Leveraging or Exploiting Cultural Difference?

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Abstract

Due to the expanding trend to globalise software development organisations need to understand
and address issues which previously did not arise. Cultural distance has been identified as one of
these key issues. This paper presents the results from a three year study which identified the
implications of misunderstanding and not addressing cultural differences. This work was undertaken
within a multinational organisation which offshored part of their software development process
from Ireland to Malaysia. Of particular relevance was where cultural difference was initially
perceived as something which could be leveraged. The opposite proved to be the case and resulted
in key Malaysian personnel being forced to leave the organisation. This was due to their cultural
aversion to decline requests to undertake additional work. This resulted in serious implications for
the success of the projects concerned. Ultimately the requirement for cultural training was
recognized by the management and staff at both locations.

1. Introduction

Globally distributed software development is a popular and expanding trend in today's Information
Technology (IT) industry [1, 2]. In this context software development is now generally considered as
a globally sourced commodity [3]. The sustained popularity for the adoption and implementation of
this approach is attributed to organizations endeavoring to gain and maintain competitive advantage
[4, 5]. The opportunity to achieve this objective is ascribed to labor arbitrage, which is seen as a

mechanism to reduce software development costs [6, 7]. This approach has been facilitated by the availability in large numbers of well educated and technically competent software engineers in low cost locations in Latin America, Eastern Europe, India, and the Far East [8, 9]. The logic underpinning this type of strategy is that temporal difference between remote locations and labor cost savings provide opportunities for reduced time to market and facilitate competitive pricing. Increasingly organizations are endeavouring to leverage these opportunities to enable them to establish, maintain or extend their market share in what are increasingly volatile international markets [3, 6, 10].

While this is the generally perceived situation many organizations who have implemented this type of strategy have discovered outsourcing software development to other organizations or offshoring to remote divisions is not a simple or straightforward task [6, 8, 11]. This has been attributed to the difficult and complex nature of software development [12].

Research has highlighted a number of difficulties which have been encountered when implementing a Global Software Development (GSD) strategy. These include understanding requirements, establishing and managing globally distributed teams, testing applications and the effective coordination of these types of projects [11-15]. These difficulties are further compounded by cultural and linguistic differences, lack of communication, geographical and temporal distance from fellow developers and customers. Differences between process maturity levels, development and testing tools, standards, technical ability and experience have also been identified as relevant issues. In this context distance has been identified as a key problem and by its very nature introduces barriers and complexity into the management of globally distributed projects [16].

Four key elements have been identified which are inherent to distance in these circumstances. Geographical distance introduces physical separation between team members [4]. Temporal distance hinders and limits opportunities for direct contact, team building and cooperation [17]. Linguistic distance limits the ability for coherent communication to take place [18]. Cultural distance negatively impacts on the level of understanding and appreciation of the activities and efforts of remote teams and colleagues [14, 19]. Coordination, visibility, communication and cooperation are all negatively impacted by geographical, temporal, linguistic and cultural distance [20]. If these elements of distance and their potential for negative impact are not recognized and managed correctly they can create serious barriers and complexity within GSD projects [6, 11, 21, 22]

While each of the elements of distance, which have been outlined are recognized as important, the focus of this paper is cultural distance and its impact. The importance this has when operating in a GSD environment is discussed at length and the danger of ignoring this important issue is highlighted. In addition the cost of misunderstanding cultural distance are considered specifically in terms of: 'If things appear to be too good to be true they probably are' [6]. In this context the goal of leveraging or exploiting cultural distance is considered. The objective in presenting the results from this study is to acknowledge and build on the research which has already taken place in this area.

2. The Case Study

This investigation has focused on the operation of virtual software development teams with members based in Ireland, Malaysia and from a historical perspective Israel. There can be a level of ambiguity regarding the use of the terms virtual team and geographically distributed team. The term distributed team simply states the geographical location of the team members. The important difference between a virtual team and a geographically distributed team can be considered as the interdependence of tasks [23].

A virtual team by its very nature has a high level of interdependence of tasks between team members. It is possible to have a team which is geographically distributed, but where the work has been partitioned in such a manner that there is no interdependence of tasks between team members. In these circumstances this team is geographically distributed, but not virtual.

Virtual teams were selected as the basis for this investigation given their level of exposure to the full implications of operating in a globally distributed environment. In this context it is recognized the findings which are presented here have relevance not only to the operation of virtual teams, but also to other types of offshoring and outsourcing strategies [15].

This case study was undertaken in the Irish division of a large US multinational called Software Inc. (a pseudonym) and was carried out over a period of three years. The Irish based division had been operating successfully for over twenty years when this study commenced. During that period a large percentage of the projects undertaken had been offshored from their US parent; therefore, the Irish staff and management were very experienced in having projects offshored to them. They had worked with colleagues in a number of international locations and had extensive experience of working with teams in Israel on numerous projects.

Two years prior to undertaking this case study the organization's corporate strategy changed. At that time they initiated a policy of establishing virtual teams with the objective of leveraging the technical ability of their Irish staff with the competitive salary levels of their Malaysian engineers. When this research commenced the division had four virtual teams in operation with members based in Ireland and Malaysia. Each of these four teams was managed by an Irish based Section Manager. Some teams were established for over a year and a half while others had only been in operation for a number of months.

This case study focused on two embedded units of analysis. One was a virtual team with members located in Ireland and Malaysia which had been in operation for a period of eighteen months. The second was a virtual team with a similar makeup, but had been established for just over six months. The organization fully supported this research project and provided the author with access to documentation, staff, management and the opportunity to undertake extensive onsite participant observational research.

3. Research Methodology

Given the potential opportunities which this study offered it was considered important to ensure the most appropriate research methodology was selected and implemented. To achieve this objective considerable time and effort was spent researching and evaluating different approaches. Having considered the alternatives it was determined that there was a requirement for a qualitative, structured, but inductive approach to effectively leverage the opportunity which this case study offered. This resulted in the selection of a Yin [24] based embedded case study which incorporated a Strauss and Corbin grounded theory [25] based inductive approach to data gathering and analysis. To cater for the exploratory aspects of this investigation grounded theory was selected as the most appropriate. While the Yin based case study provided the structure and support which was considered necessary.

In addition given the opportunity for extensive onsite access it was recognized there was the possibility for the use of a supplementary approach which could be selectively implemented when required. For this purpose the five cycle action research as defined by Susman and Evered [26] and Baskerville [27] was selected. Given the length and scope of this study all three approaches were successfully implemented [28].

4. Cultural Difference and its Impact

Recognition of the importance and impact of cultural distance between remote colleagues plays a key role in the successful operation of virtual software teams [6, 11, 17, 29]. Culture can be defined as being: "socially derived, taken for granted assumptions about how to act and think" " [30]. It remains below every day consciousness and only becomes obvious when it is contrasted with different cultural norms, values and assumptions. The operation of virtual teams requires a level of cooperation and coordination that cannot ignore the impact cultural distance plays and the barriers and misunderstandings it can create [8, 31].

Evidence emerged at an early stage of this study that the management and staff were completely unaware of the implications of cultural distance and the impact it had on the day-to-day operation of their virtual teams. In addition the Irish based staff had previously collaborated with teams in other international locations on a regular basis. These collaborations had proved problematic as a result of cultural distance. While management acknowledged the existence of previous problems in this area, steps were not taken to address them and the issue was generally ignored.

When the virtual team strategy was selected and implemented cultural distance and its potential impact on the operation of the teams was not seriously considered. At the most basic level there was very little information shared regarding the national cultures of virtual team members at both locations. One Irish team member did not know where Malaysia was located and thought it was in the Middle East. This was despite the fact that this person had been working on a virtual team with Malaysian colleagues for over six months. The same person went on to express their surprise that they were working with Malaysians of Indian extraction: "Another thing sometimes they are not necessarily all Malaysians! I am working with Indians!" Clearly this individual was not aware Malaysia was in the Far East. Furthermore he had not been informed that the Malaysian population

is made up of three ethnic groups Malay, Chinese and Indians. It was also clear from the Malaysian team members that they knew as little about Irish culture as the Irish staff did about theirs.

Two relevant issues were highlighted from the analysis of the data from this study. The first was the approach taken to implement both virtual team strategies and the second was how the teams operated as a result. The strategy in both situations was to simply replicate the procedures and processes implemented with collocated teams. This manifested itself in a number of ways which included not providing basic cultural training and not addressing related communication problems [14]. Other issues which were highlighted included not recognizing the need to inform each location when the other was celebrating national holidays. Provision was not made to inform staff of the introduction of daylight saving time and the impact this would have on the amount of time both locations had for synchronous collaboration [18]. In addition gender related issues and religious differences which had the potential to lead to misunderstandings were totally ignored. All these factors had serious negative implications for the operation of the virtual teams.

4.1 Cultural Problems: The Teams' Historical Perspective

The Irish based virtual team members had previously worked on projects with colleagues located in China, India, the USA and Israel (but not as part of virtual teams). An unexpected result to emerge from the analysis of the data from this study was that historically the Irish staff experienced most cultural problems working with colleagues located in Israel. When collaborating the Israeli and Irish staff were not informed of what was culturally acceptable and unacceptable behavior. This resulted in situations where national cultural norms and styles of communication were employed which were misinterpreted. As a result this had a negative impact on communication, cooperation and the level of working relationships that existed between remote colleagues.

To place the cultural problems which were experienced in context it is relevant to note Israel has been ranked in fifty second position out of fifty countries and three regions based on Hofstede's power distance index [32]. The concept of power distance is defined as "The extent people accept that power is distributed unequally" [33, 34]. This term has also been described as revering hierarchy [11]. The ranking Israel received indicated as a nation they have a very low score for revering hierarchy. This was reflected in individuals having a blunt and forthright communication style. While this can be advantageous in some situations, when dealing with other cultures it can also be misinterpreted as aggressive and confrontational behavior.

The Irish on the other hand had a similar attitude to revering hierarchy. Ireland was ranked forty ninth in Hofstede's distance power index [32]. Where the Irish and Israelis differed was in how that attitude was communicated. Irish people in general are polite, friendly and helpful in their professional relationships with others [35]. This approach conceals that in general respect has to be earned and is not ascribed to a specific job title, role or position [29]. In a cultural sense the Irish can be described as achievement based in their outlook [36]. The Irish attitude towards authority is reflected in their humor toward their superiors, colleagues and themselves [29]. In these circumstances it is not surprising given the different cultural approaches to communication which

both groups employed it led to misunderstandings, uncooperative behavior and in many cases hostility.

The experience of the Irish staff dealing with their Israeli colleagues can be summed up in the following two statements: "I worked with Israel before this they were very arrogant and they could not take criticism".

"We would have experienced some rude comments and alienation from the teams in Israel. It is very much a cultural thing". The latter statement was made by a Section Manager. Even though it was realized at a managerial level there were cultural problems no measures were taken to address them. Therefore on both sides there was very little understanding of the perspective of their remote colleagues.

Eventually some Irish staff realized that cultural training was needed and if it had been provided a lot of problems could have been avoided. As one person stated "Two of the Israelis that I worked with came over to Ireland and they were lovely people. It was just they were quite gruff. They were quite straight to the point and it took me ages to realize that. If we had some training about their culture it would really have helped us avoid a lot of problems"

In spite of the negative experience of the Irish staff and management when dealing with culturally remote colleagues very little was learned. In particular the need to acknowledge and address cultural distance was not identified at a managerial level when the virtual team strategy was selected and implemented.

5. Culture its Dimensions and Concepts

A knowledge of the national culture and values of virtual team members is of significance in helping individuals to interpret and understand the behavior of their remote and culturally diverse colleagues [37]. The ability to classify culture allows it to be contrasted, compared, evaluated and predicted [38].

5.1 Geert Hofstede

Geert Hofstede's work on culture was considered of value to this investigation. Hofstede's classification of culture was derived from research carried out in the International Business Machines Corporation (IBM) [32, 39]. His research focused on the values and culture of computer professionals [11], which has particular relevance to this study. While Hofstede's work is not without its critics [40-42] It is still widely utilized in information systems research [41].

Hofstede defined culture as "The collective programming of the mind which distinguishes the members of one group or category of people from another"[39] . He classified what were originally

four value dimensions of culture against which his research indicated countries differed. After a period of time he extended his dimensions to five and plotted data from fifty countries and three regions against those five dimensions [32]. The five dimensions are outlined as follows:

1. Power distance

2. Uncertainty avoidance

3. Individualism versus collectivism

4. Masculinity versus femininity

5. Long-term versus short-term orientation

As discussed in Section 4.1 the power distance dimension relates to how people react to inequality and how they accept the unequal distribution of power within their society and organizations. This acceptance manifests itself in the way it impacts on relationships between managers, colleagues and subordinates [43]. Depending on how cultures revere hierarchy this is demonstrated in how individuals behave toward those in authority and how they express themselves as a result [11].

Hofstede defined uncertainty avoidance as the mechanism different cultures employ to cope with the uncertainty of life. Societies have devised three strategies in an effort to address the issue of uncertainty; they are technology, law and religion. Different nationalities reaction to uncertainty and the structures and beliefs they have developed to address these issues are dependent on their specific culture. Some cultures endeavor to avoid ambiguity. Others with low uncertainty avoidance prefer less structure, fewer written rules, and are more willing to take risks.

The third cultural dimension is individualism versus collectivism and it describes the relationship of the individual to groups within their society. The collectivist's preference is to be part of a closely-knit community. The maintenance of harmony within the organization, family and society is considered a virtue and confrontation is avoided. The word 'no' is not often used as saying no is considered confrontational. The individualist's penchant is to be part of a more loosely knit group or community. They see their own needs as paramount and this is reflected in their approach to how they work and their attitude to membership of an organization.

Hofstede's fourth cultural dimension is masculinity verses femininity. At the societal level different nationalities demonstrate a predominance of masculine or feminine values. At the organizational level when individuals from a masculine and feminine value based societies work together the difference in focus and approach can lead to misunderstandings. Behavior which in one culture is considered acceptable, can be offensive and unacceptable to individuals from the other. This can also lead to a divergence in the overall goals and objectives of both groups and impact on the level of motivation and trust between culturally diverse colleagues.

The fifth and final dimension is long-term versus short-term orientation. This dimension was developed independently of the other four. It was derived from Hofstede's collaborative work with Michael Bond [44]. The kernel of the dimension is the extent to which cultures are orientated toward a long-term outlook compared to those whose focus is more short-term.

5.2 E. T. Hall

The work of E. T. Hall was also considered. In his view, culture is communication and communication can be separated into three elements - words, material things and behavior [45]. Words are the medium of verbal expression. Material things can be an expression of status, wealth and power. Behavior is an expression of how an individual feels or reacts to a situation, people or event. By the study of the constituent elements of communication in Hall's view an understanding of what he terms a "silent language" which is unconsciously expressed can be achieved. A study of this silent language provides insight into the principles that shape individuals and cultures. Hall equates culture to a computer, which has programs that guide human responses and reactions. Crucially the cultural program will not work if important elements are missing. This happens when individuals unconsciously apply their own rules to another system [46].

Hall defined seven concepts, which he identified are relevant to the study of national and corporate culture:

1.   Speed of messages

2.   Context

3.   Space

4.   Time

5.   Information flow

6.   Action chains

7.   Interfacing

The speed of messages varies. A fast message can be the news headlines on radio or television, a newspaper headline or a cartoon. A slow message takes longer to decipher. Slow messages can only be understood by those who take the time and who have the knowledge, to determine their meaning.

Context is the information around a communication, item or event. This information provides the additional elements, which come together to give it full meaning. This level of information or context can be described as high or low.

Space is important culturally and different cultures require different amounts of personal space. Space can also equate to power and position. In some cultures if an individual has a large office this is an indication of their power and status. In other cultures managers are happy to be located with their subordinates.

Different cultures have different attitudes to time. Hall describes two cultural approaches to time as monochromic and polychromic. Monochromic time is linear in nature and segmented. Polychromic cultures on the other hand are the opposite they carry out simultaneous activities and time commitments are considered flexible. Plans may be changed frequently and easily.

Information flows to different locations. In low context cultures, information is controlled and focused on those who need to know. In high context cultures, information flows freely around the organisation.

Action chains are the rituals of doing business where step one must be completed before step two is undertaken. Bureaucratic processes and indeed software development and test procedures are often based on the action chain approach. The breaking of the action chain in certain circumstances can have serious repercussions. Low context, monochromic cultures experience great difficulty when the chain is broken as they find it difficult to deal with unexpected change. High context polychromic cultures find change easier to deal with.

The concept of effectively interfacing is a key element in the business environment when dealing with cultural diversity. An effective interfacer is an individual who is a bridge between team members, departments, organisations and cultures.

5.3 Trompenaars and Hampden-Turner

The work of Frans Trompenaars and Charles Hampden Turner was also considered relevant. They equate culture to an onion that comes in layers and has to be peeled, to be understood. They have developed seven dimensions of culture [36]. Each of the seven dimensions provides a juxtapositional view of different aspects of culture:

1.   Universalism verses particularism

2.   Individualism verses communitarianism

3.   'Specific' verses diffuse

4.   Affective verses neutral

5.   Achievement verses ascription

6.   Sequential verses synchronic

7.   Internal verses external control

Universalism verses particularism outlines two cultural approaches to what is considered good and correct. Universalism implies in the cultural setting that there is a set of defined rules which are correct and should be implemented in all circumstances. This is contrasted with particularism, which

places value and emphasis on relationships and circumstances rather then on rules. Individualism verses communitarianism is similar in approach to Hofstede's individualism versus collectivism dimension [32] (see section 5.1)

'Specific' verses diffuse cultures: In a 'specific' culture, business and home are separated and compartmentalized. Individuals from a 'specific' culture concentrate on hard facts, standards and contracts. They can be described as direct, open and extravert. Diffuse cultures on the other hand are the opposite there is a large personal side to people's lives.

Affective verses neutral: These terms are used to describe the acceptability of showing emotion. In affective cultures people show their feelings and it is an acceptable practice. In a neutral culture it is the opposite the expressing of feelings is controlled and individuals are not encouraged to publicly display their feelings.

Achievement verses ascription. In an achievement based culture status is gained from what the individual has and is capable of achieving. In an ascribed culture status is derived from who someone is and what position or role they hold.

Sequential verses synchronic cultures relates to time and the ordering of tasks. The sequential approach is to see time as a narrow band and plan accordingly. Synchronic cultures on the other hand see time as a wide ribbon. In this situation multitasking is acceptable and time and deadlines are considered flexible and plans can be easily changed. This is similar to monochromic and polychromic time as outlined by Hall (see section 5.2).

Internal verses external control, every culture has developed its own way of dealing with nature. Do individuals control nature or does nature control them? Cultures with an internalist viewpoint perceive the environment as mechanical and something that can be controlled. Externalists on the other hand view themselves and their environment as part of nature. They have to go along with what happens and they believe they have very little control over their own destiny.

5.4 Three Points of Cultural Difference

It was noted that Karolak's three points of cultural difference for interacting with and managing remote staff were incorporated in the different approaches which have been outlined. Karolak's three points are as follows [6]:

1.   Some cultures do not promote individual responsibility and accountability

2.   Some cultures accept most suggestions without much discussion

3.   If things appear to be too good to be true they probably are

The works of Hofstede, Hall and Trompenaars and Hampden Turner were therefore considered of value and utilized to sensitize the researcher's focus when undertaking this study.

6. Cultural Difference

The Malaysian staff came from a Far Eastern culture and this was reflected in their day-to-day activities as virtual team members. This contrasted sharply with the culture of the Irish team members, which is Western in focus. When asked about their Malaysian colleagues the Irish staff generally described them as respectful, friendly, polite and hardworking. They went on to state that clear work related differences existed between the Irish and their Malaysian colleagues. This included the Malaysian staff provided very little feedback regarding the progress of their work and did not ask many questions.

6.1 Gender

Software Inc. is a worldwide equal opportunity employer and does not allow gender bias in its recruitment or internal promotion policies. This was represented in the gender mix of the Irish based staff. The Section Managers of the two virtual teams researched were female. In the Irish context gender was not an issue and was not even considered relevant.

This is not the case in some Eastern cultures where the female role is seen as subservient to the male. In such cultures, attitudes to gender, which are considered unacceptable by Westerners, are still prevalent and accepted as the norm. These attitudes are reinforced by religious belief and in some countries the legal system.

When establishing the Malaysian operation Software Inc. employed an equal opportunity strategy and a mixed gender work force was recruited. Malaysia is considered a progressive, industrialized, outward looking and inclusive society. This is reflected in a number of ways including the availability of a well-educated, technically competent and mixed gender workforce. That stated a large percentage of the population. continue to hold conservative and traditional beliefs [47].

During the first year of this investigation the author did not identify any specific problems regarding gender related virtual team interaction. The Irish based team members were not aware of offending the sensibilities of their male or female Malaysian colleagues. That stated this has to be qualified with the statement an Irish virtual team member made: "Given we have no idea about their culture we would not know if we had offended them or not. It is not like they would tell you".

In the second year of this study a serious gender related issue did arise. A Section Manager outlined her experience on visiting Malaysia and meeting a new Malaysian Manager who was reporting to her. On meeting him she offered to shake his hand and he refused to do so. In fact he put his hands behind his back. She went on to state she found him generally uncooperative. As a result of his attitude she had to change her management style when dealing with him. Rather than employing her normal consensus building approach on how issues should be addressed. She had to dictate her instructions and insist they were carried out to the letter.

After a short period of time this Malaysian based Manager was removed from her project. Having enquired the reason for his behaviour she was told he held strong religious beliefs and he did not like reporting to a woman. This situation was something the Section Manager had not experienced before and due to her lack of knowledge of cultural distance she was not prepared to deal with it.

6.2 Religion

Religion is societal in nature and has a direct impact on the values, norms and morality of the individuals who adhere to a particular belief system. In a global context these societal norms may not be understood or appreciated by people from another culture and or religious persuasion. Indeed what in some cultures are considered acceptable practices and beliefs are considered unacceptable and on occasion offensive by others. Religious differences can arise with regard to attitudes to morality, gender, alcohol, diet, and social interaction.

An issue which this research identified was that on a number of occasions Irish staff asked their visiting Malaysian colleagues to attend informal social events which took place in bars. Rather than declining the invitations the visitors just did not turn up. This was not appreciated by the Irish staff and it did little to foster and develop a spirit of cooperation between the remote team members. In this situation a basic knowledge and respect for each other's religious beliefs would have been of value.

6.3 Power Distance

Power distance clearly emerged from this study as a relevant issue [43]. The Malaysian staff demonstrated an unquestioning attitude to authority [36]. This resulted in them agreeing with everything that was said, not expressing an opinion and saying yes to every management request. Both Section Managers wished to address these issues. It was only after being repeatedly told that it was expected that they be forthright and say what they really thought, that the Malaysian team members were able to begin to express their opinions. Even then they continued to find it difficult to do so or even highlight that they were having problems. This was a serious issue as it negatively impacted on the progress of the projects. Particularly as the sooner problems were highlighted the sooner they could be resolved.

The Malaysian virtual team members also demonstrated another aspect of the power distance dimension. This was that instructions must be conveyed by the correct authority figure to be obeyed. A Section Manager instructed an Irish team member to ask his Malaysian colleagues to undertake a task. Rather than challenging the person on his authority to make the request the Malaysian team members just chose to ignore it. In this way confrontation was avoided, but the task was not carried out and as a result the project was delayed.

7. Leveraging or Exploiting Cultural?

As a result of their revering of hierarchy Malaysian staff unquestioningly accepted additional work every time they were requested to do so by an authority figure. The work was completed on time, but this was only achieved by working excessive hours of unpaid overtime. While this level of effort was sustainable in the short-term in the long run it became intolerable. When they could no longer endure these long hours the Malaysian staff left the organization. This resulted in a high level of labor turnover in Malaysia. The Management of the Irish based division were not aware why this was happening and investigated the problem. Once it became clear what was going on they gave instructions that the Malaysian team members were not to be asked to take on excessive amounts of work.

While the management of the Irish based division considered this practice counterproductive this was not a universally held view within the organization. Another division within the corporation had a different approach. When the management of that division realized that the Malaysian staff did not refuse extra work and were prepared to work long hours this was perceived as an opportunity that could be leveraged.

This was highlighted by the experience of one of the Section Managers who had a dual reporting role to the management of both the Irish and the other division. This manager came under serious pressure from the management of the other division to overwork her Malaysian team members. She was told she had an attitude problem, as she did not believe in what they termed "the 7/12 strategy" (working remote staff 12 hours a day, 7 days a week). She went on to say "I was hit by that type of attitude by very senior people in the other division".

The Section Manager believed the outcome of not implementing a 7/12 strategy was successful in the long run. Her decision to take a long-term approach led to the establishment of stable teams. Indeed where other Malaysian teams had sustained high levels of turnover of staff, people wanted to join her teams.

This illustrates a very important lesson with regard to virtual team operation and distributed software development with reference to culture. "If things appear to be too good to be true, they probably are" [6]. Without understanding the culture of the staff at a remote location a factor may appear as something that can be leveraged, but it can in fact end up being totally counterproductive. The short-term impact of implementing a 7/12 strategy was increased productivity. The long-term implications were more serious, as a high level of staff turnover led to a constant loss of specific technical experience and competence. This was reflected in the limited long-term productivity levels that could be achieved as a result.

8. The Need for Cultural Training

This research demonstrated the requirement for the provision of cultural training in both locations. A fact the staff voiced themselves on numerous occasions. Given the lack of clear information regarding each other's culture it was easy to understand how and why actions and issues were misinterpreted and led to misunderstandings, which negatively impacted on the productivity of the virtual teams. Ultimately the importance of and requirement for cultural training was recognized by management, but not before a lot of time, effort and resources were wasted.

It is important to stress when discussing cultural training that it is a sensitive subject and not the depiction of wooden stereotypes. Cultures are made up of individuals who are not all the same. That said there are common characteristics that distinguish one culture from another. Therefore there are general activities, issues and approaches that need to be recognized. There are also certain activities and types of behavior which are acceptable in one culture, which are unacceptable in another and this needs to be appreciated. "One must understand other people in the context of their unique historical, political, economic, social and cultural backgrounds. In that way it is possible to become more effective interactors with them" [47]. This approach provides a good basis and starting point. Building on this basic knowledge by getting to know remote colleagues and learning from that experience is the most effective way of developing a meaningful understanding of each other's culture [43].

In conclusion this study highlights that cultural difference should be leveraged and not exploited for short term gain at long term cost. In addition it helps to answer the question "What has culture got to do with software development? The inductive methodology which was employed provided clear voice to the respondents which highlighted and reinforced the fact that cultural distance is a very important factor. This needs to be understood and given due consideration. Measures are required to be put in place to address its specific requirements. If cultural differences are ignored it can have serious implications for the successful implementation of a globally distributed software development strategy.

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