
- Pauw, J. B. de, Gericke, N., Olsson, D., & Berglund, T. (2015). The effectiveness of education for sustainable development. *Sustainability (Switzerland)*, 7(11), 15693–15717. https://doi.org/10.3390/SU71115693
- Pedro, E., Leitão, J., & Alves, H. (2019). The intellectual capital of higher education institutions: Operationalizing measurement through a strategic prospective lens. *Journal of Intellectual Capital*, 20(3), 355–381. https://doi.org/10.1108/JIC-07-2018-0117
- Ployhart, R. E., Nyberg, A. J., Reilly, G., & Maltarich, M. A. (2014). Human capital is dead; Long live human capital resources! *Journal of Management*, 40(2), 371–398. https://doi.org/10.1177/0149206313512152
- Pugh, R., Hamilton, E., Soetanto, D., Jack, S., Gibbons, A., & Ronan, N. (2022). Nuancing the roles of entrepreneurial universities in regional economic development. *Studies in Higher Education*, 47(5), 964–972. https://doi.org/10.1080/03075079.2022.2055320
- Rahmadani, V. G., & Schaufeli, W. B. (2022). Engaging leadership and work engagement as moderated by "diuwongke": An Indonesian study. *International Journal of Human Resource Management*, 33(7), 1267–1295. https://doi.org/10.1080/09585192.2020.1799234

- Ramírez, Y., & Gordillo, S. (2014). Recognition and measurement of intellectual capital in Spanish universities. *Journal of Intellectual Capital*, *15*(1), 173–188. https://doi.org/10.1108/JIC-05-2013-0058
- Robbins, S. P., & Judge, T. A. (2024). Organizational Behavior (Nineteenth Edition). Pearson Education Limited. https://api.pageplace.de/preview/DT0400.9781292449968_A46465006/preview-9781292449968_A46465006.pdf
- Saari, A., Rasul, M. S., Yasin, R. M., Rauf, R. A. A., Ashari, Z. H. M., & Pranita, D. (2021). Skills sets for workforce in the 4th industrial revolution: Expectation from authorities and industrial players. *Journal of Technical Education and Training*, 13(2), 1–9. https://doi.org/10.30880/jtet.2021.13.02.001
- Salman, M., Ganie, S. A., & Saleem, I. (2020). The concept of competence: A thematic review and discussion. *European Journal of Training and Development*, 44(6–7), 717–742. https://doi.org/10.1108/EJTD-10-2019-0171
- Scuotto, V., Le Loarne Lemaire, S., Magni, D., & Maalaoui, A. (2022). Extending knowledge-based view: Future trends of corporate social entrepreneurship to fight the gig economy challenges. *Journal of Business Research*, 139, 1111–1122. https://doi.org/10.1016/j.jbusres.2021.10.060
- Suciu, M. C., Plesea, D. A., Petre, A., Simion, A., Mituca, M. O., Dumitrescu, D., Bocaneala, A. M., Moroianu, R. M., & Nasulea, D. F. (2023). Core competence—As a key factor for a sustainable, innovative and resilient development model based on Industry 5.0. Sustainability, 15(9). https://doi.org/10.3390/su15097472
- Sung, S. Y., & Choi, J. N. (2014). Multiple dimensions of human resource development and organizational performance. *Journal of Organizational Behavior*, 35(6), 851–870. https://doi.org/10.1002/job.1933
- Tajeddini, K., & Martin, E. (2020). The importance of human-related factors on service innovation and performance. *International Journal of Hospitality Management*, 85, 1-14. https://doi.org/10.1016/j.ijhm.2019.102431
- Tee, K. F. (2016). Suitability of performance indicators and benchmarking practices in UK universities. *Benchmarking*, 23(3), 584–600. https://doi.org/10.1108/BIJ-07-2014-0069
- Tilak, J. B. G. (2016). Global rankings, world-class universities and dilemma in higher education policy in India. *Higher Education for the Future*, 3(2), 126–143. https://doi.org/10.1177/2347631116648515
- Tjahjadi, B., Soewarno, N., Astri, E., & Hariyati, H. (2019). Does intellectual capital matter in performance management system-organizational performance relationship? Experience of higher education institutions in Indonesia. *Journal of Intellectual Capital*, 20(4), 533–554. https://doi.org/10.1108/JIC-12-2018-0209
- Tripathi, A., & Dhir, S. (2022). HRD interventions, learning agility and organizational innovation: a PLS-SEM modelling approach. *International Journal of Organizational Analysis*, *31*(6), 2322–2336. https://doi.org/10.1108/IJOA-12-2021-3064
- Uddin, M. K. (2024). Environmental education for sustainable development in Bangladesh and its challenges. *Sustainable Development*, 32(1), 1137–1151. https://doi.org/10.1002/sd.2728
- Ulum, I. (2019). Intellectual capital framework perguruan tinggi di Indonesia berdasarkan Instrumen Akreditasi Program Studi (IAPS) 4.0. *Jurnal Reviu Akuntansi dan Keuangan*, 9(3), 309-318. https://doi.org/10.22219/jrak.v9i3.10227
- van Tuin, L., Schaufeli, W. B., & Van den Broeck, A. (2021). Engaging leadership: Enhancing work engagement through intrinsic values and need satisfaction. *Human Resource Development Quarterly*, 32(4), 483–505. https://doi.org/10.1002/hrdq.21430
- Vargas-Merino, J. A., Rios-Lama, C. A., & Panez-Bendezú, M. H. (2024). Critical implications of education for sustainable development in HEIs - A systematic review through the lens of the business science literature. *International Journal of Management Education*, 22(1). https://doi.org/10.1016/j.ijme.2023.100904

- Velayutham, A., & Rahman, A. R. (2018). The value of human capital within Canadian business schools. *Journal of Intellectual Capital*, 19(4), 836–855. https://doi.org/10.1108/JIC-06-2017-0086
- Wilkesmann, U., & J. Schmid, C. (2014). Intrinsic and internalized modes of teaching motivation. *Evidence-based HRM*, 2(1), 6–27. https://doi.org/10.1108/EBHRM-07-2013-0022
- Wright, E., & Horta, H. (2018). Higher education participation in "high-income" universal higher education systems: "Survivalism" in the risk society. Asian Education and Development Studies, 7(2), 184–204. https://doi.org/10.1108/AEDS-07-2017-0061
- Wright, P. M., Nyberg, A. J., & Ployhart, R. E. (2018). A research revolution in SHRM: New challenges and new research directions. In Buckley, M.R., Wheeler, A.R. and Halbesleben, J.R.B. (Eds.) *Research in Personnel and Human Resources Management Vol. 36.* Emerald Publishing Limited, Leeds, pp. 141-161. https://doi.org/10.1108/S0742-730120180000036004
- Wu, Y. C. J., & Shen, J. P. (2016). Higher education for sustainable development: A systematic review. *International Journal of Sustainability in Higher Education*, 17(5), 633– 651. https://doi.org/10.1108/IJSHE-01-2015-0004
- Young, J. C., Rose, D. C., Mumby, H. S., Benitez-Capistros, F., Derrick, C. J., Finch, T., Garcia, C., Home, C., Marwaha, E., Morgans, C., Parkinson, S., Shah, J., Wilson, K. A., & Mukherjee, N. (2018). A methodological guide to using and reporting on interviews in conservation science research. *Methods in Ecology and Evolution*, 9(1), 10–19. https://doi.org/10.1111/2041-210X.12828