

What do Employers expect from Business Analysts and is it captured by the “Business Analysis Body of Knowledge” (BABOK)?

Full Paper

Paul Meredith

Strategic Systems Solutions
Eleebana, NSW.
Email: paulmeredith@pcm.id.au

Peter Summons

School of Electrical Engineering and Computing
The University of Newcastle
Callaghan, NSW
Email: Peter.Summons@newcastle.edu.au

Mira Park

School of Electrical Engineering and Computing
The University of Tasmania
Hobart, TAS
Email: Mira.Park@utas.edu.au

Bruce Cheek

BR & WE Cheek Computing
Carey Bay, NSW.
Email: bruce.cheek@gmail.com

Abstract

Emerging professions need to define their role and contributions to business and society. An important part of this is setting policies and definitions of what constitutes a professional and professional practice in their discipline. This information is increasingly being captured and codified using tools such as Bodies of Knowledge, Quality Frameworks and Codes of Practice.

The International Institute for Business Analysis defined a Body of Knowledge for Business Analysis (BABOK). This paper reports on a longitudinal survey of 240 SEEK advertisements over a six year period investigating how closely the skills and knowledge required for Business Analysis positions matched those defined within BABOK.

This exploratory and qualitative study used secondary sources, so generalizability of results has limitations. Nevertheless, interesting patterns were observed. There was strong evidence that the “Competencies” defined within BABOK are sought by employers. However, surprisingly little reference was made to many of the BABOK Knowledge Areas.

Keywords: Business System Analyst, Body of Knowledge, Business Analyst Skills, BABOK

1 INTRODUCTION

The Business Analyst (BA), or, more precisely, the Business Systems Analyst (BSA), is an emerging role within organisations in Australia. The Australian Government states that in this area “There are likely to be around 12,000 job openings over 5 years (that’s about 2,400 a year)” (Job Outlook 2019).

This paper reports an exploratory study on the current role of the Business Analyst. A longitudinal study was undertaken of job advertisements for Business Analyst positions within Australia and New Zealand in 2012, 2015 and 2018. Knowledge, competency and technique requirements included in these advertisements were then correlated with the Business Analysis Body of Knowledge (BABOK) (IIBA 2009, IIBA2015)

The study was exploratory and used a relatively small convenience sample of secondary data sources, therefore we can do no more than report on possible trends and findings. The survey raised possible areas for further, more detailed and controlled, investigation that may be considered in future development of the BABOK. The Research questions to guide the analysis were expressed in the form of “Propositions”, as shown below:

P1: Business Analysts are employed primarily to undertake the activities articulated in the BABOK

P2: Not all parts of the BABOK are identified as equally important by employers of Business Analysts

P3: Some of the skills and competencies that are highly regarded by employers are not included in the BABOK

2 BACKGROUND

Information and Communication Technology (ICT) projects involve technology, processes and people. Historically the process components have been handled by Systems Analysts and the Technology by Programmers. By contrast the “people” aspect of projects has often been ad-hoc, handled by end-user representatives or an organisational change management (OCM) specialist. Managing the people aspect is complex and challenging. Lerouge et. al. (2005) referred to interpersonal, political and business knowledge skill sets in the context of people skills. It is clear that unless the people aspects are well-managed the project overall is likely to fail.

Today’s BA is often involved in all of these aspects of the ICT project, clearly a very wide range of responsibilities. However, even with these onerous responsibilities, BA’s are often required to do more. Bourne (2005) coined the term “accidental project manager” to describe the BA who has been told by his or her manager: “*By the way, you can project manage this project as well as undertake the BA role*”. Similarly, the BA is often tasked with Organisational Change Management. The term “accidental organisation change manager” may also find common usage in the future. So, should the BA’s already challenging responsibility also involve Project Management and Organisational Change Management?

All of these roles are critical, but should they all become the responsibility of the BA? This paper makes no judgement on this question, but posits that, if these roles are included in the BA responsibility without reductions in other responsibilities, the BA role will become even wider and deeper than it is at present. If this happens then finding people with the required skills (and time) to successfully fill the role will become increasingly difficult, perhaps impossible.

In the medium term, as the business focus moves from efficiency to outcomes and from stability and continuous improvement to innovation and volatility, it will be important to continually review and update the role of the BA to ensure that it does not become impossibly difficult. These reviews must result in both the addition of new responsibilities and skills as well as the removal of other activities that are becoming less critical.

Bodies of Knowledge (BOK) are increasingly being used for formalisation of occupational roles and skill requirements. Having such documentation not only defines the range of skills and competencies needed to successfully fill a role. It also makes it clear whether the role is too broad for a single individual to fill successfully.

In the following section we will quickly overview BOKs and overview the Business Analyst BOK, the BABOK, which is widely used within the ICT industry.

3 CLASSIFYING PROFESSIONAL KNOWLEDGE

Many schemas have and still are being used to classify the work carried out within specific occupations and to define the knowledge and skills needed to carry out that work. This paper focusses on one of these, the Business Analysis Body of Knowledge (BABOK).

3.1 Bodies of Knowledge

Bodies of Knowledge (BOKs) are now accepted as important repositories of professional expertise. Wikipedia (2019) points to several alternative definitions of a BOK, including:

“Structured knowledge that is used by members of a discipline to guide their practice or work. The prescribed aggregation of knowledge in a particular area an individual is expected to have mastered to be considered or certified as a practitioner.” (Ören 2005)

“A set of knowledge within a profession or subject area which is generally agreed as both essential and generally known.” (Oliver 2012)

“The systematic collection of activities and outcomes in terms of their values, constructs, models, principles and instantiations, which arises from continuous discovery and validation work by members of the profession and enables self-reflective growth and reproduction of the profession.” (Romme 2016)

Collectively these definitions suggest objectives of a BOK include:

- Creation of an aggregation of the knowledge that is needed for practitioners and which guides their work;
- Facilitating distribution of that knowledge widely (within the discipline);
- Ensuring that professional practice is continually reviewed and the BOK updated regularly.

Examples of BOKs include:

- The Civil Engineering Body of Knowledge;
- The Project Management Body of Knowledge;
- The Business Analysis Body of Knowledge.

This research refers to the BABOK (see below). This paper hopes that the findings of its study may make a small contribution to each of these objectives for areas of future review of the BABOK.

3.2 The International Institute of Business Analysis (IIBA) and the BABOK

The IIBA was founded in Toronto, Canada in 2003. It is anecdotally regarded as one of the preeminent professional bodies for Business Analysts.

A Body of Knowledge Committee was formed in 2004 to draft a global standard for the practice of business analysis. Version 1.0 of “A guide to the Business Analysis Body of Knowledge” (commonly known as the BABOK) was released in 2005. Several updates were made between 2005 and 2008 with version 2.0 being released in 2009 and version 3.0 in 2015.

The BABOK defines the following **Knowledge Areas (KAs)**:

- 3.0 Business Analysis Planning and Monitoring
- 4.0 Elicitation and Collaboration
- 5.0 Requirements Life Cycle Management
- 6.0 Strategy Analysis
- 7.0 Requirements Analysis and Design Definition
- 8.0 Solution Evaluation

Each of these Knowledge Areas are further broken down into **Tasks** that produce outputs that are both demonstrable and measurable. A practising BA is expected to have expertise in each of these Knowledge Areas and the tasks associated with them.

BABOK also defines 6 **Competencies** needed for the performance of business analysis:

- 9.1 Analytical Thinking and Problem Solving
- 9.2 Behavioural Characteristics
- 9.3 Business Knowledge
- 9.4 Communication Skills
- 9.5 Interaction Skills
- 9.6 Tools and Technology

Completion of BABOK tasks is achieved by the use of specific **Techniques**, some of which may be relevant to a single task, while others are used by more than one task. Techniques are quite dynamic in the sense that they come in and out of favour on a regular basis, with new techniques being developed and existing techniques dynamically evolving. The BABOK has identified fifty techniques which are mapped to the individual six knowledge areas at the task level. Techniques vary from highly technical (e.g. data modelling) to the more subjective (e.g. lessons learned).

4 RESEARCH DESIGN

4.1 Data Collection

The analysis in this paper is based on job advertisements placed on SEEK in 2012, 2015 and 2018.

SEEK was founded in Melbourne in 1997 and has become one of Australia's largest online recruitment agencies. Their website allows job seekers to search for jobs against specified criteria, such as industry, location and salary band.

Online searches were initially undertaken on 2012 SEEK advertisements using the keyword "business analyst". Several trial extractions were undertaken to familiarise the researchers with the data generally contained within these advertisements and to design a data collection/storage process.

Data from the advertisements was coded to the BABOK categories described in Section 3.4. As well as coding to all Knowledge, Task, Competency and Technique areas defined within BABOK, additional categories were created for requirements identified that were NOT addressed in the BABOK. A limited set of demographic data relating to the advertisements, including factors such as experience required, employment type and methodology used, was produced.

An initial collection of 100 advertisements from 2012 was collected in December 2012. A second data gathering exercise in October 2015 yielded another 100 advertisements and finally in October 2018 a third sample of 40 advertisements was collected. The total data set included 240 advertisements.

4.2 Limitations of the Data Sets

The data set was a convenience sample and was not representative of the large Business Analysis discipline. While the longitudinal nature of the data provided an opportunity to identify trends over time, the relatively small data sets make any analyses that subdivide the datasets problematic. Further, the data was often qualitative and the coding of it, to an extent, subjective. Care is therefore needed to be taken to ensure that the limitations imposed by these characteristics are understood.

For these reasons, the analysis undertaken was simple. The authors looked for indications of trends and gross relationships. No statistical tests were used and care was taken not to make inferences from very small subsets of the data.

The analysis does not attempt to prove the "propositions" described in Section 1. As indicated in Section 1, the study objectives were simply to identify areas where further, more extensive "scientific" study seems justified.

4.3 Data Analysis

Advertisements were analysed line by line, mapping the requirements from each to the various BABOK elements. Data was processed using a range of tools, including spreadsheets, multi-dimensional software and report generation software.

5 ANALYSIS OF RESULTS

240 advertisements were analysed. Of these, 16 were excluded: 10 had been incorrectly labelled as being for a BA position and 6 were generic advertisements placed by recruitment specialists. This resulted in an analysis sample of 224 advertisements.

5.1 Demographics and Moderating Variables

Advertisements were categorised as shown in Figure 1.

This section presents brief observations relating to trends over time, correlations between the categories, and the rate of requests for expertise, for the most frequently referenced BABOK areas (from Figure 2, these knowledge areas are: 4 Elicitation and Collaboration; 6 Strategy Analysis; and 7 Requirements Analysis and Design Definition).

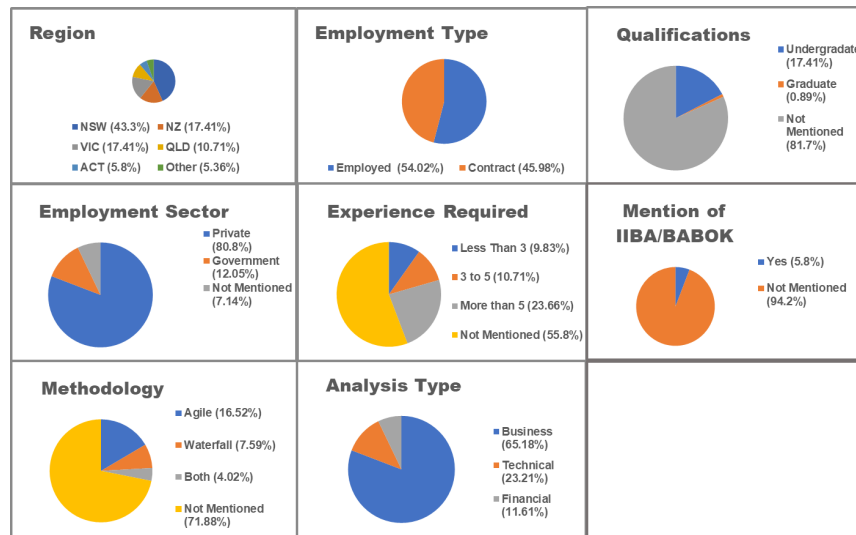


Figure 1. Demographic and Moderating variables from the samples.

Region: The majority of the positions were for positions in NSW, particularly in the final 2018 sample where NSW located positions increased to over 55% of the positions, while the number of positions advertised in Victoria and NZ dropped significantly in the last two data collection periods. Frequently referenced BABOK areas were not strongly correlated to region, with the exception of Queensland where higher levels of reference to these BABOK areas were evident.

Employment Type: Over the three survey periods the percentage of Contract positions almost doubled. Frequently referenced BABOK areas were not correlated with employment type.

Employment Sector: Over the three survey periods the percentage of Government positions almost doubled. Frequently referenced BABOK areas were referenced more often by advertisements for positions in the private sector.

Qualifications: Over the three survey periods the most striking aspect of this demographic was the large percentage of positions that did not mention any need for formal qualifications. This was consistent across all periods. Frequently referenced BABOK areas were not correlated with qualification.

Experience Required: A surprisingly large number of the advertisements did not mention experience levels required. Of those that did, the very great majority required more than 3 years of experience. There was only a single position offered for an entry level position. It seems reasonable to assume that the advertisements that did not specify minimum experience levels were still looking to recruit experienced staff. It is important to note the absence of advertisements for positions requiring minimal experience as this may be a limitation of the data sets. Frequently referenced BABOK areas were not correlated with experience.

Mention of IIBA/BABOK: This category was included to provide a feeling for how important employers perceived the BABOK to be, or how aware they were of it. While references to BABOK rose across the sample periods they remained low. It cannot be said that BABOK is a driving force in

recruitment. Frequently referenced BABOK areas were not correlated with specific mention of BABOK in the advertisement.

Methodology: References to methodology, while relatively low, were interesting. Over the course of the survey periods references to Agile more than doubled, while references to more traditional approaches reduced by more than 80%. It would appear that Agile is now dominant. Knowledge Area 6 (Strategy) was referenced much more frequently by advertisements seeking Agile. The other frequently referenced BABOK areas were not correlated with mention of methodology.

Analyst Type: Advertisements were divided into three groups based on the type of work involved, “Technical”, “Business” and “Financial”. Over the survey periods, the percentage of jobs for “Business” increased by around 20%, with related reductions for the other two groups. References to the frequently referenced BABOK areas were fewer for “Finance” positions, but similar for “Business” and “Technical”

5.2 BABOK Knowledge Areas

References to individual generic tasks within each of the six BABOK Knowledge Areas (KAs) were aggregated to create a measure of references made to each. Figure 2 shows these results. It was decided that no further analysis would be carried out on KAs that were referenced by less than 15% of advertisements. These excluded areas are shown as patterned bars.

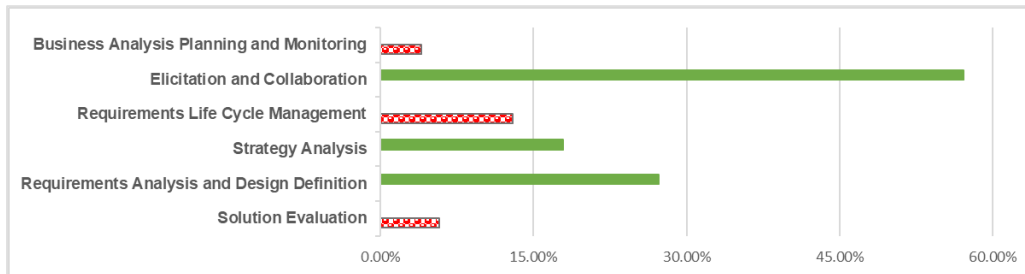


Figure 2. Business Analysis Knowledge Areas.

5.3 BABOK Tasks

Graphs were created for the remaining (most frequently referenced) KAs showing frequency of mention of individual Task types within that Knowledge Area (See Figures 3, 4 and 5). No further analysis was carried out on Task types mentioned in less than 5% of advertisements.

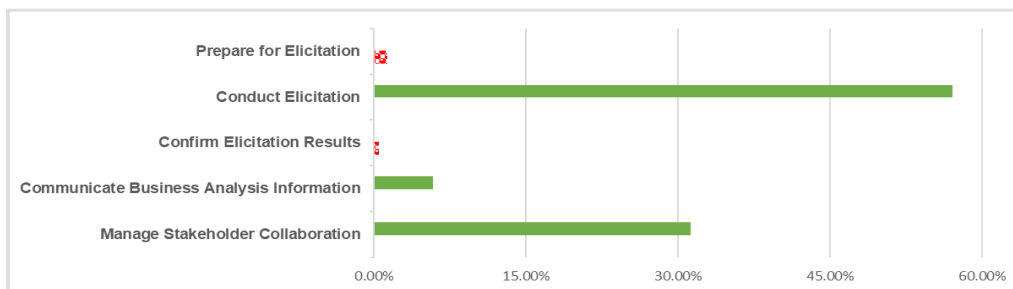


Figure 3. KA 4 - Elicitation and Collaboration.

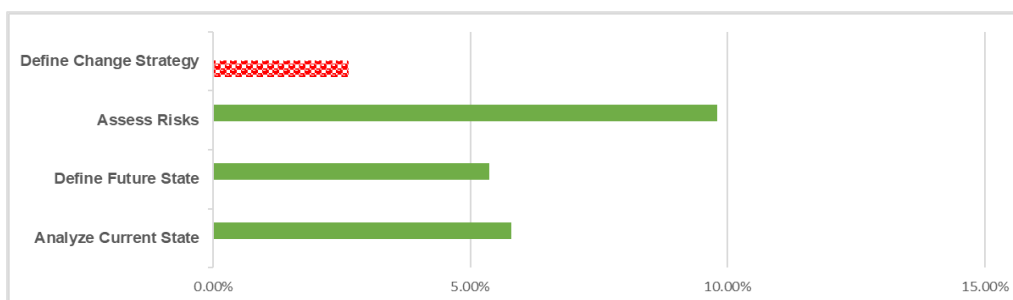


Figure 4. KA 6 - Strategy Analysis.

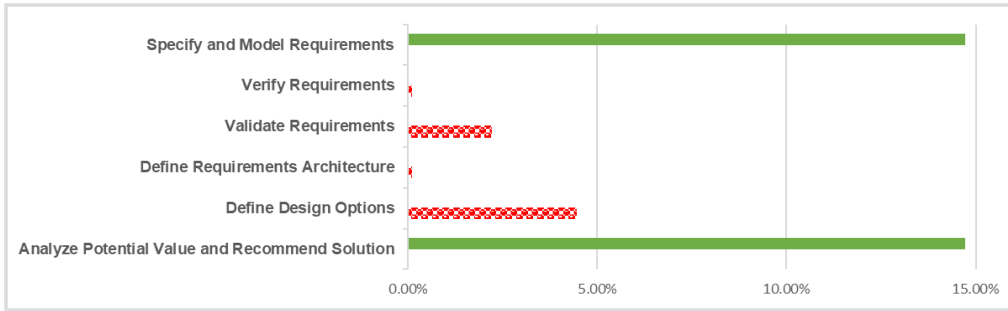


Figure 5. KA 7 - Requirements Analysis and Design Definition.

5.4 BABOK Tasks – Chronological Trends

The longitudinal nature of the data made it possible to analyse trends over time for the most referenced KAs and Tasks (KAs 4, 6 and 7) - see Figures 6, 7 and 8. The top set of (Green) bars show trends for the Knowledge Area with its associated Tasks (Black bars) below.

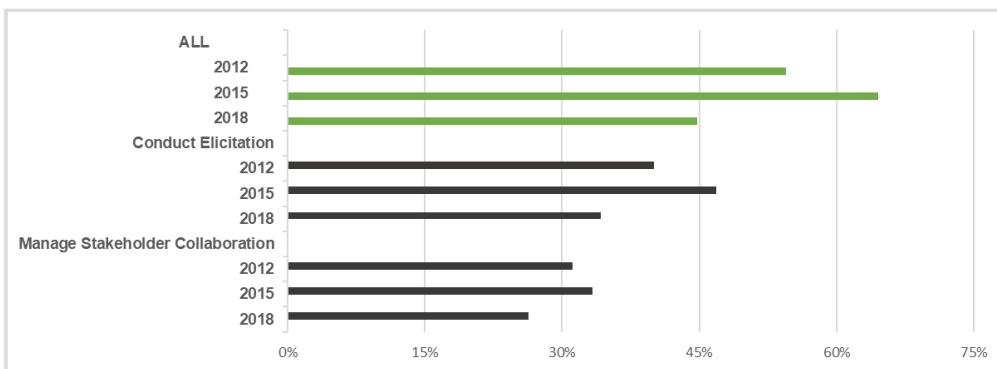


Figure 6. KA 4 - Elicitation and Collaboration - Trends.

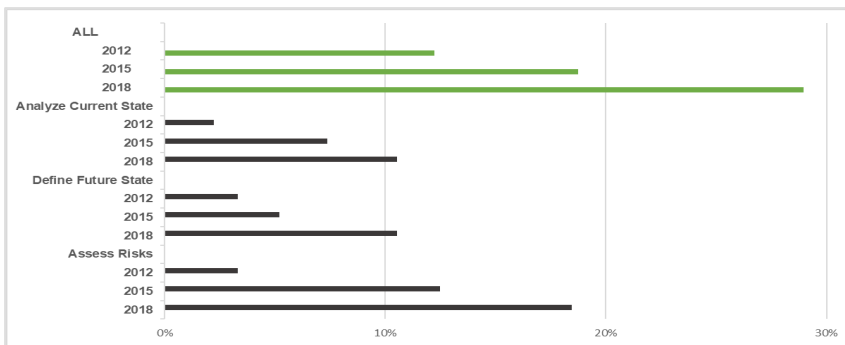


Figure 7. KA 6 - Strategy Analysis - Trends.

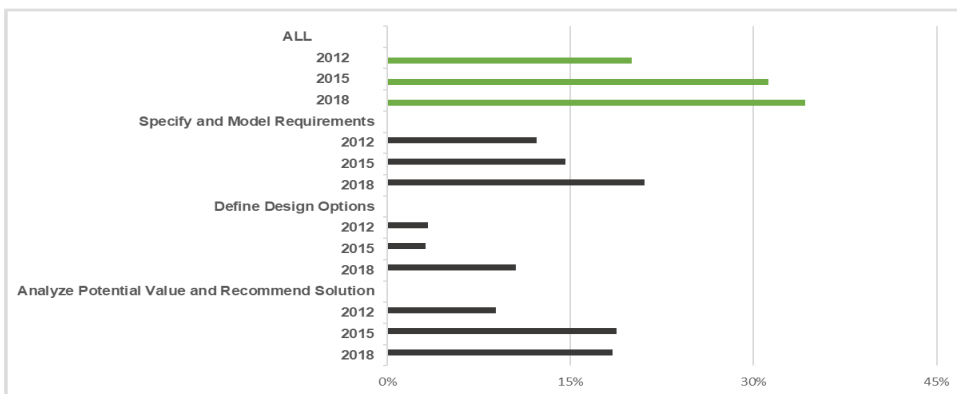


Figure 8. KA 7 - Requirements Analysis and Design - Trends.

5.5 BABOK Competencies

In contrast to references for KAs and Tasks, which were generally lower and not spread as evenly as would have expected, the references to BABOK Competencies were all consistently referenced. Therefore, complete analysis was done for all of these. Figure 9 shows these results. The same method was undertaken as for aggregation of KAs. An overall measure of references to Competencies was created. This measure is shown at the top of the graph (Green bars) with the lower sections identifying individual Competencies (Black bars).

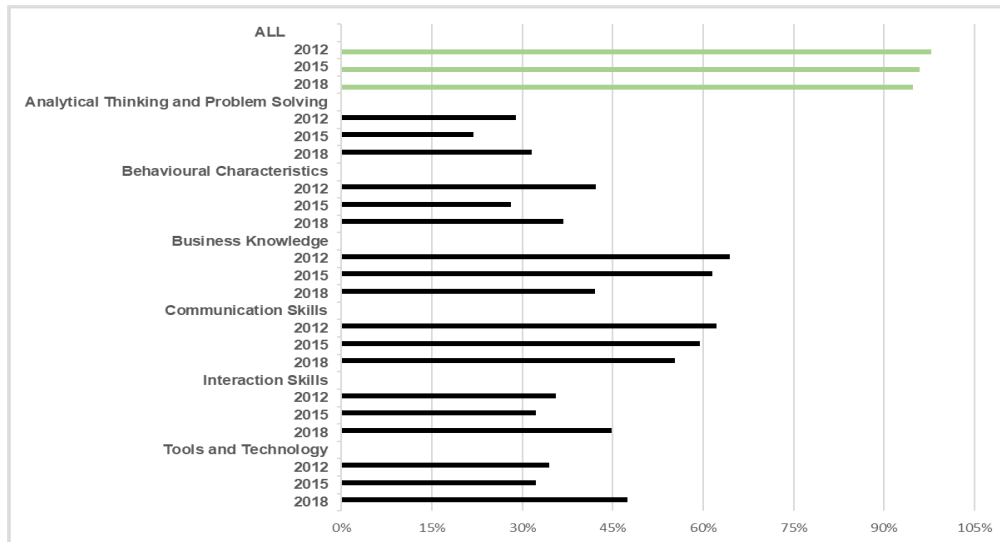


Figure 9. Underlying Competencies - Trends.

5.6 BABOK Technique References

The 50 Techniques mentioned within BABOK are both specific and volatile. For this reason there would not be no expectation to see consistently high references to them, or indeed consistent patterns in references over time. In the 224 advertisements analysed there were 259 references to BABOK Techniques. These were spread sparsely across the techniques, only 6 Techniques were referenced more than 10 times. Table 1 shows these.

Technique	References	Percentage
Process Modelling	108	48
Functional Decomposition	22	9
Business Cases	18	8
Use Cases	18	7
Data Modelling	16	5
Risk Analysis and Management	13	4

Table 1. Popular Technique References

5.7 NON-BABOK References

As described in Section 4.1, data was also extracted from the advertisements relating to references to elements that were not believed to be include, or at least not completely covered, within BABOK. There were 346 references to non-BABOK Areas. Table 2 shows the most commonly referenced of these.

Non-BABOK Topic	References	Percentage
Technical Skills	122	54
Data Management	50	22
Testing	50	22
Project Management	43	19
Implementation	35	16

Table 2. Non-BABOK References

5.8 Advertisements with few/no references to BABOK Knowledge Areas

The authors had expected relatively uniform references across all of the BABOK Knowledge Areas (KAs) within the sample's advertisements. However, apart from the three "popular" KAs (Elicitation, Strategy and Requirements), referencing was minimal. A simple analysis of the data sets showed:

- 60 of the advertisements (approximately 25%) made no mention of any BABOK Knowledge Area;
- 22 of the advertisements referred only to Elicitation and to Requirements Definition;
- 61 (approximately 25%) of the advertisements referred only to Elicitation;
- 10 of the advertisements referred only to Requirements Definition;
- More than 50% of the advertisements made reference only to Tasks within the Elicitation and Collaboration Knowledge Area.

6 CONCLUSIONS

The analysed data provides qualified support for the Propositions introduced in Section 1

P1: Business Analysts are employed primarily to undertake the activities articulated in the BABOK

- Advertisements included significant references to BABOK Competencies and Techniques. There was referencing to Knowledge Areas relating to Elicitation, Strategy and Requirements. However, there was also significant referencing of Non BABOK areas! Perhaps the word "primarily" may be too strong!

P2: Not all parts of the BABOK are identified as equally important by employers of Business Analysts

- Of the 30 Tasks identified with the KA's of BABOK, only 2 were referenced by more than 30% of the advertisements and more than 20 were referenced in less than 5%.

P3: Some skills and competencies that are highly regarded by employers are not included in the BABOK

- Areas not covered within BABOK, including Project Management, Implementation, Technical Skills, Data Management and Testing, were referenced in many advertisements (see Table 2).

6.1 Some interesting trends in the data

- Agile is reported as being utilised at higher levels in the later data samples.
- Interest in the Strategy and Risk Management Knowledge area seems to be trending upward, albeit from a low base.
- Demand for Business Analysts increased during the study duration with a corresponding lessening of demand for "Technical" Business Analysts.

6.2 What the employers seem to want Business Analysts to do

- Conduct Elicitation and Stakeholder Collaboration, and to a significant, but lesser, extent Requirements Gathering. (See Figures 2, 3, 4 and 5)
- Testing, Implementation, Data Management, Project Management and other non BABOK activities. (Table 1)

6.3 Final thoughts

The analysis presented in Section 5.3 suggests most positions had a largely operational focus on "doing" work. BABOK however refers to a wider range of activities, also involving planning, monitoring and evaluating. The authors take a view that Business Analysts should be involved in the full range of Tasks defined within BABOK.

Less than 5% of the advertisements specifically referenced BABOK suggesting that many employers may not be fully aware of, and engaged with, BABOK.

The longitudinal analysis reveals an increasing emphasis on AGILE and Business rather than Technical Analysis. BABOK has an excellent extension covering Agile and, in the authors' view, the core of BABOK would be improved if much of this extension were integrated into it rather than existing only on the periphery.

Notwithstanding any of the above, the BABOK is seen as a very important and useful publication. The challenges are (as noted in Section 2), keeping it current and making the potential beneficiaries aware that it exists and recognising that it is extremely valuable.

Finally, it is noted that BABOK is only one of many ICT related BOK's. There are other important alternatives, in particular the Skills Framework for the Information Age (SFIA, 2018) and CBOK, the Australian Computer Society's Core Body of Knowledge for ICT Professionals (ACS, 2019). The authors intend to include analysis and comparisons between both BABOK and SFIA in future work.

7 REFERENCES

- Bourne, L. 2005. "The Accidental Project Manager". *Project Management Institute of New Zealand Annual Conference*. Auckland.
- IIBA. 2009. *A Guide to the Business Analysis Body of Knowledge*. IIBA, v2.0. Toronto, Ontario, Canada: International Institute of Business Analysis.
- IIBA. 2015. *A Guide to the Business Analysis Body of Knowledge*. IIBA, v3.0. Toronto, Ontario, Canada: International Institute of Business Analysis.
- ACS. 2019. "Core Body of Knowledge for ICT Professionals(CBOK)". *Australian Computer Society*, Sydney. <https://www.acs.org.au/content/dam/acs/acs-skills/The-ACS-Core-Body-of-Knowledge-for-ICT-Professionals-CBOK.pdf> Retrieved: 12th Jul 2019.
- Job Outlook. (2019) "ICT Business and Systems Analysts". *Australian Government Department of Employment, Skills, Small and Family Business*. <https://joboutlook.gov.au/Occupation?search=Career&code=2611> Retrieved: 7th Aug 2019.
- Lerouge, C., Newton, S., Blanton, J.S. 2005. "Exploring the Systems Analyst Skill Set: Perceptions, Preferences, Age and Gender". *The Journal of Computer Information Systems* (45:3), Spring, pp 12-23.
- Oliver, G.R. 2012. *Foundations of the Assumed Business Operations and Strategy Body of Knowledge (BOSBOK): An Outline of Shareable Knowledge*. Darlington Press, Sydney.
- Ören, T.I. 2005. "Toward the body of knowledge of modelling and simulation". *Proceedings of the Interservice/Industry Training, Simulation Conference*, Orlando, FL, Nov.
- SFIA. 2018. "Skills Framework for the Information Age (SFIA)". *SFIA Foundation*. <https://www.sfia-online.org/en/framework>. Retrieved: 7th Aug 2019.
- Romme, G. 2016. *The Quest for Professionalism: The Case of Management and Entrepreneurship*. Oxford University Press, Oxford.
- Wikipedia. 2019. "Body of knowledge". https://en.wikipedia.org/wiki/Body_of_knowledge. Retrieved: 6th Aug 2019.

Copyright: © 2018 Meredith, Summons, Park & Cheek. This is an open-access article distributed under the terms of the [Creative Commons Attribution-NonCommercial 3.0 Australia License](https://creativecommons.org/licenses/by-nc/3.0/), which permits non-commercial use, distribution, and reproduction in any medium, provided the original author and ACIS are credited.