Study of tactical alignment of business and IT in education systems

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ABSTRACT

Business - IT alignment (BITA) is one of the most widely discussed topics for the last decade in the area of Information Systems Planning and Management as it stresses the importance of the technology, business management, and an amalgamation of the two that holds the promise for obtaining the sustainable advantage of business organizations in the long run. Business Information Technology Alignment (BITA) has been found to improve firm performance. Yet little is known about the process through which universities/colleges achieve BITA. It is the fastest-growing economy in the world.

Keywords — Tactical alignment, Strategic alignment, Aspects, Barriers, Assisted qualitative data analysis, Business-Information Technology Alignment, Strategic alignment maturity

1. INTRODUCTION

Business - IT alignment is one of the most widely discussed topics for the last decade in the area of Information Systems Planning and Management as it stresses the importance of the technology, business management, and an amalgamation of the two that holds the promise for obtaining the sustainable advantage of business organizations in the long run.

It is not strange for business and IT specialists in an organization to encounter disputes and squabbling as unavailability of correlative understanding and the failure to yield desired results lead to mistrust and blaming among themselves (Henderson, J.C., and Venkatraman, N., 1993). Efforts to initiate trust between these two groups and a mechanism for unanimity in decision-making are often included in the search for Business–IT alignment.

Frequently using immediate alignment actions, in this case, one could produce false and ambiguous outcomes at any point of analysis, but the level of distortion could be most severe when assessing alignment in individual methods or through a file of processes that, in its whole, covers the value chain. Indistinct alignment actions could also damage important IT decision making by preserving a fabricated misalignment amongst CIOs when in fact the contrary holds true.

Firms may pursue to concentrate IT resources on procedures that are vital to the accomplishment of their business strategy, to allow greater responsiveness to market change. Doing so with less analytical measures may be reflected inefficient. Likewise, a lack of IT resources may be a cause of frustration for end users in techniques that are minor to the business strategy – in human resources, for example, but the organization will survive. The similar lack of IT resources in an organization’s mission - essential processes could damage it. Assessing alignment at the organization level ignores what happens in each and every procedure, and it does not involuntarily disclose whether individual methods are aligned. One can accomplish this fact only via abstracting and evaluating alignment at the process stage.

Hence, as a result, in this study, we propose a fresh and different conceptualization of alignment at the process level. We develop the work that has been done at the corporate level over a 20-year interval by emphasizing the advantages of presenting a more granular opinion of alignment across various business methods. We adapt measures derived from strategic fit research, individually, profile deviation measures (Venkatraman, 1989), to differentiate between situations where process-level misalignment is related to a lack of IT support for essential activities in a specific process (termed as IT shortfall) & other instances in which, even though IT fully supports vital operations, excess or slack IT supplies (stated as IT slack) that might aid modifications to business strategy at a later date however exist. We exhibit the qualities of this conceptualization and measurement approach using perceptual data from a survey of IT & business administrators. It approves the necessity to update
our alignment measures to allow for circumstances when IT can and is assumed to endorse and enable variations and transformations in strategic business direction, to improve individual procedures or help implement the whole business strategy.

Business/IT alignment has been approached in the article in many ways. Henderson and Venkatraman (1993) described alignment as the level of fit and integration midst business & IT strategy, business & IT infrastructure. Reich & Benbasat (1996) argued that alignment is the level to which the goals, mission, & strategy confined in the business strategy are distributed & supported by the IT strategy. Sauer & Yetton (1997) indicate that IT must be handled in a way that imitates the management. McKeen & Smith (2003) reasoned that the strategic alignment of IT occurs when a company’s objectives & actions and the IS which keep them stay in harmony. Proper alignment signifies that the group is using suitable IT in specified circumstances in an appropriate approach and that these deeds remain consistent with the business strategy, objectives and wants (Luftman & Brier, 1999).

2. LITERATURE REVIEW

Back in the 1960s, IT has been considered with swift growth, and developed business and turned into an essential part of most business and industrial firms. Many firms in every area such as business and commerce, industry, healthcare, and government and academia are fundamentally reliant on their IT (Earl, 1992; Ward & Peppard, 2002; Ward & Peppard, 2004). The firms have to verify and comprehend how to operate IS/IT usefully, to remain cutthroat in a vibrant business atmosphere. A critical achievement feature for an active business in a lively business atmosphere is a useful & competent IT strategy auxiliary associating business strategies and procedures (Henderson & Venkatraman, 1993). The significance of the necessary use of technology-based IT for successful administrative accomplishment which constructs an impact to the formation of business value is referred & is better known (Henderson & Venkatraman, 1993; Luftman et al., 1993).

In the literature, alignment is subjected to various interpretations in both theoretic & practical reports. Alignment has been called integration (Weill & Broadbent, 1988); fit (Chan, 1992); harmony (Luftman, 1996); strategic alignment (Henderson and Venkatraman, 1993); bridge (Ciborra, 1997); business-IT alignment (Luftman, 2007); IS alignment (Chan et al., 2006; Benbya and McKelvey, 2006); IT alignment (Chan, 2007) and fusion (Smaczny, 2001); Silvius (2009) concluded that one of the reasons for this unclarity is that the theory of alignment is still young.

Furthermore, many analyses of alignment have highlighted that alignment is a procedure instead of an end state (Parkert et al., 1988; Niederman et al., 1991; Henderson and Venkatraman, 1993; Baets, 1992; MacDonald, 1991). Galliers (2004) highlighted the issue of aligning ICT in a relatively fixed state after implementation in a firm, with a business strategy & related material requirement which are always in the necessity of adjustment. Hence, in this context with regards to the ‘end state’ alignment approach, a more holistic definition of alignment is illustrated by Silvius (2007),  ‘the degree to which IT applications, infrastructure, & organization allow and support the business strategy & procedures, as well as the method to realize this.’

Luftman (2000) defined business alignment & information technology (IT) as a harmonious relationship. Chen (2010) has also stated that business & IT should be in harmony for them to align correctly. The overall perception of business & IT can be accomplished by understanding business strategy & information technology governance (ITG). De Haes & Van Grembergen (2009) was discovered that there is a specific relationship amid business/IT alignment and the use of ITG. Business strategy is evaluated by how good a company executes as it associates to processes, structure, and its environment (Croteau & Bergeron, 2001).

The idea of fit is the principal subjected in the area of strategic management (Venkatraman and Camillus, 1984; Venkatraman, 1989; Tan and Tan, 2005). As, Porter (1996, p. 73) states: Strategic fit amongst various activities is essential not only to cutthroat and modest benefit but also to the sustainability of that advantage. It is difficult for a competitor to coordinate a collection of interlinked actions than to just copy a specific replicate a set of product attributes, coordinate a process technology or sales-force approach.

The aim of the “business and IT alignment” is attained by no businesses. It is a worthy yet critical goal to follow and pursue. One can either by taking steps to get closer or by one might never reach the alignment for which it requires a process. Most of the time everyone ignores that it is a process. These processes neither have a base point nor have an endpoint, which incrementally gets towards alignment is a series of “learn and do” cycles (Coleman & Raymond, 2006).

Information Technology (IT) can influence all the facets of educational and business wants in higher education institutions (R. Yanosky and J. McCredie., 2008). It is clear in current times that dependence on IT in the education region has augmented (F. Newman and J. E. Scyrur, 2015), (L. Price, J. T. Richardson, and A. Jelfs, 2007), (J. T. Richardson, 2005), with more growth of the IT role in coaching and studying activities all through the previous two eras (M. Deniz, 2014). Earlier, IS in the higher education area were mostly used for communication & administration activities (R. B. Kvavik., 2005). The swift technological improvements related to the Internet, mobile computing and social networks have developed into vital to enhance & endorse learning (A. Lavinica and C. Calafate, 2009).

This improvement of IT and its implementation in higher education carry on growing (A. Eriksmo and J. Sundberg, 2016). Rendering to a current review led by J. Herron, 2016, increased reality technology has demonstrated its importance in aiding medical preparation and has already assisted in authentic curative measures. Further chances & potentials for accepting these tools and technology & other lately established technologies in education are frequently found.

This result in the requirement for universities to spend profoundly on new improved and enhanced technologies to improve higher education coaching & learning methods (F. David and R. Abreu, 2016). The study demonstrates where nearly 75% of faculties
think these Learning Management System (LMS) as an extremely beneficial and helpful tool to improve teaching. Students also illustrate great stages of contentment in the direction of the improvement of their learning event via the usage of these systems. Such insights of learners, staff, and faculties can be taken into consideration as an essential and vital common issue, which must be considered to evaluate the worth of the alignment amid business procedures & IT systems in higher education institutions.

Nowadays, the catastrophe in such systems in higher education institutions may have substantial bad influences on student’s fulfillment, institution’s status & future incomes (S. Tareen, 2014). Thus, if these tools are to include importance to learning activities, they have to continually assess & align with the requirements of students and academic employees. Similarly, technologies operated by staffs in various sectors and schools at higher education institutions have to be associated with the institutional intentions to include business value.

The eccentric character of higher education, embodied in collective management, distinct organizational culture between colleges & universities and the liberation of academic programmes and research accomplishments, gives exhibits an exceptional IT alignment challenge with institutional purposes & significances (J. A. Pirani and G. Salaway, 2004) (J. Luftman and R. Kempaiah, 2007), through the implementation of the Strategic Alignment Maturity Model which was established by (J. Luftman, 2003), find the education area to be the minimum matured part in terms of strategic business & IT alignment contrasted with several other business and manufacturing areas for instance conveyance, insurance protection, and well-being. Thus, the emphasis has to be specified to the higher education area to search the trials and barriers which avoid more top education institutions from succeeding a more advanced level of alignment among business and IT.

One also wants to identify that not all alignment analysis hires a processed or analyzed the degree of alignment. Out of 170 articles and theses that Gerow et al. (2014) recognized as including the essential of the alignment literature, only 71 (41%) comprise a tangible measure of alignment as evidenced by correlational or other pragmatic analysis. Out of this, 49 (69%) papers use single means based on, for, e.g., Likert scales. As such, only 22 (31%) papers have processed an alignment measure using the information on IT & business strategy. While Gerow et al. (2014) argued that particular actions may generate inflated Alignment measures, it is equally likely that only rules are only meant to find IT deficit. Such scales are unlikely to reveal organizations with IT slack or to unveil the level of IT slack if it exists.

Adding to the vicissitudes in a firm’s internal atmosphere core competency, skills, finances, structure, knowledge, personnel, etc., and no one has a dynamic combination of forces which claim a change in response (Luftman et al. 1993; Henderson & Venkatraman, 1993).

2.1 Strategic Alignment
Strategic IT/business alignment has sustained to garner attention, despite decades of research. This has been attributed to, among other things, the many practical challenges it presents (D’Souza and Mukherjee 2004). Reich & Benbasat (1996) also stated that in lots of the study on strategic alignment, no distinction is made between factors influencing alignment, and alignment itself. They, therefore, make the difference between causal elements, for instance, the IS planning process, & alignment. They further define the alignment result along two dimensions, i.e., the intellectual side, and the standard format. The rational aspect denotes to the alignment of IS plans (or strategies) with business plans (or procedure) & is termed as the situation in which a set of best-correlated business plans & IS plans exist (Reich & Benbasat 1996). On the other hand, the social dimension of alignment is referred to the situation in which the business & IS administrators comprehend & are dedicated to the IS & business objectives, mission, and plans (Reich & Benbasat, 2000). Luftman (2000), in a separate line of research, define business-IT alignment as operating IT suitably and adequately to harmonize with business strategies, goals and needs.

It contrasts with the definitions provided by Reich and Benbasat (2000), in that the focus is on applying IT, instead of on social aspects or IT plans. It is thus similar to what Chan et al. (1998) define as apprehended strategic alignment, as opposed to the scheduled strategic alignment, usually showed in strategies and plans. These three views of alignment are not entirely separate, but interconnected. The social dimension will have an optimistic effect on the intellectual, both of them in turn influencing realized strategic alignment. The dynamic & turbulent business and IT environment affect too, however, making alignment a moving target, with the company and IS strategies continually changing, and the subsequent need for one or the other to be adjusted.

Managerial interest for the value of IT investment has retained the limelight on alignment, as it is thought to be that by aligning IT with business plans and goals, administrative advantages will accumulate (Henderson & Venkatraman 1993). Chan et al. (1997) provide evidence for the assertion above by demonstrating that strategic alignment is the primary impact on organization act, instead of either IS strategic orientation or strategic business orientation alone. Tallon & Kraemer (2003) confirm that the relationship mentioned above is valid up to a specific point, but note that outside this threshold further increases in alignment might yield lower IT payoffs. This outcome highlights the necessity to become an improved insight into the dynamics of alignment.

2.2 Aspects of Strategic Alignment
The strategic use of Information Technology (IT), better known as strategic alignment, has increased its significance as a result of the strong dependence of organizational activity on information systems and their related technologies. Consequently, organizations want to ensure that IT investments are made on those projects that improve business performance and competitiveness (Tallon, Kraemer and Gurbaxani, 2000). Furthermore, IT executives consider strategic alignment as one of the main challenges that the organization has to face (Ives and Mandviwalla, December 2004; Luftman, 2000; Tallon and Kraemer, 2003).
Strategic alignment, however, has been subject to different interpretations in theoretical and practical studies and it is difficult to find a common agreement, which can be seen reflected on the variety of definitions found in the literature. For example, strategic alignment has adopted different synonyms like integration (Weill and Broadbend, 1988), fit (Porter, 1996), linkage (Henderson and Venkatraman, 1993), harmony (Luftman, 1996), bridge (Ciborra, 1997) and fusion (Smaczyń, 2001). All these definitions, though, focus on how to improve organizational capabilities through technology. In the early works, researchers focused on developing a strategic plan that integrates business and IT visions. Frameworks were also used by organizations to improve the information system strategic planning process. Examples of these are Critical Success Factors, the value chain, the Strategic Option Generator and methodologies such as Business System Planning and Strategic System Planning (Robson, 1997). More recent research in this area defines alignment as all the activities that management performs to achieve business goals supported by IT across the organization (Luftman, 2000). Several approaches have been used to integrate the business strategy and information technology (IT) strategy. Most of these approaches are planning oriented (Smaczyń, 2001) and assume structured environments under full control (Ciborra, 1997; Maes, 1999) in contrast with the real environment organizations face where uncertainty, flexibility, and changeability prevail (Peppard and Ward, 2004). Even if some organizations do not have a formal planning process, they still need to be able to develop their business direction (Reich and Benbasat, 2000)). This direction should be clear enough to allow organizations to focus on those IT projects that add business value. Despite the wide acceptance of strategic alignment, there is no consensus on how to achieve alignment, and a few references detail the process. Henderson and Venkatraman (1993) suggested that alignment could be achieved through the selection of appropriate alignment perspective included in their strategic alignment model (SAM). These perspectives were: strategy execution, technology transformation, competitive potential, and service level. Each of these defines the driver of the perspective and the roles of business and IT managers including the criteria performance measure. Luftman (1996), who redefined the SAM model providing eight perspectives instead of four, followed this approach.

The general process of achieving alignment (Luftman and Brier, 1999) consists of the following steps:

- Set the goals and establish a team
- Understand the business linkage between IT and the business
- Analyze and prioritize gaps
- Specify the actions (project management)
- Choose and evaluate success criteria

Sustain alignment Existing literature; however, does not provide further details for all the steps involved.

2.3 Strategic Alignment Barriers

At a strategic level, senior executive support for IT has been identified as an important factor of alignment. It is considered to be number one enabler as well as the fifth inhibitor to alignment, as found by Luftman et al. (1999) and Karahanna & Preston (2013). General business awareness and support of technology innovations are of foremost importance. In assisting this, business executives should take into consideration the value of IT as well as defining visions and strategies that include the role of IT. Another important factor in the business support of IT is seeing the value in funding and sponsoring IT-projects (Chen et al., 2010). Hence, the lack of senior executive support creates an alignment barrier. Stoel & Muhanna (2012) further highlight it stressing the importance of line executive commitment to IS issues and initiatives, e.g., by IS projects having a business sponsor. The second most important enabler found by Luftman et al. (1999) was the notion of IT participating in creating business strategies. Mutual co-operation between representatives from IT and the business is needed in forming business and IT strategies in order to take advantage of IT as an enabler to reach competitive advantage. Such cooperation is easier with cross-functional teams, with representatives from both the business and IT (Antikainen & Pekkola, 2009). Cross-functional teams provide advantages such as considering opportunities when forming business strategies. Important aspects such as trust and forming partnership are made possible through cross-functional teams (Rao & Ramachandran, 2011). Ajjan (2009) adds to this by proposing that the connection between business and IT planning process impacts alignment. IT managers who participate in business planning have a better-perceived understanding of business objectives and vice versa. Luftman et al. (2010) highlight the importance of link Business and IT Missions, Priorities, Strategies, Planning Processes, and Plans. The authors proposed that business and IT plans should be linked and well documented and for IT personnel to participate in business planning and in new product development. Moreover, Rosenkranz et al. (2010) underline that good communication leads to information sharing between business and IT, which support mutual understanding. Furthermore, Vermerris et al. (2014) highlight communication and understanding between business lines and IS executives as another important precondition to alignment. This is more often the case when the CIO has been with the firm for many years and has a strong working relationship with the CEO. Preston & Karahanna (2009) argue that good communication is an important ingredient in shaping true partnerships based on mutual trust, as well as risk and reward sharing between business and IT.

2.4 Tactical Alignment

While business-IT alignment at the strategic level is broadly studied (Chan and Reich 2007), there has been a minor study of how IT and business can align at the tactical level.

Tactical business-IT alignment is essential for making sure that IT projects are implemented on time, and the implemented applications deliver the planned and desired business benefits. Alignment at the operational or tactical level is required for ensuring that planned applications are successfully implemented, maintained and used, that applications and systems irrelevant to the business plan are not implemented, and that implemented IT delivers envisaged business benefits (Tarafdar and Qrunfleh, 2009).
Aspects of Tactical Alignment

The first aspect was alignment at the level of projects the strategic IT plan specifies broad applications that need to be implemented. The IT projects that are to be executed actually to implement these are selected at the middle-management level. Projects have to compete with one another for resources. Resource monitoring and dynamic resource allocation are therefore required to ensure that projects have adequate technical and managerial resources and that they are implemented on time and within budget.

While it is common to have technical and resource-related success metrics, such as on-time/on-budget completion and development of specific applications features, for projects, the business success of a project depends on whether or not the implemented application is used and to what extent they enable specific operational goals such as decreased time or more effective processes for accomplishing particular tasks. Hence, developing both IT and business metrics for projects ensure that the project addresses time and budget criterion, as well as fulfils operational level business goals.

The second aspect was to align the decision-making processes of the IT function and other departments, through governance mechanisms. These mechanisms create the framework for the interface of the IT department with other functional areas and lead to a better understanding of business requirements by IT managers, a greater appreciation of IT constraints and technical capabilities by functional managers, and better support of end users. Appropriate roles for IT professionals that situate them in user departments and allow for dotted line reporting to business department heads, ensure that the IT department is cognizant of functional needs.

The aspect is to balance firm-wide technology standardization with process-specific customization. This enables the firm to trim down redundancy, integrate elements of IT infrastructure such as networks across applications, and reduce competition for resources among applications that can use the same platform. Standardization choices are important for aligning requirements of new applications with the capabilities of existing infrastructure. Moreover, they form the basis for technology-related tactical decisions during mergers and acquisitions.

The fourth aspect is formal and informal IT-business communication (Basselier & Benbasat, 2004; Chan, 2002) at the middle and junior management levels ensure that day-to-day technology, prioritization, and resource-related problems are identified, discussed and mutually resolved by IT and functional managers. Communication can be through regular meetings between IT and business managers as well as through informal and impromptu walk around by IT managers, the fifth aspects are alignment at the level of skills. Matching the skills of middle and junior IT professionals with changing requirements of a firm undertakes new business strategies such as new product initiatives, mergers and acquisitions, and global expansion. For instance, when one firm acquires another, the IT function may have to acquire new technical skills to integrate and maintain new applications or infrastructure.

Hence, Tactical alignment is accomplished through operational level interaction and interfaces between IT and other business functions.

2.6 Tactical Alignment Barriers

It is often argued that IT does not understand the business environment and therefore cannot support and drive the business in a successful manner. Ray et al. (2005) and Rosenkranz et al. (2010) concluded that it is fundamental that IT understands the organizations business environment including external forces such as customers and competitors. In reverse, it is equally important for a business to understand IT. In achieving an understanding of business, IT should, for instance, communicate in business terms and also apply technical understanding to discover business opportunities. For example, IT can be used to deliver customer service. This way one can also measure data which enables enhancement of results. Another example of IT benefits are organizations that have IT-based business strategies, for instance, companies that sell customer tailored products. In reverse, it is also evident for business to understand IT (Wagner & Weitzel, 2012). It is also found by Campbell et al., (2005) and Wagner et al. (2010) that a tactical barrier faces managers is that formal business strategies are often too ambiguous for business managers to understand. In other words, managers face ambiguity surrounding the differences between espoused strategies, strategies in use, and managerial actions, many of which may be in conflict with one another. Reich & Benbasat (2000) found, and recently confirmed by Rao & Ramachandran (2011) that shared domain knowledge is an important alignment factor. The claims of Alaceva & Rusu (2015) for that the limited knowledge sharing leads to poor communication and low mutual understanding of business and IT goals support this. Moreover, IT and business executive’s ability to understand and be able to participate in the
others’ key processes, ensure better communication between business and IT. Furthermore, increased cross-border knowledge influences the relationship between business and IT. Therefore, business executives have ranked that IT does not prioritize their workload well according to business needs (Beimborn, 2012). On the other hand, IT is often overwhelmed with tasks to the degree that it becomes difficult to meet its commitments, which creates agitation in both end users and business executives. Cancelled and over budgeted IT projects are rarely because of technical problems. However, it still affects IT credibility. The main reason for IT failing to meet its commitments is not adhering to basic project management disciplines, as well as lack of business participation in the different aspects of the project (Jentsch & Beimborn, 2014; Fonstad & Robertson, 2006). Therefore Reich & Benbasat (2000) propose that the history of IT implementations within an organization is an important factor when it comes to alignment, and has been emphasized within the studies applying social capital theory or boundary object theory that have emerged more recently, since 2010 (Jentsch & Beimborn, 2014; Vermerris et al., 2014). Past failures or success of IT implementation can reduce or increase the credibility of IT.

3. OBJECTIVES AND SCOPE OF RESEARCH

The object of this study is to assess the level of strategic alignment and tactical alignment in educational institutes. To accomplish this goal, it offers and intends to define an agenda and an outline for business IT strategic alignment.

• To find out the factors responsible for achieving better strategic and tactical alignment

• To design a methodology in pursuit of achieving tactical or strategic alignment

3.1 Research Questions

a. To find out the factors responsible for achieving better strategic and tactical alignment

b. To design a methodology in pursuit of achieving tactical or strategic alignment

4. METHODOLOGY

As it is seen in the literature review section, there are various aspects associated with the business its alignment which can be a vital part of its success and development. A discrete study needs to be done to endorse the essential factors and strategy, which can affect business-IT alignment to enable the education system to remain competitive in the market and to serve more efficiently. The factors like Admission of students, its management, admit per student, accounting system, examinations, results, etc. will be taken out.

4.1 Survey instrument

The purpose is to find different factors, which would influence development, practice, and acknowledgement of Business IT alignment in the higher education systems. The primary effort will be to gather the feedbacks via interview. The interview is a qualitative research technique, which includes “conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program or situation.” Here, the people will be requested to answer a few questions related to my research work. The survey will comprise all the essential and significant factors, which will be determined by taking into consideration all the research questions. Advantages of interviews include possibilities of collecting detailed information about research questions. Moreover, in this type of primary data collection, it has direct control over the flow of the process and has a chance to clarify certain issues during the process if needed. Disadvantages, on the other hand, include longer time requirements and difficulties associated with arranging an appropriate time with perspective sample group members to conduct interviews.

When conducting interviews, one should have an open mind and refrain from displaying disagreements in any forms when viewpoints expressed by interviewees contradict your own ideas. Moreover, timing and environment for interviews need to be scheduled effectively. Specifically, interviews need to be conducted in a relaxed environment, free of any forms of pressure for interviewees whatsoever. There is a risk of interviewee bias during the 7primary data collection process and this would seriously compromise the validity of the project findings. Some interviewer bias can be avoided by ensuring that the interviewer does not overreact to responses of the interviewee. Other steps that can be taken to help avoid or reduce interviewer bias include having the interviewer dress inconspicuously and appropriately for the environment and holding the interview in a private setting.

4.2 Sample selection

The sample will be various stakeholders as explained in the above theoretical framework. The response of the stakeholders concerning above-noted parameters will be captured. I will approach all the stakeholders associated with the department and obtain their reactions in this questionnaire.

4.3 Data Source

Chairman, Vice Chancellors, Principals, Deans, HoDs, faculties, staffs, students, administrators and developers of selected existing online communities in the education sector. Location: Bhubaneswar, Odisha has been decided for the data collection. Few of the Top Management colleges/ Medical Colleges/ Engineering colleges will be visited to collect data from all the sources. Application developers, senior managers, and management of a few IT service providers in the academic domain from Bhubaneswar will be contacted to acquire relevant and latest data on their part.

4.4 Analysis

After the responses are gathered, the data and factors will be organized properly. It will be organized in a group categorizing Tactical and Strategical level of people. The next step is to listen, read all the data carefully, and construct a category system, which allows all the data to be categorized systematically. After the data are coded, the data will be displayed and organized so that it could be interpreted. Simple matrices or chart can be used to compile interview data so that patterns can be determined among respondents. To analyze the data the computer-assisted qualitative data analysis program i.e., ATLAS.ti will be used. This
program will link code with the text in order to perform complex model building and help in data management. The qualitative metrics will be done to check the rationality and dependability of the model. The outcomes obtained will be explained to conclude about the relative significance of these factors affecting the development, usability, and success of the Business IT alignment in education systems.

ATLAS.ti is a Computer Assisted Qualitative Data Analysis Software, CAQDAS, which is an application, built for aiding the analysis of qualitative data. Many different CAQDAS are also available online and so is widely used by many researchers. ATLAS.ti is one of the used tools for qualitative analysis of large data. This software comes equipped with sophisticated features that aid the organization and management of large data. Atlas.ti offers a large variety of media types including txt, doc, docx, odt, pdf, wav, mp3, mp4, avi and a host of others. ATLAS.ti also comes with a high level of coding and visualization features make it easy to summarize large data.

It is leading software for Qualitative Data Analysis. It reveals meanings and relationships allowing users to ground their findings in the data. ATLAS.ti allows users to gain rich insights with the most intuitive and powerful QDA software. It is completely redesigned in nearly every aspect, ATLAS.ti 8 is poised to set a new standard for computer-assisted qualitative data analysis. It is easier to learn and use than any other QDA program – including older versions of ATLAS.ti. It is completely revamped interface has been designed to follow rigorous principles of friction-oriented usability. It employs a logical ribbon structure, context menus and keyboard shortcuts to make the workflow as ergonomic as possible.

Here, the focus is on getting results quickly and efficiently. In addition, ATLAS.ti is powerful and innovative.

4.5 Theoretical Construct
Students, Teaching staff, Research & Development, Business Process Owners, and Divisional IT Management are the key stakeholder groups for Central IT. Whilst Students and Teaching Staff are included in Divisional IT. This illustration is shown in the Figure above. To improve the frequency and quality of communication with these groups, Central IT made efforts. However, there are still perceived gaps in this communication amongst both students and faculty and more effort is required in this area. Often communications take place at the tactical level. For instance, if a significant outage of services is being considered, divisional IT contacts and business process owners are contacted and their responses are used to guide appropriate decision-making.

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