

Examining the Perceptions of Information Technology in an Elite Sporting Organization

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Abstract

In recent years, technology has enabled sporting organisations to become innovators in the global sports arena. Elite sporting teams and bodies are becoming increasingly dependant on technology for daily operations and subsequently these organisations are more and more reliant on technological developments in sport. Player training and management technologies and team performance tools have given sporting organizations the avenues to become more competitive. Organizations invest in information technology for many reasons, for example cutting costs, increase in production and services without increasing costs, improving the quality of services or products and sporting organizations and bodies are no different in looking to technology to gain competitive edges as well as improvement of athlete preparation. However, in spite of these innovations and the potential to gain competitive edges, some seem to struggle with technology resulting in an ambiguous and sometimes negative perceptions of IT services. This work examines the building of credibility in sporting organizations through education and the development of positive perceptions of information technology. The findings provide a basis for further studies and possible trials of differing education formats in technology to further develop both the positive acceptance of sports related technologies and assist in improving the sporting organization's environment.

Keywords: Credibility, Information Technology, Sport

1. Introduction

Organizations, including elite sporting organizations and clubs, operate in a strategic information technology (IT) environment, where the alignment of business and information strategies should be a significant focus for organisational effort. In organisations where the relationship between the IT function and the rest of the business is poor, this severely influences their ability to make the sort of contribution that the business demands (Ward and Peppard, 2002).

Information systems and technology (IS&T) is possibly one of the more important developments in the commercial world over the past 50 years (Carr 2005) and this would similarly apply to the world of sport. Literature has many examples of organizations, including sporting organizations, who have obtained competitive advantage from their use of IS&T. However, in many organizations IT is seen as a cost (Kingsford et al 2003) and in sport the IT resources have been managed by staff in an environment where the potential for loss of knowledge is high due to staff turnover which may occur over short periods and where staff turnover is due to many reasons of which some are differing from the business norm.

If users are not willing to accept the information system, it will not bring full benefits to the organisation (Davis and Venkatesh, 1996). Whether IT is regarded as good or bad depends on how the users of IT perceive it and this perception may not necessarily depend on the technical quality of the systems provided to users. Thus, it is important to find out why users may have a negative manner perception of IS&T.

This exploratory paper reports on an attempt to improve the user perception of the IT function in an Australian sporting organization which has struggled to improve internal user satisfaction. Based on a snapshot of internal user satisfaction survey results and interviews, the paper presents a proposed method to enhance satisfaction and improve the users' perception of IT.

2. IT in the Organization

The IT function of a sporting organization is in somewhat of a quandary as to where it actually resides. Researchers over the last 30 years have put forward the idea of IT being a strategic asset and it being used strategically to further the organization's goals, and there is the perspective that to be competitive the organization would not survive without it. This additionally applies to elite sporting organizations and clubs.

Undeniably IT is the backbone of an organisation and its commercial dealings (Carr 2003); it has transformed business practices, can change the way business is conducted (Beheshti 2004) and in some instances organisations have survived based purely on their use of IT (Malik and Goyal 2003). However, IT is still seen primarily as an operational support function in many organizations (Beheshti 2004) with little emphasis placed on its importance to the organizations.

Though it may not be possible to quantify completely the value of the role of IT to an organisation, it seems imperative that appropriate investments are made in IT to maintain competitiveness. The perception of the "role of IT function in an organization" could have a direct impact on the effectiveness of development of IT capabilities (Ramakrishna and Lin, 1999). Avison et al. (1999) indicate that while IT can be critical to the organisation's ability to conduct and develop business, the IT function is often considered as a secondary activity. A by-product of this is that organisations may be reluctant to divert appropriate investment towards enhancing the IT function, and in sporting organizations and clubs is often the one area where investment is minimized.

IT usage appears to be one of the most significant phenomena to occur within sport in past two (2) decades. It may be used for general organizational functions including operational and managerial control, strategic planning and decision-making. However, the applications of IT have increasingly extended to various functions surrounding the preparation of the individual athlete and/or team.

Perception

Perception is based on the understanding one has of something or someone. It is an impression that a person has based on their understanding of another entity (be that a physical thing, a group such as a team or an organization or another person). Hence perception can be defined as "the process of making sense out of one's environment" (Daft 1997:p562) or "the process of selection, organization, and interpretation of stimuli from the environment" (Milton et al (1984: p22).

When looking at perception in a sporting organization or club, the impressions that a coach/athlete/support staff member has are no doubt influenced by their past experiences, as in any organization (Milton et al. 1984). As they acquire new information or their environment changes, no doubt their perceptions will also shift.

Negative Perception of IT

Negative perceptions of IT are misperceptions based on a lack of understanding or awareness (Overby, 2005a). Today an IT disruption can paralyze a company's ability to make its products, deliver its services and connect with its customers, not to mention foul its reputation, yet only a few companies have done a thorough job of identifying and tempering their vulnerabilities (Carr, 2003).

Reinertsen (2000) believes that no system is so fool proof that it can be operated by idiots, as a result he focuses his attention on the selection and training of people. This is an important concept for organisations and the negative perception of IT within the organisations. It appears to be human nature to act on perceptions, even though it may not be valid, so a negative view of IT can have disastrous consequences within organizations.

In any organization it is hard to change negative perceptions once they are instilled. Even by delivering projects successfully and ensuring IT deliverables, such as network uptime, are maintained

at optimum service levels, changing the mindset of end users within the organization may take considerable effort. Overby (2005a) believes it is impossible to improve how IT is perceived without basic competence in the function and some level of system implementation success. Simply being competent or achieving a major project win is not enough to change a poor perception.

Some consequences of a negative perception of IT within a sporting organization include missed opportunities for innovation and growth, inefficient IT operations, IT budget cuts, a decline in coaching staff / support staff / player morale, and user resistance to IT systems.

Credibility and Trust

Credibility and trust are two important elements that all should strive for in any sporting organization / club. A common misconception is that both credibility and trust are often thought to be same, but this is not the case as one party could have someone's trust but they may not be credible to others. Credibility as defined by Bashein & Markus (1997) is the standing someone gives to another as a result of a positive or negative action and it does not come from the credit we take for undertaking the action. Trust on the other hand requires one party to knowingly place themselves in a position where they may be at risk from or be vulnerable to another party (Brown et al 2004).

Psychology research has shown that a common affiliation leads to improved credibility. That is, in many situations people find others with similar thoughts and beliefs to be more credible than those with different thoughts and beliefs (Fogg and Tseng, 1999). Ignorance in the understanding of an organization's IT infrastructure leads to the formation of negative perceptions and poor credibility (Bashein & Markus 1997). As with industry, in a sporting organization it is important to determine how this low credibility has been attained and what can be done to improve the credibility of IT and change negative perceptions.

A common theme to build credibility is to manage expectations and not over promise. The credibility an IT function has within the organization, and the confidence the users (coaching staff, support staff and players) have in the competence of IT is based on past working experiences (Reich & Benbaset 2000, Huang & Qing 2007). Credibility can be easily damaged by a poor performance in the provided IT service. Once it has been lost, regaining credibility is difficult as restoring confidence may take considerable time and the IT function may continue to suffer for several years (Cormack et al 2001a, Horn Nord et al 2007). To ensure confidence in IT is retained, regular updates of achievements through the application of the organization's IT performance should be communicated throughout the organization. (Overby 2005a).

Trust also implies both parties will lower their own interests in order to achieve individual and joint goals. Once trust has been established through friendship, dedication, and a successful history of working together (Huang & Qing 2007) it will not necessarily be damaged by a poor performance and good performance will only reinforce the trust already gained and improve credibility. Conversely, if a member of the coaching or support staff or a player is not trusted, they will not be credible, regardless of their expertise and performance (Bashein & Markus 1997).

IT staff consult and communicate with all level in the coaching staff and player group in order to build a common awareness and create a positive organization/club-wide impression of the IT function. By partnering with the various stakeholders in the team(s) to tackle problems with shared knowledge and information, IT staff can seek further opportunities to add value across the entire organization. When partnerships are based on trust the joint effort will lead to enhanced outcomes (Barthelemy 2003) as most people 'value someone they have confidence in and can trust' (Bhardwaj 2007:p57). By doing this the IT function will be more focused, credibility and trust between the IT and the club and team's stakeholders will be increase and all entities will form a sound partnership(s).

3. Research Methodology

This exploratory work reports on the attempts by a sporting organization to improve the perception and acceptance of IT within their community – a semi-professional Australian sporting club competing in the premier level competition in their state. The IT function has struggled to over the years to gain meaningful acceptance and subsequently the uses and acceptances of IT dwindled rather than being further embraced.

The study was conducted through a discussion group, a series of interviews with a short survey and a case study. The advantage of doing a qualitative research was that it allowed greater understandings of the interviewees' personal constructs and experiences. All participants in the study were fully informed and voluntarily consented to their involvement. Participants were also free to withdraw from the research without giving reason or justifying their decision at any time, if they so wished.

The sporting organization was chosen due to the broad range of athletes competing at differing levels ranging from the social/weekend participant to individual full time athletes. The first grade / senior team had semi-professional and professional athletes on contract, of which some had additionally been recruited into the club.

The organization had various levels of successes and failures with the introduction of various information technologies ranging team and player management, match and player statistics to training and conditioning programs. The technologies used are stand alone in so much that they are not formal requirements of the club or mandatory to compete in the competition. There are some competition requirements where relevant match data and player statistical data is to be loaded to the competition management systems run externally by the competition management.

Interviews

A pre-interview discussion (n=2) was held prior to the commencement of the pre-season period in relation to the technologies in place in the club. As suggested by Patton (1990) this allows other related topics to emerge. From the discussions, a general interview script was developed based on issues derived from comments and points raised. All the participants were or had been involved in the club in either a coaching, team management or player roles for the previous season, and in the majority had been involved with the club for more than four years/seasons. McCracken (1998) discusses how interviews can draw on the past as well as the present to extract a deeper understanding of an issue than a simple survey type inquiry. Erlandson (1993) states that the use of semi-structured interviews allows the investigator to ask respondents for facts as well as gathering opinions. The same main format of questioning was employed in all interviews (n=11).

The interviewed subjects were solicited through chain sampling. Chain sampling “identifies cases of interest from people who know people who know people who are information-rich, that is, good examples for study, good interview subjects” (Patton, 1990) All of the 11 volunteers were chosen for interview on the basis of availability, suitable experience and use of technology(s) used in the club and in their chosen sport. Erlandson (1993) suggests that this technique of “purposive sampling” is preferred to random or representative sampling because the major concern of the researcher is to maximize discovery of the problem and the heterogeneous patterns that occur within the context of the particular study. Semi-structured interviews were conducted at a location that suited the interviewee and in general lasted on average approximately 20 to 25 minutes after which the interviewees were also asked to provide responses to a survey.

The focus of the interview questions centred on the views, if any, participants had to the uses of information technology and the impact of the use of the technology in relation to their individual or team preparation. Any views or opinions in relation to another sport, or technologies not employed by their sport, were disregarded. Their personal viewpoints on information technology, in relation to levels of application and introduction, what they enjoyed or did not enjoy with the use of the technology(s) employed in the sport, what opinions and frustrations they had with the information technology and IT staff and what aspects they had or had not appreciated. Participants were also

asked about their own adaptation to the use of the technologies, changes to their own practices leading up to, during and after a match were also explored. The interviews were recorded and transcribed for analysis. Follow-up phone calls were made to six respondents where clarification or further investigation was required.

A case study is an investigation of a contemporary phenomenon within its real-life context which provides rich contextual data obtained from an organizational setting and a single case study has the ability to increase our understanding of a particular situation (Yin 2003). It has been argued that a single case study, while not generalizable, has the ability to provide a valuable insight into a known context (Duhan et al 2001) and that the findings may be appropriate for someone in a similar circumstances (Cousin and Jenkins 2001).

3.1 The Field Site

The organization is being studied for the purpose of this study is a sporting organization with athletes competing at all levels from grassroots through to elite national players. The athletes compete in five open age teams and three Under 21 age teams. Each team consists of fifteen players and a group of reserve athletes. The teams compete in a state's premier competition. On completion of the state competition, the state team champion competes against the premier team from the other leading state in Australia to determine the national champion.

The organizational structures of each club in this competition and the sport, although slightly different, are in essence very much the same. The structure of the club in this study has a head coach with each team having one or two coaches and a team manager. A strength and conditioning team and medical and physiotherapy staff work with all teams and support the coaching staff. The organization has a structure with an operations manager overseeing the day-to-day running of the organization and reports to a board headed up by the organization's president. The IT staff are not directly linked to any specific team but provide IT support across all areas of the club. The overall team / player management is administered by the sporting organization's head coach.

3.2 The Problem

The organizational structure has a direct linkage to the problem as even though there is a head coach who oversees all teams and sets directions and processes for the season, individual coaches are not obligated to utilize the technologies, and in some instances, due to individual preferences, introduce their own preferred information technologies, only use a subset of the technologies or do not use the technologies at all. To some degree the individual team staff work fairly autonomously.

Similarly athletes, due to their own needs, are a mix of those using and relying on the information technologies or the feedback data provided to those who elect to not use the information technology due to various reasons.

When initiating a project requiring IT involvement, the head coach usually seeks an endorsement from the board and the technology is then introduced. It is then the responsibility of IT to implement and often manage the technology. There is very little consultation with either the other coaching staff, support staff or the IT staff.

There is very little education or hands on testing by the various end users. The coaching staff and athletes are provided with minimal information as to the functioning of the technology, and the requirements behind the introduction of the technology. The individual teams in the most only utilize the components of the system that directly affect their athletes or provide the relevant data required by the head coach. There is little knowledge within individual teams on how the other teams use the system. Once an information system has gone live, there is even lesser understanding within the club community of how the system holistically fits into the club's structures and processes.

This leads to frustration and eventually a negative perception of the system and IT in general. A single process within the club may involve multiple teams to complete the process. In not understanding the responsibilities of the other teams, users are open to unrealistic expectations of

what the system has to offer, and in some cases what is expected. When given the opportunity, the individual teams often set expectations of the technology without regards for the needs of the remainder of the club. These then become unachievable and the blame is laid on the assumed inadequacy of the system, and eventually adds to this negative perception of IT.

As a typical input from various units within the club, for example, coaching staff and medical staff and strength and conditioning staff, some of these units do not appear to fully understand the impact their own unit has on the structure of the club’s processes. Systems are built incorporating the needs of all teams / athletes which is advantageous to IT staff as they are able to have a holistic understanding of the club’s process. IT staff often appear to be more knowledgeable than individual units and users due to this holistic view of business processes.

3.3 Interviews and Surveys

Interviews were conducted during the preseason period (January / February) and followed by a survey. The survey was again conducted midway during the season proper. Interviews and the surveys were conducted at the completion of the season (September).

Figure 1 below is a summation of the three surveys. The survey taken in January/February was declared as baseline measurement from which improvements would be measured. Using the baseline measures, all team coaching staff agreed that a 5% increase in satisfaction of the baseline as an achievable target.

This comparison allows the perception of IT within the club to be gauged and the results show the users hold a poor or negative perception. The survey questions included communication skills, professionalism, understanding of the technology, culture of IT in the club, ability to recommend solutions, quality and timeliness of delivery, value to the club and individual teams and athletes, and overall satisfaction.

Team	Jan/Feb (Baseline)	Target 5% Increase on Baseline	Mid Season May	September	Sept. vs Jan/Feb (Target +5%)	
Team A	6.4	6.72	6.7	6.9	7.8%	<input type="checkbox"/>
Team B	7.1	7.45	7.0	6.6	-5.7%	<input type="checkbox"/>
Team C	6.0	6.3	6.1	5.9	-1.6%	<input type="checkbox"/>
Team D	6.8	7.14	5.9	6.3	-7.3%	<input type="checkbox"/>
Team E	6.5	6.83	6.2	5.8	-10.7%	<input type="checkbox"/>
Overall	6.56	6.88	6.38	6.30	-3.9%	

Figure 1: Comparison – May and September Quarters

4. A Framework for Improving Perception of IT within the Organization

While the overall results obtained in the September customer survey were somewhat expected the levels were of a surprise to the IT staff, the head coach, operations manager and the board. Given the perceived successful implementations of information technologies, it was anticipated that the results would have improved or at worst case remain the same. As such research was undertaken on how to improve the perception of the IT function and from the IT literature a six-step model proposed by

Peppard (2001) was identified. This model acts as a guide for studying the perception of IT. The six steps involve getting the basics right, enlisting key influencers, building credibility, seeking involvement early in projects, placing responsibility for IS with the organization (club) and cultivating and maintaining partnership.

Peppard (2001) suggests education plays a key role in this stage to impress upon business managers (the coaching staff) the process of value creation through IT and the key role that they play in this process. The issue at hand in the organization appears to be the lack of understanding of the holistic process that IT systems are built upon. It is important to understand that at this stage that the study focuses on the holistic education and its impact on perception of IT and not education on how IT systems work.

4.1 Getting the basics right

The first stage involves focusing on the IS function itself, ensuring that it can deliver basic IT services (Peppard, 2001). With this environment, while on a smaller scale, this involves basic IT functions such as network availability, support / help desk-like functions and reliability of applications.

Despite the improved use of project management and systems development tools and methodologies, the failure rate of IT projects is still very high. The biannual Standish group surveys continue to show high rates of IT projects that were cancelled before completion or are delivered over budget, behind schedule and with fewer features and functions than initially specified (Marchewka 2012). This is a disturbing statistic for IT departments eager to improve their perception of IT. Thus, it is important to get the basics of IT delivery and service to an acceptable level.

IT departments must make an extra effort to be proficient in project management, end user service and applications quality despite these being an organization wide responsibility. If this is not achieved it may be difficult for IT to meet the basic expectations of the business.

Within the sporting organization guidelines for achieving the basics are in place:

- 1 Due to the size of this environment, a near 24 x 7 on call support is necessary during the competitive season to ensure network availability, problem fixes, etc. are addressed within minimal timeframes. All outages are reported weekly to the operations manager and head coach.
- 2 For project management, a suitable methodology needs to be incorporated and adhered to be all stakeholders – coaching staff, support staff and athletes.
- 3 Good and timely service is a performance objective for IT staff. Review of end user satisfaction be conducted at key point during the year and playing season, to address any short comings and is taken in to account at end of season and staffing reviews.

4.2 Enlist key influencers

There are particular individuals within an organization who are pivotal to what happens and these individuals are the so-called opinion leaders or key influencers Peppard (2001).

Thus for IT transformation to occur it is important to get these influencers on board before proceeding as these individuals bring visibility to projects and add impetus to the process. However they can also decide the success or failure of an initiative. Key influencers also exist within the user community (club). These key users drive system change but may also have concerns regarding ease of use of the system or changes to job roles due to system implementation (Overby, 2005).

Jarvenpaa and Ives (1991) agree with Peppard and say that general managers need to be involved in information systems due to the magnitude of expenditure involved, the ability for IS to enable business initiatives such as business process re-engineering, total quality management, and the weight of evidence which demonstrates that when general managers are not involved in IS, investment is wasted on automating inefficient processes.

Key influencers are enlisted for the introduction of technologies and IT functions within this sporting organization. This is undertaken by ensuring that all projects are initiated and owned by the head coach. The head of the IT staff reports to the head coach and is constantly communicating with the other senior coaching and support staff. Weekly or fortnightly meetings are conducted to ensure that only items that are of high priority are being worked on.

4.3 Build Credibility

In establishing credibility it is important to bear in mind that credibility is not something that is taken, but rather something that is given; in essence it must be earned by and is derived from achievements and actual results (Peppard, 2000).

It has been suggested by Overby (2005b) that IT staff regularly present IT efforts and achievements to the board, the executive committee, other governing bodies and potentially the whole organization. This includes not only project work but also major maintenance and enhancement efforts, as well as successful results through the applications of technology.

To achieve success, a sense of trust and commitment, credibility must be developed between various participants to ensure a free exchange of beliefs and opinions. When credibility is lost it is difficult to regain as once a user perceives that someone or something lacks credibility, then they are likely to stop using the service or resource, hence providing no opportunity to regain credibility. Peppard (2001) says that education showing the value through the use of the technology, and IT and the key role it plays in this process, is important.

An important concept for building credibility is to manage expectations and not over promise as users have more faith in what IT has to offer if IT delivers what it promised. Often this is a difficult concept for IT staff as users can be unrealistic in their demands and has to be managed.

Within the sporting organization there appears to be adequate communication to users indicating value of the technologies and IT. Relationship between IT staff and team management provides the ability for dialogue due to the less formal organizational structures between IT staff and team management; and with the IT staff having a contributing factor in the team decision making processes.

4.4 Seek involvement early in the implementation of technologies

According to Peppard (2001) the IT function should actively seek out the involvement of the team stakeholders in IS projects and be willing to get involved in projects when invited by the stakeholders. From a project management perspective Marchewka (2012) suggests it is important to identify stakeholders as early as possible to enable adequate communication channels to be set up at the start of a project. This also encourages the users to take responsibility for the project. The outcomes are more accurate when the stakeholders/team staff is responsible for the projects.

When users (coaching staff and athletes) and stakeholders are involved early in projects there is less chance of missing important information or requirements about the desired way the system operates in their environment. This also enables athletes and coaching staff to think about the testing process and minimalizes any potential frustrations when the system is implemented.

In this organization this process is working fairly well. The introduction of any technologies, whether they are IT related or team related has to be initiated and approved by the head coach and board. The project methodology ensures that the initiators of any technology related project(s) to the organization and the IT staff work closely where enforced signoff is required. Often the sign off process is a point of frustration for the coaching staff as they feel that it delays the process but once they recognize the value it adds to the outcome they comply with the process.

4.5 Place responsibility for IS with the business

Peppard (2001), highlights the importance of business managers taking responsibility for aspects of IT that traditionally may have been delegated to the IT function and in this environment the senior team management need to take greater responsibility in the applications of technology.

There may be resentment in the taking on this responsibility as technology is foreign to them. However they must realize they are making decisions that involve using technology rather than pure technical or technology decisions. This implies senior team management may need to be educated on how to make these decisions which involve technology; however they must take ownership for these decisions which also infers taking responsibility for their component of IT (including all new and existing technology and systems).

Commitment is considered essential for the success of the system. Overby (2005b) notes that in order to change perception, IT staff must have a sponsor who share ownership and accountability with IT for IT and introduced technology.

In this sporting organization all technologies and IT systems have a “business” owner – usually the head coach. Any changes made to existing or new systems have to be signed off by the head coach and endorsed by the board.

4.6 Cultivate and maintain partnership

Peppard (2001) infers there is a possible danger of management becoming complacent and not recognizing their contribution to IT success.

Despite strong management commitment and detailed planning, an IT project may fail simply because IT personnel and users are unable to effectively handle their day-to-day interactions. Quality interaction, by way of communication and information exchange is considered a key success factor in IS development effort (Marchewka 2012).

IT departments must change their focus from a task-oriented method to a role-oriented method that emphasizes the relationship between IT and users of the technologies. Overby (2005b) says that IT departments should employ internal relationship managers to work with the business units to build relationships and/or partnerships and hence set the foundation to improve perception.

Within the sporting organization close relationships between IT staff and the senior coaching staff are visible at the higher management levels. The IT staff reports to the head coach and has a close relationship with other coaching staffs. However, the level of the relationships may not be noticeable at the lower end team staff and players.

5. Response to negative perception

It appears that the sporting organization is following most of the recommendations given by Peppard (2001) in the six step framework. So why does this negative perception towards IT exist?

For sporting organizations to be competitive, it is important that they invest in addressing problems concerning their technology and IT functions. A negative perception of IT may not necessarily be a problem of the technology / IT staff as it could be related to stakeholders using the technology without a complete knowledge of the how IT systems impact holistic process within the sporting organization.

Ward and Peppard (2002) believe Peppard’s six-step process provides the possibility of improving the perception of IT through educating users. An education program could address the mindset blockages and thereby improving the perception of IT within the organization. According to Peppard (2001), education plays a key role to impress team management the process of value creation through IT and the key role that they play in this process.

Other literature supports the notion of education and training being used as a means to improve the view users have of the IT function. Olfman et al. (2003) believe education and training is a strategic necessity for staying competitive and delivering results. IT training literature shows that traditionally IT training has been to impart skills in the use of the particular systems to users. Olfman et al. (2003) indicate that IT skills training are typically built to illustrate the semantics of the system functions. Training is focused on ‘what’ the system can do and not ‘why’ it does what it does.

There appears to be little focus on how the system covers a holistic business process and adds value to the organization. By neglecting this aspect of the value of a system, there is little business

ownership. In their study on organizational learning strategies, Olfman et al. (2003) suggest that there is little business focus in terms of application of IT skill to business process and understanding what these skills and systems will do for the individual and the organization. They emphasise that the capability to focus on the larger business picture requires that IT skills training be considered in an integrative manner with organizational strategies.

In an era where sporting organizations are increasingly dependent on IT for value and gaining competitive edges, it seems remarkable that there is limited focus on this topic within sporting organizations. IT training must focus on the organizational needs not just how to use the system. End users must understand the holistic process and how IT assists them in achieving their individual and team goals.

Ewusi-Mensah and Przasnyski (1991) indicated that 30% of the executives who responded to their survey on information system abandonment indicated end users experienced uncertainty about an information system's impact on their job. This may lead to a negative perception of what IT has to offer and eventuate in abandonment of the technology that may have benefit to the organization.

According to Sein et al. (1996), training methods and approaches have focused most exclusively on ensuring that a trainee acquire the skills to use an IT tool and in a specific domain but with the advent and increasing use of technologies and IT solutions this narrow view of training will prove to be inadequate in preparing sporting organizations, teams and athletes of the future. They recommend it is important to incorporate a conceptual level of training, which refers to viewing the tool in the context of the entire system and the organization.

On reviewing the available it appears that training of the user in the holistic process and goals may be an important step in improving the perception of IT.

6. Conclusion and Future Research

There is reduced understanding of IT value and IT departments/staff are stumbling to facilitate the organizations demands for return on IT value which also applies to sporting organizations and elite level clubs. Organizations that fail to value IT and take on the benefits of IT will miss opportunities for innovation and possibly spend IT expenditure inefficiently. Thus many have taken up the challenge of recommending potential solutions to improve the value of IT. This cannot be done just by reducing expenditure on IT solutions as these solutions give organizations the ability to be innovators and have the potential to gain competitive edges.

The challenge for IT staff in a sporting organization is to enable the organization to see value and benefits in IT and technology and hence improve the perception of IT. Through this work, it appears this may be possible by improving the educational methods of end user training within the organization. This may be done by introducing holistic process training along with IT systems training.

This study is significant because it examines how a sporting organization can take advantage of IT. By formulating a strategic learning module for end users, it can assist the organization to stay competitive, provide a better training and match preparation environment for teams and athletes, achieve better results and potentially deliver an attractive environment to attract other athletes to the club/sporting organization. By understanding the value of IT, the sporting organization may be able to service their coaching and support staff and athletes more effectively. The findings could also be applied to other organizations that may be faced with a similar negative perception of IT or potentially where the IT department is viewed poorly.

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