

Building bridges with IT: Successful collaboration with your IT department

Abstract

Information technology is vital to ensuring the smooth running of all library systems and services. However many libraries face challenges with IT staff to implement new projects and provide a responsive service to library patrons. Improved interpersonal relationships between library staff and information technology workers achieve positive outcomes for library patrons and the organisation as a whole. This issue is important for library technicians in particular, as they often have increased contact with IT staff through the nature of their roles. This paper will recommend measures that establish a good foundation for library technicians to successfully collaborate with IT. Strategies include examining the communication styles of both parties, the IT occupational subculture (Indira R. Guzman, 2008) and how this impacts on working relationships. The paper seeks to give library technicians insight into IT practices, namely through an overview of the ITIL (Information Technology Infrastructure Library) framework. These internationally accepted best practices spell out how IT should respond to the needs of its customer and the broader organisation. By understanding how IT respond to requests, library technicians can better prepare their interactions with IT staff. The focus being on the articulation of the library's technical requirement(s) and how the lack of an IT solution is impacting the library's deliverables. When both parties communicate on the same wavelength, a foundation of mutual trust can be built working together for a common purpose (Heyman, 2001). The presentation will also recommend strategies to employ if working relationships are not ideal. The paper will help library technicians and their IT colleagues work collaboratively. The benefits will become apparent to staff, the organisation and most importantly, library patrons.

Introduction

Information technology has permeated almost all aspects of working life in the 21st century. The vast majority of library services rely on information technology and the support provided by IT workers plays an important role in both the creation of new services and the support of ongoing business needs. However sometimes library staff face challenges when communicating with IT personnel. Library technicians are especially impacted by this problem as they are often the connection between the library and the IT department due to the nature of their role. This paper will look at ways that library technicians can work better with their IT departments, including:

- examining the communication styles of the two parties
- the IT occupational subculture (Indira R. Guzman, 2008) and how this impacts on working relationships
- ITIL (Information Technology Infrastructure Library) – what is it and how library technicians can use it improve communication
- Lastly, what can be done to avoid and improve difficult interactions with IT

Who are IT?

Information technology staff work in a variety of roles as there are many different aspects of technology work. Generally the larger the organisation, the more specialist IT people will be employed. An example of job titles and a brief description is below:

- Architects/ Infrastructure
Designs and develops technology solutions

- Business/System Analysts
Matches business or client needs to create or improve systems
- Change Management
Applies rigor to the implementation of changes (i.e. new software, procedure changes) to a workplace's technology
- Database Development & Administrator
Develops and administers databases
- Developers/Programmers
Focused on the development of software applications
- Engineering – Hardware/Software/Network
Designs, develops and installs hardware, software or networks.
- Help Desk/Desktop Support (levels 1-3)
The most common IT role that internal clients, such as library technicians, interact with. Level 1 staff deal with basic or repetitive tasks/issues, levels 2-3 deal with more complicated problems.
- Networks and System Administrators
Administers and maintain networks and systems
- Project Management

Focussed on IT aspects of delivering a project

- Information Security

Secures IT networks from outside interference (i.e. hacking attempts)

- Software Asset Management

Collaborate with other clients and IT groups to manage software lifecycles and compliance with licence terms & conditions.

- Telecommunications

Constructs, monitors, repairs and maintains communications systems and equipment

- Testing and Quality Assurance

Tests software to ensure it works correctly before it is released to end users

- Web Development and Production

Focused on the development of webpages and intranets.

General roles:

- Sales
- Training
- Management

Connections between library technicians and IT

There is evidence to indicate that library technicians have more interactions with IT than others in libraries such as librarians, indicated by James's statement from her survey of 882 librarians and library technicians in Canada. Her survey stated that 29.5% of library technicians had "information technology responsibilities" compared with only 26.5% of librarians (James, Shamchuk, & Koch, 2015).

James goes onto state:

"Technology is perceived to be a major factor in the evolution of the library technician roles, identified by comments from all library sectors"

So not only are library technicians learning about and managing IT systems, they are therefore very likely to be requiring IT assistance and advice. Library technicians are often "level 1" helpdesk support, providing basic IT support to library clients. James states "In general, library technicians perceive themselves as becoming the predominant front line staff for public service and technological assistance". If issues need to be escalated, it is often the library technician who will call IT or lodge a helpdesk service request. If library technicians are involved in project management, or the development of a new service, they will also encounter IT personnel.

Divide between library and IT fields

When we examine both the library and IT fields, it seems that the work of two professions are valued differently by society. One perspective on this comes from Scott-Dixon who states "assumptions about IT work incorporate assumptions about who performs this work, and that work performed in traditionally nonwhite, non-male jobs is often viewed as less

technical, *regardless of the technological objects that are employed in the process*”(Krista, 2005). In other words, even though library work heavily incorporates the use of technology, it may still seem like less technical work in the eyes of IT, and more broadly, society as a whole.

The salaries that the two occupations command reflect the perceived value of the positions; the average salary of an IT professional is \$70,000-\$80,000 (Mehdiani et al., 2016) whereas the average salary of a library technician is \$50,000 (Aguero et al., 2016). Part of the reason for this is also the gendered nature of the library profession and the IT profession; the library field is a female dominated field, and IT is very male orientated. Unfortunately “Masculine occupations are more prestigious and better compensated”(Lamont, 2009). The gender pay gap is still very real in Australia; there is even a federal agency set up to address the issue (the Workplace Gender Equality Agency).

Stereotypes

Stereotypes exist in both librarianship and IT fields. All of us who work in librarianship are aware of the prevailing stereotypes of “librarians”; conversely IT workers usually face their own “nerd” stereotypes. These stereotypes are heavily gendered. Some authors argue that this contributes to library staff “self stereotyping themselves out of IT because it does not fit with society’s female gender stereotype” (Carson, 2014). The gendered nature of both professions can compound this “Although subtle discrimination occurs in all work places, not just libraries, the effects in a gender-segregated workplace are compounded. Confronted with a complex series of social, cultural, and organizational cues, women are made to feel less competent and less comfortable with technology” (Lamont, 2009). There

has been a push in a variety of STEM (Science Technology Engineering Maths) fields to increase women's workforce participation; IT is no exception to this. The Australian Computer Society has compiled a report on the topic of women in IT and recommends a number of strategies to attract and retain female staff. (Society, 2015).

Research has shown that negative stereotypes can effect how a person performs in a particular environment; Beginners are "particularly vulnerable to the stereotypes... as mistakes might confirm in one's own mind that the stereotype is true" (Carson, 2014). Two possible solutions to this are finding evidence that the stereotype is untrue and also finding role models who don't conform to the stereotype.

IT occupational subculture

As IT support is so fundamental to an organisation's success, it is worth analysing the particular characteristics of the the occupation itself. Guzman, Stam and Stanton conducted research on the topic of whether IT have a distinct occupational culture in organisations, separate to the organisational culture of a workplace. An occupational subculture can occur if an occupation shares "educational, personal and work experiences... similar ideologies and forms of addressing those ideologies in speech and behaviour" (Indira R. Guzman, 2008). IT as an occupation are susceptible to subcultures as "occupations with long histories, unique educational requirements and established professional groups (i.e. doctors, lawyers) tend to have stronger ideologies... the occupation may exert stronger influences on... behaviour than organizational culture does" (Indira R. Guzman, 2008).

The article's authors used Trice's Occupational Subculture theoretical framework "to examine the characteristics of the occupational culture of IT personnel and its relationships

with other types of personnel within organisations” (Indira R. Guzman, 2008). The theoretical framework assesses “group” and “grid” dimensions of the subculture – group referring to how the “occupational subgroup interact with each other, emphasizing the pressures to conform to the culture’s ideologies and forms.” (Indira R. Guzman, 2008) This dimension also “provides an understanding of how groups establish boundaries between insiders or outsiders” (Indira R. Guzman, 2008). The “grid” dimension refers to “the tangible structural features through which members attempt to order their relations with each other (work rules, required certifications etc.)” (Indira R. Guzman, 2008). The authors feel that the IT occupation has a weak grid dimension, the reasons explained in the table below. The author’s research confirmed their theory that IT is indeed an occupational subculture. The characteristics of the subculture are presented below:

Working Label	Occupational Culture Characteristics
Value of Technical Knowledge	Frequent use of unique technical knowledge, jargon, and vocabulary as a means of establishing group identity, maintaining boundaries between groups, and excluding out-group members.
Extreme and Unusual Demands	Extreme and unusual demands pertaining to working in the profession, particularly relating to long hours, angry users, and the need for constant self re-education as a form of intra-group bonding.
Complaints about Others	Complaints about the behaviors and abilities of end-users and about being misunderstood by managers as a form of intra-group bonding.
Shared satisfaction	A shared sense of satisfaction about helping others with technology that supports and justifies the importance of the occupation.
Ethnocentrism	Professional ethnocentrism including feelings of superiority and control over other groups and their members.
Cultural Forms	Physical settings involving electronic equipment and disorder, use of jargon as signs of group membership.
Unique and Shared Stories	Unique and shared stories about the history of information technology as a means of identifying members, validating membership and as a form of intra-group bonding.
Weak Grid Dimension	Weak grid dimension characterized by lack of formal work rules and absence of clear requirements for membership.
Intercultural Dysfunction	Intercultural dysfunction was also caused by adverse stereotypes that IT personnel had of end users and vice versa. Discrepancies arose with respect to the level of personalized support that was expected from IT personnel by end users.

Table 3. Characteristics of the Occupational Culture of IS/IT personnel within

There are a couple of factors in that may lead to IT staff feeling dissatisfied with their organisation – angry users, long hours, being misunderstood by managers. Research

suggests that being “dissatisfied with one’s job or organization is likely to increase one’s propensity to join a subculture”. (Boisnier, Alicia, Chatman, Randall, & Elizabeth, 2003). It’s not surprising then that IT staff would want to bond with each other over the specific challenges of their occupation.

IT personnel having their own subculture can have a definite impact on communication and conflict with non IT personnel as will be explored in the next section.

Communication styles and perceptions

Library and IT staff work in what are fundamentally service industries and as such communication and interpersonal skills are vital. In addition, the productivity of both libraries and IT depend on a collaborative relationship and effective communication is a very important aspect this.

ALIA considers the ability to communicate effectively a key competency of all those who work in libraries. Effective oral and written communication skills are listed as a prerequisite of the vast majority of library positions; this includes active listening, clear written communication and being able to convey information to people from many different walks of life. In research on the subject of personality traits and librarianship, almost all library specialists (i.e. archivists, academic librarians, public librarians etc) surveyed rated highly for customer service skills, of which communication skills are central (Williamson, Pemberton, & Lounsbury, 2008). The only notable exceptions were cataloguers!

There is some conjecture in the literature as to whether IT personnel have poor communication skills; some research indicates they do, but Guzman, Stam and Stanton

feel differently stating “end users and IT personnel seem to have distinctive styles for diplomacy, directing, assertiveness and nonverbal communication”.(Indira R. Guzman, 2008). Common end user complaints include IT using too much jargon, IT professionals using a superior tone or talking down to staff and poorly written emails or procedures. Whilst not commenting on IT professional’s communication skills, Rossman & Rossman give an interesting insight into the psychology of “techies” stating “information systems personnel are more analytical and logical than the general population, while they are also socially reserved” (Rossmann & Rossmann, 2005). A number of research papers and articles seem to point to the differing perceptions between end users and IT as being a key factor in communication problems. Hornik, Chen, Klein and Jiang analysed end user expectations of IT personnel’s communication skills and found that “that users with communication skill expectations of IS staff lower than their perceptions (negative gap) exhibited a significantly higher level of user satisfaction than users who had communication skill expectations higher than their perceived IS staff communication skill proficiency (positive gap)” (Hornik, Chen, Klein, & Jiang, 2003). In others words, if user’s expectations of IT were too high, they were bound to be disappointed.

Following on from this, It’s also worth noting that end users and IT professionals see systems very differently “User satisfaction denotes user perception with the system rather than the technical quality of the delivered system, pointing out the potential gap for perceived system success. In other words, a user may find the system unacceptable, yet IS staff may not find any technical flaws and be quite satisfied” (Hornik et al., 2003). This is yet another source of potential conflict. IT personnel often have their own frustrations with end users citing poor passwords, unstable environments due to extraneous program downloads (i.e. Spotify) and end users who don’t want to learn as key problems.

Working relationships

A working relationship can be simply defined as “the relationship between people who interact because of their work” (Oxford English Dictionary). The subculture and communication styles of IT can cause issues as explained above and in addition, library staff can exacerbate problems by having their own stereotypes about IT and having unrealistic expectations of IT professional’s communication skills.

Barriers to working relationships can come from other sources such as “an outsourced IT service, misunderstandings based on the different focus of the two departments, the culture of the overall organization, and issues resulting from the reporting structure”(King, Cataldi-Roberts, & Wentz, 2017). The same authors go on to state “major problems occurred when there was a lack of awareness and appreciation regarding each other’s mission, expertise, and goals... both departments provided an institution-wide service, but from the IT point-of view, the library was just one of many departments it served”.(King et al., 2017).

Positive working relationships are characterised by trust, mutual respect, open communication and appreciating differences of opinion. Heyman focuses on the concept of mutual trust between IT professionals and library staff in her article on “ Building successful relationships with IT professionals”, outlining five key requirements for mutual trust to occur between individuals:

- 1) A demonstrated level of competence or domain knowledge
- 2) A focus on the “broken” work processes vs blaming people
- 3) A willingness to admit individual mistakes and to acknowledge limitations

- 4) A spirit of cooperation and not competition
- 5) An ability to give and receive assistance from associates

(Heyman, 2001)

There are a number of ways that can positive working relationships can be formed, we will examine two ideas below:

The Library System's Team Model

In order to improve the relationship between library and IT staff, Montana State University created a model whereby a liaison position (the Electronic Information Coordinator, or EIC) worked between the two groups. This position is rotated through library staff on a 3 yearly basis. Part of the EIC's role was to "chair Technical Implementation Group (TIG) meetings, [which are held] every other week, and include members from Systems, Circulation, Reference, Tech Services and Administration" (Rossmann & Rossmann, 2005). The EIC also acts as a "communication conduit, [who] provides training and basic IT support" (Rossmann & Rossmann, 2005). The EIC "often defends the Systems Team when he is aware of the efforts and thinking behind Systems' decisions. Similarly, he will advocate Public Service's position when he feels they have good reasons for their requests." (Rossmann & Rossmann, 2005)

The TIG meetings gave staff members from the library and IT an opportunity to "check on issues impacting on [library] teams, advise the systems team in defining and resolving problems and defuse situations by being aware of issues within complex projects or applications" (Rossmann & Rossmann, 2005). Rossmann and Rossmann state that "one of the most notable positive improvements that have come as a result of the

efforts of members of the TIG is a group focus on the common goal of improving technology in the Libraries... TIG members have come to appreciate the perspectives, mentality, and priorities of the other members of the group. What started off as a somewhat adversarial relationship between the non-IT and IT members has changed to a tone of respect and mutual understanding of each other's perspective" (Rossmann & Rossmann, 2005). As part of the meetings, library workers are "publicly praising IT staff following a positive interaction" which the IT staff find "highly motivating" (Rossmann & Rossmann, 2005).

The key components of this approach are working relationships built on mutual respect, open communication and appreciating differences of opinion. These relationships obviously took some time to grow, but the end result for the library has been positive – "we have found that developing a common understanding of how IT people work and trying to help them understand how non-IT people think is a better strategy for successful collaboration" (Rossmann & Rossmann, 2005).

Temporary work assignments and tours

Another idea for improving working relationships is for "IT personnel to be sent on temporary assignments... into non IT departments where they learned the needs and priorities of a particular user community" (Indira R. Guzman, 2008). As libraries are specific user community with our own needs, this could be a real opportunity for library staff to interact with IT, outside of normal troubleshooting demands. The assignment could be as short as IT visiting the library for a few hours and seeing how library technician's and others use the systems. The idea of this approach wouldn't be for the IT staff to know everything about the library, but rather get an overview of what the library does and what

technology needs to provide good service to library patrons. Documenting any ideas or suggestions from both IT and the library would be advised to get the most out of this experience for both parties and would provide a foundation to improve working relationships moving forward.

Tours are another mechanism that help IT to interact with their clients. In my own workplace, WA Health, an IT manager implemented a tours program for new and existing helpdesk staff which he named "Smell the disinfectant". (J Beech, personal communication, 8 September) These tours took IT staff out into the hospital wards, specifically to King Edward Memorial Hospital, the state's Women and Newborn Health Service. IT personnel met clinical staff and were able to see how their work maintaining IT systems and responding to system outages was crucial to the overall functioning of the hospital. Clinical staff appreciated the opportunity to interact with IT and felt that IT staff were interested in their work. This led to an improvement in working relationships between the two parties. There are plans to roll these tours out to a number of other hospitals.

Information Technology Infrastructure Library

The Information Technology Infrastructure Library is a "set of best practice publications for IT service management... ITIL gives guidance on the provision of quality IT services and the processes, functions and other capabilities needed to support them. The ITIL framework is based on a service lifecycle and consists of five lifecycle stages (service strategy, service design, service transition, service operation and continual service improvement), each of which has its own supporting publication" (Hanna, 2011).). Along with limiting the use of jargon, part of ITIL training for

IT professionals focus on the importance of customer service skills including active listening skills, empathy and communication skills generally. ITIL was originally devised by the UK government, and is still partially owned by them. There are a number of training providers who offer ITIL training, in Australia and internationally, and the courses are less expensive than training such as a Microsoft Certification (G. Hill, personal communication, 30 July 2017). The fundamental tenets of ITIL can also be implemented by IT departments without having completed the training.

At the core of ITIL is the need for IT departments to examine the technology needs of the business (the business being the client's organisation). There are a number of ways that IT can respond to these needs – providing a service desk and/or service level agreements, change management (where new solutions or applications are introduced into the environment, at the behest of IT or the end user), and release management, where new or updated programs are finally released into the environment. ITIL encourages “continual service improvement” so that IT continues to “realign IT services to the changing business needs by identifying and implementing improvements to IT services that support business processes”. (“ITIL V3 Foundation Certification Training Course,” 2007).

ITIL & the Library Technician

ITIL as a framework primarily benefits the end user or customer. It does this by putting the needs of the customer at the centre of IT processes and procedures. By using ITIL language, library technicians can better articulate their technical requirements. For example, when reporting a problem via the service desk, the following elements should to be communicated:

- What are the risks if the problem isn't solved (or solved in a timely manner)
- How quality of services and productivity are being impacted by the problem

Risks include:

- financial risks to the organisation
- compliance risks (where the organisation is unable to comply with legislation)
- risk to the reputation of the organisation

(G. Hill, personal communication, 19 August 2017)

By highlighting the risk to IT, the library technician is requesting a change to the IT environment to mitigate the risk. The change could be a new IT application or a workaround that can be implemented.

It's a good idea when reporting a problem to give some thought to the concepts of urgency and impact as they relate to IT. IT service desks often rank problems in terms of their urgency and impact to the organisation. Problems with an application that is used by the whole organisation would be considered a priority as they have the biggest impact; subsequently problems that only impact on one end user would be considered as a lower priority. However sometimes problems that impact on only a small group of users can escalate to the whole organisation, something IT are mindful of. So whilst resolution of the problem raised by a library technician has its importance to the library (and to library clients), it may not be able to be resolved as swiftly as other problems threatening a bigger impact to the greater organisation that IT serves.

In the event that IT fail to adequately act on the request, a dialogue via escalation or service level agreement, may be required. The dialogue should focus on how IT and

library services can collaborate (and perhaps compromise) to meet the core deliverables of the organisation. In some cases, establishing a service level and its executive endorsement can be the catalyst for obtaining better resources (staff or technology) to meet the agreed requirements.

Strategies for suboptimal working relationships

If working relationships are strained and difficult, either party may find it difficult to implement changes. There are a number of strategies that can be considered in this situation:

- 1) Talk to your manager about the difficulties you are having communicating with IT, including any steps that you have taken to try and resolve the situation. If problems are not be resolved by IT in a timely manner, let your line manager know how the problem is impacting on the library and its services as a whole.
- 2) Talk to your IT department's manager (possibly in conjunction with your manager) about the problems you are facing in your working relationship with IT staff. Focusing on the broken work processes as opposed to blaming IT staff (Heyman, 2001) shows that you are committed to improving both working relationships and IT processes across the organisation.
- 3) Relate problems back to the impact on your library service – how are your staff, clients and the library's ability to provide a service being impacted by problems with programs and/or poor IT staff service? These issues need to be raised with both IT staff, managers and your larger organisation.

- 4) If there is an opportunity for you to publicly praise positive IT staff interactions through a staff meeting or other public forum, this could go some way to improving relations with your IT department, as Montana State University found (Rossmann & Rossmann, 2005).

- 5) Examine your own expectations around IT service – do you expect IT to resolve all of the library’s technology problems urgently? Do you have particular stereotypes of IT staff? Reflecting on expectations may help to see how your perceptions may be contributing to the problem.

- 6) Service level agreements are defined as “An agreement between an IT service provider and a customer. The SLA describes the IT service, documents service level targets, and specifies the responsibilities of the IT service provider and the customer” (“ITIL V3 Foundation Certification Training Course,” 2007). A service level agreement is useful as it provides structure for both parties. Implementing an agreement may come from the top levels of an organisation or it could be an agreement that specifically covers just the library. It can help if the agreement is set up by a mediator and both IT and library staff may need to compromise on what the agreement covers. Service level agreements must be monitored to ensure they are being adhered to by both parties.

- 7) Sadly, sometimes working relationships are irretrievably damaged and can’t be fixed. In this situation, accepting that IT staff may not change their communication style or be committed to improving relationships may be the best course of action. Each individual can only control their own behaviour.

Conclusion

Positive working relationships between library technicians and IT staff are vital to ensuring the success of library services, contributing to the success of the organisation as a whole. By examining stereotypes, the IT occupational subculture and communication styles, we can see how misunderstandings can arise between IT professionals and library staff. Using ITIL to communicate the impact of problems on the library service and looking for opportunities for library technicians and IT staff to positively collaborate can break down these barriers and lead to real change within the organisation. If both library technicians and IT are committed to working together, the library service and the organisation as a whole can be fundamentally changed for the better.

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