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Insights into the theory-practice gap: Perspectives from South African industrial psychologists

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Orientation: Emerging industrial psychologists enter into an internship after completion of their studies. Interns sometimes lack the required competencies, which may be a result of a gap between theory taught at university and expected competencies in practice.

Research purpose: The general objective of this study was to explore the beliefs of supervising industrial psychologists regarding the theory-practice gap, and the perceived competence of graduates entering industrial psychology internships.

Motivation for the study: The existence of the theory-practice gap in industrial psychology in South Africa is largely unexplored. Understanding the current level of competence and identifying the aforementioned gaps, universities and interns can proactively reduce the perceived gap.

Research approach/design and method: A qualitative descriptive research design was employed. Data were collected through qualitative surveys among a homogenous sample of 13 industrial psychologists supervising interns. Content analysis was used to analyse the data.

Main findings: Interns display some competencies, while lacking others. The majority of the participants confirmed a gap between theory acquired at university and industry. The participants made recommendations to universities and interns to close this gap.

Practical/managerial implications: Identifying a theory-practice gap and the impact it may have on the competence level of emerging professionals, students and universities can adapt their learning and teaching strategies to potentially help minimise the gap to ensure graduates are more competent when entering internships.

Contribution/value-add: This research study adds qualitative insights on the topic of the theory-practice gap, specifically the perceptions of supervising industrial psychologists within South African organisations.

Keywords: industrial psychology; industrial psychology intern; supervising psychologists; competencies; perceptions; theory-practice gap.

Introduction

Orientation

'There is always tension between theory and practice' – Steve Klabnik (2012).

This quote, to some extent, captures the essence of what this research study aimed to gain more perspective on, as the researcher was interested in investigating how practitioners perceived the overall competence level of industrial psychology interns, and in gathering opinions about the prevalence of the theory-practice gap.

Research has shown evidence of a theory-practice gap, as well as its implications for several disciplines, including teaching, nursing, cognitive-behaviour therapy, production scheduling, and management theory and practice (Kinyaduka, 2017; Pilecki & McKay, 2013; Romero-Silva et al., 2022; Scully, 2011; Ungureanu & Bertolotti, 2020). However, research on the possibility of a theory-practice gap in the field of industrial psychology, and specifically in the South African context is lacking. The current study addresses this gap by exploring the perceived gap between theory and practice of industrial psychology from the perspective of supervising industrial psychologists and their experience with intern industrial psychologists upon commencement of their internships.

Research objectives

The objectives of this study were to (1) gain insight into the perceived competencies industrial psychology interns possess or lack upon entering their internship; (2) establish what the desired competencies of intern industrial psychologists are; (3) determine if there is a perceived gap between theory taught at universities and what is expected of intern psychologists in practice; and (4) acquire supervising industrial psychologists' recommendations to address this theory-practice gap.

Literature review

Industrial psychology internships in South Africa

To investigate the possible gap between theory and practice in industrial psychology, one needs to understand the scope of the profession. Industrial psychology is a subfield of psychology that has developed into a field in its own right. Industrial psychology is concerned with applying psychological principles in the working environment to improve the productivity and quality of work life of the workforce (Spector 2012). Industrial psychologists use their knowledge and training in topics such as organisational development, career development, human behaviour, consumer behaviour, individual assessments, and other psychological theories as well as knowledge about the needed legal, administrative, and ethical guidelines to help address human and organisational problems in the work context (American Psychological Association, 2022). In South Africa, the industrial psychology profession is regulated by the Health Professions Council of South Africa (HPCSA). The HPCSA defines industrial psychology as:

> [T]he science and practice of professionals who function in organisational and occupational settings with an aim to ethically explain, assess and influence human behaviour and its reciprocity at individual, group and organisational levels, with all efforts directed at human flourishing and the sustainable development of all affected stakeholders. (HPCSA, 2019a)

As prescribed by the HPCSA (2019a), the pursuit of qualifying and registering as an industrial psychologist in South Africa includes the completion of a bachelor's degree majoring in psychology (industrial psychology) or the equivalent thereof, an honours degree in industrial psychology, and a completed master's degree in industrial psychology. After completion of their studies, aspiring industrial psychologists are required to complete a full-time 12-month HPCSA-approved internship and then pass the National Examination as set by the Board of Psychology.

The purpose of the above-mentioned internship, as found in HPCSA (2019b) Form 218, is to allow interns to apply their acquired theoretical knowledge in a practical way in a professional setting, under the supervision of a senior industrial psychologist. Internships take place over 12 months and expose interns to different domains of industrial psychology – such as organisational psychology, human resources, career psychology, employee wellbeing, testing and assessments, and an elective such as ergonomics – throughout the year while ensuring that ethical standards are upheld consistently throughout. Simply put, an internship helps graduates apply what they have learnt practically, gain experience and network in their field of study (Bloom, 2018). Even though the purpose of an internship is to allow graduates to gain certain practical experience and give them a place to apply their knowledge in a practical way, graduates are still expected to possess certain competencies when starting an internship.

As mentioned, the industrial psychology intern reports to a supervising psychologist during the 12-month internship period. The role of the supervising psychologist within an internship is to provide professional guidance, support, and the necessary equipment during the internship programme. The supervising psychologist acts as a coach and mentor and helps the intern achieve goals set for the internship programme. Additionally, the supervising psychologist acts as an assessor during the programme and reports on the intern's progress during the programme. A supervising psychologist also helps interns identify strengths and developmental areas. The supervising psychologist must also ensure that interns are exposed to all the required domains of industrial psychology as set out by the HPCSA and help make the internship programme meaningful and valuable (Nazareth College, 2019; Penn State Brandywine, n.d.). Supervising psychologists are there to help guide interns through the domains of the internship by providing coaching and mentoring as required; supervisors also help ensure that interns adhere to ethical guidelines and serve as an example of what could be expected from industrial psychologist in practice. As found in HPCSA (n.d.) form 160, it is also the duty of the supervising psychologist to evaluate the progress of interns under their supervision and help adjust the internship programme accordingly to ensure that all goals are being met as set out in the approved internship programme.

Along with a supervising psychologist, interns also require an academic supervisor who oversees the progress and reporting of the internship on behalf of the supervising university. While the monitoring of the internship is a key part of successful completion, for the purpose of this study, the focus will be on the supervising psychologists' perceptions as they are in much more frequent contact with interns and are in a unique position to be able to comment on whether there may be a gap between the education these interns received, and what is expected of them during their internships (HPCSA, n.d.).

Theory-practice gap

Although a generally understood term, a clear definition of the theory-practice gap is lacking. To date, research on the gap between theory and practice has mostly been related to the field of nursing. In the context of nursing, Greenway et al. (2019) define the theory-practice gap as the gap that exists between theoretical knowledge and the practical application of this knowledge, many times leading to negative

consequences within the field because of a lack of proper practical application of knowledge. Similarly, this definition can be transferred to the discipline of industrial psychology where the theory-practice gap relates to the discrepancy between the theoretical knowledge obtained during university education and what is expected of industrial psychologists in the workplace.

This gap between theoretical knowledge and practical application is often a consequence of a lack of awareness of what the other party is doing – parties being academics and practitioners – a lack of trust in the knowledge presented by the other side, or a lack of implementation of knowledge gained (Rynes, 2012). According to Mayo (2017), academics often teach graduates only theories and not practical techniques, arguing that graduates must find a way of implementing theories that suit them best. Also, the significance of research is often overlooked by practitioners (Mayo, 2017). Similar to the opinion of Mayo (2017), Latham (2019) opined that the field of organisation psychology often favours the scientist (i.e., theory) over the practitioner. Latham (2019) holds the opinion that many students that go on to their further studies in the field of organisational psychology are trained to become academics, and as such, often do not learn some of the valuable skills that come with exposure to the business environment, such as learning how to speak without using academic jargon. Another possible reason for the gap between theory and practice, in general, could be that organisations' expectations of graduates are mismanaged, as higher education institutes can only go up to a point when training students (Griesel & Parker, 2009).

Research in other disciplines have suggested that a gap between theory and practice may hold some negative consequences for employees and organisations. In teaching, the gap between theory and practice can lead to teachers not being able to do their jobs as effectively and thus hindering the learning process of the students they are teaching, as newly graduated teachers are unsure what teaching strategies to implement and use (Kinyaduka, 2017). Other consequences of the theory-practice gap were found to be negative emotional responses such as confusion and frustration related to the differences experienced between the academic and work environment. However, participants in the same study felt that the gap between what is taught and how this knowledge should be applied encouraged them to ask for help when struggling, and by doing so to develop their own style to execute tasks (Streveler, 2013). A more serious issue that can arise in medical fields, such as the paramedic field, is that practitioners within the field who struggle to apply theoretical knowledge in a practical way are running the risk to harm patients, especially when not supervised (Mahmud, 2013).

Bridging the gap between theoretical knowledge and the practical application of this knowledge can be especially challenging to newly qualified practitioners within a field (Watkins, 2018). In a study done in 2018 involving industrial psychologists with a master's degree education, aimed to determine if practitioners in different stages of their careers had a perception that there was a gap between theory and practice, it was found that practitioners felt there was a gap on all levels. Participants in their early careers appeared to experience the biggest and most notable gap between what is taught at graduate school and what is expected in the workplace. Participants who fell within this category indicated that the theory was helpful and needed but more practical experience was needed to fully understand how to apply psychological theories. Practitioners in mid-career also indicated that they could recognise a gap between what the industry wanted and what the academia taught. These participants also mentioned the importance of trying to make research relevant to organisations. Participants in established careers indicated that they believed there might be a gap between theory and practice, but the relevance of the potential gap will depend on what project a practitioner is involved in (Islam et al., 2018).

As indicated above, the theory-practice gap is prevalent in several disciplines. Similarly, research by Coetzee and Van Zyl (2014) highlighted the need for industrial psychology practitioners to familiarise themselves with academic literature and its applicability in the South African workplace. Oosthuizen et al. (2023) also propose that practitioners and academia should take hand when developing curricula related to industrial psychology. Their research on the experiences of industrial psychology interns revealed that generally interns were satisfied with the competencies they acquired during their studies at the University of South Africa (UNISA) to prepare them for the workplace. However, no research has empirically investigated the prevalence of a theory-practice gap in industrial psychology in South Africa from the perspective of industrial psychology practitioners.

Competencies, skills and knowledge

Knowledge is defined as all the information that you possess that can be applied to help you do the job, and can be categorised into four main types, namely, factual knowledge, conceptual knowledge, procedural knowledge, and metacognitive knowledge (Krathwohl, 2002). Skills can be described as the knowledge and abilities that enable one to do something well (Merriam-Webster, n.d.). While the concept of skills is one that most people understand, it is hard to conceptualise and find a definition that is agreed upon in all fields. Green (2011) proposed that skills have three key features including that they are productive, expandable, and social. No universal definition of competence exists. In the literature, a distinction can be found between the British conceptualisation of competence, as opposed to the American use of competency (Mitchelmore & Rowley, 2010). Competence is the ability to master specific job-relevant knowledge and skills, and to apply this knowledge and skills in relation to performance criteria of a given job (Bartram, 2012; Moore et al., 2002). Competencies, on the other hand, refer to the required behaviours that are needed to perform well and reach desired objectives across different occupations (Bartram, 2012; Boyatzis, 2008).

Quite often graduates entering the workplace lack confidence in their knowledge and competencies or job-related competence. For example, a study by Duijn et al. (2020) revealed that upon entering the labour market, graduates in the veterinary field did not feel competent enough to act without supervision, and only after about 10 months of supervised work did the majority of participants feel that they were competent enough to perform their jobs without supervision. In another study, nursing graduates self-scored their competence levels as rather good overall, but appeared to be less confident in their competence levels than nurses with more experience (Lima et al., 2014). In their study, Gawrycka et al. (2019) indicated that the majority of their participants thought that most graduates do not have the needed competencies to be classified as professionals when they first enter the labour market. Gawrycka et al. (2019) also reported that there were discrepancies between the rating that graduates tended to give themselves, and the rating that future employers and recruiters tended to give them. When looking at competence levels, graduates tended to rate themselves more highly compared to future employers.

A study by Oosthuizen et al. (2023) on the experiences of industrial psychology interns revealed that generally interns were satisfied with the competencies they acquired during their studies at the UNISA to prepare them for the workplace. Some of the competencies identified by these interns include confidence in conducting a range of psychological assessments, conducting industrial and organisational psychology (IOP)-related behavioural diagnostics on individual-, team- and organisational level, designing and facilitating IOP-related interventions, among others. Similarly, the HPCSA (2019b) prescribes that the exit-level outcomes of industrial psychologists include problem diagnostic and intervention planning, intervention design, psychological assessment, professional practice, research, communication and reporting, continuous professional development (CPD), ethics and legislation. These competencies all rather relate to job-specific competences. Other researchers have also identified the desired competencies required of industrial psychologists in the workplace. These include intradigital, interdigital, interpersonal and intrapersonal skills and attributes that employers require in the digital-era (Coetzee & Veldsman, 2022), workplace counselling skills (De Jager-van Straaten et al., 2016), knowledge and experiences related to community engagement initiatives (Vermeulen et al., 2019), among others. These studies, however, did not investigate the extent to which universities train industrial psychology students in these skills and competencies. Thus, no research has empirically investigated the prevalence of a theory-practice gap in industrial psychology in South Africa from the perspective of industrial psychology practitioners.

Research design

Research approach and strategy

This study employed a qualitative research approach and was conceptualised according to a constructivist paradigm. According to DeFranzo (2011), qualitative research is exploratory in nature, and this was deemed the most effective way to gather views and opinions from participants in this study. A qualitative descriptive research strategy was followed, as the study aimed at describing the opinions of the participants, rather than making any inferences from the data (Barret, 2016; Lambert & Lambert, 2012; Seixas et al., 2017).

Sampling and procedure

A purposive, heterogeneous sample of 13 (n = 13) registered industrial psychologists acting as supervising psychologists to industrial psychology interns was selected. The potential participants were identified via LinkedIn, a professional social networking platform that is intended to stimulate professional networking. These psychologists were then contacted to explain the purpose of the study and to request their participation. An email was then sent to the interested participants containing the relevant information and the link to the online written survey. The following inclusion criteria were presented:

- The participants had to be supervising psychologists in practice with at least one intern industrial psychologist under their supervision within the 2 years preceding the time of answering the survey.
- Participants also had to be employed by a South African organisation.
- All participants had to be comfortable to answer the survey in English.

Supervising psychologists from universities were excluded as the purpose of this study was to gain insight from supervising industrial psychologists in industry and not from academia. Of the 40 professionals who were contacted via LinkedIn or email, four responded that they would not be able to participate as they fail to meet the requirements for participation. A final sample of 13 professionals indicated their willingness to participate and completed the survey, resulting in a response rate of 36% for this study. Table 1 provides a breakdown of the biographical data of the

TABLE 1: Profile of participants (N = 13).

Item	Category	Frequency	Percentage
Age (years)	24–30	4	30.76
	31–35	1	7.69
	36–40	3	23.08
	41–45	1	7.69
	56–60	1	7.69
	61–65	2	15.38
	65+	1	7.69
Ethnicity	White	11	84.61
	African	1	7.69
	Coloured	1	7.69
Language preference	Afrikaans	10	76.92
	English	3	23.07
Gender	Male	4	30.76
	Female	9	69.23
Years of registration	3–5	3	23.07
	6–10	4	30.78
	11–15	1	7.69
	16–20	1	7.69
	20 +	2	15.38

participants. The majority of participants were 24–30 years old, and most participants were white Afrikaans females. The period that participants had been professionally registered with the HPCSA varied from 3 years to close to 30 years.

Data collection

Data were collected through qualitative surveys. A link to the online survey was shared with the participants. Prior to completing the surveys, a consent letter explained the purpose of the study, and participants were informed that participation in the study was voluntary, and that individual responses will be kept confidential. The participants were asked to complete a basic biographical questionnaire to assist in describing the population. The qualitative written survey consisted of open-ended questions that were written in a non-directive way. The participants were encouraged to elaborate as much as they wanted with all their answers, thereby enabling the researcher to obtain information-rich responses. The questions posed to the participants explored their opinions about the competence of industrial psychologists upon entering their internships, and the specific competencies these interns display adequately and those they are lacking. The participants were also requested to indicate if they observe a gap between theory taught at university to emerging industrial psychologists, and what they are expected to practically perform in industry. Finally, they were requested to present recommendations to address this gap, where identified.

The following questions were presented to participants in the written qualitative survey:

1. In your opinion, what are the competencies an industrial psychology intern is expected to have?
2. How would you describe the overall competence of industrial psychology interns when they commence their internship?
3. In your opinion, are there any specific competencies graduates appear to lack when entering an internship? Please elaborate on your answer.
4. In your opinion, are there any specific competencies graduates demonstrate well when entering an internship? Please elaborate on your answer.
5. In your experience, does there appear to be a gap between theory taught at university level to emerging industrial psychologists and what they are expected to practically do in the workplace? Please explain your answer.
6. What recommendations would you make to universities to help bridge the gap between theory and practice, if you believe there is one?
7. What advice can you offer emerging industrial psychologists to ensure they are competent when they enter the workplace?

Data analysis

After the data had been transferred to the Excel spreadsheet, it was analysed through the use of content analysis. Content analysis refers to the process of reviewing a form of media to enable the researcher to evaluate the meaning and patterns found within the chosen media, in the case of this study written qualitative surveys (Prasad, 2008).

The steps of content analysis as described by Prasad (2008) include:

1. Formulation of research objectives
   The researcher first delineated the purpose and the boundaries of the study. This guided the analysis by ensuring the content remained relevant.
2. *Selection of communication content and sample* or *population*
   The researcher established that the chosen method of data collection would be written qualitative surveys and the population would be supervising industrial psychologists. The collected data contained written text.
3. Developing content (subject) categories
   After an initial examination of the data was completed, the researcher identified potential categories into which the gathered data could be sorted. The identified categories flowed from the research objectives that were identified in earlier steps.
4. Finalising units of analysis
   From the responses in written text, words and phrases used by the study participants served as the units of analysis.
5. Preparing a coding schedule, pilot testing, and checking inter-coder reliabilities
   The researcher made use of a co-coder to help ensure that data were coded in a reliable and understandable manner. The researcher first utilised the generated content categories and performed the initial analysis. The raw data and analysed data were sent to a co-coder to assist with the reliability and to discern any ambiguity that might be present within the data. No disagreements arose from the preliminary analysis.
6. Analysing the collected data. The researcher analysed the data. After the analysis was concluded, the researcher corroborated the agreement between the research objectives of the study, and the analysis of the data.

Strategies employed to ensure quality data

Strategies to assess the trustworthiness of a naturalistic enquiry, like that of qualitative research, were defined and conducted by researchers such as Guba (1981) and Anney (2014). One of the first strategies employed was that of *credibility* (internal validity). Another strategy that was utilised was the endeavour to ensure *transferability* (external validity). The researcher established a detailed record of the steps and processes followed to complete this study, which is an auditing trial. This was done to make it easier for other researchers to replicate the study with other participants, consequently ensuring the stability of data over time, also referred to as *dependability* (reliability). Finally, *conformability* (objectivity) was protected by remaining objective during the research process.

Ethical considerations

An application for full ethical approval was made to the Economic and Management Sciences Research Ethics

Committee (EMS-REC) and ethics consent was received on 30 August 2019. The ethics approval number is NWU-01350-19-A4. This research adhered to the principles of the *Protection of Personal Information Act (POPI Act 4 of 2013)*, as no personal information of participants was collected via a third party. The data were de-identified in the analysis. Online informed consent was obtained from the participants prior to the completion of the surveys. Participation in the study was completely voluntary and the participants could withdraw from the project at any time they wished to do so.

Findings

In this section, the findings of the current study are discussed in detail and put into perspective.

Industrial psychology intern competencies

Slightly more than half of the participants (*n* = 7) who act as supervisors to industrial psychology interns were positive about the overall competence level of interns upon the commencement of their internship. These participants revealed that generally interns demonstrated a good, or acceptable level of competence when entering their internships. This cohort of participants indicated interns commonly display good theoretical knowledge, are quick learners (e.g. '… they do learn quickly' [P1, male, 56 years]) and are able to quickly understand and react to situations appropriately. Participants also noted that even while interns were on an acceptable level of competence, they would still benefit from developmental opportunities (e.g. '… most are competent, with development' [P13, female, 29 years]).

Contrary to the above, six of the participants indicated that they felt that interns were lacking in competence when entering their internships. The participants indicated a variety of specific competencies of interns that are deemed unsatisfactory. The responses indicated that interns lacked the ability to practically apply their theoretical knowledge. It was noted that interns tended to want to apply perfect models that do not always work in practice, and that interns often struggle to apply their knowledge practically – interns tended to submit a highly theoretical piece of work (e.g., 'They struggle to manage the variety and change, and to really apply their minds to deliver a practical piece of work' [P4, female, 36 years] and '… lack the skills to apply the theory … ' [P1, male, 56 years]). The participants elaborated that this inability to apply their knowledge may be a result of lacking the practical experience to fully understand the workplace ('… need a lot of practical experience …' [P6, female, 38 years] and 'individuals who had exposure during their studies at relevant workplaces were definitely more competent' [P13, female, 29 years]).

It was noted by some participants that interns appear to have difficulty with adapting to the ever-changing working environment that they function in when completing their internship ('… struggle to manage the variety and change …' [P4, female, 36 years]) and with the rapid pace of learning that is required when entering the workplace ('… struggle to keep up with the pace and learn quickly enough' [P4, female, 36 years]).

It appears that interns are quick to lose confidence or struggle to believe that they can do some tasks, especially when things veer away from the expected ('… curb self-confidence when things don't always go according to plan.' [P8, female, 30 years]). Also, interns are often afraid of making mistakes, which may also impact their overall confidence, and the participants suggested that confidence levels would increase with more practical experience. Finally, interns also seem to lack innovation in the workplace (e.g. 'struggle to be innovative' [P4, female, 36 years]).

Required industrial psychology intern competencies

The participants were also asked to list the competencies they expected industrial psychology interns to have when entering an internship to enable them to complete their internships successfully. The responses from the participants were classified into three main categories, namely: (1) competencies, (2) knowledge and skills, and (3) personal attributes. The categories and subcategories are presented in Table 2 and Table 3, substantiated by quotes from participants.

Category 1: Competencies

This category focusses on the capabilities or abilities industrial psychology interns are expected to display in the workplace. These competencies are associated with superior performance across different contexts and occupations. Table 2 details the 18 competencies that were identified in this study.

Category 2: Knowledge and skills

This category focusses on the knowledge and skills that tend to be specific within an industry or occupation and are often skills that are gained while functioning within the specific industry. The nine knowledge-based skills identified in this study are presented in Table 3.

Category 3: Personal attributes

Personal attributes refer to the characteristics that individuals may exhibit in the workplace that the participants in the study identified as essential for industrial psychology interns. Table 4 provides a list of the 27 descriptive terms provided by the participants in alphabetical order.

The theory-practice gap

The participants were asked to indicate whether they could observe a gap between theory taught at a university level and what is expected in practice from emerging industrial psychologists. The majority of participants (*n* = 10) indicated that they did indeed believe there is a gap, while three (*n* = 3) of them observed little or no gap between theory and practice. These two categories are elaborated below.

TABLE 2: Competencies of industrial psychology interns.

Descriptive term	Direct quote
Adaptability: Willingness and ability to change with the circumstances of a situation	'… ability and willingness to adapt' [P8, female, 30 years]
Analytical skills: Examine and analyse information. Reference was made specifically to the HPCSA listed competencies for intern industrial psychologists (including the ability to conduct a needs analysis, namely to analyse and examine available information to determine the needs of a client and the organisation)	'Examining information' [P3, male, 33 years] 'Analytical' [P11, female, 30 years]
Applying theory practically: Utilise the knowledge gained at university and apply it in the workplace	'… integrate and apply knowledge obtained in theory' [P9, female, 62 years]
Commercial acumen: Satisfy the needs of managers and stakeholders within an organisation while keeping best practices in mind. Find a balance between meeting the needs of the business while preserving a humane ethos	'Commercial competence' [P6, female, 38 years]
Communication skills: Communicate effectively in both written and verbal communication	'… explain concepts in easily understandable steps, both verbally and in writing' [P1, male, 56 years]
Confidentiality: Honour confidentiality and privacy within the workplace	'Confidentiality' [P13, female, 29 years]
Creative problem-solving ability: Generate effective and creative solutions to work-related problems	'Working through problems creatively' [P8, female, 30 years]
Ambiguity tolerance: Manage conflicting demands and uncertainty in the workplace	'… cope with … conflicting demands …' [P2, male, 68 years]
Independence: Work autonomously, self-direct and create their own opportunities	'Ability to work independently' [P8, female, 30 years]
Interpersonal skills: Skills and social graces to interact with their managers, co-workers, and all other shareholders of the business	'Interpersonal skills' [P12, female, 39 years]
Leadership skills: Ability to guide and influence others	'Leadership skills' [P10, male, 64 years]
Managing stress: Function effectively when under pressure, while managing stress in a healthy manner	'Dealing with pressure and stress' [P10, male, 64 years]
Multitasking: Perform multiple activities simultaneously	'Multi-tasking' [P13, female, 29 years]
Planning and organising skills: Create an organised structure to effectively perform all their duties	'Planning of tasks/activities' [P2, male, 68 years]
Situational comprehension: Summing up a situation quickly and responding appropriately	'Quickly comprehend the situation' [P1, male, 56 years]
Strategic thinking: Capacity to understand and consider the broader context of a situation, issue, or project.	'Ability to see the bigger picture' [P8, female, 30 years]
Taking initiative: Be proactive and take initiative	'Taking initiative' [P8, female, 30 years]
Time management: Meet deadlines and keep within the agreed-upon timeframes through effective time management	'Completion of assignments as per agreed timelines' [P2, male, 68 years]

HPCSA, Health Professions Council of South Africa.

TABLE 3: Knowledge and skills of industrial psychology interns.

Descriptive term	Direct quote
Career counselling knowledge: Knowledge about career counselling to assist employees with career planning	'… assists with career counselling' [P9, female, 62 years]
Change management knowledge: Establish how organisations experience and manage change as part of the change management process	'… how it is dealing with change' [P9, female, 62 years]
Ethical knowledge: Understand the ethics of the profession including the scope of practice for industrial psychologists and associated behavioural and ethical rules	'… adhere to guidelines and principles' [P11, female, 30 years]
Human behaviour knowledge: Basic understanding of human behaviour at work. This may help to identify counterproductive behaviour in the workplace	'Understanding human behaviour' [P9, female, 62 years]
Knowledge about employee lifecycle: Knowledge of the employee life cycle, including performance management, employee wellness, training and development, and skills identification	'Develop a deeper understanding of … performance management' [P9, female, 62 years]
Legislative knowledge: Familiar with legislation relevant to the organisational context	'Develop a deeper understanding of legislation' [P9, female, 62 years]
Organisational development knowledge: Make suggestions about how best to improve the functioning and growth of employees and the organisation as a whole	'Make recommendations about organisation's development' [P9, female, 62 years]
Psychometric test knowledge: Understanding psychometric principles (validity, bias, reliability, and appropriate test use) and knowledge of online assessments	'… get exposed to on-line/internet-based assessments' [P9, female, 62 years]
Research skills: Conduct research in an effective manner	'Research ability' [P12, female, 39 years]

TABLE 4: Descriptive terms of the personal attributes of industrial psychology interns.

Growth mindset	Goal-driven
Poise	Humility
Ability to uphold standards	Insightful
Ambition	Integrity-minded
Learning and development orientation	Intuitiveness
Assertiveness	Learning agility
Confidence	Openness to feedback (both positive and critical)
Curiosity	Proactivity
Deadline-driven	Professionalism
Dedicated	Resilience
Diligent	Self-awareness
Emotionally intelligent	Self-discipline
Factual	Work ethic
Excellence orientation	

Category 1: Causes of theory-practice gap

This category focusses on the belief that participants held when indicating that they believed there was a gap between what is taught at university and what is expected in industry from emerging industrial psychologists. The reasons (sub-categories) offered are listed in Table 5.

Category 2: No gap between theory and practice

Very few (*n* = 3) of the participants did not believe that a gap exists between theory and practice. These participants seem to believe that there is an alignment between universities' curriculums and what is expected of interns in industry. They expressed their appreciation for universities teaching relevant, up-to-date theory ('I believe universities exude effort to remain current on leadership and organisational theories' [P8, female, 30 years]). The theoretical information is, however, often misinterpreted by students during their studies (e.g., 'The gap may be in the interpretation …' [P12, female, 39 years]). Consequently, students may struggle to envision how specific situations may unfold in real-world scenarios. It was acknowledged that in some cases only exposure in industry will generate sufficient knowledge and skills ('will only come with experience and maturity' [P12, female, 39 years]). It was also mentioned that students must take responsibility for their own competence, as all the responsibility does not lie with the university to prepare students for internships.

TABLE 5: Causes of theory-practice gap.

Descriptive term	Direct quote
Additional training needed: Interns needed more training when they enter the workplace. Specific mention was also made of the fact that interns needed opportunities to develop and grow on a personal level.	'need extra additional on-the-job training' [P9, female, 62 years]
Lack of practical experience and exposure: Insufficient practical experience and exposure during their studies. Lack information about what industrial psychologists do, and has limited exposure to the different sub-fields (including medico-legal assessments, report writing, managerial psychology, disciplinary hearings, or competency-based systems of analysis).	'Managerial psychology is still very new to them …' [P9, female, 62 years] 'Most interns to not know what IOPs do' [P3, male, 33 years]
Lacking industry knowledge: Universities are not up to date with the latest industry trends (e.g., gamified assessments, artificial intelligence technology, agile team management, predictive data analytics).	'There lacks synergies between practitioners and the academic space and those in the workplace in designing material that looks at both worlds.' [P11, female, 30 years]
Lack of relevant research topics: Lack of interesting and relevant research topics in their studies.	'Majority of studies are about validation of assessments and very little contribution towards more pressing issues' [P4, female, 36 years]
Insufficient focus on business-related skills: Lacking commercial skills such as business management, financial skills, managing difficult people and how to deal with stakeholders.	'Also more business and financial skills should be taught in the Industrial Psychology Programme' [P7, female, 41 years]
Flawed theory: Theory is outdated and the models and theories not relevant in practice and adopted from abroad.	'… models built for the workplace of the 1980s and 1990s' [P4, female, 36 years] 'Theory is also outdated and not within South African context.' [P6, female, 38 years]
Unrealistic expectations: Unrealistic expectations of the workplace in terms of time and salary.	'… expect unrealistic change to happen in unrealistic time frames.' [P5, female, 29 years] '… expect too much money without proving themselves first' [P3, male, 33 years]

Recommendations to improve the proposed theory-practice gap

The participants made recommendations to universities and to interns to address the identified gap between theory and practice. The recommendations made to universities and to industrial psychology interns respectively, are discussed in detail in Table 6.

Discussion

The first objective of this study was to determine how supervising industrial psychologists would describe the overall competence level of interns upon commencement of their internship. As expected, there were varying answers that pointed towards varying levels of competence. The study findings suggest that the majority of the participating industrial psychologists rated the average competence level of industrial psychology interns as satisfactory. This is somewhat comforting, knowing that interns do possess the required knowledge, skills, and competencies to perform well. Some participants indicated that the overall competence level of interns tended to vary depending on the workplace exposure that had already been gained. It was suggested that interns who had prior exposure to the working environment tended to show a higher level of competence compared to those with limited exposure to the working world. This serves as a reminder to educational institutions to support full-time students with exposure to industry.

From the findings, it is clear that there seems to be an agreement between some of the competencies that interns were expected to have, and those that interns tended to demonstrate well as reported by participants. Specifically, the study participants indicated that they expected interns to be able to apply what they have learnt, and some of the participants indicated that some interns were able to apply what they learnt at university in the workplace. It was also noted that some interns that were able to apply what they have learnt in practice were often ones with previous work experience. Some participants, however, believed that interns lack the ability to apply theoretical knowledge practically. Therefore, some contrasting findings were obtained in this regard. In the literature, it is considered not uncommon for graduates to lack in some competencies upon completion of studies. It is proposed that only after practical workplace exposure were graduates deemed more competent to productively function within the workplace (Duijn et al., 2020; Gawrycka et al., 2019; Shoenfelt et al., 2012). A South African study by Oosthuizen et al. (2023), however, suggested that the majority of industrial psychology graduates were very satisfied with the competencies acquired through their studies. Thus, there seems to be a discrepancy between industrial psychology practitioners and graduates' views regarding graduates' level of competence when entering the workplace.

In the current study, the participants expressed their desire for interns to have theoretical knowledge of certain subjects such as psychometrics, employee wellness and human resources-related knowledge. This expectation of sound theoretical knowledge was met according to the study participants. The participants indicated that this theoretical knowledge tended to help interns with some aspects of work such as starting a job description or conducting basic workplace counselling.

In this study, some findings were contradictory in that some competencies that were indicated as being on a good level by some participants, were considered lacking by other participants. Some participants indicated that they believed that interns were able to keep up with the pace of learning, while others indicated that interns struggled to maintain and manage the rapid learning pace during an internship.

The second objective of this study was to determine which competencies graduates are expected to have when they enter their internship. The participating industrial psychologists identified a variety of competencies that they expected interns to have upon commencement of their internship, including several specific job-related competences, as well as general competencies (Bartram, 2012). These included *competencies that transcend across different contexts and occupations* (including adaptability, analytical skills, commercial acumen, communication, confidentiality, creative problem-solving, ambiguity tolerance, independence, interpersonal skills, leadership skills, stress management, multitasking, organising skills, situational comprehension, strategic thinking, initiative and time management), job-related *knowledge and skills*

TABLE 6: Recommendations for universities and interns.

Descriptive term	Direct quote
Category 1: Recommendations for universities	
Update theory: Universities should stay up to date on theory that reflects the industry and the South African context. This can be done by utilising case studies to grasp the application of theoretical knowledge.	'Case studies' [P2, male, 68 years]
Relevant subjects: Subjects that are relevant to industry must be taught at universities. Move away from paper-and-pencil-based assessments towards digital assessments. Distinguish between industrial psychology, human resource management, and industrial relations. Expose students to industrial psychology sub-fields and functions (e.g., Fourth Industrial Revolution, gamified assessments, AI-orientated people software).	'Stop teaching irrelevant subjects' [P3, male, 33 years]
	'Stop teaching and confusing HR and IR for IOP students' [P3, male, 33 years]
	'Include an entire module of the fourth Industrial Revolution' [P4, female, 36 years]
	'Expose them to the latest technologies' [P4, female, 36 years]
Diversify skill set: Skills should be future-focussed including artificial intelligence (AI), data analytics.	'Include financial and business acumen as a mandatory subject' [P7, female, 41 years]
Focus on industry competencies: Train students in the competencies expected of interns in the workplace.	'… focus on the competencies' [P2, male, 68 years]
Practical experience: Interns need more practical experience during their studies through organisational visits (on-site and classroom contact), information sessions with industrial psychologists from a variety of sub-disciplines. It was also recommended that a shared forum between industrial psychologists and academics be established.	'Include more relevant practical classes' [P3, male, 33 years]
	'More exposure to real organisations' [P5, female, 29 years]
	'Bring in more practitioners that are at the forefront of leading innovations in our industry to expose students to these areas' [P4, female, 36 years]
	'… forums where practitioners in the workplace contribute and collaborate with academics' [P11, female, 30 years]
Manage expectations: Inform students of the academic journey to qualify as an industrial psychologist.	'Educate students on a pre-grad level on the expected journey of the study course they have chosen' [P8, female, 30 years]
Graduate support: Support students to ensure success in their studies, and inform them of the available resources to achieve this.	'Ensure graduates/interns are getting the right level of mentoring and support' [P7, female, 41 years]
	'More exposure to … the resources they actually have available to deal with their issues' [P5, female, 29 years]
Category 2: Recommendations for interns	
Sub-category 1: Work-related skills and competencies	
Ask questions: Interns should not be afraid to ask for clarity and ask for help, but also take initiative to source the answers to their questions.	'When unsure, go and look for the answer before just shooting from the hip or say you don't know' [P12, female, 39 years]
Business lingo: Gain an understanding of the way managers and business leaders speak and what information would be deemed as necessary and important for them to hear when presenting a new idea.	'… learn the language that managers speak' [P8, female, 30 years]
Change gradually: First of all, try to understand the workplace they are functioning in before trying to change things. Insight into a situation may result in better decision.	'seek to understand, not to change' [P5, female, 29 years]
Gain experience: Pursue exposure to organisations and gain practical experience and exposure to all industrial psychology sub-disciplines before specialising.	'… get exposure to the real world of work' [P13, female, 29 years]
Add value: Cultivate a mindset of adding value and producing work of a high standard.	'Ensure you deliver something of value' [P4, female, 36 years]
General knowledge: Interns should broaden their world knowledge, and use the resources available to gain such understanding.	'… make sure they can talk about what is happening in the world' [P7, female, 41 years]
	'Use Ted talks, articles by experts, books, audiobooks, Lynda.com – anything you can get your hands on' [P4, female, 36 years]
Communication skills: Develop the skills required to explain new ideas to individuals, groups, and managers on all levels. Learn the skills to explain the value of an idea and answer questions that may arise.	'… how to sell an intervention or idea' [P8, female, 30 years]
Lead when you can: Develop leadership skills and seize opportunities to take the lead.	'… utilise opportunities to lead' [P10, male, 64 years]
Networking: Develop and apply networking skills through interest groups (such as SIOPSA), reaching out to professionals, among others.	'Learn from others in the same field' [P2, male, 68 years]
Be practical: Apply logic and practical thinking, and move beyond theoretical knowledge.	'Move away from a theoretical answer and really think about the needs of the client' [P4, female, 36 years]
Seek and use support: Interns should use their support systems optimally.	'They have a shield which is their supervisors to lean on and back up their decision making' [P11, female, 30 years]
Be open-minded: Try new things and use these new models and theories to create their own way of doing things.	'try new models' [P1, male, 56 years]
Sub-category 2: Personal skills and attributes	
Accountability: Interns should take responsibility for their own development and take accountability for their actions.	'Take accountability' [P12, female, 39 years]
Community engagement: Spend time serving in their communities to help them gain an understanding of the problems that the country and community face.	'… develop a sensitivity for the challenges in this country' [P10, male, 64 years]
Cultural exposure: Exposure to different cultures and how they react and act within the working environment.	'gain exposure to as many cultures as possible' [P7, female, 41 years]
Curiosity: Explore all the sub-fields of industrial psychology and gain insight into other disciplines as well.	'keep an open mind to the whole professional field' [P2, male, 68 years]
	'Be curious about other disciplines' [P4, female, 36 years]
Learning orientation: Continue learning and use all the resources available while at university to ensure academic excellence. Read, research, reflect and discuss what they are learning.	'Read and research and drive your own learning' [P4, female, 36 years]
Humility: Accept starting at the bottom of the organisation, and remain humble.	'… start off humble' [P5, female, 29 years]
Learn from mistakes: Learn and grow from mistakes; see them as opportunities.	'make mistakes and learn from them' [P11, female, 30 years]
Reflection: Develop the skill of reflecting on new information and about the role of interns and industrial psychologists.	'Reflect after conversations with professionals' [P8, female, 30 years]

SIOPSA, Society for Industrial and Organisational Psychology of South Africa.

(including knowledge on career counselling, change management, ethics, human behaviour, employee lifecycle, legislation, organisational development and psychometrics, as well as research skills), and *personal attributes* (including poise, being goal-driven, humility, learning orientation, integrity, assertiveness, self-awareness, curiosity, etc.) that contribute to success. The findings of this study correspond with other researchers such as Coetzee et al. (2022), as well as

the competencies of interns as set out by the HPCSA (2019a) and what is expected from students upon completion of their studies. Some of the competencies that were identified by these researchers, as well as the participants in this study, include, for example, communication skills, being able to cope with pressure, being innovative, professionalism, ethics, legislation knowledge, research skills, and time management. From the results, it is clear that there is a wide variety of competencies that interns are expected to have upon commencement of their internship.

The third objective of this study was to determine what competencies supervising psychologists believed interns to lack upon commencement of their internship. The most common category of competency that, as stated by participants, appeared to be lacking was linked to work-related attributes that interns still needed to work on, such as the ability to adapt to different situations, being confident in their skills and abilities, and coming up with innovative ideas in the workplace. Other areas of competence that were identified as lacking were the inability to keep up with the learning pace as well as struggling to apply theory in the workplace. Some of the identified skills are similar to soft skills that were identified by other researchers as lacking in graduates, such as critical thinking skills and lifelong learning. When looking at the question of competence levels from the perspective of graduates, Stewart et al. (2016) found that graduates often rated themselves higher on competencies, but these competencies were often those that organisations tended to rate graduates lower on, as can also be seen in the current study – practitioners within organisations tended to rate the competence level of graduates as lacking.

Similar to the findings in the current study that showed there is a mismatch between what is expected and what is demonstrated in practice, O'Shea et al. (2022) also found that graduates, organisations and academics hold differing expectations regarding the skills and competencies that graduates should possess. Organisations involved in the O'Shea et al. (2022) study indicated that graduates often lacked soft skills such as problem-solving, desire to learn and self-confidence. These lacking skills are similar to those identified by participants in the current research study.

The study's fourth objective delved into participants' views on whether there is a gap between the theoretical concepts taught at the university level and the practical expectations in real-world applications. The majority of participants indicated that they believed there was a gap between theory and what is expected in practice within the field of industrial psychology. This study adds to conclusions drawn in studies done on the gap between theory and practice in the field of industrial psychology (Caetano & Santos, 2017; Islam et al., 2018). In the current study, participants who expressed the belief that there was a gap, tended to specifically mention the reasons why they held this belief. Participants stated that even when interns had a good theoretical base from which to work, they often struggled to apply this knowledge practically in the workplace. Benati et al. (2021) found similar results but from the perspective of graduates. Participants in the Benati et al. (2021) study indicated that they found it difficult to apply what they have learnt to the workplace and often needed more industry and situational-specific knowledge. Participants in the current study opined that a lack of practical experience may contribute to the inability to apply theory in a practical manner. Another reason for the belief that there is a gap as given by participants was that students had a misperception of what the workplace would be like.

Participants also indicated that they believed one of the reasons for the gap was that there was a misalignment between academia and the industry, in that the focus of academia and the industry were not aligned, and this leads to research that may be dismissed by one party. Caetano and Santos (2017) had similar findings with regard to the research focus of academia and the industry. The different research focusses of the two sides tended to mean that the research that came from either party is often disregarded as irrelevant to the other party. Many of the participants that indicated the belief that there was a gap between theory and practice, noted a lack of practical experience and exposure, stating that interns often did not know what practising industrial psychologists do or that there was lacking exposure to the different sub-fields of industrial psychology. In line with the skills that industrial psychologists need to function in the workplace, Barkhuizen et al. (2015) concluded that students do not gain enough experience and exposure to workplace counselling to ensure that they are competent. The current research study agrees with the findings of Barkhuizen et al. (2015) in that participants also indicated that practical experience starts too late and that students do not get enough exposure to the sub-fields of industrial psychology.

In contrast to the above findings that indicated that participants believed there was a gap, there were some participants in the current study that indicated they did not observe a gap between theory and practice. The argument raised by participants that did not believe there was a gap, was that universities were on par with what was expected of theoretical teachings, but work-related knowledge would only be obtained through practical experience in the workplace. The finding that certain competencies would only be learnt in the workplace is similar to that found by Duijn et al. (2020), where veterinary students involved in the study indicated that they only felt competent to function without supervision after working under supervision for a few months.

The fifth objective of this study was to obtain recommendations from supervising psychologists to universities to assist them in addressing the postulated theory-practice gap. Even though not all participants believed that there was a theory-practice gap, all the participants made recommendations to potentially address the theory-practice gap.

Many of the recommendations made by participants centred around involving practising industrial psychologists more in the working environment, as well as re-evaluating the theory that is taught and how applicable it was to the current world of work. Like the current study, Janse van Rensburg (2020) also gathered recommendations to increase the practical exposure to the real world of work, and to ensure that students know what the field entails. Participants in the current study also recommended the use of more case studies in the classroom as a method to help students gain a better understanding of how to approach problems within the workplace. Bonney (2015) concluded that case studies are a more effective way of learning as opposed to merely reading about a topic. Case studies tend to help students understand a concept better by enabling them to find a solution for a proposed problem.

The findings in the current study supported the belief that some subjects that are being taught at university level are no longer relevant and that universities should try to focus on what is relevant and rather work on diversifying the skill set that is taught so that students are better equipped for the business world upon completion of their studies. The idea that some subjects are not relevant may also come from the recommendation that different groups of students (including human resources, industrial relations and industrial psychology) be taught separately and have more time to focus on the relevant subjects. The relevance of subjects will need further investigation and it was recommended that universities engage in talks with practitioners to gain more insight into which subjects are deemed irrelevant.

Other recommendations that were highlighted, are that universities should try to manage the expectations that students have of what the workplace would be like. Participants indicated that many students do not know what practising industrial psychologists do and as such are left with unrealistic expectations about the workplace (and their internship). It was recommended that it would be beneficial to ensure that students are shown what to expect of the working world before they enter their internships or the working environment. Leask et al. (2020) found that practical experience aided in understanding theoretical knowledge and thus the finding of the current study corresponds with other researchers' findings that practical experience is important. This could be done by incorporating recommendations such as utilising job shadowing during studies and ensuring that students start to gain practical experience from early in their studies and not only from an honours level or later. In their study, Leask et al. (2020) concluded that it would be beneficial for all clinical-based fields to start gaining practical experience from a first-year level and not to wait until internship or clinical practice after completion of studies.

As part of the objective on how to address the gap, participants were also asked what they would recommend to emerging industrial psychologists to ensure that they are more ready for the labour market. Many of the recommendations centred around the idea of taking accountability for one's own learning and not to be afraid to change one's way of thinking and to be open to ask questions when one is uncertain. In their study, De Villiers, Van Heerden and Van Schalkwyk (2018) concluded that young professionals must work together with their learning institutions and the organisations to ensure they are competent when entering the labour market. Findings also highlighted the importance of using the resources that are available during the course of studies, as well as during the internship year.

Limitations and recommendations

This study is not without limitations. Although the data collected were sufficient to reach the objectives of this study, a larger sample size might have generated additional, meaningful insights into the competencies of industrial psychology interns. It could also be recommended that a more diverse sample be utilised as the majority of participants were white, Afrikaans-speaking women. Different cultural groups and genders may have other experiences of the theory-practice gap and it may be interesting to explore. Though deemed sufficient to collect the data that were required, written qualitative surveys limited the researcher's ability to ask questions to clarify answers and probe for further answers to gain a deeper understanding of what participants truly meant.

Recommendations for organisations

The results of this study showed that the majority of supervising psychologists identified a gap between what is taught at universities and what is expected of emerging industrial psychologists in practice. This could negatively impact the overall performance within organisations and cause more time to be spent on teaching new employees the skills and competencies that they should already have had a sufficient level of competence in. Organisations can utilise some of the findings of this study as a starting point to create an effective induction programme to help speed up the process of increasing the level of competence when graduates enter the workplace. Effective induction and onboarding programmes should inform new employees how the organisation functions and help manage expectations of what the workplace will be like. It is also recommended that these induction programmes introduce new employees to all the available resources they have to do their job and to assist when a challenge presents itself.

Given that many of the recommendations from participants centred around involving practising industrial psychologists more and enabling students to gain more experience, organisations may use this study as a starting point to engage with universities to assist students in gaining more experience and exposure in the field of industrial psychology prior to starting their internships. The increased involvement prior to an internship could include offering job-shadowing opportunities during holidays or creating a space in which students can ask specific questions about the day-to-day functioning of the industrial psychologist through a chat room or joined email.

It can also be recommended that organisations use the knowledge gained to educate staff who will be working with graduates and interns to inform them ahead of time that there may be certain competencies that graduates may lack. Being informed of the challenges that interns and graduates may face, could potentially prepare the organisation better on how to support interns to enable them to grow and develop to the best of their ability.

Recommendations for universities

The first recommendation that can be made to universities is to consider working more closely with practising industrial psychologists when designing programmes, to help ensure that the needed competencies for the workplace are formed during a study term. Given that the current study asked for recommendations directly from supervising psychologists who work closely with new graduates, it is recommended that the suggestions be seriously considered and implemented where possible. The participants recommended the use of more case studies to improve exposure to real situations; it is the opinion of the researcher that universities should reach out to professionals to help them create the proposed case studies based on real scenarios that have taken place. Universities may also consider re-evaluating the effectiveness of all the subjects and the design of courses.

Conclusions

From the study findings, it can be concluded that although interns display certain competencies when entering the workplace, they still lack some necessary competencies for a successful internship. The findings show that there are many competencies that interns are expected to have upon commencement of their internship, but few that they demonstrate to a satisfactory extent. From the findings, it can also be deduced that the majority of industrial psychologist practitioners believe there is a gap between what is taught at university level and what is expected in industry of emerging industrial psychologists during their internship.

The importance in identifying the existence of a theory-practice gap lies in the ability to address the gap appropriately through recommendations that have been made by the current participants in this study, as well as recommendations that will be made by future researchers. The gap between what is taught and what is expected must be addressed as the larger the gap becomes, the more likely it is that graduates will struggle in the workplace. From the current study, it can be seen that there is already a gap between the expected competencies for graduates and what they demonstrate well upon commencement of an internship. Addressing the theory-practice gap will help reduce the gap between expected and experienced competencies.

Once universities are informed about the existence of a theory-practice gap from the perspective of practising industrial psychologists, they are left with the responsibility to adapt their programmes to help reduce the gap that is observed.

Universities and organisations must join forces to help ensure that a competent workforce enters the labour market.

Competing interests

The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

Authors' contributions

E.d.G. fulfilled the role of the primary researcher, and was responsible for the conceptualisation of the article, collecting of the data, interpretation of the research results, and the writing of the article. C.E. acted as supervisor, and thus played an advisory role and assisted in the conceptualisation and the writing of the research article.

Data availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Disclaimer

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