Competitive intelligence skills needed to enhance South Africa’s competitiveness

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Abstract

Purpose – South Africa as a country continues to rank low in the world of competitiveness. It is the aim of this paper to focus on the need for South African organisations to perceive competitive intelligence (CI) as one of the most important tools to improve their competitiveness through a systematic, practical approach to make the CI cycle worthwhile, especially through skills development. The paper intends to identify the skills CI professionals in South Africa need in order to conduct the CI process in organisations effectively, thereby improving the country’s competitive position.

Design/methodology/approach – The research for the paper is based on an extensive review of literature to identify the skills needed by CI professionals. A survey was conducted, by questionnaire, among organisations in South Africa with existing CI units in which the respondents had to identify the skills they deemed necessary for the CI professional to run the CI process effectively.

Findings – Findings suggested that the majority of respondents were 40 years and older, in the top structure of larger organisations and had been using CI for longer than five years. The overwhelming result is that there are skills inequalities between what skills respondents view as crucial and those that rated highest in their self-evaluation. Skills identified as most important include, among others, networking, research skills and analytical abilities.

Research limitations/implications – CI in South Africa is still in its infancy and in 2008 no professional CI groups existed. As a result, there is no recognised list of practising South African CI professionals available in South Africa. For this reason the respondent database consists of attendees of CI courses, workshops and seminars held by the Department of Information and Knowledge Management at the University of Johannesburg.

Practical implications – The research indicated that where CI had been established in certain organisations for at least five years, it did not reflect positively overall on South Africa’s current competitive situation. Where there is a systematic CI approach, however, problem-solving is easier to address and negatives could be turned around. With this in mind and a proper “buy-in” into skills development, it will have a very positive outcome for all the organisations that wish to improve their competitiveness.

Originality/value – For a country such as South Africa (and other developing countries) this research is of extreme importance as the country is facing a serious shortage of skills. Skills development of CI professionals can create a strategic advantage for the country and increase South Africa’s competitiveness.

Keywords Competitive strategy, Skills, Human resource development, South Africa

Introduction

South Africa’s lack of global competitiveness, according to various competitiveness indices (Blanke, 2007, p. 20; IMD, 2008, p. 1), has over the past few years become a contentious issue, with the main focus on the inability of the country to escape its competitiveness trap. This fact, its impact on South Africa as a country, and more particularly its business sector, has given cause for this research. Competitiveness
concerns factors such as skills, higher education and training, efficient markets, the ability to harness the benefits of existing technologies and business sophistication (Blanke, 2007, p. 5). One of the most prominent indices include the IMD's *World Competitiveness Yearbook* (IMD, 2007, p. 1), which analyses and ranks the ability of nations to create and maintain an environment that sustains the competitiveness of enterprises; countries that consistently rank high in these indices are the USA, Switzerland, Denmark, Sweden, Germany, Finland and Singapore (Blanke, 2007, p. 10). Common denominators of these leading countries are quality education and high spending on research and development (Blanke, 2007, pp. 9-20). In contrast to leading competitors, South Africa not only fails to improve its competitive position but its competitiveness is actually deteriorating.

The previous South African Minister of Finance, Trevor Manuel, stated in his 2008 budget speech that there are signs of uncertainty in South Africa’s economy. Barriers to faster export growth include high telecommunication costs, transport capacity strains and skills shortages. He also stated that South Africa should seek to engage proactively with the global environment by revising its strategic priorities for the coming decade (Manuel, 2008, p. 1).

According to Van Tonder (2007, p. 1) this declined rating is, among others, the result of inadequate government policy. The decline was not surprising, since issues such as skills shortages, regulating matters and poor services have not been addressed yet. The matter of skills shortages was greatly emphasised and research showed that only 26 per cent of the South African population is working or has the ability to work, whereas Mexico ranked at 40 per cent and the People’s Republic of China (PRC) at 58 per cent. The level of unit labour cost remains an important determinant of competitiveness and in this respect the South African industry is exposed to significantly lower wage levels (Van Tonder, 2007, p. 1). According to a leading Solidarity unionist, Joubert (in Van Tonder, 2007, p. 1), education and skills programmes of the state are insufficient and solutions to address these are working too slowly. In the category of skilled workers, South Africa holds bottom position in terms of the retention of skilled workers, the availability of engineers, efficient immigration legislation and discrimination and unemployment.

The World Economic Forum (Blanke, 2007, p. 5) has developed the Global Competitiveness Index (GCI) to assess national competitiveness, which provides a holistic overview of factors that are critical in order to drive productivity and competitiveness. These factors were ranked overall out of 134 and results for South Africa were as follows:

- institutions 46th;
- infrastructure 48th;
- macro-economy 63rd;
- health and primary education 122nd;
- higher education and training 57th;
- market efficiency 31st;
- technological readiness 49th;
- business sophistication 33rd; and
- innovation 37th (Global Competitiveness Index, 2008, p. 21).
From a list of 14 aspects, respondents were asked to select the five most problematic for doing business in their country. An inadequately educated workforce was ranked as the most problematic factor for 2008 (Global Competitiveness Index, 2008, p. 1), similar to 2007 (Blanke, 2007, p. 168). It is therefore evident that South Africa needs to redress some critical competitiveness issues, most notably the development and retention of a skilled workforce. Other factors that need to be redressed include an organisation’s strategy and the knowledge of competitors. A tool to redress the inadequacies is competitive intelligence (CI) (Hughes, 2005, p. 5). CI is a tool that transforms information into actionable intelligence that, if used in strategic decision making, could enhance an organisation’s competitiveness. For the purpose of this paper, CI will be defined as an ongoing, systematic evaluation of the external environment for opportunities, threats and developments that could have an impact on the organisation and influence reactive decision-making. CI as one of the fastest growing domains in the business sector has long been acknowledged as a strategic management tool (Du Toit, 2007, p. 34; Viviers et al., 2005, p. 577). Kühn (2005, p. 1) proposed CI as an instrument to advance competitiveness and a means to innovation through the use of knowledge. Therefore, the aim of this paper is to identify what skills South African CI professionals need in order for CI to be used successfully as a strategic management tool to enhance competitiveness both in the country and its businesses. To address the above problem, the following sub-problems will be dealt with:

- What phases does the CI cycle consist of?
- What specific skills are needed in order to conduct each phase of the CI process successfully?

**Importance of CI**

Increasingly, organisations are paying attention to CI, because it supports organisational needs in terms of gathering, interpreting and disseminating external information. CI has become a necessary activity in countries – compelling organisations to look beyond internal business activities and to integrate events in the external environment into the information picture continuously. CI supports the strategic process in organisations, acting as a “sensor” to indicate to top management whether the organisations are still competitive (Havenga and Botha, 2003). Knowing how to add value to information in order to obtain a competitive advantage is the real key factor for implementing a CI process. It is therefore not surprising to learn that management strategists are increasingly relying on CI to enhance competitiveness.

Kahaner (1996, p. 25) states that CI has become the “latest weapon in the world war of economics”, in which many emerging economies view CI as a way to win economic wars against larger, more industrialised countries. By using their wits instead of weapons, these countries are able to turn raw information into usable intelligence to further their economic status. Calof (1998) argues that CI has significant advantages, with managers of major companies proclaiming the importance of and need for CI. CI plays a key role in companies’ strategic management toward sustaining competitive advantage. CI contributes by providing analysis and understanding of the company’s external environment. Gilad (1989, p. 30) states that organised CI is the coordinated-across-the-entire-organisation activity of keeping under surveillance whatever parts of the entire environment the organisation decides to monitor, in
order to bring about a systematic collection and analysis of CI to serve the CI needs of
the organisation as a whole. CI is the process of developing actionable foresight
regarding competitive dynamics and non-market factors that can be used to enhance
competitive advantage. Competitive dynamics refers to the evolution of a country’s
industries and the moves and countermoves of competitors, suppliers, customers,
alliance partners and potential competitors. Competitive dynamics includes the ability
to provide products and services as or more effectively and efficiently than the relevant
competitors; for example, success in international trade, high productivity, competitive
cost of production and high quality of goods and share in regional or global markets.
Non-market factors such as government regulation, tariffs and the culture of a country
impact on competitive dynamics but are not suppliers of products or services to the
industry (Prescott, 1999, pp. 42-3).
Kahaner (1996, pp. 28-31) cites the following reasons as to why companies need CI in
the global economy:

• The pace of business is increasing rapidly and businesses are required to handle
  more projects and make more decisions with more speed than before.
• Technological development resulted in the introduction of wireless
  communication, personal computers, the internet and biotechnology. This has
  increased the speed and availability of communication and companies are
  experiencing an information overload.
• Increased access to resources increased the number of global competitors and
  decreased the importance of close physical proximity.
• Existing competition is becoming more aggressive. Many market places are
  maturing resulting in companies increasing their market share at the expense of
  their competitors.
• Political changes affect companies quickly and forcefully. Many countries have
  moved from communism or socialism to capitalism in the last decade.

CI management is a well-established function in organisations in developed countries,
because managers realise that if they do not monitor the actions and activities of their
competitors, their strategic plans will fail. Nevertheless, organisations in African
countries (including South Africa) continue to be surprised by undesirable changes in
the environment and it appears that the advances in managing intelligence are as yet
largely unknown in these countries.

CI process
The CI cycle had its origin in the key intelligence topic (KIT) process. This process was
developed to allow the CI director to identify and prioritise both senior management
and organisational key intelligence needs. In the KIT process it is determined what the
CI unit should research and to whom this intelligence should be delivered. The aim of
KIT originally was to identify management needs that require intelligence that could
be acquired from their own departments or other government representatives
(McGonagle, 2007, p. 74).

This process gave cause for the creation of the CI cycle (see Figure 1). All phases of
the CI cycle are interrelated and therefore the success of the one will determine the
success of the other. Various sources indicate that the generally accepted norm for the
CI cycle includes the constructs of planning and focus, collection, analysis, communication, process and structure, and organisational awareness and culture (De Pelsmacker et al., 2005, p. 608; Viviers et al., 2005, p. 578; Viviers and Saayman, 2004, p. 3). The planning and focus phase concentrates on the identification of needs in order to collect all relevant information, which is the second phase. In the third phase all collected information must be verified to determine rationality and factuality. This information is then communicated in an appropriate way to the relevant parties. The fifth phase requires the appropriate policies and procedures to be in place for CI to make a positive contribution to the organisation. This should be communicated effectively to employees in order to develop a culture of competitiveness and organisational awareness. Research has, however, indicated skills development as an additional construct of the CI cycle (De Pelsmacker et al., 2005, pp. 616-7) to the traditional ones being described. For the purpose of this research, skills development will be added to allow specific focus on this as a phase of the CI cycle. Muller (2002a, p. 6) suggests a few reasons why training is a necessary phase to include in the CI cycle. Through training, misconceptions regarding CI are cleared up, it has communication advantages, transfer of expertise and skills takes place and a mindset of CI awareness is fostered within the organisation. In addition, through training, the employees’ functions and roles are clearly identified (Muller, 2002a, p. 6).

Before training can be initiated it is important to determine the exact need in the organisation. The most basic training needs would include guidelines on information

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**Source:** Adapted from Muller (2002c, p. 2)
collection, analysis methods and techniques and the management of briefing sessions (Muller, 2002a, p. 7). Prescott and Miller’s (2001, p. 13) statement is closely connected, by indicating key areas for development as skills and observation. It is, however, debatable whether an intelligence analyst is born or developed. Prescott and Miller (2001, p. 13) state that all employees can be trained to provide information to the CI group and that they are most likely to do so if they receive information in return to enable them to make valuable decisions. When strategy, tactics and employee responsibilities are linked with CI training and it shows a contribution to bottom-line performance, employees will “buy in” and training will be most effective (Prescott and Miller, 2001, p. 13).

The development of skills concludes the CI cycle. Although training is an additional construct to the CI process, it is clear that training contributes to the success of each phase in the CI cycle. It is important that a regular audit is conducted to determine the level of CI skills in organisations. Training is then initiated according to the organisation’s identified needs. This paper will specifically focus on the construct of skills development with the aim to explore the role of the CI professional in utilising the CI process more effectively and by extension, enhancing the competitiveness of organisations through the development of skills.

**CI skills**

The reality of the CI function in the South African organisational structure still holds a demoted position. Individuals who developed this function now view it as a “back-room” activity. This causes the CI function to have a lack of importance and top management support, which leaves it quite restricted in terms of value (Cruywagen, 2002, p. 6). As indicated by Du Toit and Muller (2004, p. 3), the CI process will fail if it does not receive the necessary support and if operation of intelligence by top management is not implemented. A very specific set of skills is required of the CI professional to conduct the various phases of the CI cycle effectively (McLellan, 2001, p. 4).

The following is a list of generally accepted skills put together by practising CI professionals (McLellan, 2001, p. 5; Muller, 2000, p. 3):

- **Traits** – creativity, persistence, written and oral communication skills, analytical ability, understanding of scientific methodology, independent learning skills and business understanding.

- **Teachable skills** – strategic thinking, business terminology, market research presentation skills, knowledge of primary information sources and research methods, enhancement of journalistic interviewing, analytical abilities.

- **Professional experience** – knowledge of corporate power structures and decision-making processes, industry knowledge, enhancement of primary research skills.

Potential CI practitioners must develop their skills fully in order to have the ability to conduct the CI process efficiently. Lack of a specific trait could be solved through formal education (McLellan, 2001, p. 5). The above-mentioned is supported by findings of the American Productivity and Quality Centre (APQC). The Centre states that highly qualified personnel must staff the CI function. The highest priority is strategic thought combined with communication, analytical and interpersonal skills. Industry-specific
knowledge and information technology skills are also important for the CI professional (Cruywagen, 2002, p. 4; Hughes, 2005, p. 11). In order to view the competitive landscape realistically, CI personnel need to be truth seekers that take a stand against biased CI customers (Cruywagen, 2002, p. 4). Organisation, structure, planning and theories of management are of no real importance. Ventures are either successful or fail because of the people involved. The competition will only be outperformed through the attraction and use of the best people (Cruywagen, 2002, p. 7).

According to Muller (2000, p. 7) individuals who have knowledge of CI refer to it as a “multistage process”. It could also be referred to as the CI cycle, which consists of the identification of CI needs, project planning, collection and analysis and distribution of information. Some individuals, who do not have a real understanding of the concept of CI, refer to it as “picked up intelligence”. It is, however, clear that intelligence is not picked up, it is developed (Muller, 2000, p. 7).

The aim of the following section is to explore the different phases of CI in order to identify the specific traits, teachable skills and professional experiences that would make up the skills set for the CI professional.

Planning and focus phase
Du Toit and Muller (2004, p. 9) stated that planning represents 80 per cent of the intelligence process, whereas the actual execution thereof represents only 20 per cent. Planning also provides employees with a definite course of action. According to MacLeod (1996, p. 1) rational comprehensive planning consists of four elements, namely goal setting, identification of alternatives, the evaluation of meaning against ends and the implementation of decisions, with feedback cycles and repetition of steps.

It is clear that proper planning is the backbone of a good CI process. It is essential for the CI professional to be fully equipped in order to conduct planning successfully. CI professionals should know how to extract and identify intelligence needs from clients. They should be aware of the basic psychology types to recognise various orientations in order to give an indication of how to approach the client. Finally, it is imperative that there should be an information resource gap-analysis in order to pinpoint the client’s need (Muller, 2000, p. 7). Therefore, as is evident from the above-mentioned, the CI professional must have the ability to give direction, in other words have leadership qualities. In addition, an organised, open mindset is vital in order to set goals and look beyond the obvious.

After the planning phase has been completed successfully, the collection of all relevant information starts.

Collection phase
According to Heppes (2006, p. 31) the essential skills for the collection of information are:

- knowledge of various methods to gain access to internal and external sources;
- the assessment and management of primary and secondary information sources; and
- formal research skills and ethics regarding the collection process.

In addition, the individual should know how to ensure the validity and reliability of sources. CI professionals must be able to differentiate between hypothesised and open
assumptions (Muller, 2000, p. 8). Heppes (2006, p. 31) highlights the fact that this phase is based on how the intelligence function will be conducted with regard to the gathering of relevant information. Specific emphasis is placed on the analytical capabilities that a CI professional needs in order to manage this phase. These skills support the evaluation of how clear the client expressed his CI need and when and how the intelligence unit will find it possible to provide the information that was obtained from the available collection sources (Heppes, 2006, p. 31). Good networking skills are also a prerequisite. Not all results can be generated from published sources. The best results are generated from human contacts. These sources not only give information, but can explain the implications and significance thereof. If for some reason they cannot help, they may be able to direct the researcher to someone who can (Murphy, 2005, p. 63). Networking skills go together with communication skills and ethics. Murphy (2005, p. 114) states that “a lot of unpublished intelligence lies in people’s heads”. That is why the CI analyst should be a good talker as well as listener. It is of great importance that the professional should know what background information to gather beforehand, in order to decide if spending time on the interview will be worth while.

A number of procedures must be performed on collected information before the information can be analysed. Information must be organised in a functional format in order to add meaning. This process includes the following: collection and organising of related information, coming to indefinite conclusions with regard to the relationship among facts and their relevance, the assessment of the accuracy and reliability of each item, logical classification of items into categories, investigating the information source critically, and evaluating the meaning and value of content for further analysis (Heppes, 2006, p. 35).

Finally, in order for the collection phase to be conducted successfully, the CI professional should have excellent research skills, analytical abilities, work thoroughly, have good communication skills and ethics, and be creative. Once the CI professional has collected all relevant information, the analysis phase is initiated.

Analysis phase
The CI analyst must be creative, able to offer inductive as well as deductive arguments, must be skilled in applying basic analysis methods, have the ability to make an educated guess and have the correct approach to place the situation in context, which will provide a frame of reference with regard to the specific subject (Heppes, 2006, p. 36). This statement is supported by Muller (2000, p. 8), who adds that the existence of gaps and blind spots is unavoidable and therefore analysts should know when to cease analysis. CI professionals should not rely on facts only, but should also draw upon their intuition and imaginative sources. Good analysts above all must be “comfortable with ambiguity and not dismayed by it” (Murphy, 2005, pp. 133-5). The analysis phase of the CI process, however, is the most difficult part. Therefore, above all, the appropriate skills are necessary to evaluate the information, seek for patterns and create different scenarios based on the analysis conducted (Heppes, 2006, p. 36). The ability to perform appropriate analysis and interpretation is a vital aspect of the process of CI. Good analysts adapt their opinions as circumstances vary (Murphy, 2005, pp. 133-5).
In order for the CI professional to put the above skills to good use, it is necessary to be aware of and refrain from pitfalls such as prematurely formed views, superficial lessons from history, group-thinking or stereotypical thinking, excessive secrecy, projection of one’s own culture, ideological beliefs, doctrine, or expectations of others, wilful disregard of new evidence, and bias-reasoning (Heppes, 2006, p. 39).

Finally, in order for the CI analyst to perform analysis effectively, necessary skills include analytical abilities, trusting one’s “gut feeling”, interpretation skills and various types of arguing. CI analysts should also be ready to follow the lonely road, because they do not tend to “follow the herd”. “There are two kinds of analysts. The first type wants to be right. The second wants to have company” (Murphy, 2005, p. 135). After all relevant information has been analyzed it is communicated to the client.

Communication phase
Required skills for effective communication of collected evidence are the ability to choose a suitable format and appropriate media, persuasive presentation skills and the capability to deliver organised and summarised findings (Heppes, 2006, pp. 35-6). The primary objective of reporting is to present relevant information that is 100 per cent accurate. The CI analyst always presents the findings to the client in an unemotional, objective manner. Also, the analyst must constantly refrain from presenting their own perceptions, unchallenged statements, bias and wishful thinking.

Analysts must be modest and intellectually flexible to enable them to change their minds in light of the evidence (Murphy, 2005, p. 232). According to Muller (2000, p. 8), presentation skills should be persuasive, assertive and diplomatic. In summary, the CI professional should have appropriate communication skills and the ability to know when to focus on facts. In order for the CI process to be used to its full potential, it is vital that the concept of CI is known, understood and recognised throughout the organisation.

Process and structure, organisational awareness, culture and skills development phase
In order for an organisation to be successful, it is necessary that all employees understand the role they play in the bigger organisational system (Paper et al., 2001, p. 89). Each and every employee must have a proper understanding of how the organisation works. One of the conclusions to which Paper and colleagues came, based on their study, was that “people are the key enablers of change” (p. 89).

Therefore, based on this conclusion, it could be argued that the phases of “process and structure”, “organisational awareness and culture” and “skills development” are interrelated, since an organisation’s structure is supported by the appropriate organisational culture. Employees in turn will not be interested in changing or adapting to a structure that they are not aware of, in this instance, CI. The concept of CI should be part of every employee’s job description. Awareness of the true value of intelligence needs to be created. There should also be mechanisms in place to support employees in identifying intelligence that is of significance (Murphy, 2005, p. 17). Awareness services can be established where employees receive current updates, for example via intranet (Murphy, 2005, p. 234).

To conclude this section, it can be stated that the CI professional skills set should comprise of the following:
Traits would include leadership qualities, vigorousness, persistency, determination, ability to work diligently and creatively, trust in intuition, objectivity, being unemotional and having an imaginative mindset.

Skills that could be taught would include networking skills, verbal and non-verbal communication skills and ethics, various types of arguing and an open organised mindset.

The ability to evaluate information based on analysis should include the creation of scenarios and recognition of patterns.

The above-mentioned states the required skills set for the CI professional as indicated by literature. The next section represents the results of a survey that was conducted among 132 individuals. The survey dealt with the skills necessary for the CI professional in South African organisations.

Survey on skills needed by CI professionals in South Africa
South Africa trains only 44.6 per cent of its skilled workers, compared to the PRC (69.1 per cent), India (55 per cent) and Poland (78.9 per cent). In 2007 only half of the whole country's Grade 12 scholars passed. In 2006 a massive 200,000 graduates were unemployed, compared to 60,000 in 2004. The construction sector is also currently experiencing a serious lack of skills, which it can hardly satisfy. The ramifications are serious, especially with the 2010 soccer World Cup just around the corner (Smith, 2008, p. 1), and it could be argued that in general, lack of skills might be one cause for South Africa's poor competitive position. Therefore, with the focus on CI, if professionals do not have the appropriate CI skills, the CI process will not be conducted efficiently. The previous section investigated the specific skills necessary for the CI professional in South Africa. The objective of the empirical survey was the identification of skills needed by South African professionals in order to conduct the CI process successfully.

Research methodology
CI in South Africa is still in its infancy and for those that do conduct CI practices it still is a matter of sensitivity. With an increase in attention paid to the subject of CI, various professional groups were launched, for example, SCIP Southern Africa (SCIPSA), South African Society of Competitive Intelligence Professionals (SAACIP) and the Knowledge Management Society of South Africa (KMSSA). The membership ratings, however, were very low and in 2008 none of these CI groups were functioning. As a result, there is no recognised list of practising South African CI professionals available in South Africa (Viviers and Muller, 2004, p. 56). For this reason the research population for this survey were attendees of CI courses, workshops and seminars held by the Department of Information and Knowledge Management at the University of Johannesburg. The University of Johannesburg's database consists of 132 individuals. A questionnaire was compiled containing 12 questions in total. The questionnaire was divided into four sections. Section A was limited to background and/or biographical information, while Section B explored the respondent's perceptions about necessary skills for the CI professional. Section C required the respondent to evaluate him/herself regarding certain given skills. Finally, in Section D the respondent was asked for additional comments that could be relevant to this study. The questionnaire was developed in a uniform resource locator (URL) format by the Statistical Consultation
Services (Statcon) at the University of Johannesburg (a URL is a compact string representation for a resource available via the internet). The questionnaire was sent out via e-mail, including the URL link and accompanied by a covering letter to all respondents on the database. The respondents had to submit the completed questionnaire directly via the URL link to Statcon for statistical analysis of the data. The data were put into spreadsheets, with statistical graphs for a visual representation of the results. A total of 78 completed questionnaires were received, which gave a response rate of 59 per cent.

Findings

Demographic profile. The sample represents 34.2 per cent (26) of respondents within the age group 24-39 years. Respondents within the age group 40-49 years represented the majority with a total of 42.1 per cent (32), followed by 23.7 per cent (18) of respondents falling in the category of 50 years or older. With regard to the level of employment, 68.8 per cent (53) of the respondents were in the top structure of the organisation, whereas 31.2 per cent (24) were in line management.

Qualifications. With regard to the academic qualifications of the respondents, 50.6 per cent (39) of the respondents attained a postgraduate degree, whereas only 24.7 per cent (19) of the respondents’ highest qualification was a post matriculation diploma and 24.7 per cent (19) had a baccalaureate degree. The data signifies that most respondents (75.3 per cent) held a degree. CI necessitates the mastering of specialised rather than general skills. The above results support the findings of Pietersen (2006, p. 49), which indicated that the CI professional should be a highly qualified person.

Application of CI in organisations represented. Multinational corporations and private organisations comprised 35.1 per cent (27) of the respondents, respectively. National corporations represented 16.9 per cent (13), parastatal ones 7.8 per cent (6), and registered non-governmental organisations (NGOs) 1.3 per cent (1). Other companies that did not fall into any of the categories mentioned represented 3.9 per cent (3) of the respondents. The majority of respondents, 70.5 per cent (55), originated from companies with 201 or more employees; and 29.5 per cent (23) of the respondents were from companies with no more than 200 employees. This indicates that CI is applied more often in larger organisations, since only they can afford a CI unit. Thirty-one per cent (23) of the respondents indicated that CI had been in existence in their organisation between five and ten years, 39.2 per cent (29) indicated less than five years and 29.7 per cent (22) more than ten years. Therefore, the above figures state that CI had been in existence for at least more than five years in 60.8 per cent (45) of the companies surveyed. Most respondents had zero to four years’ (40 per cent) CI experience, followed by 31.4 per cent with 5-9 years, and 28.6 per cent with ten years or more. The majority of the respondents (95.7 per cent) felt that CI played either an important or very important role in management decision-making. Only 4.3 per cent of the respondents specified that CI was either unimportant or totally unimportant in their organisation. With regard to this, CI was viewed as very important in gaining an overall competitive advantage by 91.5 per cent of the respondents. Six respondents (8.5 per cent) stated that CI was of no importance in their organisation and it is remarkable that, although they worked in the CI profession, these individuals still did not acknowledge the role that CI has to play in the business sector.
Respondents’ perceptions with regard to CI skills required by CI professionals

Respondents were asked to identify CI skills they deemed as necessary for a CI professional. Skills identified in the literature survey were listed and respondents had to give each skill a ranking out of 100 per cent according to a Likert scale which comprised the following:

- totally unimportant;
- unimportant;
- very important; and
- important.

The credibility of this section is measured by the Cronbach’s $\alpha$ coefficient, which is a coefficient of reliability (or consistency). Cronbach’s $\alpha$ coefficient typically ranges from 0 to 1.0, with higher magnitudes being more desirable. The individual sets of questions in the research questionnaire were ranked as reflected in Figures 2 and 3. An overall coefficient of 0.809 was calculated for the results obtained, and this is considered to be in the range of scores considered as reliable, which should be above 0.7 (see Table I).

Figures 2 and 3 illustrate the most important skills necessary for the CI professional, as identified by the respondents. Please note that the results are split into two graphs in order to provide a clear layout of the findings.

The three most important skills in Figure 2 represent networking skills with 72.7 per cent (48), analytical abilities with 71.2 per cent (47), and research skills with 68.2 per cent (45). This was followed by strategic orientation representing 67.7 per cent (44), objectivity with 65.2 per cent (43), specific industry knowledge with 58.5 per cent (38), intellectual skills with 57.6 per cent (38), determination in 8th place with 54.7 per cent (35), verbal and non-verbal communication skills and ethics in ninth place with 53.8 per cent (35), and last an open organised mindset, that was ranked at tenth place with 53.0 per cent (35).

Networking skills proved to be the most important skill that a CI professional should have, together with research skills, that was ranked third. The retrieval of relevant information within a short timespan necessitates good networking skills.

![Most important CI skills](image)

**Figure 2.**
Representation of CI skills ranked from most to least important
The respondents put a high priority on analytical abilities, scoring it as second in importance. This skill is of great importance especially in the analysis phase of the CI cycle, which in turn is the “central nervous system” (Muller, 2002c, p. 2) of the CI process. Without proper analytical abilities, high-quality information that was gathered will be worthless. The above findings support the results of Pietersen (2006, p. 51), which found analytical abilities to be the highest ranked skill required for the CI analyst.

Figure 3 continues to provide a graphic explanation of the most important CI skills. Innovative skills were placed 11th with 43.9 per cent (29), followed by business understanding of behavioural skills with 51.5 per cent (34), multi-tasking with 51.5 per cent (34), being dynamic with 50.8 per cent (33), and hardworking with 49.2 per cent (32). Furthermore, an imaginative mindset was ranked 16th with 47.7 per cent (31), leadership qualities received 46.2 per cent (30), creativity 41.5 per cent (27), and business terminology 38.5 per cent (25). Lastly, marketing skills were rated at 33.8 per cent (22) by respondents, followed by various types of arguing at 24.6 per cent (16).

**Evaluation of CI skills**

Respondents were asked to rate their competency level with regard to the CI skills identified in the previous section (see Figures 4 and 5). The credibility of this section was also measured by Cronbach’s α coefficient. The individual sets of questions in the research questionnaire were ranked as in Figures 4 and 5. An overall coefficient of 0.877 was calculated for the results obtained and this is considered to be in the range of scores considered reliable, which should be above 0.7 (see Table II).
Figure 4. Highest ranked skills according to self-evaluation of respondents

Figure 5. Lowest ranked skills according to self-evaluation of respondents

Table II. Cronbach’s $\alpha$ for self-evaluation of important skills

<table>
<thead>
<tr>
<th>Cronbach’s $\alpha$</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.877</td>
<td>21</td>
</tr>
</tbody>
</table>
According to Figure 4, hardworking was placed first with 64.5 per cent (40), followed by determination with 54.8 per cent (34), strategic orientation with 40.3 per cent (25), an open, organised mindset with 37.1 per cent (23), specific industry knowledge with 36.1 per cent (22), business understanding of behavioural skills with 33.9 per cent (21), being dynamic with 33.9 per cent (21), intellectual skills with 32.3 per cent (20), multi-tasking with 32.2 per cent (20), and verbal and non-verbal communication skills and ethics with 31.3 per cent (20).

With regard to the lowest ranked skills (see Figure 5), 51.6 per cent (32) of the respondents rated themselves very high on objectivity, 30.6 per cent (19) on leadership qualities, 29.0 per cent (18) on business terminology, 29.0 per cent (18) on an imaginative mindset, and 27.4 per cent (17) on networking skills. Furthermore, innovative skills were ranked very high by 24.6 per cent (15) of respondents, analytical abilities by 24.2 per cent (15), research skills by 22.6 per cent (14) and creativity by 21.0 per cent (13) of respondents. Lastly, various types of arguing and marketing skills received 15.9 per cent (ten) and 13.1 per cent (eight) of responses, respectively.

Therefore, the three skills ranked highest on the respondents' self-evaluation, were being hardworking, having determination and strategic orientation. Comparing the results from the two different questions, it became apparent that the three skills indicated as most important in Figure 2 were not reflected in the self-evaluation of the respondents in Figures 4 and 5. In fact, networking skills that were placed first (48) in Figure 2, were only rated by 17 respondents according to Figure 5. Therefore, the conclusion can be reached that CI professionals in the industry do not have good networking skills. The fact that this skill tested very low in the self-evaluation, may reflect the findings of Viviers et al. (2004, p. 93). They found that even though the collection focus was excellent, the problem lies with the process and methods of collecting information. Since networking skills are important in the process of collection, the need to address this gap is highlighted.

Analytical abilities that ranked second in importance according to Figure 2 did not even feature in the top ten highest ranked skills in the self-evaluation. Therefore, the conclusion can be reached that having analytical abilities is one of the weakest links in the current CI skills set. This is supported by research findings of Viviers et al. (2004, p. 93) who concluded that analysis may be one of the weakest areas in South African companies, with reference to the CI process.

A closer look at strategic orientation reveals that it was ranked fourth with regard to the importance of skills and third with reference to the self-evaluation. Therefore, the conclusion can be reached that respondents do have a relatively strong strategic orientation. Attempts should, however, be made to change the direction to competitiveness, by finding a “balance between the organisation’s internal and external environment” (Pietersen, 2006, p. 52).

**Recommendations**

The findings of the empirical survey have important implications for management and/or businesses, specifically with reference to the future conduct of CI practices in South Africa. Because CI is still in its infant stage in South Africa, knowledge of the subject is limited. Contributing factors may include inadequate training programmes and the non-existence of active societies to foster CI. Therefore, the recommendations
which arise from the research findings are aimed at contributing to the knowledge of CI. The findings of the empirical survey confirmed that although CI is growing rapidly in South Africa, it lacks highly skilled people to drive the process.

It was found that respondents identified the three most important skills as networking skills, analytical abilities and research skills. These important skills were not reflected in the self-evaluation of the respondents. Networking skills featured fifth, research skills eighth and analytical abilities seventh, respectively. Proper analysis depends on the quality of information gathered. Networking skills, together with research abilities, are crucial for extracting relevant information. The conclusion therefore can be reached that there is a gap between what respondents view as important skills and their competency levels concerning those identified skills. One way of addressing this inequality might be to adjust courses and/or training programmes currently offered at South African universities. South African universities should pay attention to the training of CI professionals to develop their analytical and networking skills. In the knowledge economy, collection of data and information is not the key issue. The key to defining appropriate strategies is the examination and evaluation of information through analysis. Analysis is a multifaceted, multidisciplinary combination of scientific and non-scientific processes through which a CI professional interprets the data or information to provide meaningful insights. It is used to derive correlations, evaluate trends and patterns, identify performance gaps, and above all to identify and evaluate opportunities available to organisations. Analysis is arguably the most difficult skill to teach and learn and probably the area that is most neglected in South Africa for these reasons. In CI, industry knowledge counts far more than educational or professional background and close cooperation between academic institutions and industry is important in order to stay abreast of developments in the business environment and to ensure that CI programmes offered at universities anticipate and address changing formal training needs. This will produce CI professionals who are prepared for the CI job market. The need for CI is rather to specialise than to generalise.

It is suggested that the “applicant CI professional” undergo psychological testing in order to eliminate unsuitable candidates at the start of the recruitment process. The tests could also assist in identifying the aspects in which the candidate would need further training. This could be both cost- and time-saving. Also, the intellectual ability of the candidate to understand the CI concept needs to be determined. An example of such a test could be the Myers-Briggs type indicator (MBTI), which is used for indicating personality types. It is assumed that different personality types function better in different environments and ideally a match between the individual and the environment should be sought.

For large organisations it is suggested that a CI team be appointed and not just an individual. In that way a specialist could be appointed for each phase of the CI process. In smaller companies money is at stake, therefore a team cannot be appointed. Smaller organisations should make certain that the appointed CI professional has all the necessary skills to conduct the whole CI process effectively.

Since all phases of the CI cycle are interrelated, a specific skill set will be necessary to conduct this process successfully. Therefore, in order to illustrate this aspect, it is recommended that the following skills are included in the job description of CI professionals in South Africa:
considerable knowledge of the principles and practices of CI;
- the ability to aggregate, analyse and synthesise industry data into communicable deliverables that will help guide decisions;
- the ability to think strategically;
- specific industry knowledge;
- the ability to express ideas clearly and concisely, orally and in writing;
- presentation skills;
- technological skills;
- networking skills;
- research skills;
- the ability to multi-task;
- the ability to work according to deadlines; and
- an innovative personality.

Conclusion
The objective of this research was to determine the skills needed by CI professionals in South Africa. All phases of the CI cycle are interrelated and therefore the success of the one will determine the success of the other. Each phase of the CI cycle was discussed to explore exactly what skills are necessary to make up the skills set for the CI professional. In general skills were characterised in terms of traits, teachable skills and professional experience. The rapidly changing global business environment largely requires flexibility on the part of organisations and management, since the nature of competition has shifted, with exploding technological innovations leading to shorter product lifecycles. Competitive advantage shifts continuously and the ability of an organisation to stay ahead depends largely on the interaction and co-operation of CI professionals within the organisation. Organisations should have an appropriate skills development programme in place to keep employees informed about the latest trends and developments in the field of CI and the organisation as such. It could be argued that, in general, lack of skills might be one cause for South Africa’s poor competitive position. For CI to flourish in South Africa and for the discipline to be implemented and used optimally, there has to be an appropriate awareness of CI and a culture of competitiveness. CI should be incorporated throughout the organisation and it should be fixed in and aligned with an organisation’s infrastructure while remaining flexible to changes that may occur. It seems as if the CI function currently operates detached from the other functions in South African organisations and this should serve as a warning to the organisations. Without appropriate integration into business as a whole, the CI function is guaranteed to be unsuccessful. This is an area for future research. Therefore, with the focus on CI, if professionals do not have the appropriate CI skills, the CI process will not be conducted efficiently. The skills ranked highest in the self-evaluation of the respondents do not reflect the skills viewed as important. This points to a skills inequality in current CI professionals in South Africa. If South Africa is going to take its rightful place in a highly competitive global economy, the country needs to understand the importance of developing CI skills and practices that will take South Africa onto the next level of competitiveness and performance. The real
challenge for South African organisations is to develop global competence so they can expand globally. Practising CI in South Africa will be a challenge, but if one embraces the challenges then the opportunities are greater in South Africa than almost anywhere else. Key amongst the many challenges facing investors in South Africa is the need to educate people about the importance of CI.

References


Murphy, C. (2005), Competitive Intelligence: Gathering, Analysing and Putting it to Work, Gower, New York, NY.


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