Effective Team Formation in A Multi-Cultural Information Technology Project Environment; the challenges and Solutions

AJAYI S. Wumi, OMOTOSHO J. O
Computer Science Department, School of Computing and Engineering, Babcock University, Ilishan remo, Ogun State, Nigeria
wumiajayi1@yahoo.com
Computer Science Department, School of Computing and Engineering, Babcock University, Ilishan remo, Ogun State, Nigeria
ojomotosho1@yahoo.com

Abstract
A major concern while handling multi-cultural projects in Information Technology (IT) organization is the large number of differences that exist amongst team members. These differences exist in various forms such as diversity in languages, orientations, educational background, sex, personal beliefs and cultural or ethnical differences. Since most projects in IT organizations are scheduled to be undertaking within a time boundary and sometimes with constrained budgets by these same mixture of experts (irrespective of their differences) then, there is need to promote unison, empathy, professionalism, equity and sense of belonging amongst them to enable them (team members) overlook their individual and collective differences while functioning in their respective tasks to achieve management desired goals of time and quality. Otherwise failure to foster these necessary team qualities, the whole project may suffer delay, fail to complete as scheduled or even in some cases fail totally. In this respect, this review work examined the plausible ways of forming effective teams in a multi-cultural project environment. Supported by previous works in this area, the review presents the essentials for team formation as it applies in better management of multicultural projects, the potency of cultural differences, examination of prominent problems of multi-cultural IT projects and concludes on a critical analysis of suggested solutions raised to solve the problems.

Indexing terms/Keywords
Team formation, communication, Information Technology projects, teams, recruitment models, multicultural teams.

Academic Discipline and Sub-Disciplines
Science, Physical science

SUBJECT CLASSIFICATION
Computer Science, Information Technology Project management, project management

METHOD
The methodology adopted for writing and presentation of facts in this paper is purely by literary analysis (literature search and review approach). The sources of literatures were basically through published intellectual works (and resources) such as journal articles, research reports and books.

1.0 INTRODUCTION
Team formation is an integral phase of any proposed project (Information Technology projects inclusive). Hall et.al(2007) work on "Communication: The Neglected Technical Skill?" explained that without a vibrant and communicating human team in a project the probability of success is very low. Several definitions have been given on what a team is. Powell, Piccoli and Ives (2004) defined a team as “a collection of individuals who are interdependent in their tasks, shares responsibility for outcomes, who see themselves and who are seen by others as an intact social entity embedded in one or more larger social systems, and who manage their relationship across organizational boundaries”. In another opinion, Peslak(2006) sees a team as “Diverse group of individuals who come together as a team for a common purpose of creating and developing an information system, network infrastructure, or comprehensive database”. More succinctly, in my own opinion a team is viewed as a set of people, driven by the same goal of interdependent tasks and capable of taking collective responsibility for the result of their actions within the norms of an organizational culture and structure. Good team formation is an essential element of any proposed or running project. An improperly formed team poses a great danger to the quick and successful delivery of project tasks (Burke, 2007). According to Wallace (2001), although team formation takes time to accomplish, spending time to form a team that can function effectively over time to undertake projects shouldn’t be seen as an effortless process rather it should be seen as a means to achieve excellence while selecting the best from the huge numbers of both skilled and unskilled people from different culture, orientation, background etc showing keen interest in joining the IT project teams. Although there are different developmental stages1 of a team (Rowley and Lange, 2007), in this work considerations are only given to the essentials of team formation as it applies in multi-cultural Information Technology project environment.

1 Forming, storming, norming, and performing
2.0 TYPES OF TEAM

There are many opinions about types and categories of a team. Armour (2001) established that a team could be any of these four types – (a) Tactical Team (b) Process solving Team (c) Creative Team (d) Learning Team.

In their article, Ellis, Luther, Bessiere and Kellogg (2008) viewed teams as comprising of two major categories - The Virtual and The Physical or traditional teams. The notable differences between these duo is that physical or traditional team meet physically to work, exchange data and information while in virtual meetings, communication and information exchange is done via electronic means such as email, video conferencing and so on.

However, for the purpose of this paper, I shall be considering teams more in the light of categorization by Ellis et. al. (2008). One of the reasons for aligning with this categorization is that several other authors such as Tan and Kondoz (2008) have their views about team and its implementation built around this classification. Furthermore, analysis of both Ellis et. al. (2008) and Tan and Kondoz (2008) shows that the two classification encompass (broadly) the breakdown by Armour(2001).

![Figure 1: showing team hierarchy](image)

2.1 FORMING A GREAT TEAM – THE ESSENTIALS OF MULTI-CULTURAL INFORMATION TECHNOLOGY PROJECTS.

In LeJeune (2008) on “A Real-World Simulation Technique For Forming Software Development Teams In A Capstone Course” it was established that to form an excellent team, the first thing to do is to define the objectives to be achieved with the creation and who should be part of the team that will help realize this objective. An objective of forming a multi-cultural Information Technology project team could be to create a team that will function just for the purpose of the current project. Another is to create a team that would undertake both the current project and also serve either as a virtual or physical team in future projects. In the latter, the project team leader or the manager needs not form another team for a similar project when the need arise again except incases of unavailability of one or more team members or cases of eventualities.

Having defined the objectives, the next thing to consider are the real people that will serve either as a virtual team member or the physical one (Paulsen, 2004). Generally, most hire managers ( often called the human resource manager) or team makers requires that a prospective team member must be skilled, knowledgeable, trustworthy, vision driven, optimistic and above all, must be able to maintain good working relationship and understanding with team members irrespective of their differences. This is necessary because a collection of individuals isn’t recognized as a team unless they are driven by the same goal, involve in same interdependent tasks and collectively responsible for all their actions within the organization’s norm (Powell et. al., 2004). Hence, once a project team leader identifies a project as a multi-cultural one, realizing the likelihood of differences and bearing in mind ethical issues and rules of conduct binding members to take responsibilities for all work done by them or under their supervision and direction, the best thing is to forestall the existence of any thing that could bring acrimony and lack of communication amongst team members (Creighton, 1990). Furthermore, there should be consideration for resources and rewards for team members.

Till date, various approaches have been devised for team formation in multi-cultural projects (Larsen, Gilad and Moore, 2001) and (Lassalle and Richard, 2003). Top on the list is the popular traditional process of written and oral Interview.
2.1.1 The Traditional Process

This method as illustrated by Larsen et. al.’s (2001) work on recruiting IT professionals for a University (exemplifying a multi-cultural environment) requires that there are available positions to be filled first. These positions are made known to the hire manager through electronic procedure, the positions are advertised, prospective candidates then start applying, qualified ones are called for written interview, following the result of the written interview, successful candidates are contacted for an oral interview and finally, references for the successful candidate are contacted before the new team member is hired to start the induction programme.

Generally, this team formation process gives the management a feel of thoroughness and openness (Walsal, 2008) and (Lasen et.al.2001). Nevertheless, because of the time involve in the whole recruitment exercise, it may not be suitable for project or position that needs urgent attention. Also a lot of administrative overhead is incurred while trying to follow the necessary procedure for the recruitment. For example, Lassalle and Richard (2003) explain that the process may sometimes involve the use of telephone interviews and (or) web / online chats (eg whatsapp, facebook, yahoo messenger etc) which means extra cost on the path of the management.

2.1.2 Recruitment Models

Webster et. al(2000) emphasized that Information Technology project team recruitment has been a critical issue in the last several years. Due to this critical nature and the stress of team formation, very many models have been developed to ease the recruitment of Information Technology personnel. One of such models is the Kolb’s experiential (Crowley, 2004).

This model is essentially useful as it shows that learners have different learning styles and also helps team creator or managers understand their own personal learning styles thereby creating flexibility in them when choosing team members for different roles in the project being undertaken. For example, if a manager understands how he works as a manager; (say in terms of duration and quality of delivery) he could easily judge using him or herself as “yard stick” for the type of people he needs as subordinates or as team members.

2.1.3 The Referrer Method

Yet another method is the use of a referrer or personal recommendation either through colleagues or professional affiliates. Succinctly, it is a fundamental team formation process through references made for prospective team members by other experts or formerly used team member (Powell et. al., 2004). This method also includes suggestions and encouragements made towards the recruitment process. Good examples of referrers are community agencies, organizations’ legal advisers, known relatives, other professionals etc. This method is very good in that it creates a link between the management and the referrer in cases of any misbehavior from the concerned team members, the reference could be contacted immediately before any action is taken. Though, the referrer method seems to be the easiest method of hiring, it however creates more problem than others when the team is finally formed. These problems and many more are presented in what follows.

3.0 NOTABLE PROBLEMS OF MULTI-CULTURAL PROJECT TEAM

Perhaps it is safe to state first based on the works of Tan and Kondoz (2008) and Miłewski et. al(2007) that there are very many factors (including some trivial ones) militating against effective team formation in multi-cultural Information technology project; However for the sole benefit of this paper, only the salient ones are discussed herein. The very first on the projects’ influential list is communication.

3.1 Communication problem

Effective communication is the core of any Information Technology project team (Hall et.al., 2007). Inadequate communication and flow of information amongst team members (mostly, physical team) could lead to disorder, loss of data, vital documents and if not monitored well, the whole project may end up in disaster. Although, when compared to virtual team, communication tends to have a lesser effect on the physical team because, in virtual team communication is the backbone of the whole mechanism (Powell et. al., 2004). Therefore in a case where there is a strain in communication various problems like delay in response time or feedback, misinterpretation of expressions and misrepresentation of facts and figures, assurance of participation of all virtual team members and so on are sure to exist. Peslak (2006) and Hall et. al.(2007) affirms that personality and communication has a great effect on the result of team members of Information Technology project. It means in as much as a project is expected to succeed the communication aspect needs to be made smooth always.

3.2 Cultural differences

Culture refers to the “customs and beliefs, art, way of life and social organization of a particular country or group” (Advanced Learners Dictionary, 2016). Most Information Technology projects have been found to be a difficult undertaking, in particular, when team members do not belong to the same cultural background. This potency of cultural differences in IT project is as great as that of communication. Frankly, in some cases they both occur together as one great challenge for the team. If cultural differences are not properly handled, it could lead to serious problem of low self esteem, segregation, racism and many more (Powell et. al., 2004). Hence, while trying to look for core professionalism, one shouldn’t overlook the group members’ tolerance of one another. A member who is not ready to respect the culture, opinion, gender, believe and religion of others or who engage in the use of abusive language or racial blasphemy shouldn’t be admitted as a team member. Otherwise, the team is bound to divide against itself.
3.3 Power play, external Influence and Favouritism

The roles of power, external influence and favouritism known as “God fatherism2” in multi-cultural project team cannot be underestimated (Saunders et. al., 2000). In their review carried out on various research work done on subject of power and politics in IT organization (and projects), Saunders et. al. (2000) explained that power, influence and politics in IT organizations come to play over scarce resources, motivational materials, positions, priorities, access to specialized knowledge and training because the ability of an individual or a set of people other than the management to control these things is a measure of his or her power. An unqualified team member with such opportunities may however use political behaviours or external influence (such as a referer) close to the project manager or team leader to sometimes get favour, seek redress on issues or any other desired thing. This act then hinders a genuine and proper allocation of tasks, resources, motivations to a normally qualified team member and subsequently could lead to low quality of product, delay in delivery time and low self esteem (because the team member believes he is not good enough for the job task according to the provision of the Bye-law 31 IET code of conduct 3 and 4).

3.4 Influence of other sectors.

Another prominent factor which affects good team formation in multi-cultural Information Technology project environment is the influence of other sectors. Webster et. al. (2000) stated while examining the process of recruiting and retaining of IT Staff in higher education that coupled with some other lacking factors, a problem for Information Technology employers is competition with private industry where better wages and salaries are offered. This trend has been noted specifically in many private industries like banks, oils etc. The Information Technology professional in these domains gets far higher wages compare to the ones in core Information Technology project environment. This has necessitated Information Technology professionals with good and advance skills which ought to be used in Information Technology projects moved to these sectors. In a similar view shared by Aken and Michalisin’s (2007) research on the impact of skill gap on recruitment of MIS graduate , it was established that the trend of the downturn of Information Technology professional now start even at enrolment level. While conducting a survey aimed at identifying skills lacked by MIS graduates from the employer’s point of view and what impact this skills gap has on the recruitment practices of the employers Aken and Michalisin(2007) discovered that at point of enrolment, vast majority of prospective IT students do change their mind because of the greener pasture offered by these sectors. Other problems found to have contributed to inappropriate team formation in Information Technology multi-cultural project include lack of relevant skills by team members, high recruitment standard, gender discrimination and too many skilled personnel (Webster, 2000). Significantly the choice of project team leaders has specific roles to play in the whole scenario too. Brewer (2005) gave an analysis of skills and characteristics that must be possessed by a named project or team leader. From experience, I think fundamentally, a project or team leaders must have vision and should be able to establish them. He must be able to manage conflict and create mutual respect amongst team members, must be able to strike a balance between equality and hierarchy amongst team members and finally, he/she should always give honest feedbacks.

Apart from these qualities of team leaders, several other solutions like, adoption of a standardized language during official hours and meetings, values for others’ opinion, virtual team approach, have been suggested as solutions to the problems of team formation. In what follows these solutions are critically examined.

4. CRITICAL EVALUATION OF SOLUTIONS

As stated earlier on, numerous solutions have been suggested to improve both the recruitment process and the sustenance of Information Technology personnel in multi-cultural project environment. Lassalle and Richard's (2003) work examined vis-à-vis Webster et.al(2000) work, outlines several ways and methods by which Information Technology professional could be recruited and retained in the industry. However, one still need to be careful whilst trying to justify some of these suggested points, because they may as well have side effects on some other aspects of the team members’ life, the organization and the community where the project is situated as a whole. A good example of this is the discouragement of gender discrimination in Information Technology organizations which is indeed a good solution to problem of gender discrimination. Riemensneider et. al(2006) work on barriers facing women in the IT work force established that while trying to encourage hiring of more women to perform roles in Information Technology projects some inherent or cultural roles of women in the society might need to be compromised by the concerned women. Since women will have to look after the family, give birth to children which imply leave of absence or maternity leave and extra over head cost for the company in maintaining a parallel staff to occupy their position while they are away. In the work of Trauth et. al(2005), it was explained that apart from the natural duties of women in the society, some cultures don’t even encourage women to work nor do any other things other than the house hold chores. Going by these works, one might be forced to say women might not be too relevant in Information Technology project or in IT field as a whole. Conversely, this assertion may not be so. It mustn’t be forgotten that women are naturally intuitive in their reasons and are also wired with more knowledge than men to ask open ended questions during team meetings which could lead to several relevant and developmental discussions for the project. It must also be noted that gender discrimination is not only limited to women, it happens to men too.

Perhaps a good way to combat influence of other sectors on the team formation process for most multicultural Information Technology project is to introduce good reward system, motivations and flexibility of work schedules. According to Schulz (2006) it is better to start by breaking any barrier that may exist between the team leader and the team members. When

---

2 An act of being like father to somebody, usually for promotion, protection and their likes

---

Volume 1, Number 3
Universal Journal of Computers & Technology

June 29, 2016
Universal Publishing & Research Organization
there is effective communication amongst all, the team leader gets to know about peoples need and how to motivate them. The popular Maslow theory on motivation explains that people have different needs and different things motivate different people. Normal reward or salary might be enough for team member A to work more and it may take some extra motivations like verbal praise for a job well done or overtime payment and so on to make team member B perform better. Some may even need to have flexibility in their work schedule or promotion in order to be motivated (Chow et. al., 2005).

Professionally, Information Technology project team members are suppose to (on their own) continually undergo training as stated in the code of ethics of Information Technology profession. Nevertheless, team leaders and management should seek for ways to encourage (as a kind of motivation) their subordinate to undergo training for relevant skill. Although, training cost might be at the expense of the organization Magazinovic and Persnål(2008), Sheng and Ling(2007) but it will help educate and motivate team members for better performance. Succinctly, what can be deduced from my experience vis-à-vis different works consulted is that what motivates team member A might not be a motivating factor for team member B. Therefore, to prevent influence of other sector on forming excellent team for multi-cultural projects, good reward system, adequate motivations and job flexibility must be put in place.

Again, how a team is created or sometimes the type of team has a huge impact on the performance of the team. Adoption of virtual team creation helps while trying to introduce flexibility (Ocker and Fjermestad, 2008). Analysis of both Ocker and Fjermestad’s (2008) together with Powell et.al’s(2004) implies that virtual team doesn’t allow team members to meet physically, hence, data could be misinterpreted and an aggrieved team member may seize the opportunity of a faulty communication channel to leak project information to a competitor. Though this is against the provisions of rules of professional ethics, but the deed must have been done costing the organization to spend more in providing extra security for data. Despite all these demerits, I still see virtual team as a great approach to promote work flexibility, helps to create distant respect, build equality amongst team members, helps to create a feel of independence (even though team members still have to report back to work periodically) and reduction in cost and risk of moving from team members' original location to the project sites.

5. CONCLUSION

Several researches aimed at team formation and people management in multicultural Information technology projects come with different views. However, there are sure evidences from most of the researches that the process isn’t that easy. However, since excellent results in quality, delivery time and budgeting of Information Technology projects depend majorly on the qualities emphasized by the project management and team members, the process sure worth the cost. I personally have been able to see diversity amongst team members from the views of Chinn and VanDeGrift’s (2008) more as strength to the development of Information Technology project process rather than a disadvantage. Diversities or differences in Information Technology project team offer so many benefits. Aside excellent product quality which is the maximum benefits, it has been found out that culturally diverse teams produce better performance than the homogenous ones. (Powell et.al., 2004). Furthermore, it fosters enrichment of relationships and product environment (that is the community at large) and if managed properly, it could lead to a united and multilingual environment.

REFERENCES


