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ATTRIBUTES OF AN ANALYST: WHAT WE CAN LEARN FROM THE INTELLIGENCE ANALYSTS JOB DESCRIPTION

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Abstract
Intelligence is a function embedded in the organisational structures of government agencies and departments at the federal, state and local level. The intelligence analyst plays an important role in supporting the operational and policy decision makers in those organisations. Notwithstanding that important role, there has been limited research into the attributes of good analysts. In the course of this research we examined 300 advertised analyst job descriptions and compared the attributes sought with those attributes described in the literature. Whilst some correlation was identified, the generic nature of the attributes sought suggests that it may be possible they have a negative influence on the quality of candidates applying for the roles. This research is significant in that it suggests that organisations and departments may need to rethink the construction of the analyst job description.

Keywords
Intelligence analyst, selection, attributes, skills, characteristics

INTRODUCTION

Over the last 20 years intelligence as a function has become embedded in the organisational structures of a wide cross-section of government agencies and departments. Corkill & Davies (2013) in their review of the intelligence function in an Australian context identified more than 88 agencies and departments across federal, state and local government. Intelligence analysts play an important role in informing decision makers in a wide variety of situations ranging from national security, policy development to compliance management. Intelligence is a product derived from a wide range of information garnered from an equally wide range of sources of often variable degrees of veracity. The intelligence analyst is responsible for analysing and making sense of this information and subsequently developing a product that supports or informs the decision making process. Notwithstanding this important role undertaken by intelligence analysts the literature on what constitutes a good analyst within the context of skills and attributes or education is somewhat limited.

Evans & Kebbell (2011) set out to identify what made an effective crime and intelligence analyst noting that employing the right people was an essential step in process of getting effective analysts. This project rather than look at what attributes were required of an effective analyst sought to explore what attributes organisations required of their intelligence analysts. This research examined 300 job descriptions posted online by organisations as part of their recruitment process. The objective of this project was to identify what attributes and characteristics organisations considered important in potential analysts and then compare and contrast that with what the literature suggested was critical.

THE ANALYST

The primary function of an intelligence analyst is to analyse information and data for the purpose of producing intelligence products that will assist decision-makers to make optimal decisions. The type of information and data an analyst might exploit and analyse will be contextually specific to the environment in which he or she operates. As such there is a broad range of labels that might be attached to intelligence analysts that suggest an equally broad range of skills and attributes required of those so employed as analysts. A brief examination of the literature and the wider intelligence domain will surface the following; intelligence analysts, crime analysts, imagery analysts, all source analysts, strategic analysts and so on (Marrin, 2011; Richards, 2010; Walsh, 2011). These labels whilst useful on the one hand create an impression that the function of the intelligence analyst is contextually specific and data driven. The reality is however that these labels reflect the nature of products produced by an intelligence analyst within the context of their specific decision-maker requirements. The intelligence analyst is conceptually driven rather than data driven (Katter, Montgomery, & Thompson, 1979) and it is this fact that drives what is a reasonable degree of conformity across the literature with regards to skills and attributes required of intelligence analysts. The following table summarises the skills and attribute sets as identified from the literature:

Table 1 *Qualification requisites rank ordered according to frequency count.*

Authors	Abilities, Skills, Attributes and Characteristics	Environment
(Clauser, 2008; Clauser & Weir, 1976)	**Characteristics**: Reasoning ability, Accuracy, Intellectual honesty, Open-mindedness, Scepticism, Detachment, Patience, Diligence, Perseverance, Imagination	National Security
(Katter et al., 1979)	**Characteristics**: Comprehend complex conceptual models, Generate conceptual models, Knowledge, Memory, Mental flexibility	Military
(Fischl & Gilbert, 1983)	**Attributes**: High level reasoning ability, Inductive reasoning, Intellectual flexibility, Writing skill, Memory, Intellectual curiosity, Deliberateness, Interpersonal skill, Achievement motivation, Self-discipline, Perseverance	Defence
(Schneider, 1995)	**Attributes**: Intellectual curiosity, Memory, Rapid assimilation of information, Tenacity, Make judgements **Characteristics**: Broad range of interests, Developed research ability, Experience, Initiative self-direction, Disciplined, Intellectual courage **Skills**: Writing skills, Oral communication skills	Law Enforcement
(Wing, 2000)	**Characteristics**: Knowledge, Foresight, Curiosity, Innovation, Determination, Intuition, Logic, Imagination, Inspiration	Military
(Wolfberg, 2003)	**Attributes**: Innovation, Synthesis, Learning, Questioning, Pattern recognition, Adaption to uncertainty, Visual thinking, Experimentation, Metaphors, Nonlinear systematic thinking	National Security
(Moore, Krizan, & Moore, 2005)	**Abilities**: Communication, Collaboration, Thinking **Characteristics**: Insatiably curious, Self-motivated, Fascinated by puzzles, Exhibit AHA thinking, Observes voraciously, Reads voraciously, Fruitfully obsessed, Takes variable perspectives, Makes creative connections, Playful, Sense of humour, Sense of wonder, Concentrates intensely, Questions convention **Knowledge**: Target, Community, Policy, Customer, Resource **Skills**: Critical reasoning, Literacy, Computer literacy, Expression, Foreign Language, Research, Information gathering manipulation, Project management, Visualization	National Security
(Allen, 2008)	**Attributes**: Information ordering, Pattern recognition, Reasoning **Skills**: Technical expertise, Target knowledge, Analytic techniques, Search and organisational abilities, Ability to synthesise data, Inductive reasoning, Express ideas	Defence
(Quarmby & Young, 2010)	**Attributes**: Communication, Collaboration, Critical thinking, Creativity **Skills**: Subject expertise, Procedural expertise, Disciplinary expertise, Generic knowledge	Compliance & Governance
(Richards, 2010)	**Skills**: Critical thinking, Creativity, Judgement, Communication	National Security
(Evans & Kebbell, 2011)	**Attributes**: Thinking, Communication	Law Enforcement
Corkill, (UnPub)	**Attributes**: Ability to diagnose and contextualise problems, Communication, Self-awareness	Law Enforcement

Given the aforementioned proposition that the function of intelligence analysts is to analyse information and communicate the resulting assessment to decision makers for action one can reduce the abilities, attributes, characteristics and skills of analyst to two key concepts, thinking and communication. In recent years authors such as Marrin (2011) and Walsh (2011) moved the analyst discourse beyond characteristics and attributes to consider the role and function of education in the professional development of analysts. Underlying their respective thesis is an assumption, one that is common amongst scholars looking at intelligence through a national security lens, that analysts commence their careers as graduates of a tertiary education system. Each of them considers what pathways might be taken to achieve professional status for intelligence analysts whilst noting that there are no agreed standards for or accreditation of intelligence analysts. However in the law enforcement intelligence space within the USA the US Department of Justice in partnership with the International Association of Law Enforcement Intelligence Analysts (IALEIA) have successfully published Law Enforcement Analytic Standards (IALEIA, 2012) these standards layout the attributes potential analysts should possess, largely consistent with those considered previously. What stands out though is that these standards articulate a minimal education requirement for an analyst as being an undergraduate degree.

The image of the intelligence analyst that emerges from the literature is one of a man or woman whom is very well educated, an exceptional thinker with highly developed problem solving skills and outstanding communications skills both as a writer and an orator. That being the case what sort of job advertisement will enable an intelligence organisation successfully to capture their attention and subsequently submit a job application?

METHOD

The study employed a qualitative research design in the form of a literature critique, utilising a systematic review matrix (Garrard, 2014, p. 106; Jesson, Matheson, & Lacey, 2011, p. 104) to organise and summarise 300 intelligence analyst job advertisements posted online. The advertisements were extracted between the year of 2009 and 2015, from 45 different agencies and departments across federal, state and local government within all states of Australia. Utilising purposive cross-sectional sampling (Bernard & Ryan, 2010, pp. 365-366), a total of 30 job descriptions were selected from the total sample, providing a snapshot of the data across all states and the majority of job classification/grade levels. The 30 selected advertisements were subjected to content (pp. 287-294) and thematic (pp. 53-73) analysis and critiqued for qualification, experience, knowledge, skills and personal attribute content, incorporating an interpretive inductive approach (Thomas, 2006) to extract significant themes. The 30 positions were from the following domains; police 11, justice 5, crime and corruption 2, corrections 2, Australian Crime Commission 2, transport 2, other agencies 5.

To reduce textual data, the themes were coded (Bernard & Ryan, 2010, pp. 76-88) and systematically grouped (Elo & Kyngäs, 2008) by comparing similarities and differences. Each code was then placed in an Excel phrase list, which was analysed mathematically according to frequency count (f) (Bernard & Ryan, 2010, pp. 56-57), ranking the value of each phrase from highest to lowest in order to identify higher order themes and subordinate concepts. This facilitated the identification of the attributes and characteristics organisations consider important in potential analysts, where the more often a phrase or word appeared across all job descriptions, the more likely it is a salient theme (pp. 56-57). The identified themes were then compared and contrasted to what the literature suggests to be critical attributes and characteristics of an intelligence analyst in order to identify potential mismatches.

FINDINGS

The initial thematic and content analysis identified a total of 109 requisite themes within the textual data, which were compared, systematically grouped and reduced to 55 requisite descriptors. These descriptors were then further grouped, tabled and ranked according to frequency count (f) under five overarching requisite strategies: Qualification (n = 4, listed in Table 2), Experience (n = 10, listed in Table 3), Knowledge (n = 8, listed in Table 4), Skills (n = 15, listed in Table 5), and Attributes (n = 18, listed in Table 6).

Table 2 *Qualification requisites rank ordered according to frequency count. *Note: f = frequency count.*

Qualification	***f***
Tertiary	14
Training	3
Vocational	3
Postgraduate	1

Whilst the literature is not explicit with regards the minimum educational standards required of intelligence analysts, it is evident that for the most part scholars are of the view that intelligence analysts will possess at least an undergraduate degree (Breckenridge, 2010; IALEIA, 2012; Marrin, 2011). This is consistent with the function of the intelligence analyst being an advisor to the decision maker, a professional whom is required to make sense of complex situations and develop products that will allow the decision maker to make optimal decisions (Moore, 2011). It is therefore somewhat disconcerting to see in our sample of job descriptions (Table 2) just under 50% (f = 14) required or desired a tertiary qualification. This is comparatively high though when compared against the full sample of 300 where the percentage of job descriptions that require or desire a tertiary qualification falls to 19%.

Table 3 *Experience requisites rank ordered according to frequency count. *Note: f = frequency count.*

Experience	***f***
Intelligence Analysis	8
Information Tools	5
Management	5
Intelligence Environment	3
Auditing	2
Intelligence Analysis Tools	1
Data Collection	1
Investigations	1
Legislation / Policy	1
Prison based experience	1

The literature is somewhat silent with regards the relevance of professional experience. The notable exception however is the IALEIA law Enforcement Analytic Standards (2012) which addresses the intersection of experience and education noting the equivalent to a four year degree, alternatively five years of relevant experience with a two year degree or at least ten years relevant experience with less than a two year degree. As evident from Table 3, experience requisites of all forms ranked low, which might be expected if the positions were entry level positions, which they were not. Given that there was a less than 50% requirement for tertiary level qualifications, it might have been expected that there would be a significantly higher focus on candidates having experience appropriate to the role, however, this does not seem to be the case.

Table 4 *Knowledge requisites rank ordered according to frequency count.* Note: f = frequency count.*

Knowledge	***f***
Intelligence Processes, Principles and Practices	14
Public Service Principles (Generic + Specific)	9
Thematic knowledge	8
Research and Analytical Skills/Techniques	2
Information Processing Tools	2
Information Security	2
Situational Awareness	2
Risk Management	1

With the exception of knowledge of public service principles (n = 9) in Table 4, the knowledge requisites are largely consistent with the literature.

Table 5 *Skills requisites rank ordered according to frequency count.* Note: f = frequency count.*

Skills	***f***
Communication skills	28
Research and Analysis Skills	20
Project Management Skills	11
Critical thinking	11
Computer skills/literacy	10
Organisational Skills	8
Leadership skills	8
Team work skills	7
Management skills	5
Achieve results	5
Information Management	4

Confidentiality practice	4
Applying intelligence processes	1
Risk Management	1
Provide training	1

A strong correlation between our sample and the literature can be seen with regards to critical communication, thinking and analytic skills.

Table 6 *Attribute requisites rank ordered according to frequency count.* Note: f = frequency count.*

Attributes	***f***
Integrity	9
Drive	7
Initiative	5
Commitment	4
Respect	3
Adaptability	2
Fair	2
Confidence	2
Self Discipline	2
Innovation	2
Flexibility	2
Productive	1
Honesty	1
Professional Standards	1
Creativity	1
Attention to Detail	1
Willingness	1
Resilience	1

There is a degree of divergence between our sample and the literature when we look at the attribute requisites. Within the literature attributes tend to coalesce around those of cognition and thinking whereas within our sample attributes tend to be more consistent with the generic public service attributes.

DISCUSSION

The intelligence analyst is in short an intellectual, an individual whom is employed for their cognitive and intellectual skills. This is clearly evident when abilities, skills, attributes and characteristics as described in table 1 are reviewed. It is clear from the literature that analysts are described within the context of an intellectual and cognitive paradigm.

For the most part the job descriptions analysed have a limited requirement for formal, tertiary education. This indicates a failure to recognise the intellectual and critical thinking capabilities required to be an effective analyst. The function of tertiary education is to produce graduates whom have critical cognitive skills that are consistent with those identified in the literature. As an example the generic graduate attributes of ECU graduates are; ability to communicate in both written and oral forms, ability to work in teams, critical appraisal skills including problem solving and decision making, ability to generate ideas being innovative and creative and finally a cross cultural outlook (*Course coordinator handbook*, 2015).

There is an assumed nexus between experience and education that suggests over time experience negates the need for formal education. Yet this is not addressed in any significant way amongst the job descriptions analysed. In fact if anything there is a failure on the part of most agencies to exploit the value of experience by explicitly addressing that criteria in the job description. For example experience in fields of employment that require problem solving, research and the like which would provide evidence of cognitive and intellectual skills is not considered.

Generally speaking, the intellectual and cognitive requirements identified in the job descriptions and criteria are based on generic recruitment requirements as opposed to the analyst specific capabilities identified in the

literature. This is evident predominantly in the list of skills and attributes identified in tables five and six few of which relate to the cognitive and intellectual requirements of analysis. Notwithstanding that the importance of communication and, research and analysis skills are two of the few skills or attributes identified as important in the majority of job descriptions. Overall a review of various job descriptions indicates a prevailing perception of intelligence analysis as a clerical, administrative role.

CONCLUSION

The intelligence analyst plays an important role in any organisation as an advisor to the organisational decision makers. Analysts need to be well educated intellectual individuals whom are able to undertake complex research and analysis then importantly communicate the output of their analysis in an effective manner, such that their decision makers are able to make optimal decisions. The sample of job advertisements analysed in this study revealed a number of weaknesses. Firstly, the limited inclusion of educational requirements has the potential to dissuade graduates from applying for entry level intelligence positions. Secondly, the focus on using the generic public service attributes create a perception that many of entry level intelligence analyst roles are nothing more than clerical and administration roles. This may also dissuade potential graduate applicants from applying for those entry level roles. Finally it is possible that those individuals recruited as analysts on the basis of their fit with the generic attributes may lack the intellectual and cognitive attributes required for the role.

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