

Mapping managerial expectations of graduate employability attributes: A scoping review



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Orientation: Graduate employability remains high on researchers' and practitioners' agendas. Consequently, many studies have been conducted on the topic (also from a managerial perspective). A synthesis of these studies is however lacking, complicating decision-making for stakeholders with a vested interest in the topic.

Research purpose: This study aimed to give a scientific overview of managerial expectations of new graduate employability attributes through a scoping review of the available literature.

Motivation for the study: A synthesis of these studies is required to facilitate stakeholders' (researchers and practitioners) decision-making.

Research approach/design and method: This study included 63 peer-reviewed articles as part of the review. The researcher analysed the data using conventional content analysis.

Main findings: Four main categories of graduate employability attributes were identified: personal, interpersonal, workplace and applied knowledge attributes. The term personal attributes refers to an individual's unique make-up that enables them to be successful in all aspects of life and lays the foundation for the way all other attributes are applied. Interpersonal attributes dictate new graduates' ability to communicate or interact well with other individuals. The way in which new graduates adapt and function at work will be determined by their workplace attributes whilst their applied knowledge attributes build on the first three categories and enable new graduates to apply their theoretical and empirical learning in practice.

Practical/managerial implications: Not only could the results inform further studies but the additional insight into the complexity of graduate employability could also guide future developmental interventions.

Contribution/value-add: The present study aimed to make a scientifically founded contribution towards literature by identifying the most important expectations managers have regarding new graduate employability.

Keywords: employability; new graduate; managerial expectations; attributes; capability; scoping literature review.

Introduction

Graduate employability matters for graduates and organisations. Graduates benefit from gaining meaningful employment (Al-Shehab, Al-Hashimi, Madbouly, Reyad & Hamdan, 2021) (with its associated monetary and latent benefits) whilst organisations benefit from (graduate) employees who perform optimally (Fleuren, De Grip, Jansen, Kant & Zijlstra, 2016). Employable graduates also contribute positively to the economy (Al-Shehab et al., 2021; Edgell & Granter, 2019). Graduate employability is not only important but also complex. As a result of globalisation and technological advances, the work environment is dynamic (Al-Shehab et al., 2021; Dolce, Emanuel, Cisi & Ghislieri, 2020; Hagel, Brown & Wooll, 2019). Coupled with social and (geo)political disruptions (Fernández-Espínola et al., 2020), workforce requirements are continuously evolving (Baird & Parayitam, 2019).

Although there are four main stakeholders when it comes to graduate employability (higher education institutions [HEIs], students and graduates, and employers and government), employers' (continuously changing) needs and preferences dictate the labour market's demand for employability attributes (Pang, Wong, Leung & Coombes, 2019). As consumers of the attributes offered by employed graduates, new graduates need to convince employers of their possession of the graduate employability attributes as expected by employers (Roos, 2018; Wong, Chiu, Copey-

Blake & Nikolopoulou, 2021). Therefore graduates need to maximise their employment prospects by exhibiting the attributes most valued by employers (Allden, Niemann & Kotzé, 2018; Roos, 2018).

Several studies have been conducted on graduate employability attributes from an employer perspective (Allden et al., 2018; Salleh, Yusof & Memon, 2016) to unravel these needs and preferences. These studies seem to be incommensurable, lacking a basis for comparison as they are quite diverse in their approach to and use of definitions. The amount of data available, the knowledge of its existence and the availability of data-sharing platforms pose a challenge for making sense of research evidence (Chapman et al., 2020). In the absence of a synthesised view on graduate employability attributes, the present study aimed to make a scientifically founded contribution towards literature by synthesising the available conceptual and empirical research evidence on managerial expectations of graduate employability attributes through a scoping review. This study focused on managers as employer representatives and decision-makers. Managers have a vested interest in the long-term success of the company and graduate appointments would be strategically viewed by them (Lowden, Hall, Elliot & Lewin, 2011). The researchers chose to conduct a scoping review as scoping reviews enable scholars to identify knowledge gaps that show how existing and additional knowledge could inform practice (Warner, Godwin & Hodge, 2021). The review also allows stakeholders in the graduate employability sphere to make more informed hiring and development decisions. For example, it provides HEIs with the necessary information to align curricula with industry demands.

Theoretical perspectives

Graduate employability

The National Association of Colleges and Employers (2021) coined graduate employability the new career currency. The smoothness with which new graduates transition from university to work has a lasting impact on their personal and professional prospects. Wilson-Clark and Saha (2019) regarded university-to-work transition and employability as interrelated concepts and argue that unless youth get equipped according to industry demands, there will be no significant impact on improved employment. Abel and Deitz (2016) showed that underemployment decreases as graduates' employability attributes mature. Improving their employability affords graduates the opportunity of establishing their professional credibility (Atanasovski, Trpeska & Lazarevska, 2019). Knowing what employers expect from new graduates may enhance their employability and narrows the gap between the supply and demand. For the purpose of this study the term *new graduates* refers to persons who have completed a qualification at a HEI and are entering the labour market for the first time.

At its root, *employability* entails an individual's potential in the labour market (Van Harten, De Cuyper, Knies & Forrier,

2021). Over time, the issue of employability morphed from the macro-level, post-war focus, on employability of the disabled segment of the labour force, to concentrating on intra-organisational flexibility on meso-level during the 1980s. More recently the notion of individual agency is accentuated that addresses the micro-level of the individual (Van der Heijden & De Vos, 2015). Roos (2018) pointed out the importance of possessing and presenting particular attributes to gain meaningful employment that would benefit individuals and their employers.

Knight and Yorke's (2003) definition of employability goes one step further to indicate these attributes as 'attributes that promote adaptive cognition, behaviour and affect and increase one's suitability for appropriate and sustained employment opportunities' (p. 7). Whereas Roos (2018) focused on gaining meaningful employment, Knight and York (2003) emphasised sustained employability. Employability will only be sustainable if personal efforts and structural factors are balanced in an endeavour to gain and retain employment in work that is worthwhile for the worker and appreciated by the work context, hence valuable to both parties (Van der Klink et al., 2016). Forrier, Verbruggen and De Cuyper (2015) proposed a three-strand structure for the interpretation of employability: (1) increasing personal potential through personal strengths; (2) self-appraisal of this potential; and (3) realisation of employment potential through job transition. The emphasis of Knight and York's (2003) definition and this study falls within the interpretation of Forrier et al.'s (2015) first strand, interpreting employability in terms of the presentation of personal strengths that increase employment potential. This interpretation falls within the competence-based approach to employability that postulates that the employability of individuals depends on the identification and development of appropriate attributes (Cheng, Adekola, Albia & Cai, 2021; Römogens, Scoupe & Beusaert, 2020).

Graduate employability attributes

For the purpose of this study, attributes are regarded as synonymous with competencies, and refer to observable elements such as knowledge and skills (i.e. what people know and what they can do) and foundational characteristics such as attitudes or dispositions (i.e. who people are) (Boyatzis, 1982; Pang et al., 2019; Tefft & Hanson, 2015). Employability attributes should not be seen as job-specific but rather as knowledge, skills and attitudes (Dondi, Klier, Panier & Schubert, 2021), which cut horizontally across industries and vertically across jobs (Barbosa & Freire, 2019). Roos (2018) and Anastasiu et al. (2017) also argued that employability attributes should be transferable rather than job-specific and should be valued beyond organisational and industrial borders. In the Deloitte Insights Report (Hagel et al., 2019), business leaders are encouraged to focus on universal human capabilities that go beyond specific skill sets and domains. There is an increasing need for a different set of less subject-specific competencies or attributes to meet the demands of the current volatile world

of work (Barbosa & Freire, 2019). Hagel et al. (2019) emphasised enduring human capabilities that underlie the ability to learn, apply and effectively adapt one's skills to meet the demands of the ever-changing economy and the Fourth Industrial Revolution.

Taken together, this study approached employability from the perspective that graduates should possess transferable attributes (i.e. knowledge, skills and attitudes) that are required to gain and maintain employment in a volatile business environment. Using this approach, the study sought to synthesise available evidence on employability attributes from a managerial perspective.

Methods

Literature search strategy

A search was conducted by the first author between March 2020 and April 2020. In an endeavour to ensure a scientific approach to the execution and reporting of the review, an a priori protocol was developed. The steps as set out by Arksey and O'Malley (2007) in their framework for scoping reviews were complemented by annotations by the Joanna Briggs Institute ([JBI]; Peters et al., 2020) to enhance the clarity and rigour of the review process. Figure 1 gives a clear breakdown of how this was applied.

The search strategy was informed by the search terms and the inclusion and exclusion criteria. The following search terms were used separately and in combination with one

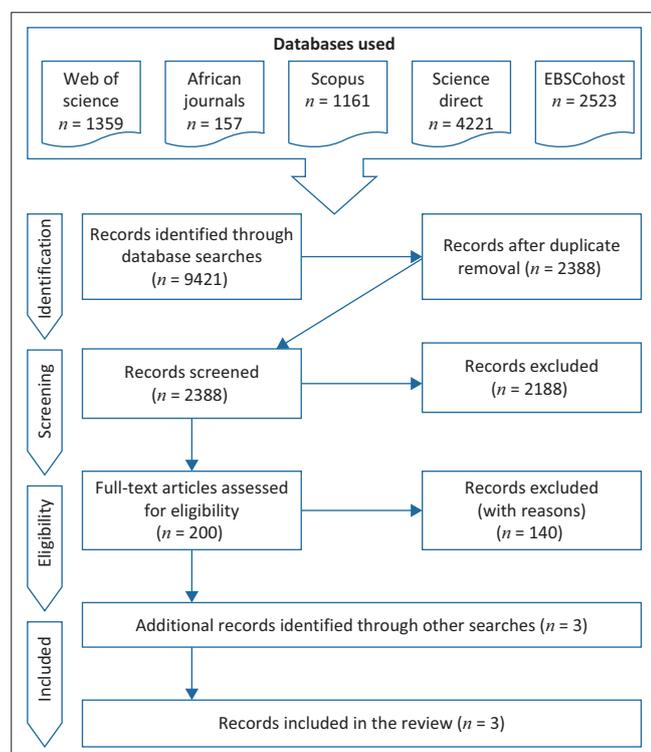
another: graduate; employability; competence; attributes; new graduate; first-time labour market entrant; first time job seeker. Alternative spelling for labour (i.e. labor) was included. Quantitative, qualitative and mixed methods empirical studies were included.

Researchers (Aigbavboa & Aliu, 2017; Alston, Marsh, Castleberry, Kelley & Boyce, 2019; Baker et al., 2017) claim that the world of work is constantly changing and so is the profile of the graduates who are entering it. Therefore, to remain relevant, only publications published between 2013 and 2019 were considered (as stated in the a priori protocol). This included pre-published online versions. Only peer-reviewed publications that had been published in English were included. Formal quality assessments are not required for scoping reviews (Peters et al., 2020). However, to mitigate quality issues, the researchers decided only to include peer-reviewed publications. Search results were initially sifted based on the relevance of the titles and then based on the abstract to determine whether or not they had to be included. Studies addressing general employability as opposed to graduate employability were excluded.

Online search engines were used to search the databases. The following databases and platforms were used: Web of Science, African Journals, Scopus, ScienceDirect and EbscoHost. These platforms are commonly used by industrial and/or organisational psychology and human resource management researchers and increase the chances of finding relevant information. Relevant studies were identified by applying the specified search terms in database searches. Duplicate publications were initially removed with EndNote's duplicate removal function and then manually by the researcher. After having screened titles and abstracts to determine relevance, more publications were removed based on exclusion criteria. Full texts were appraised based on inclusion criteria and the extent to which the research question was addressed. Publications cited in reference lists and in text of eligible publications were also included once it was found that they met the inclusion and exclusion criteria.

Data extraction and analysis

A conventional content analysis was performed. The researcher followed the process as described by Hsieh and Shannon (2005). The researcher initially avoided using preconceived categories, instead allowing the categories to inductively (i.e. data-driven) flow from the data (Hsieh & Shannon, 2005). The analysis started by repeatedly perusing the data to achieve immersion and to get a sense of the whole. Next the data were read word-for-word and the parts that seemed to capture the essence (i.e. attributes required) were highlighted and copied to the first column in the data extraction table. Preliminary notes on the content were made in a separate column. The initial text was transferred to the next column in the data extraction table where the first author refined the text, removing adjectives, numbering and technical or job-specific skills. The first author kept updating the preliminary notes in the relevant column as new insights



Source: Adapted from Tricco, A.C., Lillie, E., Zarin, W., O'Brien, K.K., Colquhoun, H., Levac, D., ... Straus, S.E. (2018). PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine*, 169(7), 467–473. <https://doi.org/10.7326/m18-0850>

FIGURE 1: Diagram depicting the scoping review process followed by the researcher.

came to light. During the following round, the text was copied to a separate table forming a consolidated list of attributes. The list was again read and studied repeatedly to identify synonyms and close variants. Constructs were sorted and renamed according to the emerging codes. This was a recurring process until the first author was satisfied with the codes for the list of attributes. Original descriptions from the text were left in the separate column in the data extraction table for reference and inquiry in order to deductively (i.e. theory-driven) make sense of the generated codes. Codes were defined based on descriptions and definitions from the original sources, the *Concise Oxford Dictionary* (Allen, Fowler, Fowler & McIntosh, 1990) or *The Handbook of Competency Mapping* (Sanghi, 2016). The iterative process was continued whilst the researcher analysed the codes (attributes) to inductively create sub-categories and subsequently the final categories. Data analysis was carried out under supervision of the second and third authors. Findings of the scoping review were finally collated and written up in a narrative format.

The following strategies, recommended by Shenton (2004), were employed to ensure data quality and integrity. Credibility was addressed by applying a suitable and well-recognised research method, namely a scoping review and a variety of data sources (i.e. articles and databases). Emergent findings were also discussed with peers and the co-authors to ensure the objectivity of the data analysis and these findings were compared with previous research findings. Transferability and dependability were addressed by following a rigorous data collection and extraction process and transparent reporting of this process. Confirmability was addressed through detailed descriptions of the methodology employed and discussions with peers and the co-authors to ensure the objectivity of the data analysis. Findings were substantiated with data from the sources that were included in the analysis to demonstrate that the categories were created from the data (Shenton, 2004).

Ethical considerations

Ethical approval was obtained from the North-West University Economic and Management Sciences Research Ethics Committee (EMS-REC) for the project (NWU-00813-19-A4).

Results

The range of literature originated from across the globe, including research articles from the Americas ($n = 6$), Europe ($n = 20$), Australasia ($n = 25$) and Africa ($n = 12$) and either targeted specific industries (e.g. engineering, accounting, IT) or spanned across various industries. From the review it became apparent that the bulk of research on this topic is quantitative ($n = 46$) with researchers often utilising questionnaires with Likert-type response scales or similar ratings indicating the importance of constructs in their opinions. All the studies utilised cross-sectional surveys.

As the focus of this study was on managerial expectations of graduate employability attributes, this scoping review only

focused on the relevant parts of research addressing this. Where studies would, for instance, compare managerial views with those of higher education or graduate and student perceptions on employability, only the managerial results were included in the data extraction table. Sample sizes varied significantly ($n = 3-3723$) with qualitative studies having smaller sample sizes ($n = 12-75$). Most studies followed a deductive approach by providing participants with a list of possible employability attributes to be rated. In some cases, this was followed up with an inductive phase where respondents were given the opportunity to add to a list of attributes already provided.

In support of the findings of the preliminary literature overview for this study, the results of this scoping review underlined the inconsistency with which researchers define employability. The majority of studies highlighted this inconsistency. Cinque (2016) summed it up aptly: 'There are different ways of naming "soft skills", different definitions of them, different manners of classifying and clustering them' (p. 389). However, common ground seems to be found amongst researchers as discussions eventually spiral back to the generic, transferable nature of the constructs being studied, regardless of which definitions were used. In their study, Baker et al. (2017) recognised the multidimensional and complex nature of contemporary conceptions concerning graduate employability. They argue that regardless of how the concept is classified, it is vital that graduates need to be armoured with capabilities and attributes that afford them the agility to function as competent employees in contrast to specialist technical skills and subject-specific knowledge (Baker et al., 2017). The array of definitions results in graduate employability attributes being classified, structured and clustered inconsistently across research projects.

Subsequently, reporting on results also differs significantly. Some researchers chose to report on all the original attributes included in their study, whereas others included only the top three to five graduate employability attributes, regardless of other graduate employability attributes with significantly high mean scores. Hence, for the purpose of this study, all constructs identified in the literature with mean scores at or above the rating scale average were regarded as significant and thus included in the data extraction table. This was done to add credibility to the choice of constructs, which were included for the purpose of this study. Adding to the inconsistency, the scientific rigour also varies greatly across articles. Although the majority of researchers could explain the scientific basis on which the compilation of the list of graduate employability attributes used in their research rests, several researchers merely presented the list without proper validation.

It was prominent in the scoping review that once a researcher had included a construct in their questionnaire or interview, participants found it difficult to differentiate between more versus less important attributes. All seemed equally important. Responses would vary, but only in a few cases were the mean scores in the bottom half of the scale. As a

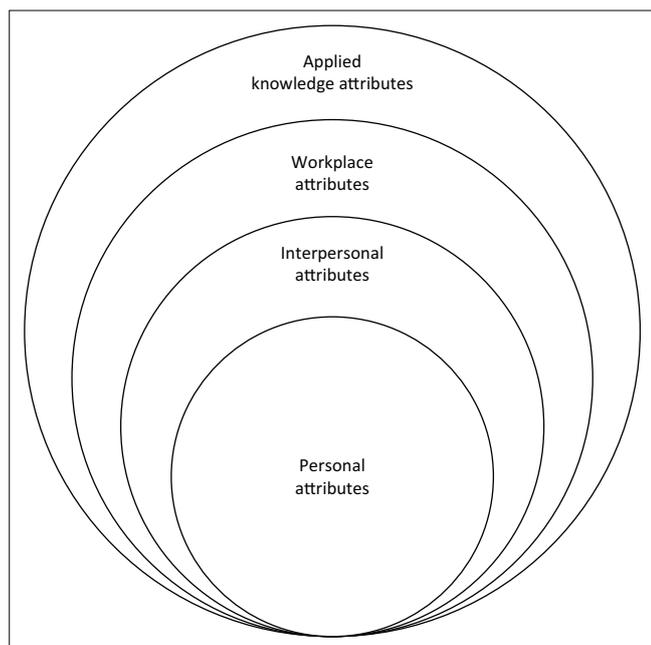


FIGURE 2: The interrelations between the four categories of employability attributes.

Likert-type scale allows for neutral responses and is notorious for its central tendency bias, it is notable that participants overwhelmingly chose to rate constructs of high importance (i.e. opting for the extremes). Thus, the results of all the quantitative articles included in this literature review were negatively skewed (McMurray, Dutton, McQuaid & Richard, 2016; Pang et al., 2019; Salleh et al., 2016; Tee, Ferns & Hughes, 2018). This raises the question as to whether, despite the researcher's instructions, the participants inherently regarded the constructs as 'nice to have' as opposed to 'need to have'.

The content analysis initially resulted in a list of 910 individual entries. The researcher coded the items and grouped similar terms together. A list of 99 unique codes subsequently emerged. Twenty eight subcategories were identified and eventually the following final four categories deductively crystallised: personal attributes, interpersonal attributes, workplace-related attributes and attributes pertaining to applied knowledge.

Figure 2 depicts the relation between the categories, and Table 1 gives a breakdown of the categories and subcategories. As a result of the interrelated nature of these constructs, some of the subcategories relate to more than one of the overall categories.

Category 1: Personal attributes

Personal attributes refer to individuals' unique make-up that enables them to be successful in all aspects of life and lay the foundation for the way all other attributes are applied. Managers expect graduates to have mastered certain personal attributes such as being well-mannered and honourable in order to build long-term relationships. 'These personal attributes include graduates being honest and having integrity, being responsible individuals,

TABLE 1: Employability attributes categories and subcategories.

Categories	Subcategories
Personal attributes	Adaptability, flexibility, coping with stress Driven Enthusiasm and motivation Good-mannered Honourable Personal characteristics (e.g. creativity, commitment, loyalty, positive attitude, sense of humour) Self-governance Willingness to learn
Interpersonal attributes	Good-mannered Communication Cultural sensitivity Customer- and service-centred Influence and motivate Interpersonal skills Language skills Leadership Negotiation skills Sensitivity and empathy Teamwork
Workplace attributes	Entrepreneurial skills Digital dexterity Reading comprehension Organisational skills Organising Planning
Applied knowledge attributes	Decision-making and problem-solving Focused vocational experience gathering Professional competence Thinking and processing

being adaptable to change, being punctual' (Allden et al., 2018, p. 3). New graduates are required to exhibit personal attributes such as being respectful, kind, polite and humble, but at the same time they need to demonstrate ambition, discipline and resilience to prove that they are driven. Managers often consider these character traits as more important than academic traits when hiring graduates (Alston et al., 2019). Managers valued self-governance, looking for a healthy self-image, self-control, self-management and self-motivation in graduates. Together with flexibility and adaptability, new graduates' ability to cope with stress were also raised as being crucial personal attributes. Managers have placed a high premium on new graduates' eagerness to learn and their commitment to lifelong learning. Pang et al. (2019) added an additional attribute called 'hardworking and willingness to take on extra work' to address a perceived shared value of some Far Eastern cultures (p. 58).

Category 2: Interpersonal attributes

Interpersonal attributes refer to the way new graduates communicate and interact with the people around them including colleagues, customers and individuals in their professional network. Personal attributes such as being well-mannered are essential for relationship-building. The interpersonal category encapsulates not only verbal and non-verbal communication attributes, but also presentation skills, language proficiency and listening skills. 'Managers

recognise listening, interpersonal and communication as highly desired skills...’ (Abassi et al., 2018, p. 10). Chen et al. (2018) identified electronic communication as an important graduate employability attribute that managers look for in the 21st century. Although the research was performed with first-time labour-market entrants in mind, literature promulgates the importance of management and leadership attributes amongst new graduates. Graduates are also expected to have at their disposal a capacity for diversity and cultural sensitivity and empathy in general. The importance of social cohesion seems like an emerging graduate employability attribute. Constructs such as cultural awareness (Messum, Wilkes, Peters & Jackson, 2017), cultural competence (Aigbavboa & Aliu, 2017), intercultural skills (Ghuri & Ayub, 2018) and social cohesion building (Brits, 2018) seem to have gained popularity in recent research. According to Aigbavboa and Aliu (2017) employers increasingly seek ‘graduates who possess the ability to develop cultural competence and exhibit self-confidence in dealing with the challenges’ (p. 33).

Category 3: Workplace attributes

The term workplace attributes addresses innate and developed attributes, comprising knowledge and skills, as well as attitudes that a person has at their disposal to adapt and function at work. According to the literature, managers want to see workplace attributes materialise through new graduates’ reading comprehension, organisational skills such as organising, planning, time management, multitasking and project management. They also want new graduates to exhibit entrepreneurial skills.

It warrants mentioning that researchers from different industries had different views on information technology (IT) as a graduate employability attribute. Research conducted in technical environments such as engineering (Sunthara & Vishnu, 2019), IT management (Misra & Khurana, 2017) and research psychology (Fynn, Dladla & Erasmus, 2019) tend to classify IT skills as a core competency or hard skill because it is regarded as part and parcel of the technical job requirements. However, Chen et al. (2018) explained the alternative view emphasising that the focus should not be the technology itself but the use and management of technology, which makes it generic and relevant across industries. The researcher refers to digital dexterity, implying that new graduates should demonstrate an ability and a desire to optimise the application of technology available.

Category 4: Applied knowledge attributes

This category refers to the ability an individual has to apply what he or she has learnt (from theory and through experience) to practical business situations. Managers expect graduates to be problem-solvers and decision-makers through proper identification of problems, evaluation of options and formulation of solutions. This often requires new graduates to possess high levels of thinking and processing skills evident in them, having a holistic perspective, being

both critical and analytical, being able to think strategically and being capable of taking calculated risks.

The review also showed that managers require new graduates to possess a certain level of professional competence (Sedlan-König, Hocenski & Turjak, 2018). Graduates are expected to be able to apply theoretical knowledge in practice and in new situations (Cinque, 2016). In addition, managers also require graduates to be able to extrapolate from what has been learnt through previous experience (Seehan et al., 2018). Managers therefore expect graduates to have a certain extent of practical and observational exposure, for example, through participating in community service projects or other pre-graduation work experience. This does not refer to technical knowledge as such (hard skill), but more to the soft skill of students having purposefully gained vocational experience in their respective fields and being able to apply this once they enter the formal labour market (Alston et al., 2019; Osmani, Weerakkody, Hindi & Eldabi, 2019).

This is an iterative process that integrates many of the attributes from the other three categories in order to create new learning experiences and expand both the personal and professional capacities of the new graduate. Baker et al. (2017) supported this by saying that it is an ‘ongoing process that includes acquiring skills, developing understanding and personal attributes’ (p. 2).

Discussion

The aim of this study was to synthesise the available conceptual and empirical research evidence on managerial expectations of graduate employability attributes through a scoping review. Results demonstrated that graduate employability is indeed a multidimensional concept. Given the inconsistencies in the way that various researchers structured their findings, this study aimed to make sense of the vast list of constructs mentioned in the literature. Through an inductive and deductive synthesis, the study identified 28 subcategories that were clustered into four main categories (or attributes): personal, interpersonal, workplace and applied knowledge. These attributes constitute individual strengths as suggested by Van Harten et al. (2021), which promote the individual’s employment potential.

Outline of the results

Personal attributes refer to an individual’s unique make-up that enables him or her to be successful in all aspects of life. According to the review, managers require new graduates to have acquired particular personal attributes which are at the core of employability attributes. This notion corresponds with Hagel et al.’s (2019) definition of innate capabilities as attributes a person is born with, such as creativity, imagination and resilience. The innate nature does not imply that these attributes remain stagnant. They can be amplified both through intended and unintended experiences and exposure (Hagel et al., 2019). In some cases, managers place a higher

premium on these attributes than on technical qualifications (Alston et al., 2019) because they are regarded as foundational attributes. The World Economic Forum (2020) also emphasises personal attributes, such as flexibility, stress tolerance, resilience, creativity and initiative to be included in their list of top work skills of tomorrow.

These are crucial attributes in a dynamic work environment where new graduates are often expected to work hard and succeed almost immediately. They need adaptive strategies to tackle tasks and to be able to adjust their plan of action in response to problems. Managers require an ability from new graduates to function effectively with constraints and to display stress resilience when factors are beyond their control. Self-governance enables these attributes. New graduates with self-awareness, emotional self-regulation and overall emotional intelligence are more inclined to meet the stressful demands of the work environment with resilience. Hagel et al. (2019) and Abelli (2021) supported this notion by highlighting personal attributes such as emotional intelligence, self-reliance and resilience in their reports.

New graduates should demonstrate basic characteristics such as honesty, integrity, responsibility, punctuality and respect to prove themselves as honourable contributors in the work environment. Exhibiting these attributes instils trust with clients, colleagues and managers. Furthermore, managers indicated that professionalism would be exhibited through new graduates being industrious and organised and holding themselves accountable for their actions and being reliable, setting their own high standards and showing that they care about their job. The recent global pandemic and the subsequent increase in location independence has illuminated the importance of attributes such as self-reliance, self-governance, discipline and general honourable characteristics (Abelli, 2021).

The results of this study confirm that the new world of work requires learning agility from new graduates. This implies an inherent inquisitiveness, a drive to continue learning from others and circumstances throughout one's life and an openness to learn from mistakes. These attributes make new graduates more valuable in the new world of work, where standardised answers are no longer enough for clients (The World Economic Forum, 2020). Customers require custom solutions to their needs, and industry needs to supply innovative solutions. The shelf life of skills is shrinking, and rapid and flexible learning has become critical in the new world of work (Abelli, 2021). Not only does continuous learning enable graduates to identify new opportunities, it also creates an impetus enabling a person to adapt and reapply what was learnt in the next context through an iterative process. Attributes are interwoven and should not be studied in silos. New graduates should realise that a complete battery of enduring human capabilities is needed to succeed (Hagel et al., 2019).

Building on personal attributes, this scoping review accentuates the need for new graduates to exhibit bona fide interpersonal attributes. *Interpersonal attributes* include an

array of knowledge, skills and attitudes dealing with the ability to communicate or interact well with other people. This is vital because the new world of work puts an enormously high premium on collaboration, networking and good personal relationships in general. Interpersonal attributes are important for communicating and working with groups and individuals both in one's personal and professional life to ensure sustainable employment (Cerezo-Narváez, Ceca & Blanco, 2018). New graduates need to intentionally establish, maintain and leverage authentic relationships with people who can help them professionally in order to improve their employability (The National Association of Colleges and Employers, 2021). New graduates are increasingly required to collaborate on a deep level with colleagues and clients from diverse backgrounds (i.e. various disciplines, reference systems or demographics) and therefore need to be culturally sensitive and adaptable. These attributes profoundly influence new graduates' leadership skills, which have become a vital attribute, as the South African Graduate Employer Association's ([SAGEA], 2020) Employer Benchmarking Survey indicates that over 30% of employers indicated that their primary purpose in recruiting new graduates was to hire them onto a leadership development programme. Of the four categories identified, interpersonal attributes remain the category that could give new graduates the competitive advantage, as it cannot be replaced by artificial intelligence or other forms of technology, thus securing sustainable employment (Wilson-Clark & Saha, 2019).

Workplace attributes address innate and developed knowledge, skills and attitudes a person should have to adapt and function at work. The main workplace attributes pointed out in the review were digital dexterity, entrepreneurial skills, organisational skills, organising and planning.

The process of task reallocation between human and machine is already in motion as industry shifts towards IT, cloud computing, dealing with huge data, artificial intelligence etc. These skills are regarded as technical skills and fall outside the scope of this study. However, effectively dealing with this transition, having the ability to adapt and utilise these skills to one's own benefit and to that of the company is a vital workplace attribute. Responsible digital citizenship is another emerging workplace attribute as digital safety and responsibility carry high stakes in an environment where information has become a valuable commodity. New graduates need to understand the legislative and moral implications of the digital world in which they operate. This applies to both their personal and professional lives, as the reciprocal impact is severe.

It might be peculiar that entrepreneurial skills have been pointed out as a sought-after workplace attribute. In essence, this refers to new graduates' ability to turn ideas into action (Baird & Parayitam, 2019). It also touches on creativity, innovation, risk-taking and new graduates' ability to plan and manage projects to achieve company objectives (Baird & Parayitam, 2019; Wilson-Clark & Saha, 2019).

Managers require entrepreneurial skills from new graduates to tap into their creativity, innovation and calculated risk-taking propensity in order to harness opportunities that might arise around them. The natural synergy between entrepreneurship (workplace attribute), leadership (interpersonal attribute) and professionalism (personal attribute) (Palazzeschi, Bucci & Fabio, 2018) is a clear example of the interaction between the various categories.

Applied knowledge attributes refer to those skills, knowledge and attitudes that enable a person to apply learning in practice. Managers highly value new graduates who are skilled in decision-making and problem-solving. New graduates are required to analyse the underlying causes of a problem and take the appropriate action to address it. Decision-making and problem-solving tie in with thinking and processing skills. New graduates need to maintain a holistic perspective and keep the overall organisational goals in mind in order to make relevant decisions and find worthwhile solutions to problems.

Vocational exposure such as work experience, internships and extra-curricular activities play a vital role in preparing new graduates for sustainable employment. This expands their frame of reference and promotes applying their technical knowledge in practice. Focused experience-gathering efforts by new graduates not only give them a head start in their career, but also benefit their employer, as the new recruit has a better understanding of the world of work and what is expected of him or her. This holds the potential of ultimately making a new graduate more employable than his or her competitors in the field. This notion currently poses a predicament for young people. Not only has job availability declined, resulting in higher unemployment, but those who have found employment are more likely to be only temporarily employed. New graduates who become ensnared in lower-level positions for a long time often find it difficult to obtain the on-the-job skills they need and which could assist in accessing better opportunities (Berg et al., 2021). Being ousted from proper participation in the labour market robs new graduates from acquiring job exposure and the workplace attributes that go with it, which in turn limits their labour market prospects and subsequent sustainable employability. Entering the labour market during a recession often limits the individual's prospects of proper development, because time and resources are not allocated to training or mentoring during challenging economic times.

In conclusion, personal attributes enable new graduates to lead and manage themselves within and beyond the work domain. They are essential building blocks for navigating workplace relationships (i.e. interpersonal attributes) and ensuring the delivery of results in the workplace. Delivery of results are also enabled by interpersonal, workplace and applied attributes, as a person should be able to adapt and function at work and to apply learning in practice as part of a team.

The current competency framework overlaps with those compiled from well-known, large-scale studies. For example, McKinsey & Company (Hagel et al., 2019)

clustered competencies into four categories: self-leadership, interpersonal, cognitive and digital. Whereas the first three overlap with personal, interpersonal and workplace attributes, digital is considered a workplace attribute in this study. Similarly, some of the attributes in the applied knowledge category are included in their cognitive category; the vocational experience is unique to this study. The framework also overlaps with the personal competency framework (Sanghi, 2016): personal, interpersonal, communication, intellectual, leadership and result-orientated. Again, the vocational experience category was unique, as was digital dexterity.

Managerial implications

During the preliminary literature study, it became clear that there are four main stakeholders when it comes to employability: government, HEIs, employers and the graduates themselves. Having identified the four categories of employability attributes by means of this scoping review empowers the various stakeholders in terms of knowing better how to focus their hiring, training and development efforts. Government would have a vested interest in addressing unemployment and underemployment, whereas HEIs and employers depend on focused efforts in order to meet industry and client needs alike. Graduates would benefit from knowing and applying these categories to be able to meet employer needs more effectively. Bates, Rixon, Carbone and Pilgrim (2019) emphasised the increasing uncertainty because of the ever-changing nature of the world of work and argue that an enormous responsibility rests on graduates' shoulders to manage their own career and employability. Di Gregorio, Maggioni, Mauri and Mazzucchelli (2019) pointed out that managers expect graduates to actively invest in and develop their soft skills to succeed in their careers.

Limitations and further study

Only articles from peer-reviewed academic journals were included. As a result, unpublished and 'grey' literature were excluded and may introduce a potential source of bias (Rosenthal, 1979). Future research may minimise bias by including more popular publications (such as those compiled by Deloitte, McKinsey and Bersin) and preprints (Harari, Parola, Hartwell & Riegelman, 2020). Although only peer-reviewed publications were included, the absence of a formal quality assessment presents a limitation. Future research could address this limitation by conducting such an assessment to enhance the confidence in their findings. One of the limitations of a scoping review is that the literature gets demarcated based on time and often financial constraints (JBI, 2015). Hence, this scoping review only included articles up to 2019. In future research, a scoping review of employer expectations should focus on studies during and after the coronavirus disease 2019 (COVID-19) pandemic because they might reveal unique attributes, for example, health and safety awareness and specific digital skills. Also, this study did not formally evaluate the quality of evidence as this is not required of a scoping review (JBI, 2015). This may affect the confidence

of the findings. This study included studies that employed cross-sectional designs. There might be value in doing a longitudinal study of managerial expectations of graduate employability attributes to evaluate the changes in expectations over time.

Although describing graduate employability in terms of attributes only presents certain useful insights, it is important to recognise the shortcomings of such an approach. Amartya Sen's capability approach (CA) focuses on values and reflects the complexity of sustainable employability (Wells, 2012). In essence, the approach argues that sustainable employability is determined by how well an individual manages to convert resources into capabilities and eventually into work functionings. Fundamental to the CA is the premise that work should create value for the organisation and for the worker (Van der Klink et al., 2016). In order to reach sustainable employability, graduates should not only be able to draw on resources and capabilities; they should also be able to capitalise on the combination of palpable opportunities and personal capabilities through their choices in order to achieve valuable work-related goals (Van der Klink et al., 2016). It is therefore recommended that further studies be carried out to investigate the implications of the CA for graduate employability.

Conclusion

This review revealed the inconsistency with which researchers defined and reported on graduate employability attributes. However, the consensus amongst researchers lies in the generic, transferable nature of employability attributes. The content analysis revealed 4 categories and 28 subcategories describing the generic attributes managers expect new graduates to exhibit. The new world of work presents unique challenges and graduates need to prepare themselves accordingly, the recent COVID-19 pandemic being a case in point. By focusing on the various personal, interpersonal, workplace and applied knowledge attributes as identified in this study, new graduates would not only be better equipped for the challenges posed by the formal work environment, but they would also be in a better position to convince managers of their employability in order to secure sustainable employment.

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Authors' contributions

M.S. acted as the primary researcher as this study formed part of her Master's research. She conceptualised the article, collected, extracted and interpreted the data and synthesised the evidence. She also took the lead in writing the article. L.v.d.V. and S.R. acted as supervisor and co-supervisor,

respectively. They played an advisory role, assisting in the conceptualisation of the study and the interpretation of the research results and refining the research article.

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Data availability

Data are publicly available. All articles that were analysed in the review have been cited in the reference list.

Disclaimer

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