

SECTION 7 - This section is to be completed by the INTERN

You may use this space for any other general points that you want to highlight

SECTION 8 - This section is to be completed by the supervisor/mentor.

According to literature, the following are the non-technical skills that employers most searched. Please use the scale below to indicate the importance of each of these skills and values (for an entry level candidate), in your opinion.

Skills, values and dispositions	Crucial to employer	Good to have	Hardly ever required	Not needed at all	Not applicable
Adaptability & flexibility					
Analytical/quantitative skills					
Awareness of organisational cultural					
Communication skills (listening, verbal and written)					
Creativity and Innovation					
Dependability					
Detail orientated/Attentiveness					
Digital/Technical literacy					
Entrepreneurial skills/risk taker					
Honesty					
Recognition of quality					
Integrity					
Interpersonal abilities					
Leadership/Managerial/Decision making					
Loyalty					
Personal values					
Planning/organising					
Problem solving/ reasoning					
Professionalism					
Programming					
Research skills					
Self-confidence					
Self-management: Initiative					
Self-management: Multi-tasking					
Self-motivated					
Self-motivation: Energy/vibrancy					
Self-motivation: Passion					
Self-motivation: Positive attitude					
Self-regulation: Assertiveness					
Soft skills					
Strategic planning					
Strength of character					
Strong work ethic					
Teamwork					
Willingness to learn (Lifelong learning)					

APPENDIX C – Descriptors for conceptual framework

Competence Category	Key Focus Area	Competencies	Description	Source
Cognitive Competence	Tacit/practical knowledge Technical/theoretical knowledge Procedural knowledge Contextual knowledge	Reflection & attentiveness	Refers to the knowledge, skills and attitudes required to reflect evaluatively on individual or group performance; to reflect on the relevance of information within a given context; to filter information and critically evaluate the importance and relevance of information; to understand how to use technology to optimise cognitive functioning; being able to appropriately follow instructions, procedures and policies, schedules, legal obligations and safety requirements.	Daviesm et al. (2011:12); Yorke & Knight (2004); SHL Group Limited (2013)
		Inquiry focussed	Refers to the knowledge, skills and attitudes related to conducting research, deductive reasoning and finding answers to pertinent questions and problems.	
		Systems thinking & pattern recognition	Refers to the knowledge, skills and attitudes related to the expanded view of a situation that takes into account the interactions involved in a problem or issue. Systems thinking is evident in the functional work of e-practitioners, such as strategic alignment, systems integration, integration testing, business process mapping, et cetera, which requires a holistic viewpoint. This provides the opportunity to detect patterns within information when engaging with the system.	Aronson (1996)
		Problem solving, creativity & innovation	Refers to the knowledge, skills and attitudes required to apply lateral and logical thinking and the use of appropriate, inventive and original methods to finding solutions; identifying relevant technology to solve the identified problem.	Ferrari, Punie and Redecker (2012); Yorke & Knight (2004)
		Analytical & quantitative thinking	Refers to the knowledge, skills and attitudes related to the systematic and detailed dissection and separation of component parts of a concept in order to analyse, evaluate and examine data and information in order to discover interrelationships and causes. Quantitative skills are required to translate the analysis of vast amounts of data into abstract concepts, graphical representations and visualisation of data	(Aronson 1996) (Daviesm et al. 2011:10) (Yorke & Knight 2004)
		Sense-making & application of existing knowledge	Refers to the knowledge, skills and attitudes required for the higher level critical thinking needed to leverage existing tacit and explicit knowledge to determine the deeper meaning or significance of data and information. The application of contextual knowledge requires an acute ability for sense-making as Snowden	(Daviesm et al. 2011) Snowden (2005:46). (Yorke & Knight 2004)

			(2005:46) explains that sense-making refers to “the way that humans choose between multiple possible explanations of sensory and other input as they seek to conform the phenomenological with the real in order to act in such a way as to determine or respond to the world around them”.	
		Assimilation, synthesis & creation of new knowledge	Refers to the knowledge, skills and attitudes related to the process of absorbing new ideas into existing cognitive knowledge, combining ideas to form a whole concept or to produce new knowledge through the expression of creativity and the use of technology.	Ferrari, Punie, & Redecker
Functional Competence (Discipline specific)	Non-technical	Business strategy, planning and architecture	Relates to the knowledge, skills and attitudes related to business strategy planning and formulation as well as enterprise architecture. Define and maintain the information & enterprise architecture, including process, information, applications, and infrastructure.	Fonstad & Lanvin, 2010
		Quality, risk & compliance	Refers to the knowledge, skills and attitudes required to define IT processes, organization and relationships. IT administration. Provide IT Governance. Monitor and control IT performance, internal control and regulatory compliance. Assess and manage IT risks. Manage quality.	Fonstad & Lanvin, 2010
		Project delivery & change management	In the conceptual framework, project delivery and change management refers to the knowledge, skills and attitudes required for all the areas of the project management lifecycle as well as managing change.	Fonstad & Lanvin, 2010
		User management & support	Customer service support (CSMG): Receives and handles requests for service, following agreed procedures. Promptly allocates calls as appropriate. Logs incidents and service requests and maintains relevant records (level 1). User Experience Design (HCEV): The iterative development of user tasks, interaction and interfaces to meet user requirements, considering the whole user experience. Refinement of design solutions in response to user-centred evaluation and feedback and communication of the design to those responsible for implementation User Experience Evaluation: Evaluation of systems, products or services, to assure that the stakeholder and organisational requirements have been met, required practice has been followed, and systems in use continue to meet organisational and user needs. Iterative assessment (from early prototypes to final live implementation) of effectiveness, efficiency, user satisfaction, health and safety, and accessibility to measure or improve the usability of new or existing processes, with the intention of achieving optimum levels of product or service usability (USEV).	(SFIA Foundation, 2015)

		Sales & marketing	The identification of sales prospects and their qualification, the development of customer interest and the preparation (including managing the bid process), execution and monitoring of the sale of any product or service into an external or internal market. (SALE) Integration of digital marketing with traditional print/broadcast methods, to support the research, analysis and stimulation of potential or existing markets for products and services, both to provide a sound basis for business development and to generate a satisfactory flow of sales enquiries. The management and development of strategies, campaigns and day-to-day marketing activity delivered through web and other appropriate digital channels and technologies (MKTG)	
		Global sourcing management	Define and maintain sourcing strategy. Manage suppliers and supplier performance. Procure IT resources: people, software, hardware, and licenses.	Fonstad & Lanvin, 2010
	Technical	Technical and Information Strategy, Planning & Architecture	Translate or drive business strategy to IT strategic plans with the following activities: function and service improvements, business process improvement, business innovation, and afterwards, determine technical direction.	Fonstad & Lanvin, 2010
		Requirements management	The definition and management of the business goals and scope of change initiatives. The specification of business requirements to a level that enables effective delivery of agreed changes. The identification, analysis, clarification and communication of the context of use in which applications will operate, and of the goals of products, systems or services. Analysis and prioritisation of stakeholders' "user experience" needs and definition of required system behaviour and performance. Resolution of potential conflicts between user requirements and determination of usability objectives	SFIA
		Business process improvement	The identification of new and alternative approaches to performing business activities. The analysis of business processes, including recognition of the potential for automation of the processes, assessment of the costs and potential benefits of the new approaches considered and, where appropriate, management of change, and assistance with implementation. May include the implementation of a process management capability/discipline at the enterprise level.	SFIA

		Solution design, dev & implementation	The management of resources in order to plan, estimate and carry out programmes of solution development work to time, budget and quality targets and in accordance with appropriate standards, methods and procedures (including secure software development).The facilitation of improvements by changing approaches and working practices, typically using recognised models, best practices, standards and methodologies. The provision of advice, assistance and leadership in improving the quality of software development, by focusing on process definition, management, repeatability and measurement (DLMG)	SFIA
		Service management	The planning, implementation, control, review and audit of service provision, to meet customer business requirements. This includes negotiation, implementation and monitoring of service level agreements, and the ongoing management of operational facilities to provide the agreed levels of service, seeking continually and proactively to improve service delivery and sustainability targets (SLMO)	SFIA
		Infrastructure	The management of the IT infrastructure and resources required to plan for, develop, deliver and support IT services and products to meet the needs of a business. The preparation for new or changed services, management of the change process and the maintenance of regulatory, legal and professional standards. The management of performance of systems and services in terms of their contribution to business performance and their financial costs and sustainability. The management of bought-in services. The development of continual service improvement plans to ensure the IT infrastructure adequately supports business needs. This includes network planning & design, hardware design & database design.	SFIA
ICT Competence	Three usage levels: Advanced, Intermediate & Basic	Advanced IS application & specialisation	These skills involve the competent usage of advanced and sector specific software tools as well as the ability to develop (programme), operate and maintain ICT systems. SFIA: This category includes the development and exploitation of expertise in any specific area of information or communications technology, technique, method, product or application area. This also includes application support, consulting and software development	Blanco & Lopez Boo (2010), SFIA

		<p>eAwareness</p>	<p>Relates to the user’s awareness of ICTs, their understanding of the information society and its implications as well as the appreciation of the relevance of ICT in the information society. It highlights the importance of lifelong learning and citizenship, taking into account legal and ethical aspects. It is the capability to use ICTs as a medium to facilitate individual or collective development of knowledge, skills and new capabilities in both social and professional life.</p>	<p>Mitrovic, 2015; Ala-Mutka, 2011; Romani, 2009</p>
		<p>Emerging tech monitoring/ New Media lit</p>	<p>Refers to understanding the new media landscape, understanding new formats, platforms and ways of communication and interaction and being able to produce meaning (construct reality) and understand the social, legal, economic and political implications.</p>	<p>Romani, 2009</p>
		<p>Information management & literacy</p>	<p>Relates to the knowledge, skills and attitudes needed to identify, locate, access, retrieve, store and organise data and information. Includes the ability to read with meaning, to understand critically and to evaluate, connect and integrate different information, data, knowledge and other sources in order to evaluate the reliability and quality of information and then make informed judgement about what is found. Includes searching for, finding and managing relevant information to be used for specific purposes. Data literacy denotes competence in finding, manipulating, managing and interpreting data, including reading graphs and charts, visualisation of the data and to draw correct conclusions from data in order to inform decision making</p>	<p>Romani, 2009 Ferrari, Punie and Redecker (2012). (Mitrovic 2015)</p>
		<p>Technology literacy</p>	<p>Refers to the confident and critical use of electronic media, represented by the ability to interact with hardware and software, as well as trending and evolving applications and devices. Includes the efficient use of ICT tools for the storage and management of information and understanding potential risks.</p>	<p>Romani, 2009; (Lankshear & Knobel 2008)</p>
		<p>Data management & literacy</p>	<p>Denotes competence in finding, manipulating, managing, and interpreting data, including reading graphs and charts, etc and to draw correct conclusions from data in order to inform decision making.</p>	<p>Mitrovic, 2015</p>

		Digital literacy	Refers to the proficiency of using ICT to identify information need, retrieve relevant information, manage and produce new knowledge, represent the information in ICT environments and then share, exchange and communicate the information in multiple formats, either textual or multimedia.	Romani, 2009
Personal Competence (Interpersonal)	Emotional Intelligence	Identify & Self awareness	Self-awareness refers to an awareness of one's identity and entails having a deep understanding of one's own strengths, limitations, aims, values and motives . It also includes the ability to recognize and understand one's own moods, emotions and drivers, as well as their effect on others . Through self-awareness one is able to build self-confidence and exercise assertiveness, realistic self-assessment and display a self-deprecating sense of humour. People with high self-awareness are honest with themselves about themselves. They are realistic, neither overly self-critical nor excessively optimistic. Self-reflection and thoughtfulness are two common attributes found in these people. Such people reflect things over and do not react impulsively.	(Yorke & Knight 2004; Goleman et al. 2002; Smith 2002; Cleary et al. 2007; Goleman 1998; Boyatzis 2008)
		Self-management	Self-management refers to the ability to work in an efficient and structured manner. It incorporates attributes like transparency, adaptability, achievement and optimism . It also covers enterprise skills like planning & organising (setting of achievable long term and short term goals and structuring action), time management (arrives punctually for work and meetings; deliver scheduled work on time, within scope - meeting deadlines), multi-tasking (being able to manage a number of tasks simultaneously and with accuracy, being able to prioritise and rank tasks according to importance, being able to manage multiple projects simultaneously and being able to organise and schedule plans, work and people efficiently). Self-management is needed to facilitate mental clarity and provide controlled energy and self-discipline.	(Yorke & Knight 2004; Goleman et al. 2002; Smith 2002; Cleary et al. 2007; Goleman 1998; Boyatzis 2008)

		Self-regulation	Self-regulation includes emotional self-control , which is the ability to control or redirect disruptive impulses and moods. It also includes aspects like trustworthiness and integrity , comfort with ambiguity, openness to change as well as the ability and openness to accept criticism . Behavioural self-regulation refers to the ability to exercise control over one's behaviour , remaining focused at work despite disruptions. It is important to note that self-regulation could take different forms, for example cognitive self-regulation refers to being able to control one's thinking.	(Yorke & Knight 2004; Goleman et al. 2002; Smith 2002; Cleary et al. 2007; Goleman 1998; Boyatzis 2008)
		Self-motivation	Self-motivation relates to having a passion for work for reasons that goes beyond money or status, a propensity to pursue goals with energy and persistence , strong drive to achieve optimism (positive attitude) , even in the face of failure. It also refers to organizational commitment and includes passion and enthusiasm, resilience, tactfulness, assertiveness, determination & tenacity (results-driven) . Through strong motivation, it is expected that the person will be comfortable with taking initiative (ability to take action unprompted and skills that lead to innovative outcomes). Self-awareness, self-confidence and self-motivation also leads to autonomy (ability to work effectively without supervision).	(Yorke & Knight 2004; Goleman et al. 2002; Smith 2002; Cleary et al. 2007; Goleman 1998; Boyatzis 2008)
		Empathy	Empathy involves the ability to understand the emotional makeup of other people. It is a skill in treating people according to their emotional reactions and includes building and retaining talent, cross-cultural sensitivity service to clients and customers, being approachable, having the ability to listen and responding suitably. Empathy is often the key to retaining talent and one of the building blocks in good relationship management and social engagement.	(Yorke & Knight 2004; Goleman et al. 2002; Smith 2002; Cleary et al. 2007; Goleman 1998; Boyatzis 2008)
	Ethical Competence	Ethical responsibility and accountability	is understood as the knowledge, skills and attitudes needed to behave in an ethical and responsible way, aware of legal frames. Understanding that actions have consequences and prepared to adhere to consequences for behaviour. Safe and responsible attitude in digital activities	Ferrari, Punie, & Redecker (2012)(Ala-Mutka 2011)
		Strength of character and values	has a moral code and acts accordingly. These include having values such as Loyalty, commitment, honesty, integrity, dependability, respect, friendliness, openness, etc.	
	Career Management	Industry awareness & business knowledge	Understanding the world of work (3.3.3), specific to the organisation. Understanding your place in the business world and how to navigate in order to build your career.	

Global Competence (Intrapersonal)	Behavioural Competence	Business etiquette & Professionalism	Demonstrated in things like being punctual, dressing appropriately, knowing how to behave in different situations, showing respect to chain of command, etc.	Andrews & Higson (2010)
		Adaptability & Flexibility	ability to respond positively to changing circumstances and new challenges; Coping with complexity: ability to handle ambiguous and complex situations. Ability to cope with change. Included in adaptability is the stress tolerance (ability to retain effectiveness under pressure)	(Yorke & Knight 2004)
	Intercultural Competence	Cross-cultural awareness	Ability to work cross-culturally; Acceptance and appreciation of diversity. Ability to manage diversity & virtual teams (3.3.2)	(Yorke & Knight 2004)(Ala-Mutka 2011)
		Adaptation to organisational culture	Having commercial awareness i.e.operating with an understanding of business issues and priorities.	(Yorke & Knight 2004)
	Social Intelligence	Relationship management	Social skill: proficiency in managing relationships.This involves influencing, developing others, change management, conflict management, building bonds and teamwork. Handling relationships is about moving people in the right direction	(Goleman 2004)(Goleman, Boyatzio, & Mckee, 2002)
		Social awareness & social responsibility	Includes empathy, organizational awareness and ability to serve client/customer needs. By being attuned to how others feel, a leader can say and do what is appropriate, to calm fears, assuage anger or join in good spirits.	(Goleman, Boyatzio, & Mckee, 2002)
		Teamwork (including virtual teams)	able to work constructively with others on a common task, towards a common goal. expertise in building and leading teams	(Yorke & Knight 2004)(Goleman 2004)
		Networking & collaboration	building networks and ability to find common ground and build rapport. effectiveness in leading change, persuasiveness. the knowledge, skills and attitudes for linking with other users, participate in networks and online communities, and interact with others constructively and with a sense of responsibility	(Goleman 2004)(Ferrari, Punie, & Redecker 2012)
		Leadership & decision making	Decision making: choice of the best option from a range of alternatives.	(Yorke & Knight 2004)
		Conflict resolution & negotiations	Conflict resolution: both intra-personally and in relationships with others; Negotiating: discussion to achieve mutually satisfactory resolution of contentious issues.	(Yorke & Knight 2004)

Meta-competences	Effective communication (verbal & non-verbal)	Reading effectiveness: the recognition and retention of key points; Language skills: possession of more than a single; Listening: focused attention in which key points are recognised language. Written communication: clear reports, letters etc written specifically for the reader; Oral presentations: clear and confident presentation of information to a group in the form of presentations or facilitation of workshops; Explaining: orally and in writing. Online: communicating through online tools, taking into account privacy, safety and netiquette.	(Yorke & Knight 2004)(Ferrari, Punie, & Redecker 2012)
	Lifelong learning (willingness to learn)	Refers to the knowledge, skills and attitudes related to the commitment towards ongoing learning to meet the needs of employment and general life. Life-long learning skills that contribute to ongoing improvement and expansion in employee and company operations and outcomes	(Yorke & Knight, 2004; Cleary et al., 2007)
WORK READINESS: Being able to adjust and transition to the work environment seamlessly after graduation and being ready and able to contribute to an employer's context (Andrews & Higson, 2008; Griesel & Parker, 2009)			



APPENDIX D – Data analysis graphs

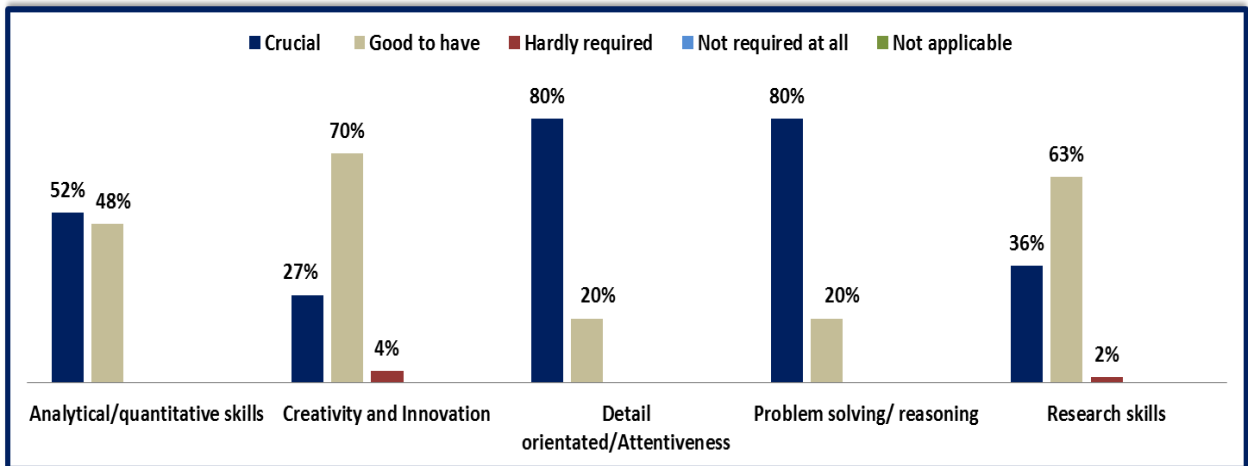


Figure 6.1: Value rating for Cognitive Competences

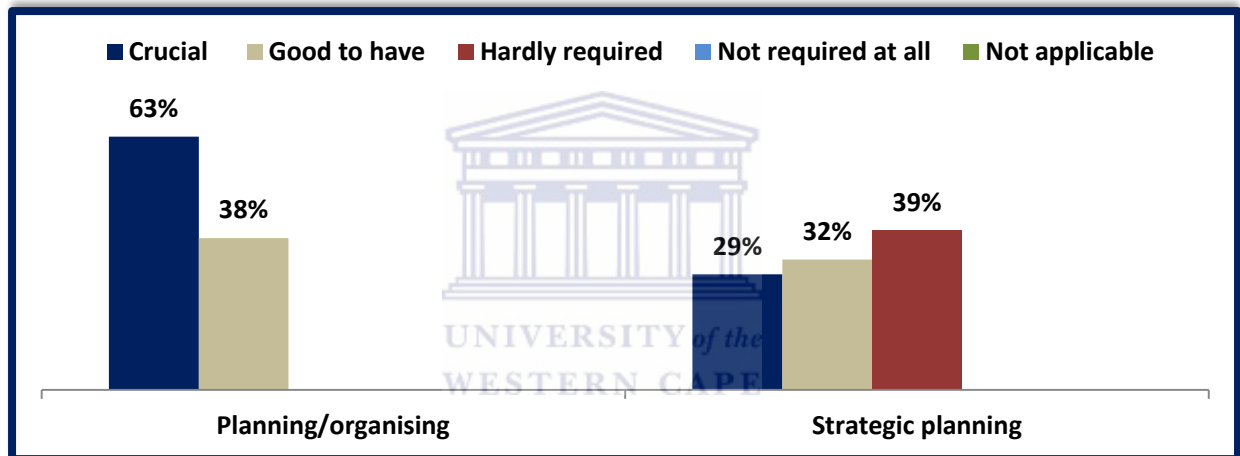


Figure 6.2: Value rating for Functional Competences

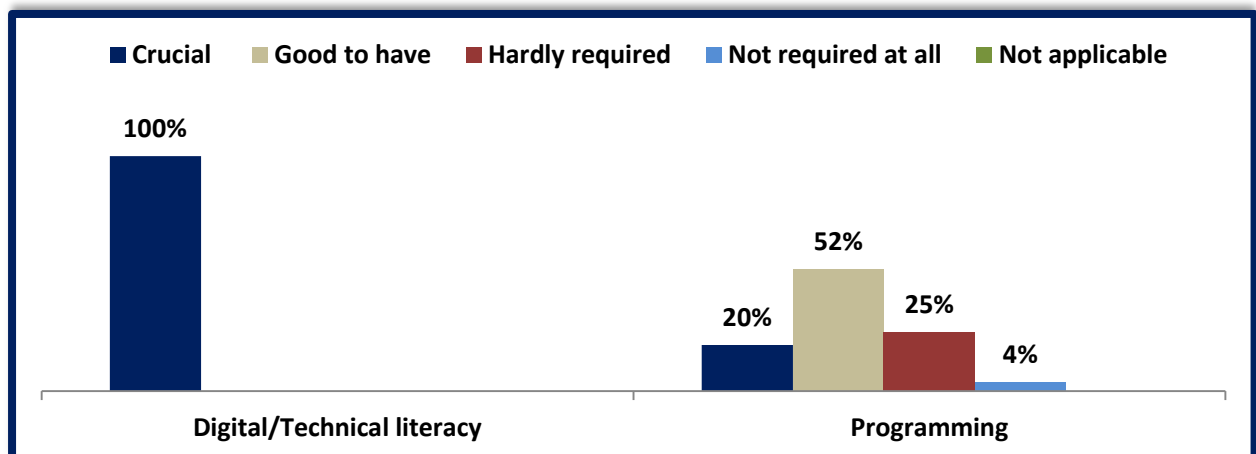


Figure 6.3: Value rating for ICT Competences

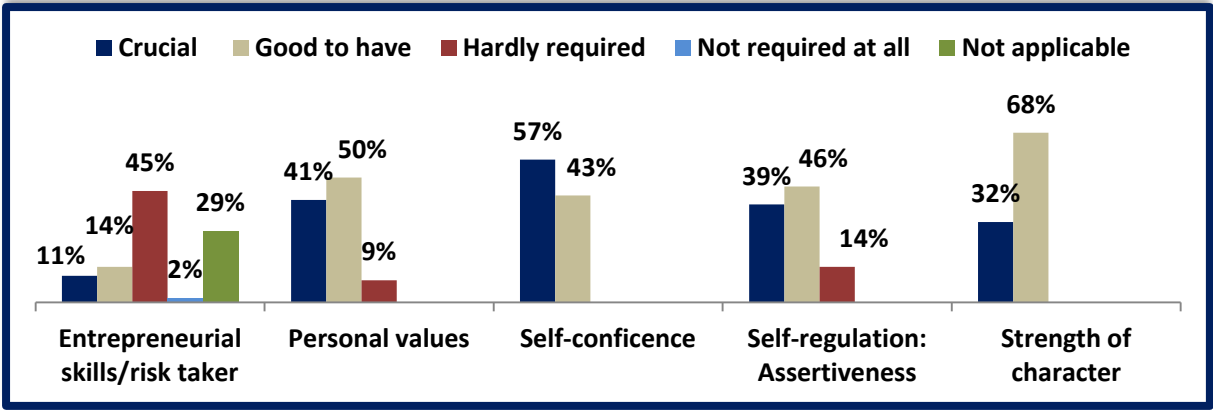


Figure 6.4: Value rating for Personal Competences

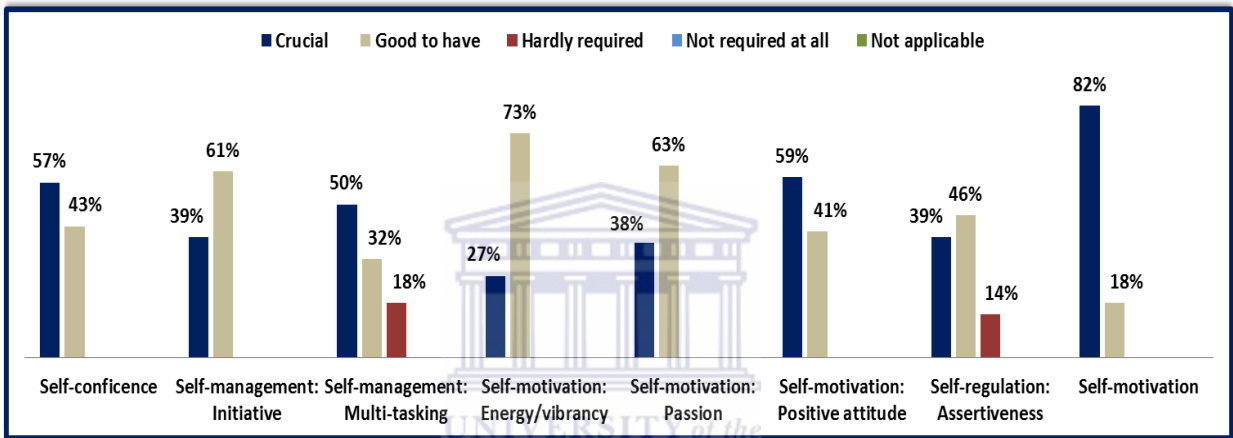


Figure 6.5: Value rating for Emotional Intelligence Competence

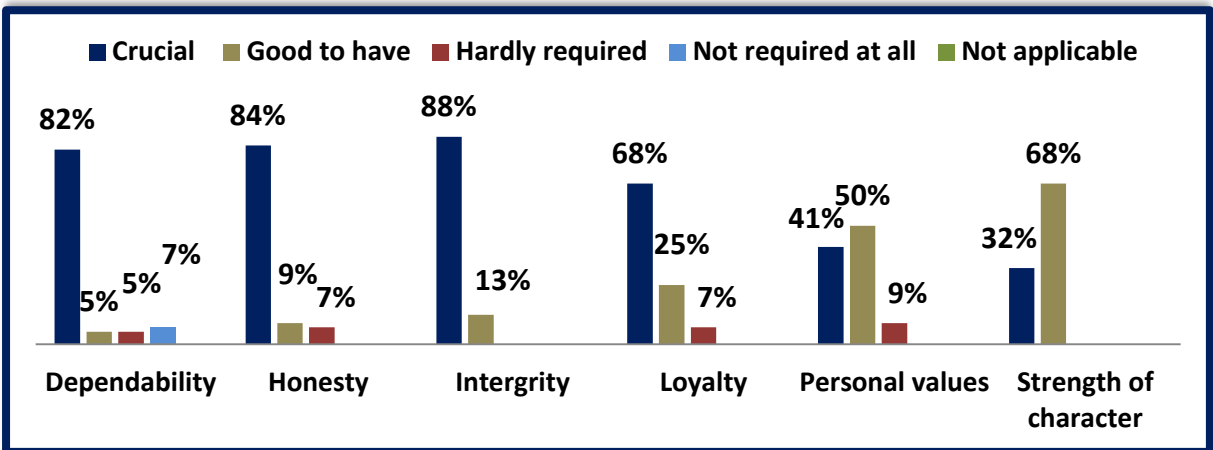


Figure 6.6: Value rating for Personal Competence - Ethical Competence

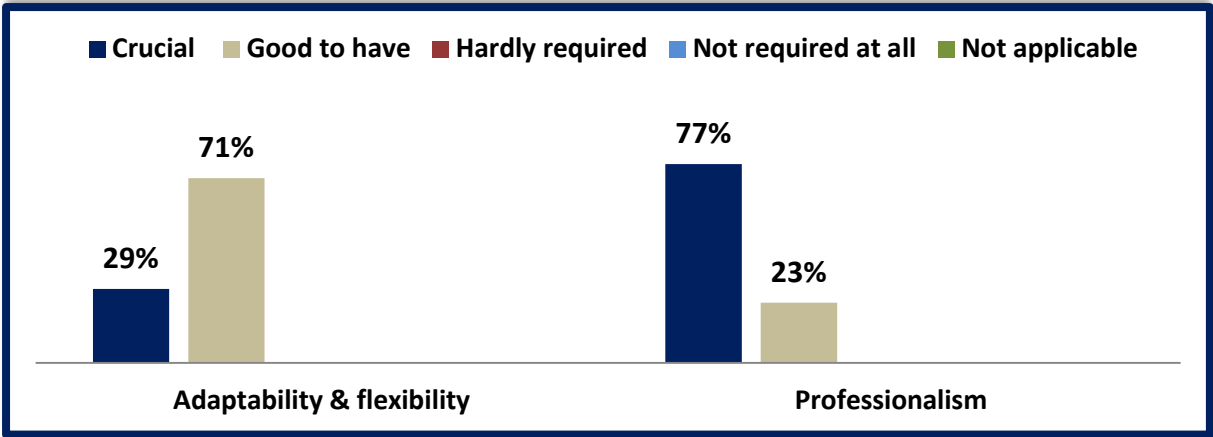


Figure 6.7: Value rating for Global Competences – Behavioural Competence

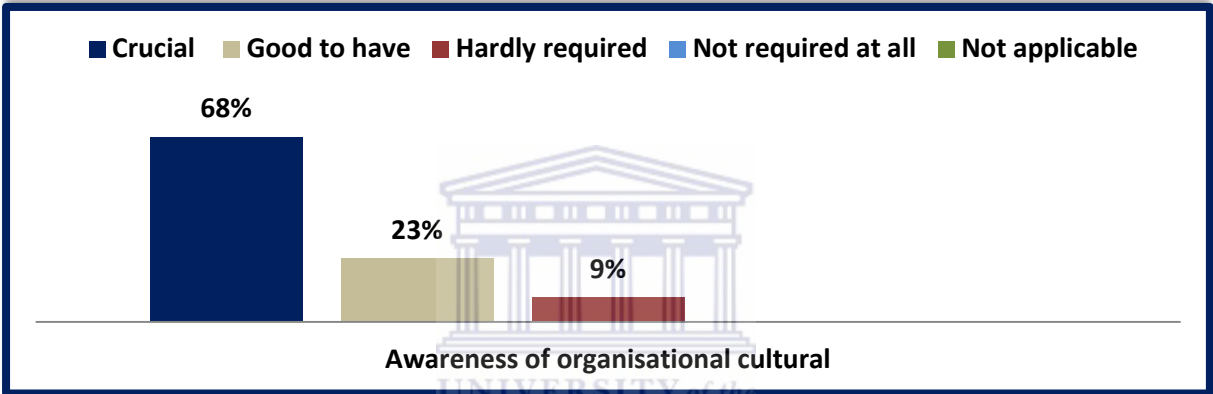


Figure 6.8: Value rating for Global Competences – Intercultural Competence

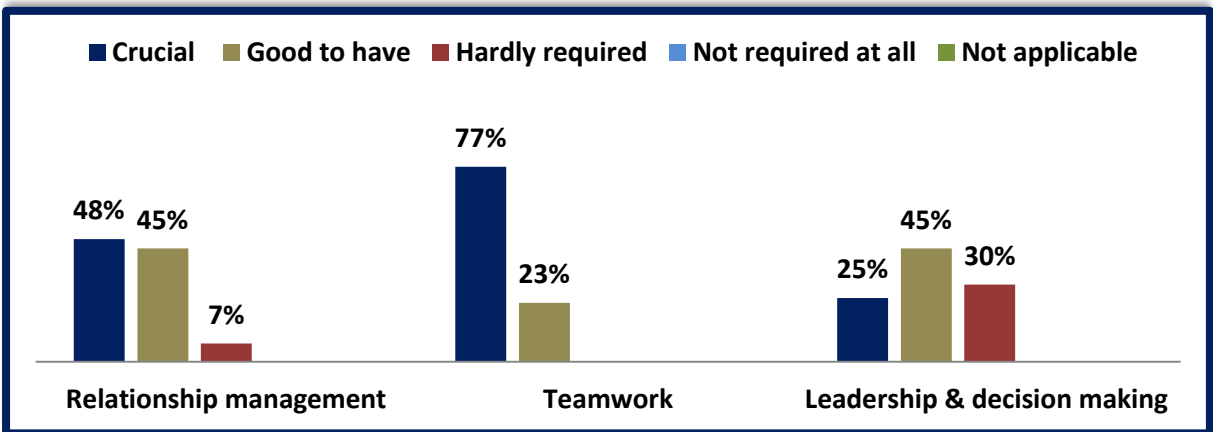


Figure 6.9: Value rating for Global Competences – Social Intelligence Competence

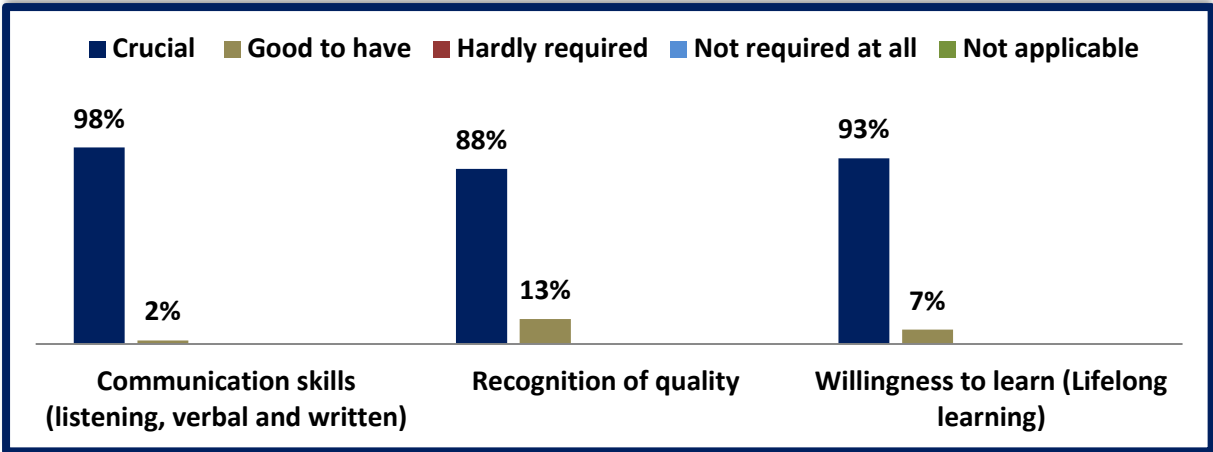


Figure 6.10: Value rating for Meta-competencies

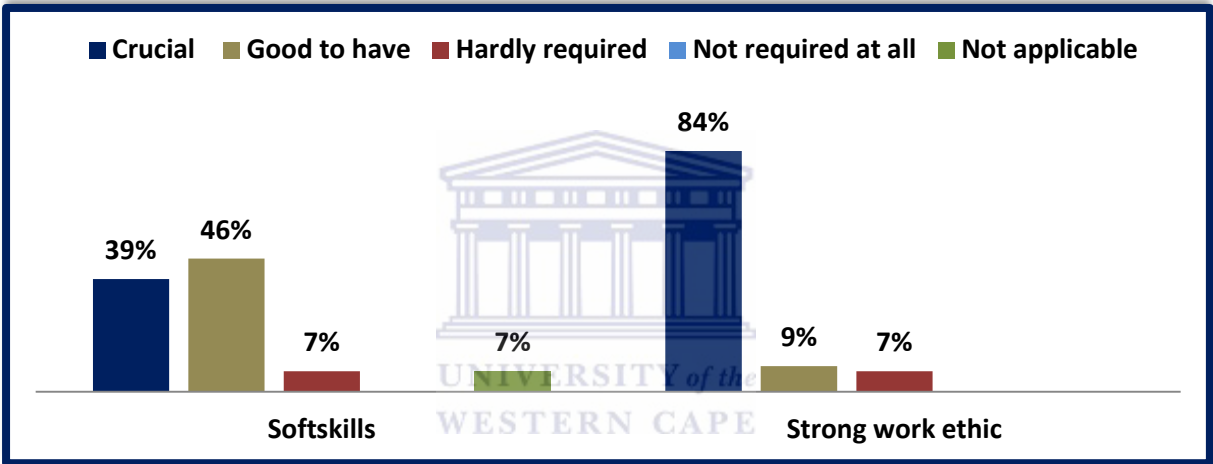


Figure 6.11: Value rating for soft skills and work ethic

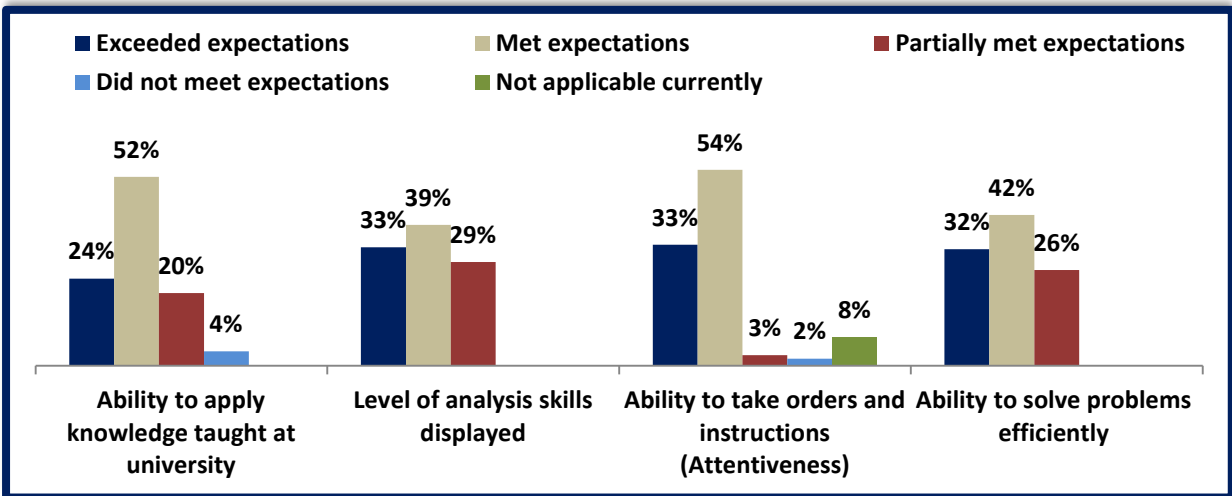


Figure 6.12: Supervisors' perceptions of performance in Cognitive Competences

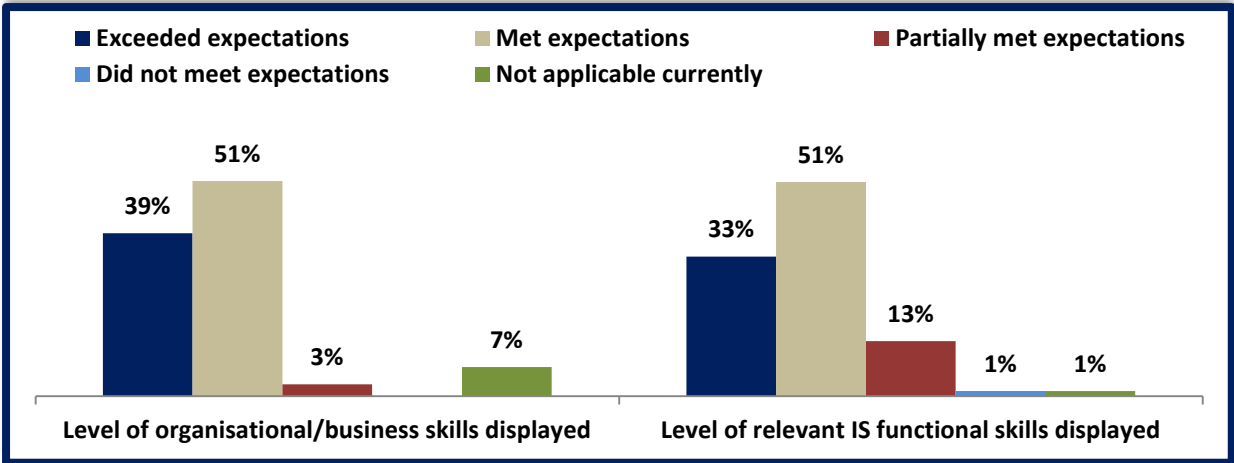


Figure 6.13: Supervisors' perceptions of performance in Functional Competences

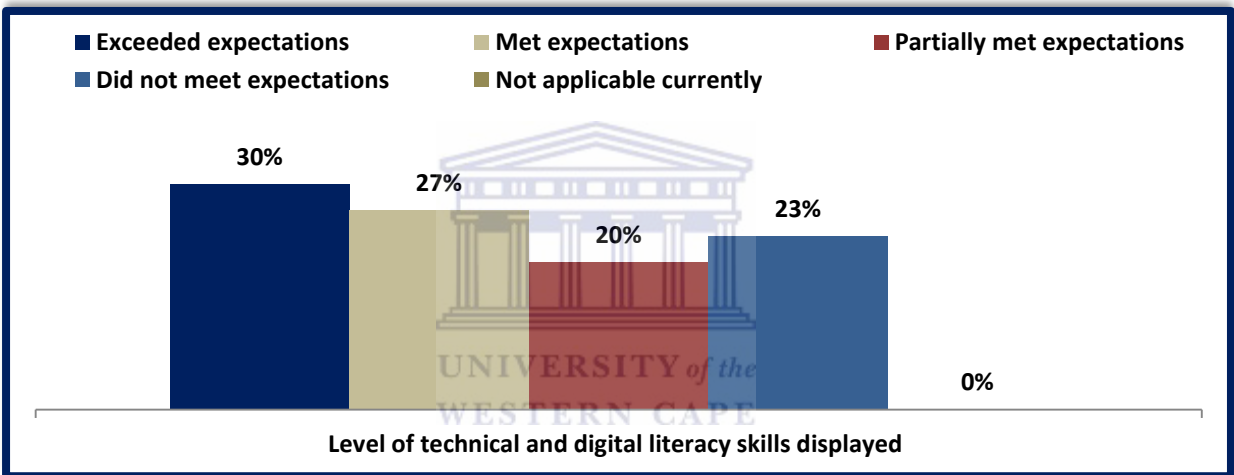


Figure 6.14: Supervisors' perceptions of performance in ICT Competences

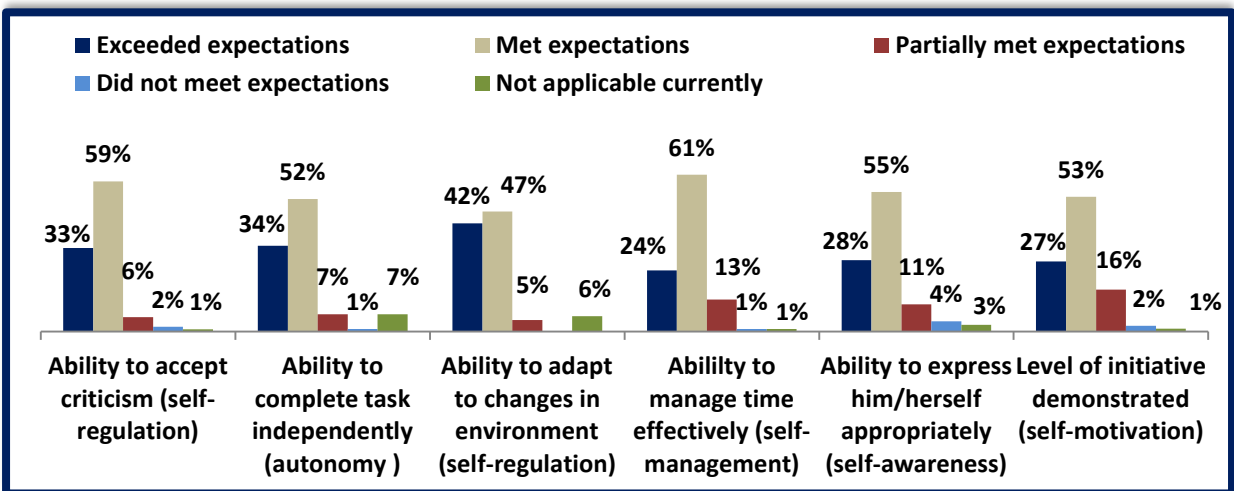


Figure 6.15: Supervisors' perceptions of performance in Emotional Intelligence

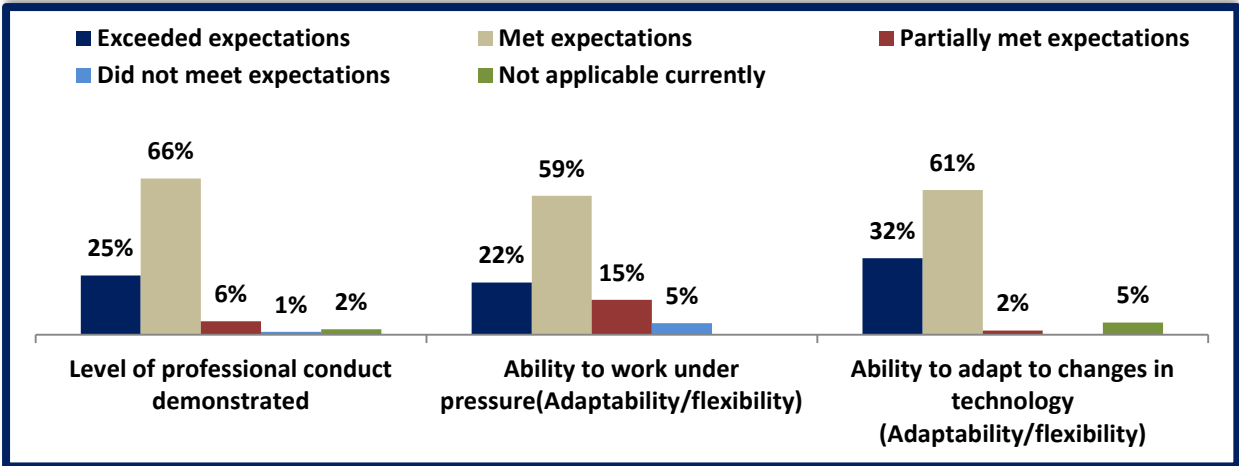


Figure 6.16: Supervisors' perceptions of performance in Behavioural Competences

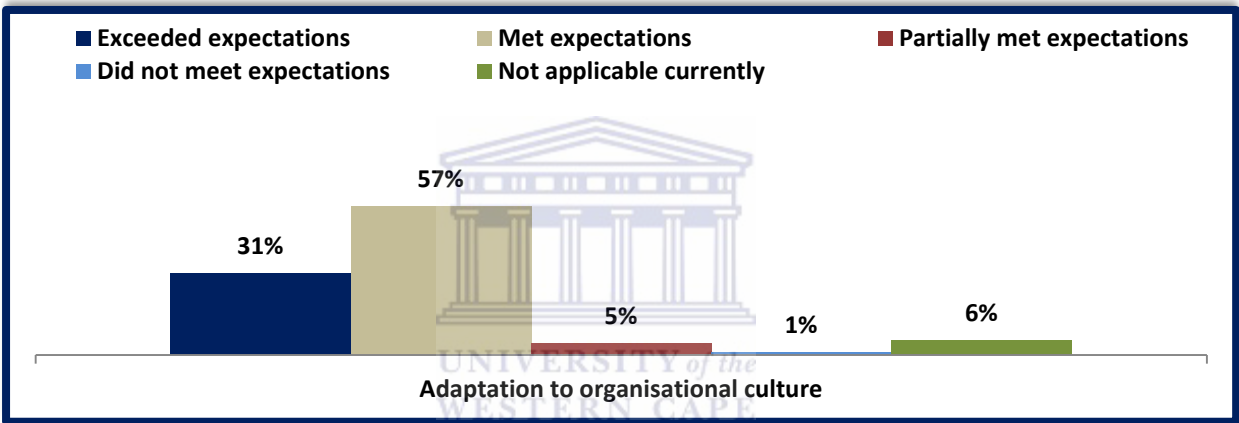


Figure 6.17: Supervisors' perceptions of performance in Intercultural Competences

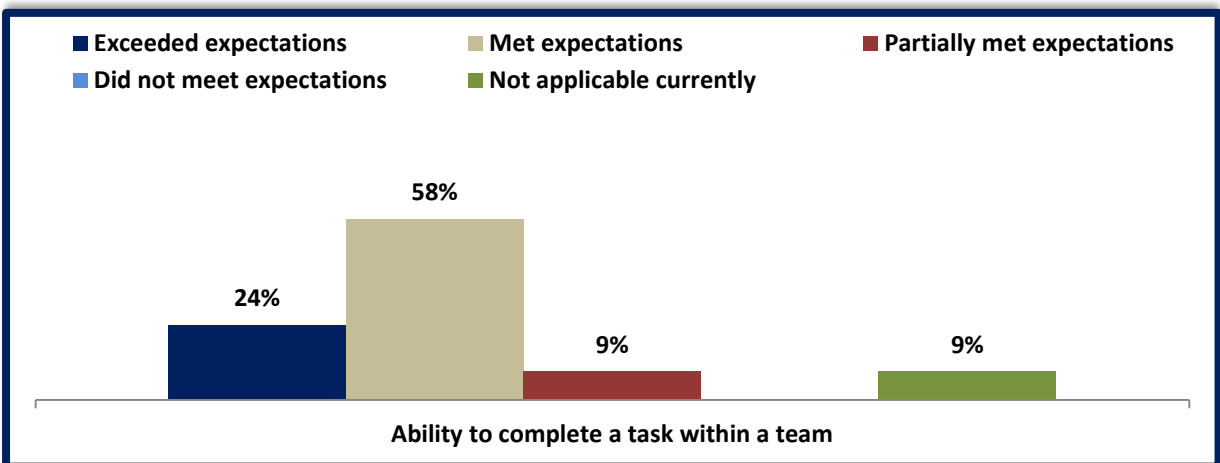


Figure 6.18: Supervisors' perceptions of performance in Social Intelligence

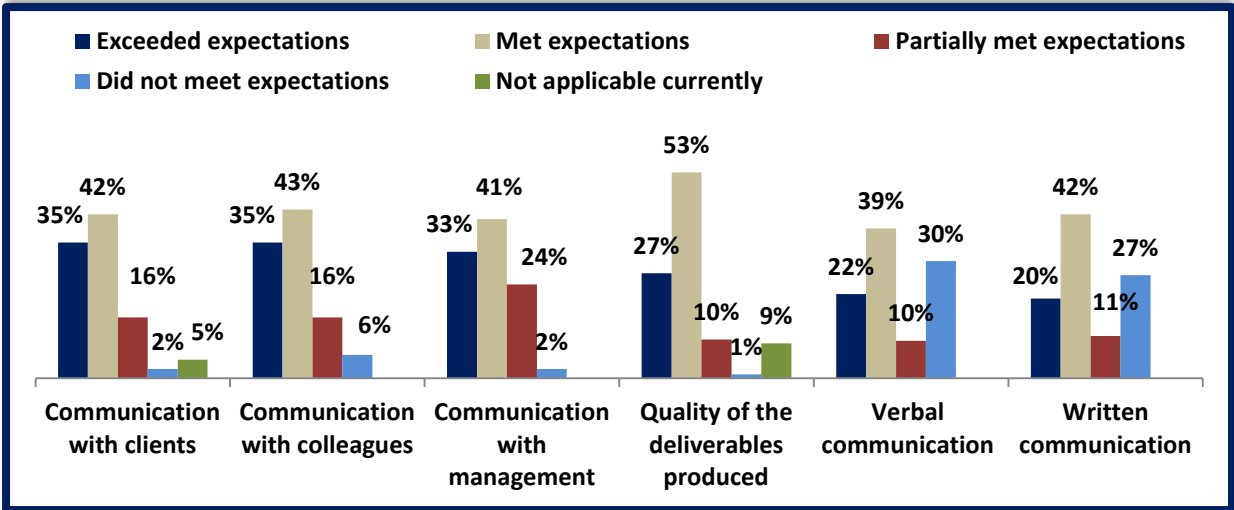


Figure 6.19: Supervisors' perceptions of performance in Meta-competencies

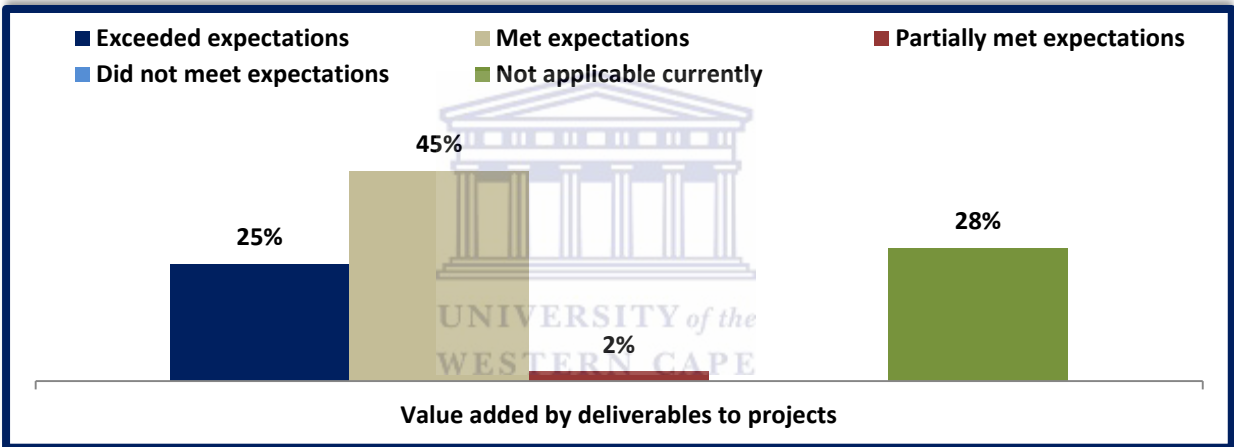


Figure 6.20: Supervisors' perceptions of the value that interns added to projects

APPENDIX E – Information sheet and consent form

Study Information Sheet

Topic: e-Competence requirements of potential Information Systems graduate employers in the Western Cape

Nuraan Davids-Latief

In this 21st century knowledge-based labour market, skills have become the global currency⁵. The mismatch between the skills that job seekers possess and the skills that employers require is seen as one of the main causes of high unemployment and low economic growth⁶. Currently the ICT industry seems to have the highest degree of skills mismatch, mainly between the e-competencies required by ICT industry businesses and the e-competencies that Information Systems graduates possess⁷. Therefore, the stronger the engagement between universities, industry employers and other stakeholders, the greater the opportunities will be to integrate and develop e-competencies in the employability skills of graduates and embed these into the curricula⁸. It is therefore imperative that universities identify the e-competencies that companies desire and align their curricula accordingly⁹.

In order for University X to measure its Information Systems (IS) graduate students' level of employability, it needs to have some awareness of the e-competencies that the IS students have, as perceived by employers in the industry. Based on the abundant literature supporting the dilemma of a skills mismatch in South Africa, this study has the following two broad aims:

- To determine *how* closely the e-competencies provided by the IS curriculum at University X are matched to the e-competencies needed by potential IS employers in the WC; and
- If there is a disparity, to determine *why* there is a disparity and what the extent of this mismatch is.

Using the above aims as guidelines, the study plans to contribute to existing knowledge by examining initiatives and benchmarks found in the literature on e-skills and e-competencies in order to arrive at the following objectives:

1. To find or develop a conceptual framework (CF) or model that could be used to measure and address e-competencies related to IS graduates at University X; and
2. To use the conceptual framework or model as a guide so that the curriculum could be aligned to provide graduates with the necessary e-competencies required by potential employers in the WC.

⁵ (OECD 2012)

⁶ (Tech Partnership 2015; International Labour Organisation 2014; Schofield 2014; ILO 2013; Scholtz et al. 2010; Schofield 2008; Rawlings et al. 2005)

⁷ (Schofield, 2014; Merkofer & Murphy, 2010)

⁸ (Cleary et al., 2007; Bridgstock, 2009)

⁹ (Scott et al., 2002; Lanvin & Fonstad, 2010; Council on Higher Education, 2013)

Consent form to participate in this study

Topic: e-Competence requirements of potential Information Systems graduate employers in the Western Cape

Dear internship host organisation,

You are hereby asked to participate in a research study conducted by Ms Nuraan Davids-Latief, internship co-ordinator at the IS Department and a Master's student at the University of the Western Cape. This research study is partially conducted towards the completion of her MCom (IS) thesis at the University of the Western Cape and has obtained the permission from the University to conduct this study.

You were selected as a possible participant in this study because you have previously participated in the Internship Programme, hosting IS honours students during the latter 6 months of the year. This study pertains to the feedback that organisations have provided during this Internship Programme, with the aim of ascertaining which e-competences organisations require from IS graduates and to measure if these e-competences are provided in the IS curriculum.

1. PURPOSE OF THE STUDY

The main aim of the study is to determine *how* closely the e-competencies provided by the IS curriculum at University X are matched to the e-competencies needed by potential IS employers in the WC; and if there is a disparity, to determine *why* there is a disparity and what the extent of this mismatch is, then to make recommendations for improvement.

2. PROCEDURES

If you choose to participate in this study:

- You will not be required to do anything
- I will use the supervisor assessments and feedback received from supervisors, during the internships, as data for this study.
- I will ensure that complete confidentiality is maintained and your company's name will never be mentioned.

3. POTENTIAL RISKS AND DISCOMFORTS

No potential risks are envisaged during this study and if any risks appear at a later stage they will be mitigated and dealt with in a discrete and sensitive manner.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

Since Higher Education Institutions (HEI) are regarded as the main source of trained and work-ready graduates, it makes sense that academic institutions need to understand what the required competences are in order to provide the relevant curricula to maximise the employment opportunities of potential graduate professionals, especially in a rapidly evolving field like ICT. This study is therefore relevant because it has attempted to understand what the required competences for current IS graduates are and whether these competences are provided in the current IS curriculum at University X. This study furthermore suggests a framework that could be used as an indicator for the combination of competences required by IS graduates. It is hoped that this information will assist in reducing the skills mismatch and skills gap, where it pertains to University X and its graduates.

5. PAYMENT FOR PARTICIPATION

No payments will be made to the participants.

6. CONFIDENTIALITY

Following strict ethical guidelines, any information that is obtained in connection with this study will remain confidential and will be disclosed only with your permission. Confidentiality will be maintained by means of referring to the host organisations as “Organisation X”, for example, when used in the analysis and discussions of the findings and the outcomes in the thesis as well as in conference papers and articles published in academic journals that may result from the study. The researcher further declares that any information given by supervisors will be handled in the strictest confidence, and that the information supervisors have provided will not be used to reflect negatively on them in any way.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to allow the researcher to use your feedback in this study or not. If you volunteer to participate in this study, you may withdraw at any time without consequences of any kind.

8. RIGHTS OF RESEARCH SUBJECTS AND CONTACT DETAILS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have any questions or concerns about the study, please feel free to contact the researcher, **Nuraan Davids-Latief** using the following details: Tel: (021) 959 2291 or email: nlatief@uwc.ac.za.

If you have questions regarding your rights as a research subject, feel free to contact the supervisor, Dr. James Njenga on Tel: (021) 959 3680 or email: jkariuki@uwc.ac.za

9. SIGNATURE OF PARTICIPANTS

Please indicate your consent by writing your initials in the box provided

- I confirm that I have read and understood the information sheet explaining the above research study and I have had the opportunity to ask questions about the project.
- I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish for my assessment to be used in this study, I am free to decline.
- I understand my responses and personal data will be kept strictly confidential. I give permission for the researcher to use the supervisors’ responses anonymously, which means that my name and the company’s name will not be linked with the research materials, and I will not be identifiable in the reports or publications that result from this study.
- I agree that the data collected from me may be used in future research.
- I agree to participate in the above research project

Name of Participant
(or legal representative
of the organisation)

Date

Signature

Copies: All participants will receive a copy of the signed and dated version of the consent form and information sheet for themselves. A copy of this will be filed and kept in a secure location for research purposes only.

APPENDIX F – Stage 3 of the open coding process followed

Areas for development (2011)	Code	Notes
General etiquette can also improve	BC	Business etiquette – follow up interview
Focus on allocated tasks and doing them well. Be very careful to not get carried away about Strategic business drivers and concerns that is shared by management and business owners. By doing your assigned tasks well you contribute to making the organization work.	BC/MC	Professionalism/ Tactfulness - Intern should basically mind their own business and focus on their assigned tasks - internal politics
Attention to detail	CC	Attentiveness – clarify in follow up interview
Critical Thinking	CC	– clarify in follow up interview
Focus on the details of what is said and written. She must learn to distinguish the important information from the “good to know” information. This will come with experience....	CC	Critical thinking NOTE: Experience
Bigger picture view of the solution will come with experience and will assist his delivery of unit testing	CC	Systems thinking Note: Experience
Selecting the right career path whether business or technical. Supplement the path with the correct certification/training	CM	Has nothing to do with weakness in internship. Career advice for the intern – good mentoring
To become a ██████████ Research Analyst ██████████ holds the right qualities for employment. Areas we would focus on and develop further would be her ability to unpack the so what with clients around key areas such as growth, challenges etc. But ██████████ has the right profile and drive to become a good RA and in time, Industry Analyst.	CM	Career advice per individual student
Needs to learn not to be defensive when criticised but see this rather as a tool for improvement	EQ	Self regulation : Accept criticism
Ability to multitask and move from one task to another and back again without flustering. Taking change "inside". This comes with experience and cannot be taught.	EQ	Self-management Multi-tasking Note: Experience
Be more determined and see tasks through to resolution	EQ	Self-management Lack of Determination & Tenacity
██████████ can improve by taking more initiative and be more determined to do a task well, paying attention to detail and see it through to completion. ██████████ was in charge of the action tracker, he worked well on this for about 3 weeks and then stopped doing it altogether, a team member and ██████████ had to get involved initially to get it off the ground too.	EQ	Self- management : Initiative/Determination/Tenacity - see a task through to completion/ Not in framework: Be present
██████████ still comes across as being shy and inexperienced, but I believe this will change as soon as she has more exposure of dealing with customers.	EQ	Self awareness/Confidence /Shyness Note: Experience
Perseverance	EQ	Self regulation Tenacity Add: perseverance to conceptual framework

Take initiative (x2)	EQ	Self management Initiative
█ needs to improve by following up on tasks or status reports as this needed reminding	EQ	Self management: Dedication. Add: Follow up on progress - tenacity
█ needs to work on her assertiveness, ensuring that she controls friendly but firmly.	EQ	Self-awareness: Add: Assertiveness
Punctuality. In the event that of being unable to meet a meeting or deadline, managing colleagues and client expectations needs to be improved.	EQ	Self management: Time management and communication
Needs to show more initiative. I think this is partly due to the fact that this was █ first real work experience, so was still trying to get to grips with what she should and shouldn't do (and strike the right balance between being proactive, yet respectful vs being overly confident or overbearing) so this will come with time and more experience.	EQ	Self-management: Initiative/Service Management Note: Experience
Tends to get a bit too emotional or excited when issues arise or are not timeously resolved	EQ/SC	Self- regulation / Conflict Management Emotional self control
Scope Management: As development area she should work on actively managing the scope and focus on containing.	FC	Project scope
Be more aware of business surroundings	ICC	firm-specific knowledge and be aware of organisational culture, operations and environment
Microsoft office skills (Excel, PowerPoint)	ICT	Digital literacy
No knowledge of SQL	ICT	Advanced/Specialisation
Focus on the quality of the output and not just the timeframe	MC	Recognition of Quality
Both the written and verbal English language to be improved by the candidate to reach higher quality and variation in expressions.	MC	Communication
Communication	MC	Communication
Communication	MC	Communication
Communication to administrative matters as well as communication to management of progress of projects.	MC	Communication
Communication with Clients (verbal / telephonically) — █ had limited opportunity during this internship to engage with external clients, so further exposure in this area will improve her confidence and therefore her ability to engage verbally with Clients more confidently and therefore effectively.	MC	Communication Note: work-based learning
Improve written skills and communication	MC	Communication
Professional responses need to be taken into account when replying to emails	MC	Written Communication - email etiquette
Written / oral communication skills can be improved	MC	Communication

Written communication, [REDACTED] must focus on being consistent when she creates documents. She tends to write the same thing differently in different sections of a document.	MC	Written communication
More out of the box thinking / taking more initiative.	MC/CC	Self- management Initiative /Lateral thinking
Communication skills and the ability to proactively engage to ascertain information and assistance	MC/SI	Communication/ Add: Be proactive SI-Collaboration
Be a specialist in at least one discipline. If you know one area well you can influence the business area by innovative thinking and suggestions. If you are generally good/average at everything but have no specialty you will find it difficult to fall back to what you know best when you need to.	N/A	Subjective opinion of the career path of intern. Vertical Specialisation is more important than horizontal knowledge. Innovative thinking can influence the business – Good mentoring



APPENDIX G – Module descriptors for the IS curriculum at University X at 2014

The module descriptors that were available, have been printed separately can be provided upon request. These module descriptors are provided as additional information pertaining to the IS curriculum that was tabulated and discussed in Section 5.3.1. A recap of the IS curriculum (Table 5.2) is placed here for ease of reference.

No.	Module code	Module name	Core/ Elective	Year Level
Undergraduate				
1	IFS 131/2	Introduction to Information Systems	Core	1
2	IFS 231	Business Analysis	Core	2
3	IFS 233	Systems Delivery Management	Core	2
4	IFS 232	Introduction to Client-Side Scripting	Elective	2
5	IFS 234	Server-Side Applications Development	Elective	2
6	IFS 242	Databases and Data modelling	Elective	2
7	IFS 244	Business Information Systems	Elective	2
8	IFS 251	Introduction to Object-oriented principles and Systems Design	Elective	2
9	IFS 262	Applied Object oriented principles	Elective	2
10	IFS 363	Systems Engineering Principles	Elective	3
11	IFS 361	Information Systems Strategy	Core	3
12	IFS 362	Architecture and Infrastructure	Core	3
13	IFS 352	Philosophy and Research Methods	Elective	3
14	IFS 351	Internet and e-Commerce (Capita Selecta)	Elective	3
15	IFS 341	Enterprise Resource Planning (Capita Selecta)	Elective	3
16	IFS 342	Data Modelling for Business Intelligence	Elective	3
17	IFS 324	Consulting Skills (Capita Selecta)	Elective	3
POSTGRADUATE				
18	IFS 714	Internship	Elective	Honours
19	IFS 721	Information Systems Practice	Core	Honours
20	IFS 722	Information Systems Research	Core	Honours
21	IFS 724	Information Systems Research Project	Elective	Honours
22	IFS 731	End user practical	Core	Honours
23	IFS 734	Capita Selecta (Oracle)	Elective	Honours
24	IFS 711	Delivering IS Benefits	Core	Honours
25	IFS 712	Managing Systems Delivery	Core	Honours