2008

The Roles and Skill Sets of Systems vs Business Analysts

Alan Vongsavanh
Westpac Banking Corporation

Bruce Campbell
School of Systems, Management and Leadership Faculty of Engineering and Information Technology University of Technology, Sydney, Bruce.Campbell@uts.edu.au

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Alan Vongsavanh
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School of Systems, Management and Leadership
Faculty of Engineering and Information Technology
University of Technology, Sydney
Email: Bruce.Campbell@uts.edu.au

Abstract

The role of business analysts and systems analysts appears to be very closely related, and there is no agreement on the definitions of the roles or the required skill set to become one of the said analysts. Though the number of these positions is increasing, the understanding of what the business and systems analysts are remains unclear and differs between organisations. A review of literature shows that there are common roles and skills between the two positions, as well as very distinct roles and skills that are clear. This research has demonstrated that although there is some harmony between the articles and interviews on the distinctions between the business analyst and the systems analyst, there are still discrepancies that can only be understood through further research.

Keywords

Systems analyst, business analyst, roles, skill sets

INTRODUCTION

The number of positions for systems analysts and business analysts is predicted to increase in the future as low-level information technology developmental roles continue to be outsourced overseas. Although the role and tasks of systems analysts has been clearly defined in the literature, the same is not true for business analysts. Existing research into the roles of systems analysts is relatively dated, whilst most of the articles found referring to the role of business analysts generally provide only anecdotal evidence of the role. There appears to be little consistency in the term used to identify the role of the business analyst with terms such as business systems analyst, functional analyst and even systems analyst all being employed to describe this, or other roles. The term used appears to be partly dependant on whether the person performing the role is employed within a business or technology group within the organisation. This lack of definition of the role of a business analyst then creates a situation where there is conflicting evidence for the skills required of that role.

The increasing need for business and systems analysts is partly due to the emphasis placed on getting correct and accurate user requirements. A clear definition and differentiation of these two roles and their associated skill sets would benefit companies which choose to hire these experts. It would also assist training institutions in developing courses to support industry with appropriately trained hires.

There is a need for research that identifies the difference between these roles and the skills that are required by each. Therefore, the research question for this exploratory project was:

What are the roles and skill set of the business analyst and the systems analyst?

This question was investigated within the context of a large Australian company. Answering this question will provide the data needed by educational institutions when designing subjects catering to prospective systems analysts or business analysts.

LITERATURE REVIEW

The Business Analyst

The business analyst is an employee within an organisation who may come from either an IT or a business background. Because of their functions and backgrounds, business analysts may operate from either the IT or business side of the organisation (Stevens 2003).

There are very few academic articles that provide a definition of the business analyst and even fewer that cover the skills required of these analysts. Non-academic articles in comparison provide a good understanding of the

role of the business analyst. The use of non-academic articles, which include magazine articles and industry specific publications, provide a practitioner's viewpoint of the roles of these analysts in the workforce and therefore is used here.

Through the survey of the articles collected, a few role categories were formulated. These include:

- **Mediation** – This is related to the liaison support role that the business analyst provides between the users or business professionals and the IT professionals (Ambler 1995; Bailey & Stefaniak 2002; King 1994; McCusker 1990; McKnight 2005; Overby 2006; Owen 2004; Peterson 1984; Sevens 2003). Note that of these references only the first is an academic paper.
- **Requirements Elicitation** – This category includes analysing and gathering the needs of both computer-based systems as well as the business (Ambler 1995; Arsanjani 2005; Bevington 2000; Hofmann & Tierney 2003; King 1994; Koubrarakis & Plexousakis 2002; McCusker 1990; McKnight 2005; Overby 2006; Stevens 2003; Verner 2004). Only the first four references are academic papers.
- **Solution Designer (Business function/processes)** – This category is related with the designing of new business functions and or processes (Ambler 1995; Bevington 2000; Owen 2004; Stevens 2003; Verner 2004). Only the first reference is academic in nature.
- **Business Modelling** – This category covers the modelling and analysis of current and future business functions and processes (Ambler 1995; Arsanjani 2005; Kourbarakis & Plexousakis 2002; Owen 2004; Stevens 2003; Verner 2004). The first two references are academic.
- **Business Problem Analysis** – This category relates to the analysis of business problems as opposed to gathering of requirements to create a computer based system (Hofmann & Tierney 2003; Overby 2006; Owen 2004; Peterson 1984; Stevens 2003). Only the paper by Hofmann & Tierney is of academic origin.
- **IS Strategy Evaluation** – This involves the evaluation of information system strategy in relation to the business needs and goals. This differs from business problem analysis in that it generally refers to longer term strategy (King 1994; McCusker 1990; Overby 2006). None of these references are academic in nature.

The identification of whether an article was of academic origin or not was purposive in the above discussion. The only roles of the business analyst that are equally supported by both types of article are those of requirements elicitation and business modelling. The remaining roles (mediation, solution designer, business problem analyst and IS strategy evaluation) are rarely mentioned in the academic literature but are all emphasised in the non-academic literature. This highlights the need for further research in this area.

It appears that the roles of the business analyst include: gathering and analysing business requirements (Arsanjani 2005; Bevington 2000; Hofmann & Tierney 2003; King 1994; Koubarakis & Plexousakis 2002; McCusker 1990; McKnight 2005; Overby 2006; Stevens 2003; Verner 2004); acting as a middle person between users and IT professionals (Ambler 1995; Bailey & Stefaniak 2002; King 1994; McCusker 1990; McKnight 2005; Overby 2006; Owen 2004; Peterson 1984; Stevens 2003; Verner 2004); and the modelling, analysis and design of current and new business processes (Ambler 1995; Arsanjani 2005; Bevington 2000; Koubarakis & Plexousakis 2002; Owen 2004; Stevens 2003; Verner 2004). Of these it would appear that the role of middle person could be the most important. According to Overby (2006) *"… the business analyst's liaison role is the key to successful IT."*

The articles indicated that to fulfil these roles the business analyst needs certain skills. These can be described as:

- **Communication** – includes interpersonal skills as well as other skills such as being adept at a foreign language (Ambler 1995; King 1994; McCusker 1990; Overby 2006; Sevens 2003). The latter is not mentioned as being important to systems analysts.
- **Elicitation** – interviewing as well as modelling skills (Ambler 1995; Arsanjani 2005; Koubarakis & Plexousakis 2005; McCusker 1990; Owen 2004; Sevens 2003; Verner 2004). They are unique to the business analyst and are not mentioned in any of the system analyst articles. Modelling specifically would include data, process and class diagrams.
- **Problem Solving** – general problem solving skills as well as judgment skills that are required in finding a solution to a business problem (Hofmann & Tierney 2003; McKnight 2005).
- **Leadership** – being able to guide discussions as well as covering diplomacy skills in terms of negotiations between the business users and IT groups whilst showing tact (King 1994; Stevens 2003).

- **Presentation** – being able to present information to a group of people or individuals in the form of formal presentations or interactive walkthroughs (Stevens 2003).
- **Selling** – promoting the new system and gaining client buy-in (King 1994; McCusker 1990).
- **General Analysis** – generic analysis skills that are required by the analyst to perform their role (McKnight 2005).
- **Technical** – programming, creation and setting up of databases and other technical related skills (Overby 2006).
- **Business Knowledge** – general understanding of the business or functional area (Ambler 1995; Arsanjani 2005; Bailey & Stefaniak 2002; Bevington 2000; Hofmann & Tierney 2003; King 1994; Koubrarakis & Plexousakis 2002; Macaulay 1993; McCusker 1990; McKnight 2005; Owen 2004; Overby 2006; Peterson 1984; Sevens 2003; Verner 2004).

All authors cited in the preceding paragraphs agreed that business knowledge is a required skill of the business analyst. Only two of the six academic articles (Arsanjani 2005; Koubarakis & Plexousakis 2002) believe that elicitation is a required skill of the business analyst, whilst only one academic paper (Hofmann & Tierney 2003) indicated that problem solving was a skill needed by a business analyst. All the remaining skills were identified only within the non-academic literature.

Systems Analyst

Many companies and organisations that have an information technology department hire employees into the role of a systems analyst. It is seen as a major role within the information systems field; however, the knowledge, skills and abilities required for the role are ambiguous (Lerouge, Newton & Blanton 2005, p. 12). It has been suggested that there may be as many definitions as there are job openings for system analysts (Misic & Graf 2004, p. 32). This section will provide the perceived role of the systems analyst as well as the skill set required of the analyst.

The literature indicates that the roles of the systems analyst include:

- **Mediation** – the liaison support role that the systems analyst provides between users, or the business, and technology professionals (Bailey & Stefaniak 2002; Graf & Misic 1994; Green 1989; Hurd 1989; Lerouge et al. 2005; Misic & Graf 2004; Morrison 2004; Nord & Nord 1997; Payne & Awad 1990; Standing 1998).
- **Requirements Elicitation** –includes analysing and gathering the needs of both computer-based systems as well as the business (Graf & Misic 1994; Green 1989; Hunter 1994; Hunter & Palvia 1996; Hurd 1989; Lee 1995a; 1995b; Lerouge et al. 2005; Misic & Graf 2004; Payne & Awad 1990; Standing 1998).
- **Solution Designer (Business function/processes)** –associated with the designing of new business functions and also possibly processes (Graf & Misic 1994; Green 1989; Hunter 1994; Lee 1995a; Lerouge et al. 2005; Misic & Graf 2004; Payne & Awad 1990; Taylor et al. 2004).
- **Solution Implementer** – where the analyst implements a computer-based system (Graf & Misic 1994; Green 1989; Hunter 1994; Lee 1995a; 1995b; Lerouge et al. 2005; Misic & Graf 2004; Payne & Awad 1990).
- **System Maintenance** – the maintenance of systems that have already been developed and implemented (Graf & Misic 1994; Hunter 1994; Lee 1995a; 1995b; Lerouge et al. 2005; Misic & Graf 2004; Payne & Awad 1990; Taylor et al. 2004).
- **Business Process Improvement** –idea generation for business process improvement to occur within the organisation (Graf & Misic 1994; Hurd 1989; Lerouge et al. 2005; Payne & Awad 1990).
- **IS Standards Regulator** – ensuring that IS standards are maintained (Graf & Misic 1994; Lerouge et al. 2005; Misic & Graf 2004).

Note that of all the articles referenced above only that of Hurd (1989) is non-academic in origin. This is in contrast to the references found discussing the roles and skill sets of the business analyst most of which were non-academic in origin.

Not surprisingly there is more agreement on these roles within the literature as the position of systems analyst has been in use for much longer than that of business analyst. This is indicated by the relative age of articles investigating either business or systems analysts. The literature indicates that the overall role of a systems analyst includes requirements elicitation, the design and evaluation of various systems solutions and then the

implementation and maintenance of the chosen solution. It is apparent that the role is more technical than that of a business analyst, with more emphasis placed on business process and system design than implementation.

The literature has tended to determine the skill sets required of systems analysts by surveying existing systems analysts (Green 1989; Hunter 1994; Lerouge et al. 2005; Nord & Nord 1997; Misic & Graf 2002); end users (Green 1989; Wynekoop & Walz 1999) or job advertisements (Hunter & Palvia 1996; Lee 2005) with varying results.

Some analysts indicate that either soft skills, such as communication, interpersonal skills and managerial ability, are more important than technical skills such as system development and business skills (Green 1989; Lerouge et al. 2005; Nord & Nord 1997). In other research systems analysts indicated that technical skills are more important than soft skills (Graf & Misic 1994; Misic & Graf 2004).

It appears that end-users believe that the technical skills of systems analysts are more important than their soft skills (Green 1989; Wynekoop & Walz 1999). Green (1989) argues that this could be because end-users do not possess these skills and need people who do.

Analysis of job advertisements indicates that both soft and technical skills are equally important (Lee 2005) whilst Hunter & Palvia (1996) found that in Singapore emphasis in advertisements was placed on soft skills and experience.

Generally the literature indicates that the most important skills required of a systems analyst are communication and technical, general analysis, design and problem solving ability. In contrast to the literature investigating the skills of a business analyst less emphasis is placed on requirements elicitation and business knowledge.

The above indicates that the main difference between the two roles is one of emphasis – business analysts are concerned with the business and how to use IT to achieve business goals, whilst a systems analyst is more concerned with software development and implementation. Although most of the literature would suggest there is little conflict or confusion between the two roles there are anomalies. For example, the two roles appear to be synonymous in the article by Bailey & Stefanek (2002). Conversely the article by Nord & Nord (1997) appears to be describing a business analyst whilst using the term systems analyst. It appears, then, that further research is required to clarify the roles and skill sets of these two positions.

RESEARCH METHODOLOGY

Understanding the skill set and roles that these analysts are involved with can be done through investigating an organisation that hires both types of analyst. In this instance a large Australian financial institution was chosen for exploratory case study research (Benbasat, Goldstein & Mead 1987). The organisation was chosen as it has a large IT department as well as a large end-user base. Managers within the organisation also separately identify both business and systems analysts.

Eight semi-structured hour long interviews were conducted with two systems analysts, two business analysts and four managers. Each analyst is located in a different unit within the organisation. This gained a relatively wide view of each role considering the small sample size used. Each of the managers is the supervisor of one of the analysts. The interviews were recorded and transcribed with analysis being informed by the hermeneutic cycle (Myers & Avison 2002). This involves re-reading the transcripts comparing parts of text to the whole "*…until the apparent absurdities, contradictions and oppositions … no longer appear strange, but make sense*" (Myers 1994, p. 191).

In the following discussion the acronym BA indicates a business analyst whilst SA identifies a systems analyst. The following digit indicates an individual business or systems analyst. Similarly managers are identified by MG and a following digit.

ANALYSIS

BA1 has been employed as a senior business analyst for one year. Prior to the current position BA1 was employed in a similar role within a small business. BA1 has an IT background and reports to MG1 who has been a project manager for one year.

BA2 has been in the current position for three years and has a business background, previously being employed as an accountant within the same organisation. BA2 reports to MG3 who has been a senior project manager for three years. Prior to this position MG3 was a business analyst. MG3 currently supervises both business and systems analysts.

SA1 has been in his current position for 4 years and reports to a program manager, MG2. Prior to his current position SA1 was a senior consultant. MG2 has held her current position for 6 months. Prior to this MG2 was a senior project manager for seven years.

SA2 has been a systems analyst for one year. Prior to this position SA2 was an IT stream lead and has a technical background.

MG4 has been a principal IT stream lead for six months and had been a systems manager. MG4 has always held technical positions. In addition to supervising a group of systems analysts MG4 inter-acts with business analysts but does not manage them.

The Roles and Skill Sets of Business Analysts.

According to BA1 business analysts generally have an IT background. However this was contradicted both by the background of BA2 and statements of MG1 who indicated that most business analysts within the organisation did not have that title. They tended to take their title from the unit in which they worked. For example, if an analyst worked within a credit unit they were titled as credit analysts. What did become clear is that the business analyst can be involved in many roles and functions within this organisation. These include: mediator; requirements elicitation; solution designer; other miscellaneous tasks and are now discussed.

Mediator: The major task of the business analyst is seen to be the interface (MG3; MG4), mediator (BA1; MG4), translator (BA1; MG2; BA2; MG3; MG4) or middleman between IT and business (MG1; BA2). As one of the business analysts describe that *"It's a role that's been born out of that lack of communication between the business and the IT side"* (BA2).

The act of mediation is conducted by being a member within the team who would be the middle man between the business who seeks resolution of business problems with technology and the IT technologists who are able to provide the required solution. As BA-1 describes it, *"…as a business analyst, I play the role of being an integrator between the business and the technology in a team, and bringing them together"* (BA1). He goes on to discuss mediation being not part of the problem definition stage by saying that *"…in fact being a mediator is when the project actually starts, before that it's the definition of the problem and the analysis and study of the problem itself, that's where the role of the business analyst starts"* (BA1).

Requirements Elicitation. Another major task that the business analyst plays involves "*working with key stakeholders to identify and analyse the business needs…*" (BA1). This is reinforced through the majority of the interviews where they see the business analyst as working with stakeholders or interacting with business users to identify (BA1; SA1), understand (BA1; SA1; SA2) or define the business problems (BA1; SA1; MG4). Business problems are expressed as business needs (BA2) as well as more commonly business requirements (SA1; MG2; BA2; MG3; SA2; MG4). In order to do this, there is a need to understand the business and this is a view expressed by many people who were interviewed (BA1; SA1; SA2). Not only does the business analyst gather requirements, but these requirements also need to be refined (SA1; BA2; MG3; SA2; MG4).

Almost all those who were interviewed indicated that the requirements gathered are then documented and this may be in the form of a 'requirements specification document' (BA1; MG1; SA1; MG2; BA2; MG3; MG4). These requirements that are gathered are then analysed (BA1; SA1; MG2; BA2; MG3) and modelled (MG3) in forms such as process mapping (SA1) or modelling (BA1) and extensive data analysis (MG3).

Essentially, the main role of the business analyst that is mentioned by the people interviewed is that they are concerned with the requirements of the business rather than the business performance. This is clearly articulated by BA2, who said that he was "*…concerned about business decisions and what business needs as opposed to how the business is performing*". In this organisation however, this same business analyst mentions that "*…as a Business Analyst, I've pretty much always had a solution put on me, so when I get the job description…it says 'ok, this business person requires…*" (BA2), indicating that the high level requirements of the business is already provided to this particular business analyst. BA2 then goes on to explain his role after a solution was provided:

It was a high level concept of how it was going to work. We had to go in and look at the detail of what was really required and the specifics of how it was going to work. So we sort of had the high level concept and we fitted all the bits and pieces in. The detail, we fit the detail in afterwards (BA2).

Solution Designer. There is discrepancy on the role of a business analyst in this area and seems to be dependent on the training and earlier experiences of the individual. Those with a more technical background are more likely to become involved in defining the architecture of a solution as well as developing a high-level solution design and product selection (BA1). Other respondents indicated that the role of a business analyst should be restricted to requirements elicitation and not solution design (BA2). Both these points of view mirror their respective experience.

MG2 believes that a business analyst can "*…input their ideas on what they think might work well, but not imposing.*" This could go as far as the look and feel of the solution and possibly address the functionality.

Related to solution's design and creation is facilitating business input into the solution being created as well as seeking approval for the various options. In effect, this involves the analyst also supporting the implementation

and ensuring that the requirements are met along the way (BA-1). One method of ensuring that the requirements are met by the created solution is through being actively involved in the testing process. Most respondents agreed that this is a role undertaken by business analysts regardless of whether it was included in their job description or whether there were other official system testers. According to MG4:

A business analyst will typically get involved at various forms of testing. So sometimes systems integration testing to make sure that the system holds up based on the requirements that they put through and also during user acceptance testing…Because what you will be doing is you're checking to make sure that all your requirements have been met and met successfully.

Other Miscellaneous Tasks. There are a few tasks that different people interviewed believed that the business analyst might be involved with. This includes dealing with regulation and compliance issues as well as supporting management information systems (BA1). A speculative reason for why the business analyst would get involved with these things is that they tend to understand the goals of the business. As well as this, they tend to be process driven and are therefore able to deal with compliance and regulation issues.

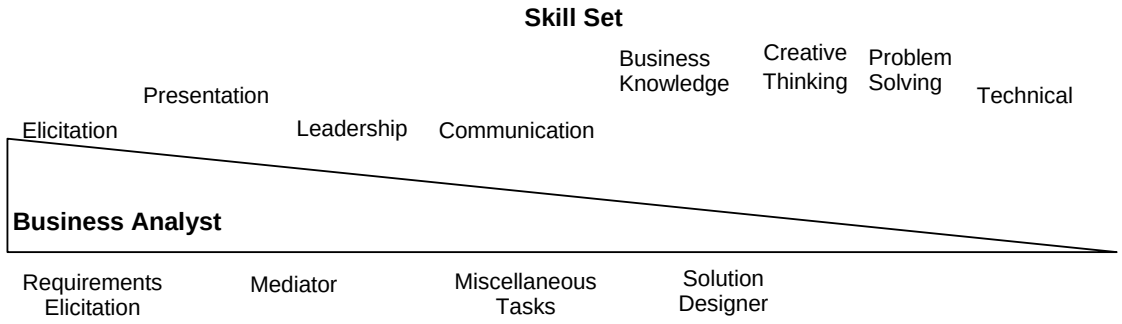
The first business analyst interview as stated earlier appeared to be involved with activities that are usually associated with a technical role including data analysis as well as programming. This again appears to be based on the background of the person as opposed to the job or role description of the business analyst.

Some other tasks that do not involve technology that they may be involved with would include outsource analysis, process analysis (SA1) and accounts analysis which involves accounting skills (MG3). Again it is speculative that these responses come from the background and experience of the person interviewed. An example is the manager that mentioned accounts analysis is the direct manager of the second business analyst (BA2) and as mentioned earlier, this business analyst has an accounting background prior to becoming a business analyst.

The overall general finding is that even though it appears that the business analyst is not seen as a technical role, both business analysts interviewed stated that there is a need to have some sort of knowledge of technology as this would be beneficial in their role (BA1; BA2).

The roles of business and systems analysts can be shown diagrammatically using two triangles. These will be developed separately then combined. The position of a role along the base of the triangle indicates whether it is most likely to be performed by that analyst. The higher the triangle at the point where it is shown, the more likely it is to be performed by that analyst. As requirements elicitation is most likely to be performed by, but not restricted to, business analysts it is shown at the left hand end of the triangle shown in Figure 1, below.

In undertaking these roles the participants indicated that certain skills are required by a business analyst. These can also be shown on a triangle. Once again, those most likely to be needed by a business analyst are shown to



the left of the triangle in Figure 1, whilst those that are less likely to be needed are shown to the right.

Figure 1. The relative importance of the roles and skill sets required by a business analyst.

A similar analysis of the roles and required skills for systems analysts was conducted. This is now discussed.

The Roles and Skill Sets of Systems Analysts

Firstly, it was quickly realised that all participants agreed that there were many titles within the organisation that could be classified as systems analysts. Strangely, none of the participants were aware of anyone within the

organisation who had the title "systems analyst." However there was some consensus on the roles undertaken by these various roles.

Technical Specialist. The most common understanding of the role of the system analyst is one of a technical specialist. It appears that the fundamental role is the understanding of computer systems and the hardware and software capabilities as agreed by business analysts, managers as well as the systems analysts themselves (BA2; MG1; SA2). Agreement to the depth and extent of the technical knowledge required differs amongst the people who agreed to the systems analyst having a technical role. The first business analyst stated that:

Systems analysts, purely from a definition perspective, you are talking of somebody who knows and understand the computer systems, the hardware and the softwares, and its capabilities and who can do things like configuring an operating system, setting up users, deleting users. Managing user rights. Those kind of things (BA1).

And that they should:

…have a good understanding of the operating systems of the networking of the applications that are installed on the system. Maybe a bit of programming knowledge to ensure that the systems are usable and they can be configured or customised by the users (BA1).

This is in contrast to the first systems analyst interviewed who believed that they would essentially only need to understand *"how the whole thing hangs together…"* in regards to the systems and the interrelation between the different systems (SA1).

Through the analysis, this differing viewpoint is again believed to be attributed to the lack of understanding of what the systems analyst is and what they do in an organisation without the job title of 'systems analyst'.

Even though there were differing opinions on the depth of technical knowledge, there was agreement that the role is of a technical nature (BA1; MG1; SA1; SA2) and that the problems that the systems analyst is involved with are of a technical nature (BA1; SA1; SA2) and IT focused (MG3).

Solution Designer. Another important role of the systems analyst through the interviews appears to be the design of a high-level solution based on the requirements of the business groups (SA1; MG2; MG3; MG4). It is essentially dealing with system requirements and specifications (BA1; SA2) and translating these requirements into a feasible solution to be created and implemented (MG2; BA2; SA2; MG4).

The solution that the systems analyst creates includes pre-conceptual as well as conceptual designs (SA1). The solution designed is of a technical nature (SA1; MG4) that often involves the use of software (BA1). The role of a solution designer can be seen as technical planning (SA1), as the solution must not only incorporate the requirements but also look at the strategic implication of using certain solutions to solve the problem or need.

When the systems analyst designs a technical solution, they may provide several solutions for consideration with costing options (SA1). These alternatives are like blueprints with cost options and the pros and cons for each of the designs (MG4). It was also indicated in some of the interviews that in the design process, a document is produced as an output of the process (MG2; MG3).

Mediator. Although the role of mediator is seen to be more of a business analyst role, a few of the people interviewed indicated that the systems analyst may also play this role to an extent. One of the systems analysts indicated that the he would be the one who bridges the gap between business and technology. In regards to requirements clarification, he indicated that:

First, I'd go to the BA. If the BA is still unable to help me out there, I'd still work through the BA, the BA goes and finds that out for me or at times it's easier for me to just go and talk to the business. It all depends on what the situations are and how confident the BA is in getting that information without muddying it too much (SA2).

The perception given through both systems analysts were that it is not necessarily common practice for the systems analyst to go directly to the business groups for requirements clarification, however to go through the business analyst instead. It appears to be a clear role expectation for the systems analyst to interact with the business analyst rather than interact directly with the business group. This again appears to be closely dependant upon the background and skill set of the individual.

An interesting comment that was made by one of the managers interviewed was that the systems analyst *"…from a business analysis perspective, they're the interface, in my view, between a technical role and a business role"* (MG4). This differs from all other interpretations whereby the system analyst is viewed as an interface between technology and business roles rather than the mediator bridging the IT and business groups.

Other Miscellaneous Roles.**The systems analyst role is easier to define than the business analyst role in the way that the business analyst may get involved with multiple tasks that vary in nature as opposed to the systems analyst who has tasks that are definitely of a technical nature, mainly in the area of solution design.**

SA2 indicated that it would be a benefit to the systems analyst to have an understanding of the business goals so that it would assist in the design of the solution rather than aid in requirements gathering. The discussion on whether the systems analyst would gather requirements or not is unclear, however, indications from the interview show that they would not do this task. In support of this argument is BA2, coming from a business background indicated that the systems analyst would not gather requirements.

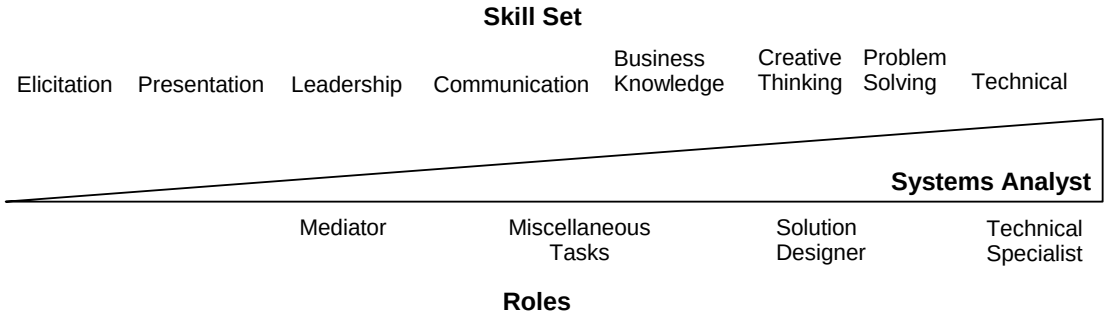


Figure 2. The skill sets and roles of the systems analyst. Those roles most likely to be undertaken by an SA are to the right.

The miscellaneous tasks a systems analyst would be involved with also includes roles such as systems administration, Unix administration, programming, managing data warehouses as well as being involved in architecture (BA1; SA1; SA2; MG1; MG3; MG4).

These roles and skill sets can now be added to another triangle. Again, those roles and skills most likely to be associated with a systems analyst are located at the higher points to the right hand end of the triangle shown in Figure 2.

Through the interviews it became apparent that there is a gap between business and IT groups which exists due to the clear distinction between the roles and responsibilities of business and IT groups. This is also well known in the IT literature (Peppard & Ward 1999). This gap, together with the preceding diagrams can be represented by a single model shown in Figure 3, below.

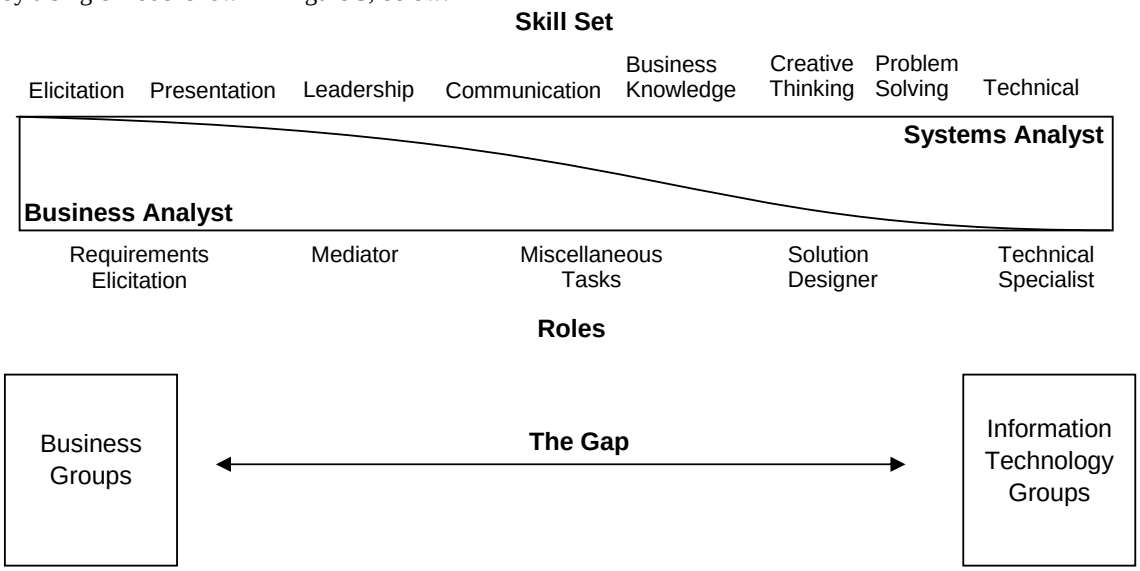


Figure 3. The roles and skill sets of business and systems analysts help bridge the gap between business and IT groups.

Figure 3 indicates that there is no clear-cut distinction between the roles and skill sets of business and system analysts. There is a continuum with some roles and skills more likely to be undertaken, or needed, by one group rather than the other. It appears from this exploratory research that the roles of either type of analyst depend, to some extent at least, on the previous experience and training of the person acting in that position.

CONCLUSIONS

The research described here supports, to some extent, earlier research reported in both the academic and non-academic literature. Prior literature identified the roles of the business analyst, in descending order of importance, as: Requirements elicitation; mediation; business modelling; solution designer & business problem analysis; and IS strategy evaluation. This research identified the roles as: Requirements elicitation; mediation; solution designer; and technical specialist.

The literature identified the roles of the systems analyst as: mediation & requirements elicitation; solution designer, implementer & maintainer; business process improvement; and IS standards regulator. By contrast, this research identified the following roles, in descending order, as: Technical specialist; solution designer, mediator; and requirements elicitation.

Differences could be due to the small size of the sample used here. It may also be due to the anecdotal evidence provided in earlier non-academic articles. The differences in the roles of the systems analyst may also be due to the age of many of the articles reviewed here. Many of them were written before the business analyst role was in general use. Therefore the roles that we have separated into two positions may have been undertaken by the one person.

At minimum we have started to provide empirical evidence to support our conclusions regarding the roles of the business analyst. It appears that to date this has not been available. However, further research is required in this area to determine whether the tentative conclusions reached here can be generalised.

We have, however, provided a framework which can be used to understand the differences in the roles and skill sets of both business and systems analysts. This should be useful during future research.

Additionally, the distinction made here between business and systems analysts may help students make decisions on what type of position they may aspire to once they finish their undergraduate studies. It also provides some evidence that could be used by educational institutions when designing courses aimed at either prospective business or systems analysts.

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