



RESEARCH ARTICLE

Contributing Factors to Job Preparedness among Undergraduate Students: A Rapid Review

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| ARTICLE INFO | ABSTRACT |
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| Received: Jul 24, 2024 | <p>Undergraduate students, who are responsible for equipping themselves with the university's guidance, possess a mutual vision in getting well for job preparedness. However, the endeavours are not promising for obtaining employment. This study seeks to develop a solid body of information regarding the elements that contribute to work preparation among undergraduate students through a comprehensive and efficient evaluation of existing literature. A rapid literature review method was employed in selecting the ten relevant articles. The process involved searching articles from two databases using specific keywords. The screening process involved the exclusion criteria, which encompassed studies that focused solely on evaluating the effectiveness of a particular job-related training and samples that were not undergraduate students. The results revealed that the papers were authored by researchers from the United States, China, Australia, Canada, and the United Kingdom. The relevant factors discovered were categorised as either environmental, personal, or a combination of both. However, personal factors have received greater emphasis. The findings revealed that it is crucial to encourage individuals' ideas and motives, which are essential for ensuring mental well-being. In addition, the environmental aspects were portrayed as resources, providing opportunities for students to adequately prepare for their profession. However, the degree to which students are job-prepared heavily relies on their awareness of the knowledge they have acquired, enabling them to be self-assured and accountable to both themselves and society. Therefore, it is recommended that universities provide additional programmes that not only prioritise education but also aim to raise awareness of their capabilities.</p> |
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INTRODUCTION

In the current job market, the skills and abilities necessary to excel in a specific occupation are increasingly crucial (Kaplan, 2023; Mainga et al., 2022; Siddiky & Akter, 2021). Various industries use advertising to recruit individuals with specific skills. The revolution has also increased work requirements (Quaratul Aini et al., 2020). As a result, universities have made significant efforts to meet these expectations by offering high-quality degrees. The purpose of this action is to guarantee that graduates are able to obtain a wide range of skills and abilities. Nevertheless, various companies persist in facing a shortage of proficient individuals. Furthermore, Quaratul Aini et al. (2020) discovered that the graduates exhibit a deficiency in self-confidence regarding their job-related abilities. This deficiency in confidence may have an impact on how prepared they are for

employment, as described by the Social Cognitive Theory (SCT) and Holland's theory (Batisfta & Gondim, 2022), emphasising the rationale of equipping individual confidence with various competencies. This highlights the importance of identifying contributing factors to job preparedness, which can be completed through academic programmes. In response to this issue, it was proposed that the university should address it by engaging in partnerships with industries (David, 2024). Besides cognition and skills, tackling psychological factors within the social networking environment is also crucial (Bottaro & Faraci, 2022; Ricciardi et al., 2022; Vespa et al., 2022; Greenhill, 2010).

Recently, there has been a focus on career competency and the need for self-reliant preparedness for the 21st century workforce environment among undergraduate students, aiming to enhance individuals' independence and self-management (Chaiyama & Kaewpila, 2021; Harper-Young, 2018; Hirschi & Koen, 2021). However, they placed less emphasis on their preparedness for the latest job conditions in the future, given the increasing challenges of competing to remain resilient in the digital world (Chen et al., 2020). Following this, it informs the need to develop more relevant instruments for assessing job preparedness for reflecting on personal attributes, networking, self-profiling, exploring different work opportunities, and taking charge of one's career (Akkermans et al., 2013). Hence, this study aims to explore more factors contributing to job preparedness via a rapid literature review as described in the methodology. The primary goal of the literature review was to investigate job preparation among undergraduates and identify the important components contributing to it, thereby facilitating further exploration of the present circumstances.

METHODOLOGY

The search keywords utilised in the present study were derived from the analogous keywords of four pivotal terms: "factor," "job," "preparedness," and "undergraduate." The relevant articles were identified during the initial search by utilising the Scopus and Web of Science (WoS) databases. Subsequently, the articles were chosen according to specific criteria for inclusion and exclusion. The chosen publications meet the necessary methodological criteria to support the findings.

The Preferred Reporting Items for the rapid literature review (RLR) was employed in selecting articles for the review. This process was conducted within a limited time frame. Like a systematic literature review, RLR also starts with the steps of determine research questions, searching articles with keywords with inclusion and exclusion criteria even though RLR has a limited scope if compared to systematic literature review (Maureen Dobbins, 2023). In RLR, the search of articles was guided with the research objective of identifying factors that influence undergraduate students' job preparedness. The significance of using RLR is supported by current studies which also employed RLR for identifying challenges to applying role playing (Hidalgo et al., 2024). This study relied on two types of digital database (Web of Science and Scopus) to collect data. This way of retrieving articles was used in previous study (Hidalgo et al., 2024) too. Figure 1 shows the RLP flow diagram. The search keywords yielded two results in the WoS database and thirteen results in the Scopus database. Two articles were removed from the list before the screening due to the duplicate. The screening approach entailed a manual evaluation, utilising certain criteria, to identify research studies that focused on undergraduate students currently enrolled in or just graduating from university. The exclusion criteria encompassed studies that focused solely on evaluating the effectiveness of a particular job-related training, namely robotics, and the article that focused on excessively specialised abilities in surgical skills.

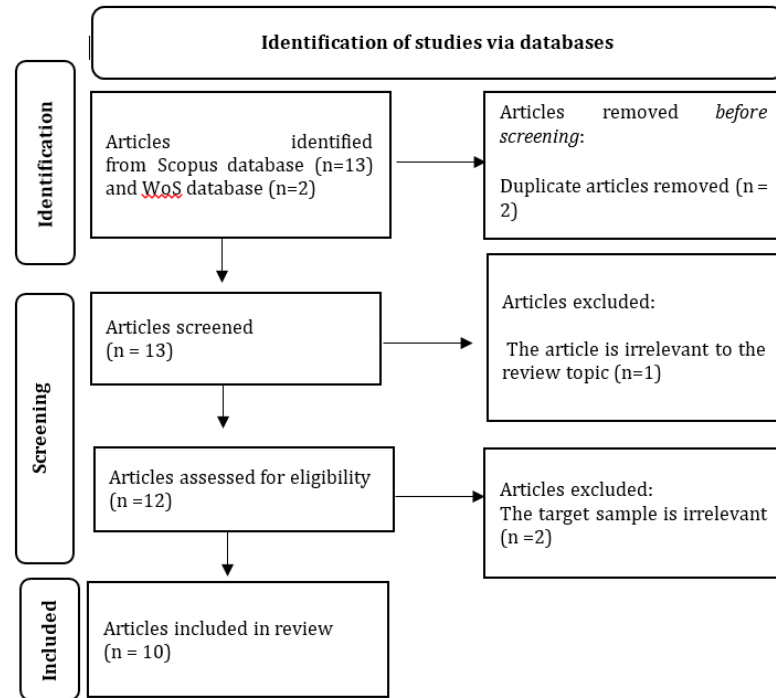


Figure 1 A modified PRISMA flow diagram for the rapid literature review

The data obtained from Mendeley was exported in the RIS format and subsequently processed using NVIVO software to get analytical results. The NVIVO software was used to systematically arrange the data by employing functions such as coding, categorization, and memos.

The aim of this study is to determine the factors that are examined in determining the job preparedness of undergraduate students. The discovery examines the extent to which previous research emphasised factors that contribute to the development of job opportunities for undergraduate students. Therefore, this study classifies the pertinent elements using the coding technique. In addition, the factors were classified based on years and target samples using the categorization feature in NVIVO.

FINDINGS

The 10 articles underwent a review process and were classified into categories depending on the factors discussed in their content. The coverage of factors (Figure 2) was divided into three percentages: 10% for personal factors, 10% for environmental factors, and 80% for combined personal and environmental elements. Career studies typically analyse these elements separately, as outlined in a recent study (McKissick et al., 2023; Bhuiyan et al., 2024) that emphasises the substantial influence of both personal and environmental factors on the development of job preparedness. Among the personal factors, self-efficacy is a distinct illustration of the individual elements involved in professional development, in addition to external variables. Self-efficacy in managing one's beliefs while seeking a job, along with understanding of career development techniques in a particular environment, may guide an individual towards success (Hirschi & Koen, 2021; Siddiky & Akter, 2021). On the other hand, environmental factors such as well-guided study environments and enrichment programmes were expected to provide strategies for equipping themselves with relevant knowledge (Siddiky & Akter, 2021; Lan et al., 2024).

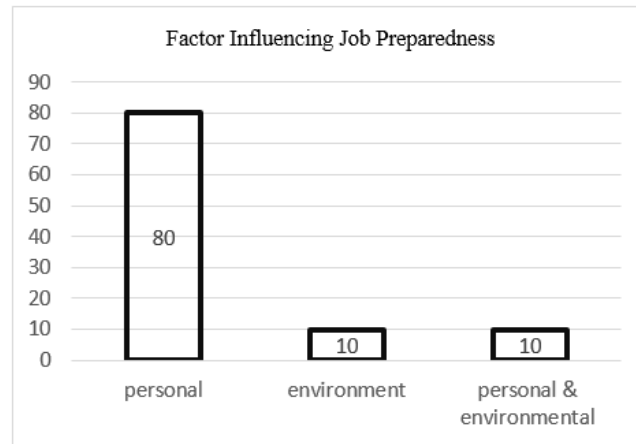


Figure 2. Percentage of factors of job preparedness (Total papers, n = 10)

Table 1 displays the methodological reporting of the research. Several countries primarily registered the research outputs, including the USA, China, Australia, Canada, and the UK. The samples involved were from the USA (30%), Australia (30%), Canada (20%), the UK (10%), and China and Malaysia (10%). Therefore, the concerns of researchers regarding job preparedness were not exclusive to any particular country. Universities around the world are taking many more steps to improve the process of preparing undergraduate students to get jobs.

Table 1 summarises the articles' content. All the articles were identified for their factors and related aspects. The topics align with the discussion's content. The coding pertains to the ongoing research, which specifically examines environmental (E), personal (P), and both environmental and personal (EP) aspects. These components were distributed as follows: 10% for environmental factors, 10% for personal factors, and 80% for both environmental and personal factors. The primary emphasis on environmental factors was reported based on the creation of chances to enhance employability and the retention of skills (Goodwin et al., 2019). On the other hand, the emphasis on personal factors involves students' satisfaction with their academic and personal development, as well as their sense of job preparedness (James & Yun, 2018). The primary areas of interest in both environmental and personal aspects involve examining an individual's confidence in performance and the necessity of offering resources (McKissick et al., 2023), as well as providing direction to enhance resources specifically for improving practical skills (Salazar-Gómez et al., 2023). Particularly, other than focusing on environmental resources and support, key factors were identified, involving self-determination (Naylor, 2022), individuals' level of preparedness in terms of soft skills (Teng et al., 2019); life skills, accountability, and self-assurance in dealing with future employment (Coates et al., 2012); mental health support for future growth (Happell, 2009); and the incorporation of attitudes and experiences gained during an individual's educational journey (Happell, 2008).

Table 1 Summary of the articles

| | Year | Reference | Key research focus | Factor E: environmental P: personal EP: environmental & personal | Sample (country) |
|---|------|---|---|---|------------------|
| 1 | 2023 | McKissick, B. R., Wrenn, M., & Vach, S. (2023). Exploring Preparedness to Enter the Field: A Q Method Approach to Understanding a Beginning Rural | This study investigated the impact of job preparedness on beginning special | EP | USA |

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| | | Special Education Educator Preparation Program. <i>Rural Special Education Quarterly</i> , 42(3), 162–175. https://doi.org/10.1177/87568705231182439 McKissick et al. (2023) | educators' confidence in their job responsibilities. Two main aspects were observed: personal factors, such as self-efficacy, and environmental factors, which include support for engaging in professional practice and being a collaborative leader. | | |
| 2 | 2023 | Salazar-Gómez, A. F., Bagiati, A., Álvarez, J. M., Beshimov, E., & Breazeal, C. (2023). The Global Apprenticeship Program (GAP): Bridging the Gap Between Talent and Opportunities. <i>2023 IEEE Frontiers in Education Conference (FIE)</i> , 1–9. https://doi.org/10.1109/FIE58773.2023.10343009 | This study designed a program for job preparedness, focusing on two main aspects: personal factors, such as self-efficacy in preparing to bridge the gap between academic training and workplace requirements, and environmental factors, which include supporting necessary workplace skills and fostering a positive work environment. | EP | USA |
| 3 | 2022 | Tomlinson, M., McCafferty, H., Port, A., Maguire, N., Zabelski, A. E., Butnaru, A., Charles, M., & Kirby, S. (2022). Developing graduate employability for a challenging labour market: the validation of the graduate capital scale. <i>Journal of Applied Research in Higher Education</i> , 14(3), 1193–1209. https://doi.org/10.1108/JARHE-04-2021-0151 | This study provides knowledge pertaining to the validity of a job preparedness instrument, the 'Graduate Capital Scale'. The instrument's content focuses on two aspects: personal factors, involving personal factors, such as self-confidence in entering the job market with social skills and job-related skills from education, and environmental factors, including training activities. | EP | UK |
| 4 | 2022 | Naylor, R. (2022). Key factors influencing psychological distress in university students: the effects of tertiary entrance scores. <i>Studies in Higher Education</i> , 47(3), 630–642. https://doi.org/10.1080/03075079.2020.1776245 | This study investigated key factors that influence students' study and future life demands, including job preparedness. The two aspects are: personal factors, including self-determination in mitigating depression | EP | Australia |

| | | | | | |
|---|------|---|--|----|--------------------|
| | | | and stress, and environmental factors, including supports and resources in managing stress for coping with study and life demands. | | |
| 5 | 2019 | Teng, W., Ma, C., Pahlevansharif, S., & Turner, J. J. (2019). Graduate readiness for the employment market of the 4th industrial revolution. <i>Education + Training</i> , 61(5), 590–604. https://doi.org/10.1108/ET-07-2018-0154 | This study examines students' perceptions of universities' experiences pertaining to job preparedness in two aspects: personal factors, including soft skills, and environmental factors, involving the university's role in developing curricula. | EP | China and Malaysia |
| 6 | 2019 | Goodwin, J.T, Goh, J., Verkoeyen, S., & Lithgow, K. (2019). Can students be taught to articulate employability skills? <i>Education + Training</i> , 61(4), 445–460. https://doi.org/10.1108/ET-08-2018-0186 | This study investigates the possibility of undergraduate students articulating their employability skills via a course-level teaching intervention. This study suggests that environmental factors have an impact on resource provision, highlighting the importance of the university's role in job preparedness. | E | Canada |
| 7 | 2018 | James, M., & Yun, D. (2018). Exploring student satisfaction and future employment intentions. <i>Higher Education, Skills and Work-Based Learning</i> , 8(2), 117–133. https://doi.org/10.1108/HESWBL-03-2017-0019 | This study investigated students' satisfaction with their academic and personal development, as well as their sense of job preparedness. This study advocates for universities to prioritize academic development as it fosters students' progress through positive personal factors. | P | canada |
| 8 | 2012 | Coates, W. C., Spector, T. S., & Uijtdehaage, S. (2012). Transition to Life—A Sendoff to the Real World for Graduating Medical Students. <i>Teaching and Learning in Medicine</i> , 24(1), 36–41. https://doi.org/10.1080/10401334.2012.641485 | This study underlines that students' experience in universities has some impact on their attitudes. The study specifically highlights two aspects: personal factors, such as cultivating positive attitudes to maintain mental health, and environmental factors, such as gaining | EP | USA |

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|----|------|--|---|----|-----------|
| | | | clinical workplace experience. | | |
| 9 | 2008 | Happell, B. (2008). The importance of clinical experience for mental health nursing – Part 1: Undergraduate nursing students’ attitudes, preparedness and satisfaction. <i>International Journal of Mental Health Nursing</i> , 17(5), 326–332. https://doi.org/10.1111/j.1447-0349.2008.00555.x | This study underlines the influence of university experiences on students’ attitudes and shows that students’ experience in universities has some impact on their attitudes. The study specifically highlights two aspects: The study specifically focuses on two aspects: personal factors, such as cultivating positive attitudes and their perceptions towards mental health practice, and environmental factors, such as gaining clinical workplace experience. | EP | Australia |
| 10 | 2008 | Happell, B. (2009). The importance of clinical experience for mental health nursing – Part 2: Relationships between undergraduate nursing students’ attitudes, preparedness, and satisfaction. <i>International Journal of Mental Health Nursing</i> , 17(5), 333–340. https://doi.org/10.1111/j.1447-0349.2008.00556.x | This study underlines the impact of university experiences on nursing students’ attitudes towards mental health nursing. The study specifically highlights two aspects: personal factors, such as cultivating positive attitudes and perceived preparedness for mental health practice, and environmental factors, such as gaining clinical workplace experience | EP | Australia |

The overall summary of the articles (in Table 1) revealed that both personal and environmental factors contribute significantly to the development of job preparedness. This result supports current findings (McKissick et al., 2023).

The results specifically revealed the importance of soft skills in ensuring job preparedness (Teng et al., 2019). James & Yun (2018) always focused on the success of fostering soft skills and knowledge to prepare undergraduate students for future job development. Coates et al. (2012) viewed the soft skills as life skills that enhance students' confidence and responsibility for job readiness. They observed all these skills during their time at university. As a result, the experiences gained during an individual's educational experience at the university have a significant impact on their preparedness for employment (Coates et al., 2012; Happell, 2008). Nevertheless, prioritising students' mental health is crucial for the continued advancement of individual aspects (Happell, 2009). Hence, it is evident that self-efficacy and other psychological factors are relevant to job preparedness. While universities focus on strengthening the psychological factor to increase students' confidence and sense of responsibility, they also focus on extra guidance for job preparedness, including courses for real-life skills, community building, and others (Salazar-Gómez et al., 2023). Researchers created instruments for skill and knowledge assessment (Tomlinson et al., 2022). The review revealed that the university educational experiences were highly focused on soft skills and life skills development. However, a lack of awareness among students may lead to the retention of these skills. Following this, there have been recent studies focusing on the creation of awareness using employability skill articulation (Goodwin et al., 2019).

Hence, universities play a large role in equipping relevant knowledge and skills, focusing on environmental and personal factors. Nevertheless, to what extent the students possess job

preparedness depends much on the students' awareness of their gained knowledge for them to be confident and responsible to themselves and society.

DISCUSSION

This study showed that different environmental and social supports have an impact on job preparedness, aligning with SCT theory. The environmental factors are various. This study focused on the efforts made by universities to provide relevant resources and support. Universities, which focus on producing knowledgeable and skilled workers, are responsible for talent development and subsequently prepare talent pools for industries and economic activities. Given this, higher institutions strive to establish a comprehensive environment that fosters the development of competent skills and instills confidence in students to secure a career (Chigbu & Nekhwevha, 2022). Nevertheless, even though the classroom environment fosters the development of more structured knowledge, students should seek out multiple sources of knowledge acquisition, demonstrating more effort and increasing awareness of what they have learned and how it contributes to their jobs. On this matter, the university should create a developmental environment that allows students to benefit from multiple environments (Bandy, 2023; Vermeulen & Schmidt, 2008), which involve all parties or stakeholders such as students and their parents, instructors, university management, government, industries, and societies. This transpires in the classroom, unlocking the extraordinary potential of communication and career-related skills within the surrounding communities (Haleem et al., 2022; Cummings, 2000). It is more encouraging if more parties are involved, such as the local team of researchers, community partnerships, and more. This implies that the classroom environment provides students with opportunities to enhance their understanding of their acquired knowledge and strengthen their confidence in their ability to apply practical skills effectively. Given the context, it is crucial to acknowledge the significance of social, community, and family support, as they can offer more comprehensive guidance as compared to relying just on the institution (Ahmad et al., 2019). Current studies have emphasised the importance of industries acting as communities to collaborate with colleges (David, 2024). This, in turn, has supported the previous practice of improving and enhancing interactions between individuals in many aspects and environments (Demetriou et al., 2017).

On the other hand, personal factors were discovered as one of the factors in this study. Personal factors include self-efficacy as the main factor contributing to job preparedness. The role is becoming more important as students are facing challenges in creating a valuable experience by exploring advanced technology and materials in a competitive environment. They need to persist through challenges in university and in their future lives. Their persistence is observed in self-efficacy (de Terte et al., 2009; Luthans et al., 2006; Masten, 2001). Assessing self-efficacy is essential to increasing belief in their ability to successfully overcome problems and achieve specific goals (Bandura, 1997). It is worth observing their self-efficacy because it enables identifying individuals who focus on processes for achieving various outcomes in affective, cognitive, and psychomotor domains (Bloom et al., 1956).

This study indicated that universities play a major role in facilitating knowledge and skill transfer. The university's environmental resources provide not only resources but also social and psychological support, such as increasing self-efficacy and, consequently, improving students' perceived learning outcomes. This is further suggested: the university's environment should provide various aspects of environmental support and motivation to develop self-efficacy, both directly and indirectly (Vermeulen & Schmidt, 2008).

The Social Cognitive Career Theory (SCCT) (Lent et al., 1994) suggests that individuals' academic knowledge influences their skills as well as their selection of jobs. It specifically guides individuals' behaviour choices based on personal and environmental factors, such as their university experiences. Aside from that, an individual's self-efficacy, outcome expectations, and personal goals significantly

shape and reshape their interests (Holland, 1997). It highlights the significance of both environmental and personal factors in determining career success (Vermeulen & Schmidt, 2008). Observing the development of students' personalities in university is crucial, as these factors shape them throughout their lives. More importantly, each individual demonstrates their abilities through their knowledge and behaviour (Marciniak et al., 2022). SCCT specifically guides individuals' behaviour choices based on personal and environmental factors, such as their university experiences. Figure 3 illustrates how the two factors complement each other. The conceptual framework demonstrates how the theory of SCCT for job preparedness integrates environmental and personal factors. In particular, the environment influences students' awareness of their own learning, and vice versa; their interest encourages them to further engage and utilise resources.

When searching for job opportunities among undergraduate students, it is advised that students focus on developing their talents (Mohd Salleh et al., 2019) and personal abilities (Mohd Salleh et al., 2017), rather than relying solely on the instruction provided by the institution. Nevertheless, current technological advancements and challenges have made getting a job more difficult because the demand for skills is increasing (Ra et al., 2019). Therefore, undergraduate students should grab any opportunities for growth beyond the knowledge and skills taught in university programmes.

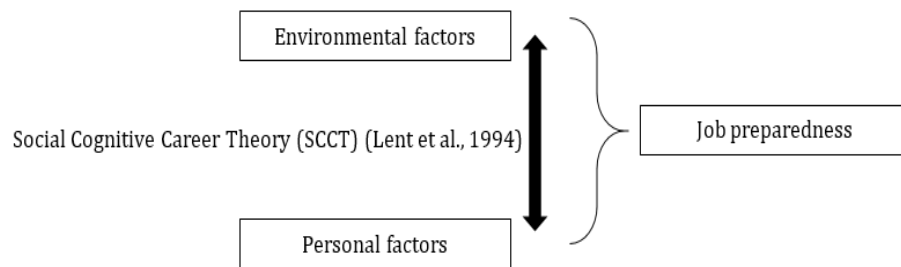


Figure 3. An understanding of job preparedness

This study illustrated the importance of closely monitoring observation or assessment for skill and knowledge development, in addition to providing environmental resources, to enhance students' awareness of their skills and knowledge growth. This finding is consistent with earlier research emphasising the importance of perceived learning outcomes; however, it's equally important to constantly enhance their skills and knowledge (Lent et al., 2016). According to the SCCT, individuals with high levels of self-efficacy and perceived learning outcomes are more likely to be resilient in the face of challenges, setbacks, and career transitions (Pintrich, 2000).

Advanced materials and collaboration with industry for up-to-date advancements are two environmental resources that can increase job preparedness and resilience. Advanced materials in teaching can improve the quality of education and equip individuals with the necessary skills and knowledge to succeed in their careers (Greenhill, 2010). Similarly, collaboration with industry can provide individuals with access to the latest advancements and technologies in their field, thereby increasing their competitiveness and employability (Vetter et al., 2022). By improving career preparedness and resilience, these environmental resources can contribute to achieving Sustainable Development Goal 3 (good health and well-being) and Sustainable Development Goal 4 (quality education) (OECD, 2019).

More importantly, the SCCT shows how important environmental resources, social supports, self-efficacy, and perceived learning outcomes are for building resilience and job readiness. By providing access to advanced materials in teaching and promoting collaboration with industry, individuals can develop the necessary skills and knowledge to succeed in their careers and contribute to achieving Sustainable Development Goals 3 and 4.

CONCLUSION

This study offers a conceptual understanding of how individuals in universities gain opportunities to equip themselves for job preparedness. Environmental factors are appreciated in developing engagement and cognition. With cognition, individuals have a chance to go further for job preparedness grounded in 21st century skills and competencies. On the other hand, personal factors and caring for students' mental health need more focus. While universities are ready to welcome advancements like AI skill development, they should prioritize mental health treatment more heavily. Therefore, it is recommended that future research prioritise the enhancement of abilities and cognition to meet present demands while also ensuring the proper nurturing of mental development. This study offers valuable insights to universities and state officials regarding the need to involve students in skill development to enhance their individual cognitive development in line with current demands and concerns.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

AUTHORSHIP CONTRIBUTION

Conception: TSH and NR conceptualised and developed the research question.

Research design: TSH and NR drafted the research design and initialled the research methodology based on the rapid literature review method. Performed a literature search strategy, screened the articles, extracted the data, and presented the results.

Refining the results: MHMY and KAC went through the reported results and did some refinement.

Drafting the paper: TSH and NR drafted the manuscript.

Presenting the abstract: LS led the writing of the abstract.

Revising the manuscript: MHMY, KAC, and LS were actively involved in the revision of the manuscript.

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