

# **Multiculturalism in Shipbuilding Projects**

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## **Abstract**

The global nature of shipbuilding projects has highlighted the importance of multiculturalism and the challenges and opportunities it brings to project execution.

An embedded single case study has been conducted to address the main research question: *How is multiculturalism related to success in shipbuilding projects?* The main findings show that different aspects of multiculturalism can have different impacts on project activities, both positive and negative, thus affecting the final successful outcome of the project. It was identified that synergy and wide problem-solving skills in project team are positive effects of multiculturalism, while negative ones relate to physical distance and delocalization, different working techniques and working attitudes, compliance with other habits, languages and regulations.

First, a definition of project success is provided, which can vary according to the involved project stakeholders; then, several success factors are identified. Those rely to “hard” issue of project management, such as planning and technical specifications, and to more intangible factors such as trust among project team members.

The study finds that project management strategies can mitigate the negative impacts of multiculturalism and increase the positive ones.

The study presents theory and findings connected with project management strategies that can mitigate the negative impacts of multiculturalism above mentioned and increase the positive ones. Some of these strategies refer to: team selection and composition, team integration, awareness of cultural differences, communication and management styles. The study has theoretical and practical implications as well as future research suggestions aimed at improving the theory on multiculturalism as facilitator of communication in project settings.

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# 1. Introduction

## 1.1 Background

Multiculturalism in organizations is a topic that has been increasingly investigated, due to the fact that organizations are no longer defined by national boundaries (Adler & Gundersen, 2008). The exchange of capital and labor across borders has become a common phenomenon in the last decades; also the multicultural composition of the society has steadily increased, due to immigration (Samovar, Porter & McDaniel, 2012). Many scholars agree on the fact that increased globalization calls for increased interaction among diverse cultures, and that the variety of different cultures is a fundamental issue for today's management (Hofstede, Hofstede & Minkov, 2010; Trompenaars & Hampden-Turner, 2012).

Multiculturalism is of particular interest when it comes to shipping, this being an industry recognized as truly global, with businesses based in five different continent and the capacity to transport billion of tons of cargo between 160 countries (Stopford, 2009). A vessel could have been built in Korea with money coming from a Norwegian bank, through the intermediation of a broker operating in London on behalf of a German ship-owner who decides to flag the vessel in Panama and lets it operate by a crew from The Philippines.

Multiculturalism issues have been investigated in shipping industry, generally with an emphasis on maritime accidents, safety and quality, efficiency, communication and job satisfaction.

In the last decades, the practice of flagging out has resulted in vessels manned by crews with a nationality not corresponding to the one of the ship's flag (Progoulaki & Roe, 2011). For this reason, the focus of the literature about multiculturalism in the shipping industry has been on the implication of the use of multicultural teams on board the ships, their composition and interaction. The impact of culture, and how this affects the approach to crew

management and the operation of the ships has been also explored (Theotokas & Progoulaki, 2007). However, looking into the subject of multiculturalism, it appears that there is a gap in the literature regarding multiculturalism in the shipbuilding industry.

The shipbuilding industry is a vital and influential aspect of the maritime economy, a fundamental component on the shipping cycles that shape the industry (Stopford, 2009).

Although vessels can vary from highly sophisticated, to one-of-a-kind products, to more standardized, the process of shipbuilding construction will always involve complex projects. Until now, limited attention has been paid to multiculturalism in organizations dealing with projects that foresee high-value adding manufacturing, such as shipbuilding.

Nowadays shipbuilding yards collaborate with suppliers and partner overseas, and this relationship is characterized by differences in history, tradition, culture, technology and economy. The implications of this collaboration have not yet been fully explored with respect to management and development of shipbuilding projects.

Effective management of multicultural project teams has actually been investigated, but the focus has generally been on international construction projects and the efficiency of multicultural teams in heavy engineering projects (Ochieng & Price, 2009).

## **1.2 Research problem**

The objective of this study is evaluating whether multiculturalism in organizations is connected with success factors/performances in shipbuilding projects. Furthermore, this thesis seeks to evaluate how project management in shipbuilding projects influences the relationship between multiculturalism and success factors/performances in shipbuilding projects.

In order to reach the objectives, the research question is:

- How is multiculturalism related to success in shipbuilding project?



The study also comprises two sub-questions that are also considered in the literature part of the thesis and taken along during the empirical part of the paper. The sub-questions are the following:

- What are the success factors in shipbuilding projects?
- How can the project management improve the success factors determined by the multicultural setting of a shipbuilding project?

## **2. Literature review**

Since the research questions set out to examine the relation between multiculturalism and success factors in shipbuilding projects, it is necessary to begin by providing some explanations of the terms involved.

A literature review of project management and multiculturalism has been performed. This chapter starts with an outline of project management and success factors, and proceeds with a definition of multiculturalism. An overview of literature referring to multicultural projects is subsequently provided.

### **2.1 Shipbuilding projects**

In shipbuilding industry, project organization is the norm. Ships can range from a standard tanker to the most complex vessel cruise or off-shore vessels; however, despite the technical differences, production is carried out utilizing the project organization form (Koivunen, 2007).

In order to analyze the peculiar environment of shipbuilding projects, it is necessary to understand what a project is.

#### **2.1.1 What is a project?**

The Project Management Institute defines a project as “a temporary endeavor undertaken to create a unique product, service, or result” (Project management institute, 2008, pag.5). A project is also “a temporary organization that is created for the purpose of delivering one or more business products according to an agreed Business Case.” (Hinde, 2012, p. 3).

In the literature it is possible to find many more definitions of project, but for the scope of this literature review, project is defined as: “a unique endeavor with a clear objective and defined scope to be undertaken within a time and cost limit” (Rolstadås, 2008, p.5).

A project is carried out by a project organization, which develops the product to be delivered to the project owner. When the end user is the organization carrying out the project, the project is defined as internal. When the end user is external, the project is defined as external: in the case of shipbuilding projects, the end user is not the shipbuilding company, but the ship-owner ordering the vessel as a final product.

The activities performed in the course of a project are different from the ones carried out during the so-called normal operations (Hinde, 2012). Normal operations are those needed for an organization to function. What usually happens is that large organizations, such as shipbuilding companies, have many ongoing projects at the same time, and there are consequently also many activities going on, including operational work and project work (Kloppenborg, 2009)

Projects can also be categorized according to the final product that they intend to deliver: if the result is a physical object, such as a ship, then the project has an engineering and construction nature, whereas if there is no certainty about the accomplishment of the result, then the project is in the field of research and development (Rolstadås, 2008).

This classification is important in order to understand the different approaches that the project management needs to apply; moreover, the planning and controlling of tools changes according to the complexity of the project. Large projects are generally broken down in subprojects or sections. For large projects - such as shipbuilding - it is also normal to utilize external resources, because of scope and competence.

The greater a project is, the higher the number of stakeholders, defined as the people having a stake in the project, starting from the base organization.

The project characteristics enumerated up to this point are summarized in the following table:

Table 1: *Projects features*

<b>Projects features</b>	
Unique	Every project has a degree of novelty, in term of product or service, or in term of place and time
Temporary	Every project has a starting-point and an end-point (temporary organization)
Goal-oriented	The task of the project is to deliver a product or a service
Cross-functional	It requires different skills and the integration of different activities, alongside with resources coming from different departments and organizations.
Uncertainty	Details may not be known in advance, and this adds risk to the activities

The detailed description of all the features of a project goes beyond the scope of this study: what is relevant is how the features are related to project management, which will be presented in the following section.

### **2.1.2 Project management and project success.**

Project management is a relatively new field: from a starting-point in the 1950s, it gradually became a more systematic discipline, with the contribution of Taylor and Gantt. In the 1960s, tools such as PERT (Program evaluation and review technique) and CPM (Critical path method) were introduced, arriving to the publishing of the *Guide to Project Management Body of Knowledge* by the PMI (Project management institute) (Rolstadås, 2008).

The Project Management Institute defines project management as the “application of knowledge, skills, tools, and techniques to project activities to meet the project requirements ” (Project management institute, 2008, p. 6).

The techniques that the definition refers to are utilized in five process groups, as identified below:

Table 2: *Project processes*

<b>Process group</b>	
Project initiation	Selection of project Preparation of documents Project manager assignment
Project planning	Definition of work requirement Definition of quality and quantity Definition of resources needed Scheduling of activities Risk assessment
Project execution	Directing and managing the work
Project monitoring and control	Checking progress Comparing actual outcomes with planned outcomes Adjust
Project closure	Contract closure Financial and administrative closure

*Note:* adapted from Kerzner (2013, p. 3)

The view of project management as a discipline, or profession, only connected with tools or techniques such as Gantt charts, PERT (Program evaluation and review technique), Critical path method (CPM) or Work breakdown structure (WBS) appears to be too static and apparently not in line with today project management (Maylor, 2010).

A growing number of scholars believe that project management should develop a holistic approach, focusing on ideas such as value creation and social complexity of project environment. This new direction of scholarly research, defined “rethinking project management”, should be combined with the classical view, in order to enrich the latter (Svejvig & Andersen, 2014). Of particular interest is the literature of project management dealing with social aspects in project environment: scholars claim that project complexity also comes from human interaction and plurality, therefore the practice of project management should also deal with relationships management (Maylor, 2010).

In light of this interest of project management towards social interactions within the project, the definition that appears suitable to our purpose is one comprising several of the aspects mentioned so far; thus, project management is “the planning, delegating, monitoring,

and control of all aspects of the project, and the motivation of those involved, to achieve the project objectives within the expected performance targets for time, cost, quality, scope, benefits, and risks” (Hinde, 2012, p. 528).

When can a project be considered a success? According to the traditional view, a project is successful when it is completed within the time, the budget and the quality requested (Kerzner, 2013).

With the developing of project management in the last decades, it seems clear that project success is perceived in different ways, according to the stakeholders involved in the project; also the idea of project performance can vary according to individuals, location and project type (Mir & Pinnington, 2014).

For the scope of the present study it appears necessary to provide the definition of success factors and success criteria. Success criteria are the parameters chosen to evaluate whether a project has been successful, often measured as project completion; success factors, on the other hand, are the conditions that must be present for the project to be successful (Rolstadås, 2008). The list of factors that can favor the success of a project is very dynamic, and this is connected with the fact that also criteria defining project as successful are very debatable (de Wit, 1988).

Over the years, many surveys have been carried out in order to identify success criteria, but the result has been long lists of objects that keep changing according to the stakeholders and the project considered. However, many scholars agree on considering a project as successful if it is completed according to time, cost and quality, which tends to ignore other important goals, such as client satisfaction, long-term business success and organizational learning (Scott-Young & Samson, 2008).

Time, cost and quality, however, appear to be criteria related to project management success rather than to project success: unlike projects objectives that have a more qualitative

nature, these parameters are easy to determine, and are therefore more convenient as a measure of project success (Munns & Bjeirmi, 1996). The result from this reasoning is that a project can be a success despite poor project management performance in terms of time, cost and quality (de Wit, 1988).

It is therefore important to distinguish project success from project management success (de Wit, 1988; Munns & Bjeirmi, 1996; Cooke-Davies, 2002). Project management is the process of controlling the achievement of project objectives, utilizing techniques to reach project goals on time and within budget. The tools such as work breakdown structure or project plans are defined as the “hard” issues of project management, whereas issues related to people skills are the “soft” ones (Munns & Bjeirmi, 1996). According to Scott-Young and Samson (2008), “soft” factors in project management can lead to different outcomes of the project objectives, and this is going to be investigated in the specific case about shipbuilding projects in the following sections.

### **2.1.3 Peculiarities of shipbuilding projects.**

This section presents some of the characteristics of shipbuilding projects, in order to clarify the context of the present paper.

Those characteristics are related with the peculiarities of shipbuilding industry.

Historically, shipbuilding has been lead by European shipyards, but this dominant position was taken over by Japan in the 70s, thanks to planned shipbuilding programs. In turn, Japan was surpassed by South Korea, which gained the first position. Ten years ago, China entered the contest as well, making the world stage highly competitive.

World shipbuilding is dominated by few large shipyards: the four largest shipyards account for 25% of the CGT (Compensated Gross Ton) market (Ecorys SCS Group, 2009). Shipbuilding companies have different sizes, with the largest companies to be found in Asia, while Europe is characterized by many SMEs and some big actors.

A common feature in all regions is the fact that the shipbuilding industry is strongly export-oriented, making the international aspect of the sector predominant. The only segment where the owners tend to buy from their own countries is the naval sector, for national security reasons.

In general, the globalization tendencies of the past decades have led to many acquisitions and joint ventures; many of the largest companies invest in shipyards located in countries where the labor cost is cheaper or closer to new markets, which explains why most companies have many shipping yards located in different countries (Ecorys SCS Group, 2009).

This brief excursus on the development of the shipbuilding industry shows that, in order to gain a competitive position, the most relevant shipbuilding companies have reached the development phase that Adler and Gundersen (2008) define as global. In this phase, production comes from worldwide locations and the product is also distributed worldwide; cultural sensitivity becomes “critically important” (Adler & Gundersen, 2008, p. 13) with regards to both clients and employees.

In these yards located worldwide, the range of ship types produced is very wide: from cruise vessels to cargo ferries, from general cargo to container ships, from specialized to offshore vessels. This differentiation implies a variation of the work required according to the type of ship: producing a cruise vessel is more complex than producing a tanker. Again, different yards can have a mix of contracts, ranging from civil to naval contracts, and the proportion of work that is sub-contracted out of the yard can vary greatly.

Although many ships are built on a standard design, very often this design can be modified at the ship-owner's requests, which makes the possibility of producing and utilizing identical parts, as in mass production, extremely limited. Even if the complexity of the product changes according to ship type, the tendency for the shipyards is to focus on



engineering design and assembly of outsourced parts such as engine or propulsion system (Mendes & DuBois, 2012).

“Shipbuilding is a complex and knowledge intensive industrial activity” (Sæther & Karlsen, 2012, p. 257). Shipbuilding projects are ultimately about integrating numerous sophisticated components into the final product.

In general, a shipbuilding company carries out several projects at the same time, so there is a high need for good planning by the enterprise, in order to utilize all the resources (financial, HR, construction sites) in the most productive way. Looking at the process of a shipbuilding project, a typical example of the main phases is illustrated in the following graph:

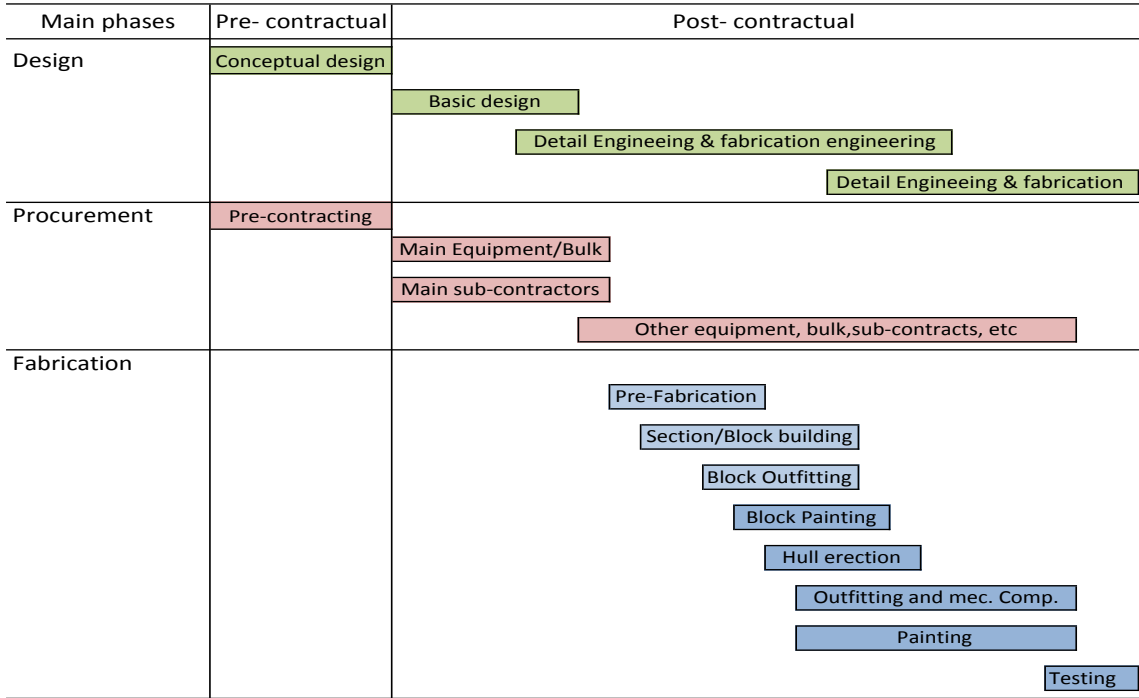


Figure n.1: Shipbuilding process. Note: revised from Iversen (2014)

The shipbuilding project already emerges in the pre-contractual phase, and the conceptual design is important from the technical and economical point of view. The ship-owner ordering the vessel gives clear indication on how the project should be developed and then is always present for the entire process. The detail engineering continue well over the

beginning of fabrication; this is a peculiarity of shipbuilding that makes it quite unique, and is due to the fact that a short delivery time is needed (Emblemsvåg, 2014)

It is possible to recognize some contiguity between construction and shipbuilding projects. They have similar features: in both projects, the nature of the product is unique; the projects tend to be multi-organizational, with an extended use of subcontracting, and in both types there is a high focus on rules and laws to comply with. (Emblemsvåg, 2014).

It is therefore possible to summarize the peculiarities of shipbuilding projects in the following definition: Shipbuilding is a unique, temporary and multi-organizational site production project with simultaneous fabrication and engineering phases and regulatory interventions. The different peculiarities are explained in table 3

Table 3: *Peculiarities of shipbuilding projects*

<b>Peculiarities of shipbuilding projects</b>	
Unique project	This refers particularly to highly sophisticated types of vessel (cruise, naval, off shore)
Temporary and multi-organizational	Subcontracting is widely used
Site production	The assembly part of the project takes place in one shipyard
Simultaneous fabrication and engineering phases	Fabrication starts before all the engineering issues are solved
Regulatory intervention	Safety regulation to comply with

Shipbuilding projects also involve several work packages and tasks carried out by different subcontractors. This implies that many organizations, alongside the main one delivering the vessel, are involved in the construction, which increases the complexity of the process, not least in view of the interaction of different cultural organizations.

## **2.2 Multiculturalism**

The literature on multiculturalism is vast, and the term multiculturalism is difficult to define because it has been used in different disciplines such as sociology, anthropology and

political science. This multidisciplinary use has resulted in different meanings that have been attached to the word (Colombo, 2015). Encyclopædia Britannica (2016) defines multiculturalism as “The view that cultures, races, and ethnicities, particularly those of minority groups, deserve special acknowledgement of their differences within a dominant political culture”. Several authors have studied multiculturalism from many angles: Van de Vijver, Breugelmans and Schalk-Soekar (2008) claim that the concept can be related to features such as the demographic composition of a population, the policies put in place to prevent discrimination and to the favorable attitude to such policies. Bloemraad and Wright (2014) add to those three classifications a fourth one referring to a philosophy of equality and justice. Colombo (2015) attaches to the term a meaning connected to the “politics of difference and recognitions”: when people having different languages, habits, customs and religion live in the same context but have the desire of keeping those differences. The connotation to the term is positive, in the sense that the respect of the diversity is necessary in order to avoid marginalization. For the scope of the present study, the meaning attached to the term is connected neither to a political philosophy aimed at increasing social equality, nor to an ideology that should manage cultural diversity (Verkuyten, 2004). What this paper intends to investigate is rather the dimension defined as “everyday multiculturalism”, i.e. the study of the way in which cultural diversity is experienced in everyday situations, including the workplace (Shan & Walter, 2014). The definition of multiculturalism selected for this study covers the dimensions of the global firm, thus implying that “people from many countries and/or cultures interact regularly...Multiculturalism adds to the complexity of global firms by increasing the number of perspectives, approaches and business methods represented within the organization (Adler & Gundersen, 2008).

What is also necessary to clarify is the use of terms such as “intercultural” or “cross-cultural”, which are often used with similar meaning in the field of research connected with

multiculturalism. While the term multicultural refers to a plurality of cultures, the term intercultural adds a sense of interactions and exchange between those different cultures (Arasaratnam, 2013). Again, cross-cultural communication implies the exchange of messages between different cultures. This exchange of messages and signals is not always successful, and this is because different cultures tend to categorize different aspects of the world in different ways (Adler & Gundersen, 2008).

### **2.2.1 Multiculturalism and projects.**

In the previous section, the definition of multiculturalism that will be referred to throughout the paper has been clarified, namely multiculturalism as one of the dimension of the global firms operating in different geographical locations, or whose employees possess different cultural background, leading to a situation where people from many countries or culture interact regularly. When talking of project management, the forms of a multicultural project could be various: it can be the case of a project established in one country, but with participating workforce from different cultural backgrounds. On the other hand, members or stakeholders of the project can be located in different countries, in some cases meeting only “virtually” (Mäkilouko, 2004).

Despite the fact the multiculturalism has been presented by many scholars as a possible advantage when dealing with management (Adler & Gundersen, 2008; Schneider, 1995; Ochieng & Price, 2009; Appelbaum, Shapiro & Elbaz, 1998), great focus has been dedicated to potential problems arising when managing in a multicultural environment.

Several studies on multiculturalism and project management exist (e.g. Hofstede, 1983; Zwikael, Shimizu & Globerson, 2005; Mesly, Lévy-Mangin, Bourgault & Nabelsi, 2013;). Hofstede conducted extensive research on the relation between culture and management. He elaborated a framework for cross-cultural communication based on four cultural dimensions, which he also utilizes when discussing successful project management

(Hofstede, 1983). Moreover, despite some criticism (e.g. Venaik & Brewer, 2016; McSweeney, 2002), the same framework has been largely utilized in scholarly research on culture and management. Because of this wide use in the relevant literature, it may be useful to recall the main concepts of Hofstede's theory. Table 4 presents the four cultural dimensions initially identified, later expanded to six (Hofstede et al., 2010).

Table 4: *Cultural dimensions*

<b>Dimensions</b>	
Individualism	Individual-oriented Social ties are loose, and individual or close family interests prevail over group interests Self-actualization is prioritized Business relations are regulated by contract and not by personal connections.
vs	
Collectivism	Group-oriented Sense of team/ belonging, with focus on common goals Business relations are regulated by personal connection rather than contracts
High power distance	Refers to a hierarchical organization, with a communication having a top-down direction. Leader seen as caring autocrat and the management style is directive. There is a sort of inequality between tops and subordinates
vs	
Low power distance	Refers to a flat organization, with a two-way communication Leader has a consultative management style, encouraging dialogue Equal rights among different levels
High uncertainty avoidance	Focus on continuity and having long-term perspective Avoidance of risk and sceptical to change Ambiguity is avoided through predictability and tradition
vs	
Low uncertainty avoidance	Short-term perspective There is more acceptance of risk and more openness to change. Flexibility is prioritized
Masculine	Focus on success and progress Work-focussed societies, where career overshadows family. Working environment tends to be competitive High gender differentiation
vs	
Feminine	Focus on family over work Less competitive working environment Gender equality as a norm

*Note:* information revised from Hofstede et al. (2010) and Adler & Gundersen (2008)

When evaluating the management of projects dealing with cultural differences, Hofstede looks at the way the different dimensions of national cultures can influence the activities of a project, reiterating the opinion that national cultures have an impact on project management and management in general (Hofstede, 1983).

Project management is highly goal-oriented, and the tasks come before relationships. This is probably related to the fact that, as a discipline, project management was created in the USA, a country scoring very high on the individualist dimension. When projects deal with cultures that are considered more collectivist, higher attention should be paid to relationships among the people involved in the project.

Sometimes the way a project is organized, e.g. with a multifunctional structure, can be problematic for people coming from cultures used to a clear hierarchical organization. The solution suggested by Hofstede (1983) is to establish clear rules and competences for the people involved in project activities. In addition to that, the project team can cooperate better when there is a common knowledge and this knowledge appears standardized. Common procedures and best practices could facilitate group synergy, and possible miscommunication issues can be neutralized through common knowledge. Not least, organizational culture can be equally strong and help overcoming barriers deriving from differences in national cultures (Schneider, 1995).

When analyzing the issues of multiculturalism in projects, the literature on teams and team performance is also of some help. Adler defines a team as multicultural when “members represent three or more ethnic backgrounds” (Adler & Gundersen, 2008, p.133). Many scholars especially emphasize the challenges on multicultural teams, arising from issues such as communication styles, trouble with language proficiency and conflicting norms on decision-making (Brett, Behfar & Kern, 2006), while other scholars tried to focus on positive effects of team diversity (Stahl, Mäkelä, Zander, & Maznevski, 2010). In order to overcome

challenges, it is possible to utilize different strategies, such as adaptation, structural intervention, managerial intervention and exit. Also different kind of managerial style can help overcoming barriers: for instance, multicultural leaders can show empathy, trying to understand other cultures and focusing on relationships among project member, with the intent to create a synergy among them. Moreover, by using a style defined as polycentric, instead of building interaction among project members, a manager can function as a link between different cultures in the team, utilizing the different characteristics of project members towards effective action (Mäkilouko, 2004).

Building this effective communication and avoiding conflicts can be especially complicate if the project involves virtual networks, were team members do not know their geographically distributed co-workers. In this case the position of the projects manager as a link is difficult to achieve because of geographical dispersion, therefore this role can be achieved by an object that is relevant for project work, such as designs, spreadsheets, images and other types of shared documents. Iorio and Taylor (2014) define those objects as “boundary objects”, which may help in managing conflicts in distributed project networks because they have “different meanings in different social worlds but their structure is common enough to more than one world to make them recognizable, a means of translation” (Star and Griesemer in Iorio and Taylor, 2014, p.9)

What appears relevant when dealing with the literature of management of multicultural projects are the “soft skills”, defined as those that facilitate the collaboration with people and groups and that deal with the human factors of project work, rather than with the technical activities (Söderlund, & Maylor, 2012). The success or the failure of a project can be related to the dynamics arising from human interaction, and this is particularly true in complex projects, where the multidisciplinary aspect is relevant (Mesly et al., 2013). When working in a multicultural environment, project manager should focus on their

communication, interpersonal skills and effective leadership skills, being flexible and adaptable while keeping the technical strengths high (Pheng, & Leong, 2000),

As it has been presented in the section dedicated to the definition of projects, shipbuilding shares some characteristics with construction projects, therefore the literature on multiculturalism in construction projects (e.g. Chan & Tse, 2003; Ochieng & Price, 2010; Ochieng, 2012) is of particular interest for the present study.

It has been recognized that research in the field on multicultural construction projects is not especially wide – in fact, just defining what a multicultural construction project is can be problematic. Some scholars suggest that any construction project connecting different contractors, all using different working norms, is already multicultural, even if there is only one country or nationality involved (Ochieng, Price, Ruan, Egbu, & Moore, 2013).

With the development of globalization and outsourcing, large projects have increasingly acquired the form of a multi-project organization, with the consequent formation of a temporary multicultural structure. Because of this, managers need to be aware of the preferred leadership style, in order to introduce a supportive organizational culture among the project team. Another consequence is that effective communication is vital in order to build this emerging organizational team culture. Moreover, effective communication can help when managing expectations and even conflicts among people involved in the project (Ochieng, & Price, 2010).

The relevant aspects of the factors that may affect multicultural project work has been summarized by Ochieng and Price (2009) in a framework that is presented in table 5:



Table 5: *Factors affecting multicultural projects*

<b>Critical areas for cross- cultural action</b>	<b>Initiative suggested</b>
Leadership style	Project management should utilize the leadership style preferred by the multicultural project team, so that project manager authority can be respected.
Team selection and composition process	Project team should be chosen based on technical competence and ability to perform team work. Respect among team member appears important. Selection through personal profiling also taking into consideration cultural complexity.
Cross-cultural management of team development process	Facilitating teambuilding activities can enhance the possibility of sharing the common aims and objective and test the capacity of working in group.
Cross-cultural communication	Cultural empathy appears relevant, as it helps build respect for others and trust. Good communication appears to be facilitated by a clear line of responsibility.
Cross-cultural collectivism	Good team organization, open decision-making and commitment are the relevant aspects that should be addressed.
Cross-cultural trust	Trust appears to depend on mutual respect and good interpersonal skills that could be facilitated by teambuilding activities.
Cross-cultural management	Keeping project team informed and using interdisciplinary procedure, in order to verify project goals.
Cross-cultural uncertainty	To reduce uncertainty project goals should be articulated, clear roles should be in place and project manager needs to possess good interpersonal skills.

*Note:* revised from Ochieng & Price, A. (2009). Framework for managing multicultural project teams. *Engineering, Construction And Architectural Management*, 16(6), 527-543

Project purpose and object should be reached by integrating values, roles and processes. In order to do this, project managers should use a leadership style capable of building cultural understanding. Ochieng and Price (2009) recognize eight different areas where project management can operate, and suggest some action that may help improve project performances.

### **3. Methodology.**

*“Methodology is a system of explicit rules and procedures on which research is based and against which claims for knowledge are evaluated”* (Frankfort-Nachmias & Nachmias, 2008, p.522). This chapter refers to the research methodology utilized in the study. The research method and strategies applied in order to answer the research questions are presented, together with the research design and the way the data have been collected and analyzed, according to the ethical implications of research. The role of methodology is to put together in a coherent way methods and techniques utilized for the analysis of object at the center of the research (Easterby-Smith, Thorpe, & Jackson, 2013). The utilization of these methods, logical procedures and techniques should lead to the consistency that is requested by a scientific research. Scientific methodology facilitates communication and gives rules for reasoning; moreover, it allows scientist to replicate the research, thus enabling the sharing of knowledge (Frankfort-Nachmias & Nachmias, 2008).

#### **3.1 The research process**

In order to conduct a research study, it is necessary to devise a process involving some precise steps, such as defining the research problem and research questions, constructing hypothesis, selecting a research strategy, defining the research design, measuring and collecting data, analyzing the results and then generalizing. Some of these steps can be carried out simultaneously, other can be omitted: what is relevant is that the research process “is the overall scheme of activities in which scientists engage in order to produce knowledge” (Frankfort-Nachmias & Nachmias, 2008, p. 18). Once a research problem has been formulated, it is important to consider the unit of analysis to investigate, because from that the choice of research design and data collection can be determined (Frankfort-Nachmias & Nachmias, 2008).

### **3.1.1. Research Strategy.**

The research strategy is the general orientation of the research. Data can be collected to test theories or theories can come out of data, so the relation between empirical research and theory can be deductive or inductive. In the process of deduction, on the basis of a theory the researcher deduces hypothesis that are then put to the test; it is therefore the theory that guides the process of data gathering. Some researchers utilize an inductive approach, where inferences and theory are derived out of observations (so, induction entails an element of deduction): in this light, the inductive method is an alternative strategy for linking theory and research, comprising deductive elements as well (Bryman, 2012). Despite the fact that sometimes deductive and inductive approaches are perceived as clearly distinct, this is not necessarily true; the same reasoning should be done for the two research strategies utilized in science, namely quantitative and qualitative research (Bryman, 2012), whose characteristics are presented in the following section.

The two main orientations of research strategy consist of quantitative and qualitative methods. Between the two methods it is possible to recognize differences related to three different aspects: the nature of the data analyzed, the principles and assumptions about social life and the role of theory in relation to research (Neuman, 2011). Quantitative methods use data in forms of numbers, while qualitative research utilizes soft data in form of words, sentences or symbols. Quantitative studies rely more on positivist principles, incorporating a natural science model that is deductive and objectivist, hence asserting that social phenomena exist independently of social actors. Qualitative strategy, on the other hand, is more inductive, and its ontological position affirms that social phenomena are attained by social actors (Bryman & Bell, 2011).

The aim of quantitative data is to understand the relation between two variables, an independent and a dependent one. To this aim, numerical data arranged in form of statistics is

gathered from a large sample size representative of a whole population. Generally, the researcher starts from a defined research question and the research is used to generalize concepts and find causal relationships (Muijs, 2004). The aim of qualitative research, conversely, is to come to term with the meaning and not the frequency of certain phenomena. Qualitative research utilizes interpretative techniques, and the intent of the researcher is to explain certain phenomena by describing them and looking for a shared pattern (Cooper & Schindler, 2011).

Summarizing the main characteristics of quantitative and qualitative strategies, in quantitative designs hypotheses are generally tested through the use of statistical tools on multiple variables, while in qualitative designs the inquirer uses research questions, and information is not collected using variables but by exploring a main concept. Quantitative research tests theories, whereas qualitative research is more interested in the ideas that the participants of the study have to share. In qualitative research, the phenomenon studied emerges in the course of the enquiry, thus making this strategy more deductive as opposed to an inductive position of the quantitative strategy. Quantitative research measures differences among variables, while in qualitative research the focus is on understanding a group of individuals (Creswell, 2012).

The strategy adopted in this study is the qualitative one; this because the desired goal for this paper is to gain an in-depth knowledge in the specific context of shipbuilding projects, by having the possibility to interpret the data after a close interaction with the respondents. As explained in the previous paragraph, a qualitative approach is suggested when the emphasis of the research is placed on the informants' opinions, as well as when there is the intention of understanding phenomena in a deep way and in their natural setting (Zikmund, 2010). The focus of the present study is multiculturalism, a concept that appears to be closely connected with the different meanings people attach to it, and to be also strongly

characterized by the interaction among individuals within a specific context; on these grounds, the qualitative approach appears the most suitable one for the purpose of this study.

### **3.1.2 Research design.**

In the above section the two research strategies have been presented, but once a strategy has been chosen, it is necessary to adopt a structure to govern the execution of the research; hence a specific design must be picked. Bryman (2012) defines research design as “a framework for the collection and analysis of data”. Depending on the elected research design, different aspects in the research are given different priority.

It is important not to confuse research design with research method, the latter being the techniques for collecting data, involving different tools such as questionnaires, interviews, participant observations or more.

There are several designs used in research; however, a simple classification illustrating all the possible variances does not appear to exist (Cooper and Schindler, 2011). According to Easterby-Smith and al. (2013), despite the dichotomy between positivist and constructionist views, research designs in practice swing between these two approaches, combining both elements. In what follows, a brief presentation of the most used designs is provided, while in the next section more attention is dedicated to the description of the case study utilized in the present paper. The research designs examined are the following: experimental design, survey design, longitudinal design, case study design and comparative design.

*Experimental* design is not widely used in social research because of the difficulty of manipulating the independent variables when dealing with organizational behaviors (Bryman, 2012). *Survey* is a cross-sectional design where the data are collected using instruments such as questionnaires or measurement instruments. Data are collected from large samples in a single moment in time, in order to get quantifiable information that should explain variations. When the study includes at least two measures over time on the same samples, then the design

is defined as *longitudinal* and the purpose is to describe patterns of change (Bryman, 2012). “A *case study* is an empirical enquiry that investigates a contemporary phenomenon in depth and within its real life context, especially when the boundaries between phenomenon and context are not clearly evident.”(Yin, 2009, p. 18). Case study design is appropriate when the research question is of explanatory nature and when the aim is to collect data that are not derived, but rather come from a natural setting. Therefore case study is an appropriate design when the research is answering a “how” or “why” question, and when data are collected in their natural setting. (Ying, 2009). Generally, the case study is associated with a qualitative strategy (Bryman, 2012). With this kind of design, the case must be defined, and in general it is an entity such as a person, a group, an organization, an event or a society. If a study holds more than one case, a *comparative design* is possible. A single case can have multiple units of analysis embedded in it (Yin, 2009).

In the present paper the research question is: How is multiculturalism related to success in shipbuilding project? The investigated phenomenon is therefore multiculturalism in the setting of shipbuilding projects. Because of the ‘how’ question and the particular nature of the research topic, which refers to attitudes of people towards other people in a working environment, the choice of case study design appears the most suitable to explore the characteristics of real-life events such as the organizational issues typical of a project setting.

When researching a problem, it is necessary to keep in mind the level of the analysis to be carried out, namely the unit of analysis that is defined as “the most elementary part of the phenomenon to be studied” (Frankfort-Nachmias & Nachmias, 2008, p. 528). The selection of the unit of analysis is relevant in a research strategy, because research design, data collection and data analysis can be different according to the level of analysis: what is valid at an individual level does not necessary hold at an aggregate level.

Once case study has been selected as the research design, it is necessary to evaluate whether this should consist of a single case or of multiple cases, and again whether the design should be holistic or embedded; therefore, the options open to a researcher are in fact four, as depicted in figure n. 2:

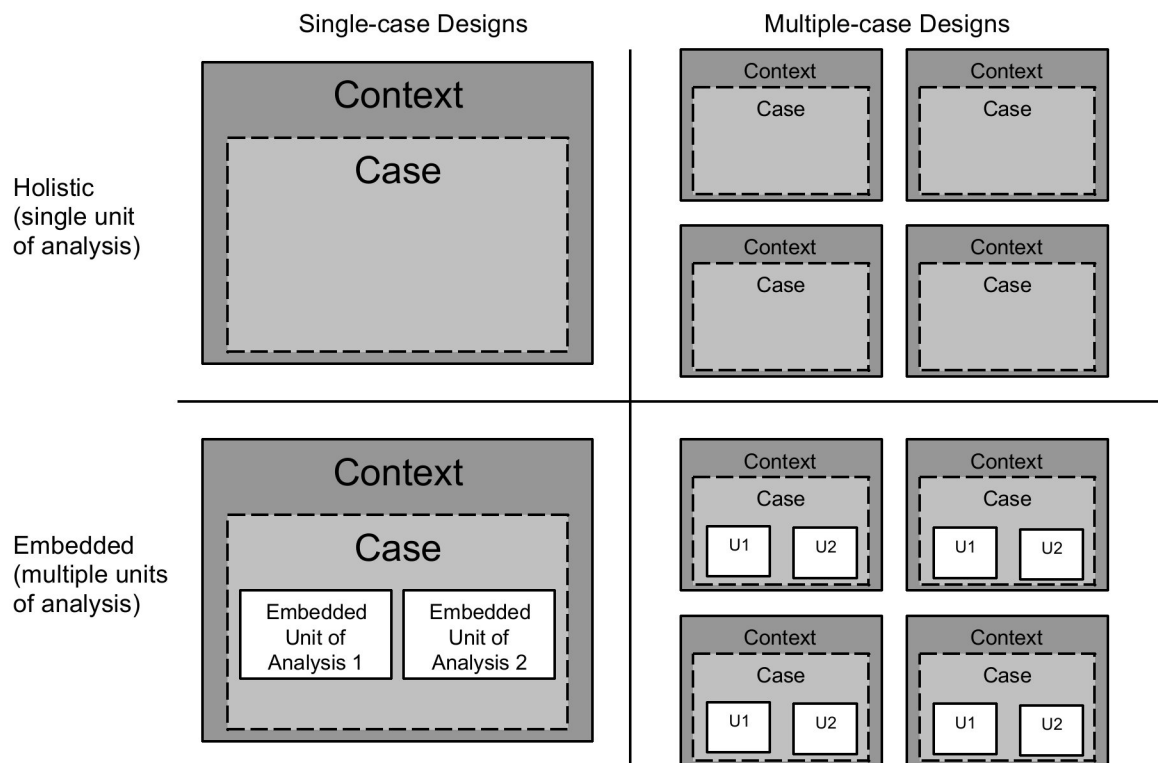


Figure n.2: *Basic types of designs for case studies* Note: from Yin (2012, p.8)

The holistic design refers to the analysis of the organization as a whole, while an embedded case occurs when there is more than one unit involved in a single case. According to Ying (2009), the two variants of single case have their pros and cons: in general, the holistic approach is necessary when it is not possible to define any sub-unit,; otherwise, the holistic design could lead to a too abstract study and the research question could slip. On the other hand, the embedded design is useful in order to conduct an extensive analysis, but it has its pitfalls if it focuses too much on the sub-unit, therefore missing aspects of the higher, holistic, level (Yin, 2009). If the same study contains more than a single case, then the design

has the characteristics of a multiple-case. A multiple-case design allows the research to verify differences within cases and tends to have more robust arguments, but requires more resources. For the present study the selected design is a single case with embedded unit of analysis.

### 3.1.3 Case description.

An European shipbuilding company that has been active in the shipbuilding industry for more than fifty years is selected as the single case, and the rationale for this is the representative one, since “the objective is to capture the circumstance and conditions of an everyday on commonplace situation” (Yin, 2009, p.48).

The company operates in the design and construction of vessels in several market segments, including cruise ships, naval ships and offshore vessels; it also covers the segment of equipment, repair and conversion. In order to operate, the company utilizes several subsidiaries and shipyards located all over the world, many of which have been acquired in recent years.

The embedded unit of analysis is constituted by the eight locations where different activities related to shipbuilding projects were carried out, and where the informants selected for the case are working at present, or have been working in the past.

The eight different locations are presented in table 6 below.

Table 6: *Case description and sub-cases*

Case	Sub-cases	Location	Property
C1 - Shipbuilding any	Sub 1 - Design Center	Europe	Owned by C1 company
	Sub 2 - Shipyard	Europe	Owned by C1 company
	Sub 3 - Shipyard	Turkey	Client shipyard
	Sub 4 - Naval Shipyard	USA	Owned by C1 company
	Sub 5 - Repairing Yard	USA	Owned by C1 company
	Sub 6 - Shipyard	India	Client shipyard
	Sub 7 - Repairing Yard	UAE	Joint venture
	Sub 8 - Shipyard	Brazil	Owned by C1 company



Of particular interest for the present paper is the fact that the selected company places itself in that phase of development that Adler and Gundersen (2008) define as global. Cultural differences may be subject to change according to the stage of development of the firm, this industry sector and the world economy : the fact that the company is a global one makes it particularly interesting to explore multicultural issues.

#### **3.1.4 Ethical issues**

“Ethics are norms or standards of behavior that guide moral choice about our behavior and our relationships with others. The goal of ethics in research is to ensure that no one is harmed or suffer adverse consequences from research activities” (Cooper and Schindler, 2011, p. 32). In order to achieve this objective it is important to follow some guidelines, pertaining to the following areas: explanation of study benefits; explanation to the participants of their rights and protection; informed consent and deception (Cooper and Schindler, 2011). For the present study, the researcher contacted the head of HR of the company in order to explain the content and benefit of the research, and to obtain permission to perform the study.

All individuals have a right to privacy that must be respected by the researcher, and confidentiality is an important aspect of such a right. For this reason the name of the selected company is kept anonymous and the informants are indicated with letters going from A to H. Informed consent refers to the full consent given by the participant after full disclosure of the procedures of the proposed research. Sometimes a signed consent form is necessary, for example when children are involved (Cooper and Schindler, 2011). For the present study the informants had been informed about the content of the research, some of them required to see the interview questions beforehand, and seven out of eight informants agreed on the recording of the interview.

Deception takes place when the researcher does not tell the entire truth about the study. “The American Psychological Association’s ethic code states that the use of deception

is inappropriate unless deceptive techniques are justified by the study's expected scientific, educational, or applied value and equally effective alternatives that do not use deception are not feasible" (Cooper and Schindler, 2011, p. 34). For the present study there is no justification for withholding information from the researcher's side, therefore all information was provided.

### **3.1.5 Data collection.**

Once the research design has been chosen, it is necessary to decide how the data will be gathered. According to Yin, "in qualitative research the relevant data derive from four field-based activities: interviewing, observing, collecting and examining (materials) and feeling" (2011, p. 129).

The use of interviews is very popular when dealing with case study: interviews "enable researchers to access information in context and to learn about phenomena otherwise difficult or impossible to observe" (Easterby-Smith et al., 2013, p.134). Moreover, interviews can be easier to accommodate in the research time plan comparing to other tools, despite the fact that the interviewing and transcribing activities can be very time-consuming (Bryman, 2012). The range of interviewing techniques available for a qualitative research is broad, from the totally open interviews to the more structured ones. Unstructured interviews are more similar to a conversation, where the researcher does not rely on close-ended questions, but rather follow the main topic and merely prompt the interviewee. Semi-structured interviews still have a flexible structure, but they contain a sequence of questions to be asked to all respondents. This sequence is built in an interview guide containing topics or themes to be discussed, whose order can change (Bryman, 2012). The use of the interview guide is useful in order to ensure that the same area of information is investigated with each respondent, while at the same time allowing the researcher a certain degree of freedom.

In the present study the interviews are semi-structured, affording the possibility to obtain rich data while clarifying unclear questions. An interview guide (appendix A) has been developed on the base of the research question and of the literature review. The interview questions are presented in table 7 :

Table 7: *Interview questions for the semi-structures interviews*

---

- 1.1 What is your nationality?
  - 1.2 How long have you been working in this company?
  - 1.3 Can you briefly describe your background and your position in this company?
  - 1.4 What kind of shipbuilding projects have you worked on? Many projects?
  - 1.5 What was the background of the people involved in the project (nationality, gender, etc)?
  - 2.1 When do you consider a shipbuilding project to be multicultural?
  - 2.2 Have you worked in many multicultural shipbuilding projects?
    - 2.2.1 . Can you please tell me a little bit about your last / current project experience?
  - 2.3 What do you think are the major advantages of working in/managing a multicultural sb project ?
    - 2.3.1 Can you please tell me one example?
    - 2.3.2. Why do you think these advantages exist?
    - 2.3.3 What could be done to increase the advantages? (And ‘what could you have done as a manager’? when relevant)
  - 2.4 What are the major challenges of working in /managing a multicultural shipbuilding project ?

Follow up:

    - 2.4.1 Can you please tell me one example
    - 2.4.2 Why do you think these challenges occur?
    - 2.4.3 What could be done to prevent /reduce these challenges? (And ‘what could you have done as a manager’? when relevant)
  - 2.5 How do you think more knowledge about cultural differences would have influenced the challenges and advantages you just told me?
  - 3.1 When do you consider a shipbuilding project to be successful?
    - 3.1.1. Follow up (if necessary): Can you please be a little more concrete, what are the criteria?
    - 3.1.2. Can you please give me some examples?
  - 3.2 Which would be the actions that could help improving success in shipbuilding projects?
    - 3.2.1 Can you please give me some examples of actions (to improve the success in shipbuilding projects) you have experienced
  - 3.3 Do you believe that the actions affecting the success in multicultural projects are the same that are affecting mono-cultural projects?

If not the same:

    - 3.3.1. What are the differences?
    - 3.3.2. Why do the differences occur?
    - 3.3.3. What can be done to prevent the negative affecting factors?
    - 3.3.4. What can be done to increase the positive affecting factors?
-

In qualitative research it is customary to use purposive sampling, meaning that the sample is chosen for the uniqueness its characteristics possess and because of specific experiences. It is therefore a non-probability sample that is relevant for the research question (Bryman, 2012). In order to select a sample including people with experience in multicultural projects, assistance from the case company was necessary. The head of HR department was contacted at the beginning of February 2016 via e- mail to present the purpose of the research. Because the headquarters of the company are located far away from the researcher, a Skype meeting was arranged. During the meeting the topic of the research was explained in-depth. Moreover, the characteristics of the suitable informants were evaluated: employees with an extensive experience of shipbuilding projects in multicultural settings were the most important characteristics. Then the head of HR department provided a list of informants meeting these characteristics. These potential informants were contacted via mail and a plan of interviews was set up for the month of March. Five face-to-face interviews were conducted within one week at the headquarters of the company, and the remaining three interviews were conducted via Skype because the respondents were located outside Europe. The eight informants are called A, B, C, ...H. Two of them were ship designers with a technical background, one was a production supervisor, five were managers, of which D and G with a technical background and B, E and H with a legal-economical background. The least experienced informants (A and C) had been in the company for less than one year, while the rest had an experience ranging from fifteen to thirty years.

The eight informants had experience from one or more sub-cases, as elucidated in table 8:

Table 8: *Sub-cases, location and informants*

<b>Sub-cases</b>	<b>Location</b>	<b>Informant</b>
Sub 1 - Design Center	Europe	A, C
Sub 2 - Shipyard	Europe	D, E,
Sub 3 - Shipyard	Turkey	F
Sub 4 - Naval Shipyard	USA	B, D, H
Sub 5 - Repairing Yard	USA	B, F
Sub 6 - Shipyard	India	D, F
Sub 7 - Repairing Yard	UAE	G
Sub 8 - Shipyard	Brazil	H

Two of the interviews have been conducted as a group interview because of time issues: in this occasion it was particularly difficult to keep the sequence of the questions as planned for in the interview guide, and generally in all interviews informants tended to anticipate questions coming later in the sequence. It was sometimes difficult to avoid digression from the topic, especially with the informants who had worked long in the industry and that therefore had long experience to share.

Six interviews were performed in an European language, which is the mother tongue of the researcher and the informants. The two remaining interviews were conducted in English. This added the necessity to make clear to the non-native English speakers what the word “multiculturalism” refers to. “Multiculturalism “ is translated in two different ways in the language of the rest of the informants; therefore the interpretation could have been difficult without an explanation.

The interviews were audio- recorded, with the exception of one, because the recipient did not feel comfortable with that. In that particular interview the data was recorded solely by the researcher’s notes.

### **3.1.6 Data analysis.**

“Analyzing data is the heart of building theory from case studies, but it is the most difficult and the least codified part of the process.” (Huberman & Miles, 2002, p. 17). In order to analyze recurring themes in the interviews, the chosen approach was content analysis, which entails the reduction of the data volume, while identifying “core consistencies and meanings” (Patton, 2002, p. 453). Data analysis happens through a concurrent flow of activities, such as data condensation, data display and verification of conclusions (Miles, Huberman & Saldana, 2014). In qualitative data the focus is on words, therefore the first step in analysis should be processing words into a clear text, starting from field notes and audio recordings. In the present research, audio recordings of the interviews were transcribed in a word file, a process that also allowed to become acquainted with the data and consequently select some main themes. In the condensation phase the data are selected and then transformed in summaries, codes and themes, allowing researchers to capture the most meaningful material (Miles, Huberman & Saldana, 2014).

Firstly, the interviews were analyzed deductively in accordance with the interview guide, and then new patterns appeared that have been coded inductively. With the completion of the data collection and analysis, table 9 with all the relevant findings was created. The table is based on the main themes derived from the interview guide and from the inductive findings that emerged during the data analysis, initially not included. The table is first presented at the end of the chapter on findings, and is later brought up again in the discussion chapter, divided according to the themes, in order to facilitate the discussion. In the course of the process, the researcher worked back and forth between the data and the analysis.

### **3.1.7 Reliability and validity.**

In the section dedicated to research design it has been explained how some designs intend to prove a theory, while others may have a more descriptive nature in order to develop theories. Irrespective of the desired outcome, any design should relate to criteria aiming to evaluate the research as a whole. The criterion referring to repeatability and consistency of the results is reliability, while validity is rather a “concern with the integrity of the conclusions that are generated from a piece of research” (Bryman, 2012, p.717). These criteria have their roots in positivist perspectives; therefore they are commonly associated with quantitative design. In particular, the extent to which replication can occur in qualitative research has been questioned, because of the complexity of the phenomena that it should investigate (Ritchie & Lewis, 2003). Nevertheless, these criteria also appear suitable to measure the quality of quantitative research, when redefining the concepts as trustworthiness, rigor and quality in the qualitative paradigm (Golafshani, 2003).

In order to assure the reliability of a qualitative study, the research processes should be reported in detail to enable future researchers to repeat the work. The research practices should be presented to help the reader evaluating whether effective methods have been used (Shento, 2004). For the present study, every step of the data collection, including the interview guide, has been presented. The process of data analysis has also been explained in order to satisfy the reliability criteria of the study.

Validity refers to the conclusion reached in the research, and appraises how valid and logical the findings are, and whether they are congruent with reality. In order to assure the validity of this study, the interview questions were designed on the base of literature findings. The interview questions were asked in different ways to avoid bias in the data. They also allowed the collection of rich data, which did not appear too different among the informants, thus implying their validity.

## **4. Findings**

This chapter deals with the data analysis from the interviews performed in the fieldwork.

The findings from the qualitative analysis process are categorized under six main themes, elaborated in accordance with the interview guide.

### **4.1 Definition of multicultural shipbuilding projects**

All the interviews started with questions on the informants' background, in order to evaluate how deep was their experiences of dealing with multicultural context.

All the informants, with the exception of one, had at least one relevant working experience in a shipyard located in a different country than his own. The informant who always worked in his own country did so in different locations; in his opinion, the experience he gained in more that thirty years in the selected company was definitely related to multiculturalism. He witnessed the evolution of the workforce operating in the different shipyard, now multinational, whereas at the time he started the workforce was mainly coming from the same country; moreover, he admitted that even among people coming from the same country the cultural differences could be consistent.

The younger informants, who have been employed recently in the company, admitted that they have been working throughout their careers in environments that they refer to as multicultural.

This leads to the following question: when should a shipbuilding project be considered multicultural?

All the informants agreed on the fact that a project can be considered multicultural when there are ultra-national aspects involved, such as subcontractors and suppliers coming from a different countries. Informant D referred to the acquisition of a shipyard located in a different country from the one of the parent company. Again, everyone agreed that a project is



multicultural from the moment when different cultural approaches converge for the sake of the project goal.

Informants having a professional economical or legal background were more articulated in their thoughts, and they all agreed on the fact that multiculturalism is the result of globalization. Informant E pointed out that

*Multiculturalism is just the result of globalization: previously, with protectionism, any country could be self-sufficient, now a single country is unable to give all the answers. I also believe that in the Western world we also experienced a cultural evolution, determining the marginalization of manual labor, and now only foreign workers do certain kinds of jobs. The result is that today in this shipyard we have thirty different ethnic groups. But I see it as an opportunity, if well managed*

Informant B was on the same page and believed that although the working team is an expression of the same culture, the project still needs to keep in mind also other stakeholders like client or sub-contractors. He also pointed out that this is just the result of how economy has evolved in the last decades. Confirming this view, informant H agreed that the main reason for a shipbuilding company to go and produce abroad is solely related to economic, legal and strategic reasons.

According to informant A, the shipbuilding industry is multicultural by default: “The goal is making a quality product, to do so you need people from different parts of the world, it does not matter which ones”.

Informant G also believes that the mix of culture is the key aspect in multiculturalism, and she stresses the central position of the client, saying that if the client comes from another country than the one where the project is organized, then the cultural implications are deeper. Also informant F shared this opinion, believing that the final product is strongly influenced by the cultural background of the client, especially for some kind of ships, like cruise vessels.

Among some of the informants there were different opinions related to the different cultural backgrounds of the project team involved in the construction phase of the vessel. While informant B thought that, for the outcome of the project, it is relevant if in the project team there are people with different cultural backgrounds, informants C and F had a different opinion. In particular informant F declared that diversity in the team is less relevant than the ultra-national aspects, “because it is the Project Management that gives the directions and the team simply comply with those”. Informant C would not necessary define a project team as multicultural if the majority comes from the same nation, with the addition of small groups of different origins. In that case he believed that the bigger group tends to assimilate the less numerous one, without implying any dominating attitude from the majority towards the minority.

When defining the characteristics of a shipbuilding projects, all informants agreed on the fact that the shipbuilding industry is very specific, meaning that the product involved is unique. Informant B declared “A ship is always unique, even when someone says that two ships are identical, they will never be, because anyhow timing is different”. Also technical competence is considered relevant when dealing with shipbuilding projects; this aspect, according to informant D and E, is a strategic issue; moreover, it makes the building of knowledge in the sector very time-consuming.

Another relevant aspect that all informants emphasized is the fact that the industry is highly regulated, and this somehow facilitates the integration between technicians coming from different cultural backgrounds, as informant A explained: “Shipbuilding is somehow international, and rules are the same, for me or for the designer who is sitting in Romania”.

The two informants who worked in the American shipyard specialized in the production of military vessels both agreed that the naval segment tends to be different, comparing to rest of the industry, because of the requirement of confidential agreements.

According to informant B, the military shipbuilding segment relies heavily on government policies, economic forces and security considerations, making that sub-case a peculiar one.

#### **4.2 Advantages of multicultural shipbuilding projects**

The next theme that has emerged relevant in the interviews is the one connected with advantages recognized in multi-cultural projects. All the informants agreed that working in multicultural projects is very enriching at a personal level, no matter how the outcomes of the project itself turns out: having the opportunity to interact with people from all over the world is considered at any rate a great opportunity by all the interviewees.

Looking at project activities, six of the eight informant were still positive: four of them thought that the greatest advantage comes from the fact that different cultural approaches bring different solutions to problems, as informant A said:

*If you have only one view to the problems, you cannot find the solution: different views bring different solutions, and what's most valuable is that in years of experience you can manage to collect a bunch of choices that can be made.*

Informant C reiterated the same opinion, declaring that multiculturalism is an advantage that allows developing skills, both social and technical:

*Everyone brings different problem solving skills, different ways of looking at things, at all the issues. There is a different way of thinking, the way you look at things, the way you explain things.*

Informant B believed that the combination of different approaches, if well managed, could create synergy in any project team. Besides this, he also mentioned the fact that sometimes some kind of approaches, for example towards order and time management, can be an asset for mono-cultural team:

*If I could have in any of my project teams a little bit of the structure of some people I met abroad, it would not be a bad thing: I wish I could have an American or*

*a German bringing some more order.*

The two other informants with a positive inclination towards multiculturalism in project work also agreed on the multitude of approaches, but they referred to multiculturalism as an asset for different reasons. Informant F declared that:

*The advantages of multiculturalism do not really reside in individual skills, but rather in the fact that, when there is an interaction between different cultures in a project, much more attention is given to the technical specifications in the contract, while in a mono-cultural environment many things are taken for granted and thus some critical issues are overseen. Working with another culture is like travelling to an unknown land, you need information and generally the starting point are the technical specifications, used as a map.*

Basically he acknowledged the value of making project team members more rigorous and thus more efficient. Another important factor that he experienced, especially working in India and Turkey, was a greater respect among people with different cultural background: “When you work with people from another country, trust is important, and there is no trust if there is no respect”.

One of the informants, with an economic background, again referred to the advantages of multiculturalism as a phenomenon proceeding in parallel with globalization. Informant E declared:

*For me multiculturalism is an asset the moment when in the yard some of the jobs are done only by some ethnic groups. At the moment the local system is unable to provide some of the job profiles we need; if it wasn't for blue collars coming from other countries it would be impossible for us to produce a single ship. A ship needs to be painted, the furniture needs to be built: who does these things if not foreigners?*

The remaining two informants were more skeptical about the advantages of

multicultural projects, and both admitted that probably multicultural projects are more problematic than mono-cultural ones, and added that if an organization decides to go global it is just for economic and strategic reasons.

#### **4.3 Challenges of multicultural shipbuilding projects**

Although impressions of challenges of multicultural shipbuilding project differ among informants, the majority of them agreed that physical distance is an issue when dealing with projects where activities and phases take place in different geographical locations.

Informant A recalled some of the problematic issues when communicating with designer colleagues working in another country, while it would have been much easier given the possibility to meet them on a daily basis.

Despite the different backgrounds, also informants B and F refer to physical distance between shipyards and the other offices of the selected company or suppliers as a relevant problem, and the same is true for informant H, who sees in delocalization of activities just a strategic choice that is not beneficial for the final outcome of the project:

*Both in USA and in Brazil, I found out that in the geographical areas where the yards are located there is not a shipping cluster as it happens at home. The result is that there is not really the possibility to externalize all the activities that for an organization are not strategic. In USA it was impossible also because of the nature of the projects that were military, but in Brazil what is really lacking is a specific technical knowledge related to shipbuilding sector. So, bottom line, the productivity is lower than at home.*

Once again, informant E's legal background appears relevant for his evaluation of challenges involved in shipbuilding projects:

*The first problem when dealing with cultural diversity is related to laws and rules in different countries with regards to contracts and payments. Moreover, every culture*

*tends to have its own negotiation style and this is something to take into account when dealing with foreign suppliers or subcontractors. All these are important issues that management is forced to put additional stress on when working on a project.*

*Globalization has determined the fact that it is no longer possible to use the same recipe with everyone.*

He also mentioned the fact that when the project team involved in the construction phase of the ship consists of different ethnic groups it could be challenging to find a formula that accommodates everyone:

*There are different ways of living, even different way of dressing of people coming from different countries. During many years in the yard I rarely experienced tension between different ethnic groups, but rather I witnessed conflicts between those coming from the same country: probably they bring here some unresolved issues from home. To solve such tension, the only way is to strive for integration, and this process of adapting is never a quick one.*

This same challenge of understanding other cultures, habits and working methodologies in multicultural projects has been recognized by four other informants. Despite the possibilities that different approaches can bring to the project, the mutual understanding could admittedly still be an issue. Informant H recalled his experience in the US:

*Working in the parent company of the American yard recently acquired, my approach was: let's go there, let's see how they work, and let's try to build the ships that we are able to build at home. But then it was actually difficult for us to understand how they worked, and there was reluctance from the other side to any kind of change, at least in the beginning.*

Informant B as well agreed that it was very problematic to convince the American workforce to utilize new production systems, but eventually he admitted that these differences

were not necessarily a problem for the project management, because often there was a will from both sides to understand each other.

Informant D recalled his experience in the US, confirming the fact that the approach to many things was different with the American colleagues. What he found really challenging for the outcome of the project was the high rate of turnover among the employees, something that he never experienced in Europe:

*In USA I experienced that people were much more ready to quit and change job. They tend to relocate much more easily than here in Europe. I think this is not due only to economic reasons, but also to a different cultural imprinting in USA and Europe. That had consequences for the project, because the technical management needed to implement a sort of strategy to assure the continuous learning of new people entering the project team to substitute workers who decided to leave.*

Informant G also refers to the differences in habits among different groups as demanding for the projects:

*At work, I feel it is important to keep into consideration the needs of all the groups, while in the meantime finding a common denominator among everyone. This can be really challenging, because at the end of the day this is business, and the bottom line is to deliver on time to a satisfied client.*

When addressing the issue of differences in attitudes of different groups, one pattern seems relevant from all the observations gathered from the informants: there is a striking difference among shipyards located in Europe and shipyards located abroad, irrespectively of typology, or whether it is a client yard or a company yard.

All the informants agreed that when working as an expatriate in another country, it is important to comply with the hosts' habits and to show respect: "after all we are guests", more that one informant said.

Informant A, who came from a neighboring country to work in the design center of the company, stated: “My obligations are to find out the rules when I come to work here ... we need to accommodate and comply with the local ways”.

Despite having a different background and occupying a project management position, informant D agreed with this opinion:

*What I feel is important when working in a multicultural project is not feeling superior or acting arrogant, but trying to comply with different habits, despite the rank you think you occupy. After all we are guests.*

Only informants A and C referred to differences of the spoken languages as an issue within project teams, as explained in the following section. Differences in habits or attitudes were not considered relevant for project activity, but rather for everyday life. When the researcher asked informant C if differences in habits or attitudes were not an issue, he replied that, when dealing with technical knowledge, “it is the same everywhere, shipbuilding rules are the same for everyone, and you need to refer to those”.

#### **4.4 Communication**

The theme of communication emerged as a separate one, because it received mixed opinions among the informants.

As anticipated in the previous section, only two informants considered language skills as a problem for project outcomes. They believed that language proficiency was anyhow an issue only at the beginning, as informant C pointed out: “Language barrier can be a problem, but once that is passed, having two or three seniors in the project developing these skills, then there are no problems”.

Four of the eight informants do not consider language as a barrier. Informant B and D emphasized the peculiarity of shipbuilding sector: being so technical, it somehow facilitates communication, as informant D pointed out:



*Any difference, also connected with language, is easily overcome when technical competence is present: technical language is a kind of natural translator. Even in a different context like the Indian one, technical language and technical competence helped to smooth out the differences.*

Informant B refers to a sort of “brotherhood” existing in the industry:

*Cultural issues are not necessarily relevant when managing a shipbuilding project, because fraternity existing in the industry prevails. The industry is so specific that when you meet a colleague from another country you perceive him as close anyway: you can recognize in him just a colleague who experiences the same problems.*

Informant F also agrees that misunderstandings coming from language differences are not relevant: it is nevertheless possible to understand each other. Cultural differences are also overcome because of the peculiarity of the shipbuilding job:

*Working in a shipbuilding yard helps: it is not a nice place to be, it can be dangerous sometimes and it is important to trust the persons working with you. Even smelling the bitumen can be an aggregating moment and if people involved in the job come from different countries, then sharing these experiences is perceived as much stronger.*

Being ready to learn the local language when moving to another country for work is considered an asset by all the informants, but more to facilitate the social interaction rather than the working activities. Informant F declared that, when working in Turkey, he learned Turkish because he felt obliged to show respect to his Turkish colleagues, and the fact that he spent time doing that was highly appreciated. The same happened during his Indian experience, and again the social interaction gained quality because of that.

Informant H, too, said that being proficient in the local language in Brazil is an asset, but with more consequences for the social sphere rather than constituting an improvement for project outcomes.

Informant F believed that the quality of communication improves in multicultural projects. This is because all the sides involved are aware of the differences and thus put in more efforts on expressing themselves clearly, something that does not happen when working at home, where a lot is taken for granted and not explained.

The two informants who worked in projects for the production of military vessels said that communication in the American naval yard was peculiar because of the special conditions, requiring confidential agreements and putting a lot of restrictions on not US citizens. Informant H declared:

*When working at the US naval yard I felt there was a sort of wall between us and the American counterparts, maybe because of the Security Agreement. The result was that getting information was quite difficult and my impression is that the US colleagues used this Security Agreement as an excuse to operate more independently. That was just after the acquisition and now the situation has improved a lot.*

Informant D agreed on the fact that communication issues have been partially solved in that yard, and when he left, some years ago, the security clearance conditions required of no-US citizens coming from the selected company were less stringent.

*I believe that the fact that the required security clearance is now wider is because we created some kind of relationships. They began to trust us more and more and probably we did something right, like being humble and showing our technical competence.*

#### **4.5 Success criteria and success factors in shipbuilding projects**

The opinions of the informants about the criteria needed for a shipbuilding projects to be considered a success are unanimous: a project is a success when it is completed within time and cost, and according to the quality requested. Some informants stressed also the importance of client satisfaction and two of them recalled that anyhow the important thing for

any company is doing business and therefore make profit out of their operations.

Informant H admitted that the latter, for other stakeholders involved in the project, could sometimes be perceived as a success on its own despite the cost and time issues:

*When the first vessel was launched from this yard, the local media talked with a lot of pride about the event, it being the first of that kind in this geographical area. Also some of my colleagues posted the news in their social media with great pride. But from my point of view the project was not a success, because of the time and cost issues. Ultimately, I believe our goal is to do business and make a profit.*

When it comes to success factors, the answers were more articulated. However, some terms recurred more often than others did, like planning, team selection and know-how.

Informants B, C and D all agreed on the fact that team selection and composition is a factor that helps reaching the goals in a shipbuilding project. Informant B declared:

*A project team needs to be balanced, you do not need necessarily the best men, but the ones that combined can deliver the best product. The competence and attitudes of team members must be balanced: there is no need for all in the team to be diplomatic, but at least one with a sense of diplomacy must be there.*

Informant C reiterated the same idea:

*When in a project there are different cultures involved, it happens that someone is more stress and does things fast, while another focuses on quality and goes slow, and neither way is the best one. You cannot have only relaxed people in a group; you need someone who pushes a bit. You need the combination of two things: I would say, keep engineering with the group that focuses on quality, and production with the faster group. Is what we did in my last project and it worked out fine.*

Again, informant F pointed to good and precise technical specification as a factor that could help project work.

Good infrastructure is considered a factor that could lead more easily a project to success, along with experience and technical knowledge of the project team. Informant A and D referred to motivation and involvement of team members as a success factor. Informant A declared: “At the bottom line everything depends on the dedication of the people involved”, while informant D was convinced that “Emotional intelligence of the people is the key”. Having people in the project teams who are ready to be receptive and open is also considered a plus. As informant D declared, “All the building phases are easier if the people involved are open and receptive, willing to understand others”. Informant F used the word honesty: “Honesty is important: saying things as they are, not withholding information, both positive or negative information. This also helps to build trust, another important element”.

#### **4.6 Project management in shipbuilding projects**

The last part of the interview was dedicated to summarizing some of the observations offered up that point. Therefore, many of the informants expressed their opinion about the characteristics that a project manager should have in order to capitalize the advantages of multiculturalism, and which actions project management could implement in order to neutralize some of the issues arising from multiculturalism in shipbuilding projects. In almost all the interviews the discussion about the role of project management was a natural consequence of the opinions expressed by the informants about success factors in shipbuilding project.

##### **4.6.1 Actions.**

The informants were almost unanimous in their opinion about the importance of actions that could facilitate the transfer of knowledge. Informant C believed that:

*Sometimes information doesn't flow as it should. Once I worked in a yard where you were pushed to be on your boss, doing your things. Everyone had is own office, but that did not help create connections with the colleagues, and there was neither*

*transfer of information nor of knowledge. Working in an open office, on the other hand, is too confusing, there is no privacy. Combining the two things would be the best.*

Informant E also believed that transfer of knowledge is a critical action that should be taken care of in shipbuilding projects, because of the evolution of the organization in a shipping yard:

*Now the situation is different than in the past. When I started we had all the competence in house, and therefore it was easier to transfer knowledge. Now, with many activities externalized, this kind of transfer is less automatic.*

Likewise, informant H believed that transfer of knowledge is an area where project management should concentrate a lot of attention, while informant D referred to it as “continue learning”. According to informant F, transfer of information is facilitated by an open communication, which is much easier when roles and responsibilities are clear. Many informants believed that a good project manager should be aware of the cultural differences that could be present in the project team, and should therefore implement actions aimed at easing team integration. Informant E believed that integration starts with the daily activities and offered the example of courses about safety that are held in six different languages as a starting-point of that gradual integration.

Informant C and G said that team-building activities might be an action that could help integration. Informant H recalled a multicultural workshop that took place while he was working in one of the US shipyard: “ It was organized by our American counterpart: it was not particularly successful, but at least showed some good will from both sides to try to get to know each other better.”

#### **4.6.2 Project manager qualities and management style.**

Many informants also agreed on the fact that a good project manager should be aware

of the differences in communication styles. Informant C claimed, “It is important to know how to communicate with subcontractors from different countries, in order to draw a line when it is necessary”, while informant G referred to a personal situation:

*We need to know the correct style of communication, knowing which are the limits that you should not pass. For example, I am a woman in a Muslim country, I cannot shake hands with men here, I cannot forget about that.*

According to informant H, communication style is also connected to trust building, meaning that trust cannot be built if a manager communicates in a way that implies lack of respect. Another idea that emerged from more than one interview was that stereotyping does not help in a multicultural environment and should be avoided as much as possible. Informant F admitted that before arriving in Turkey he did not have many expectations, while the reality was much brighter: “In Turkey I managed to build very good relationships, both personally and professionally”.

Many informants agreed on the fact that the management style of the project manager should focus on mediation: informant B said that he experienced his manager in the US yard more as a mediator than as a manager, and informants D and G pointed out that a manager should try to avoid conflicts and endeavor to use some diplomacy. Informant G, nevertheless, added that sometimes the only way to solve a conflict is to remove the team member who foments the conflict.

All the informants agreed that technical knowledge and competence are necessary for a good project manager. In particular, informant B believed that it is important for a manager in a shipbuilding project to have long experience in the industry:

*It is important for the management to have someone who has a good technical knowledge, who grew in the industry, because of the peculiarities of shipbuilding. Competence and experience allow to be respected without being authoritarian.*

According to informant D, a project manager should also be a good motivator, involving everyone toward a common goal, and he recalled the differences between his experiences in India and in the US:

*It was clear that in the Indian environment it was important to focalize everyone's attention towards a common goal, much more than in USA, where they work more according to well-divided tasks and the colleagues used to be more systematic, losing sometimes the idea of the whole.*

#### **4.7 Summary of the findings**

The analysis showed a slight difference depending on whether the sub-case was located in in the country of the selected company or in a different country. Different opinions also emerged in accordance with the background of the informants, with managers having a legal-economical background elaborating different opinions about some of the main themes. Another aspect that emerged is that the informants that have been working for more than fifteen years for the company showed a stronger organizational culture compared to the younger colleagues. Moreover, the informants with a longer experience in the industry tended to analyze multicultural aspects also by looking at the development of the phenomenon from a historical point of view, recalling the time when having a diverse workforce was an exception more than the rule. Conversely, younger informants, who have been working only in multicultural projects, explain the phenomenon as just a natural aspect of the shipbuilding industry. Based on the analysis of the interviews, and on the general observations captured performing the interviews, the summary of the findings is reported in table 9.

Table 9: *Summary of the findings*

<b>Themes</b>	<b>Main findings</b>
Definition of multicultural Shipbuilding Projects	Effect of globalization Ultra-national aspects of operations and acquisitions Cultural diversity in project team Opportunity Marginalization of manual labor
Advantages of multicultural Shipbuilding Projects	Synergy creator Multiple solutions to problems Increased efficiency Increased attention to contracts and technical specification
Challenges of multicultural Shipbuilding Projects	Physical distance and delocalization Different working techniques and working attitudes Compliance with other habits and languages Diversity in law and regulations
Success criteria in Shipbuilding Projects	Time, cost and quality Client satisfaction and other stakeholders satisfaction
Success factors in Shipbuilding Projects	Planning Balanced team selection and composition Technical competence of project team Motivation and involvement of project team Openness and trust among of project team members Good technical specifications
Project Management in Shipbuilding Projects: actions	Facilitate team integration Clear roles and responsibilities Team building and multicultural workshops Facilitate transfer of knowledge and continue learning
Project Management in Shipbuilding Projects: manager qualities and management styles	Awareness of cultural differences and communication styles Avoiding stereotyping Project manager as mediator Project manager as motivator Technical competence
<b>Communication</b>	Improves in multicultural setting Language difference problematic for daily life Local language knowledge an asset for the social sphere Technical language as natural translator
<b>Naval Shipbuilding Projects</b>	Security clearance Mainly US environment
<b>Relevance of multiculturalism</b>	Culture of client, subcontractors and suppliers Laws and regulations Communication strategies Competences in manual jobs
<b>Irrelevance of multiculturalism</b>	Assimilation of smaller cultural groups in the dominant one Very specific industry and highly regulated industry Quality product as a goal



The first six themes derived deductively from the interview guide, while those in bold font emerged inductively from the analysis. This summary takes into consideration mainly the findings that appear relevant for answering the research question. It is, furthermore, the starting point for the discussion.

## **5. Discussion**

In this section, the findings presented in the previous chapter are discussed and linked to the literature. The discussion will follow the themes presented in table 9 that summarized the findings. Each theme is discussed in a separate paragraph.

### **5.1 Definition of multicultural shipbuilding projects**

Abundant definitions of multicultural projects are found in the literature, and many of them comprise words as globalization, acquisitions, ultra-national or cultural diversity. Adler and Gundersen (2008) stressed the fact that in a contemporary economy any organization should deal with the impact of globalization, by declaring that “The world has clearly entered an era of unprecedented global economic activity that includes worldwide production and distribution, as well as increasingly large number of international joint ventures, multinational mergers and acquisitions and global strategic alliances” (p. 8). The global organization is then defined as being characterized by global dispersion and multiculturalism, where people from many countries interact regularly. Stahl et al. (2010) define a multicultural team the one where members come from different cultural backgrounds, claiming that this interaction has become more common because of the rapid rise of the global economy.

Looking at the construction industry, which has some characteristics in common with the shipbuilding one, the literature refers to multicultural projects in connection to the rapid globalization of the world’s economy (Ochieng, 2012). The idea is that multiculturalism should be seen as an opportunity, as Adler and Gundersen pointed out: “We neither ignore nor minimize cultural diversity but rather view it as a resource in designing and developing organizational systems” (2008, p. 109). In this study, nearly all the informants regarded multicultural shipbuilding projects to be a consequence of globalization and as determined by economic reasons, therefore the findings support the literature.

Marginalization on manual work in certain cultures, despite being associated by informant E to other effects of globalization, has not been widely discussed in the literature and it could therefore enrich the theory that refers to multiculturalism as a product of globalization.

## **5.2 Advantages of multicultural shipbuilding projects**

In the literature about multicultural projects and organizations, discussion generally starts by claiming that a multicultural setting can generate synergy. Adler and Gundersen (2008, p. 109) define synergy as the “behavior of whole systems that cannot be predicted by the behavior of any parts taken separately”. What happens in a multicultural setting is that an organization can create a new form of management that goes beyond the distinct cultures of people, trying to reflect the best aspects of each culture. Other scholars, who claim that project management can utilize synergy in international cooperation (Schneider, 1995), have expressed the same idea. Trompenaars and Hampden-Turner (2012) refer to synergy as a way to reconcile cultural differences.

When it comes to multiculturalism, it has repeatedly been pointed out in the literature that such a setting may help finding multiple solutions to problems. Appelbaum et al. (1998) believe that diversity supports innovation in the sense that the mix of cultures, backgrounds and ideas bring new perspectives to solve problems, while providing a sense of motivation.

Looking at the context of construction projects, Ochieng and Price (2010) also maintain that the cultural diversity of project team brings “a number of benefits, including the variety of perspective skills and personal attributes” (p. 451), thus generating new ideas and high quality in brainstorming. In the same research it is also claimed that, in an effective multicultural team, the positive effects of the synergy in the group can lead to better performance and thus increase efficiency.

The concept of creativity in multicultural teams as been explored by Stahl et al.

(2010), who refer to the possibility that “the more diverse experiences team member have accumulated ...the broader the reference base of potential action-outcome linkage the team can draw upon”. This idea closely mirrors the statement by informant A, who admitted that the wider the experience, the broader the solutions available. Several informants agreed on the fact that in multicultural shipping projects the different backgrounds of participants tend to enhance creativity, thus the findings corroborate the theory.

In the literature, no special attention has been dedicated to multiculturalism as an advantage when dealing with contracts and technical specifications, as one of the informants pointed out.

### **5.3 Challenges of multicultural shipbuilding projects**

The issues of challenges arising when managing multicultural projects have been widely explored in literature. Issues generated by differences in habits and language has been underlined by Hofstede (1983), who referred to his research on cultural dimension when discussing the difficulties of managing a temporary organization as the project ones. On the same line are the researches by Schneider (1995) and Adler and Gundersen (2008). Appelbaum et al. (1998) analyzed differences in habits and languages in a multicultural group, and the way the arising conflicts can be managed. They focus on some sources that could exacerbate conflicts, such as mistrust and miscommunication, and conclude that “cultural diversity plays a major role in group conflict...and not only affects group life and development, but also affects the conflict process” (Appelbaum et al., 1998, p. 226). Brett et al. (2006) analyzed four categories that could affect team success: direct versus indirect communication, trouble with accents and fluency, differing attitude towards hierarchy and authority and conflicting norms for decision making. Despite the fact that those specific categories have not been mentioned in the interviews, difference in attitudes and compliance with other habits still emerged in the findings. The fact that cultural differences could affect

teamwork in project construction has been studied by Ochieng and Price (2009 and 2010) and Ochieng et al. (2013). The emphasis of those researches was more on the integration of project team, yet similar challenges on habits were expressed in the findings.

Findings show that shipbuilding projects seem to be affected by different working techniques, which supports the theory. The literature already assessed the fact that work behavior varies across cultures (Trompenaars & Hampden-Turner, 2012; Hofstede et al., 2010). The problem related to physical distance and delocalization) with diversity in law and regulations (Adler & Gundersen, 2008; Iorio, & Taylor, 2014) have also been already explored. When it comes to problems arising from diversity in law and regulations, they have been touched upon briefly in much of the literature mentioned up to now.

#### **5.4 Success criteria and success factors in shipbuilding projects**

The finding about success criteria in shipbuilding projects totally supports the theory presented in the literature review. Despite the fact that a shared definition of project success does not exist (Mir & Pinnington, 2014), traditionally the criteria most frequently used to measure construction project success are the following: budget and schedule performances, client satisfaction, functionality, contractor satisfaction and team satisfaction (de Wit, 1988). Those criteria were also the conclusion of the findings.

The reasoning about success criteria can be repeated for success factors. A defined list of factors that could enhance successful shipbuilding projects is difficult to find in the literature. However, some of the traditionally cited factors in the literature -e.g. planning, project team motivation or technical capabilities (de Witt, 1988) - are also identified by the informants. Thus, the focus in this discussion will be on those factors that have been recognized as relevant for multicultural projects.

Ochieng and Price (2009), in their framework for managing multicultural project teams, recognize that a team selection and composition process are vital in order to build

cultural understanding in project work. The selection should be based not only on the technical capabilities of the team members, but also on their abilities to work in team and on their personal attitudes. Adler and Gundersen (2008) declare that team selection based on heterogeneous attitudes is the one that increases the possibility of productivity.

The idea of trust as a positive outcome in multicultural projects has been debated in the literature, but generally referring to the fact that trust is difficult to develop in such environment (Appelbaum et al., 1998, Trompenaars & Hampden-Turner, 2012). Ochieng and Price (2010) , however, pointed out that trust in multicultural construction projects is essential for team integration and that it can be obtained when there is mutual respect and good interpersonal relationships. However, their research underlines the fact that people tend to trust those they can identify with, being more similar to them. Openness is another aspect that has been discussed in the literature: Ochieng and Price (2009) claim that an open communication among team members and positive feedback from the management need to be in place to increase projects effectiveness. In the same research, the two scholars underlined the fact that leadership should possess enough inspirational style to motivate project teams.

The importance of good technical specification was mentioned by the informants, and this aspects has been briefly touched upon also in the literature, referring to procedures that must be in place in a project to reduce uncertainty among members (Ochieng and Price, 2009). Several informants also emphasize the importance of team selection and the fact that the qualities of the team members should not be limited to technical qualities, but also include their personal inclinations. The important of trust and open communication was also discussed in the interviews. Therefore, the findings find a correspondence in the theory.

### **5.5 Project Management in shipbuilding projects: actions**

The findings about the actions that project management can put in place in order to reach project success are directly connected with the findings about success factors in

shipbuilding. Several informants believe that, among the actions that project management can utilize in order to facilitate collaboration in shipbuilding projects, there are team building activities, multicultural workshops and actions helping the transfer of knowledge. All these aspects are present in the literature: Sæther and Karlsen (2012, p. 257) argue that in “shipbuilding projects there is a need for transferring user’s knowledge to the development process, especially in key shipbuilding phases”. Knowledge transfer appears to be challenging in the project environment because of time problems, the fact that locations are not necessarily the same for every project and that the project organization is often temporary. Some of the solutions could activate mechanisms embedded in individuals and groups that could perform specific tasks, or the mechanisms could be a codification like the use of databases (Sæther& Karlsen, 2012).

In order to reach the best performances, it has been proved that the project team must be fully integrated. This integration can be facilitated (Ochieng and Price, 2010) by teambuilding activities. In those occasions, the team members could assess their ability to cooperate, while interacting in a more social environment. Another aspect that management should handle is the uncertainty that appears relevant in complex construction projects. The literature confirms that assigning clear roles and procedure helps overcoming tensions due to uncertainty (Ochieng and Price, 2009)

The findings of actions that can be undertaken by project management is therefore corresponding with the literature.

## **5.6 Project Management in shipbuilding projects: manager qualities and management styles**

The literature dedicates a lot of attention to the management style of project managers in multicultural projects. In their discussion about management of culturally diverse teams, Adler and Gundersen (2008), besides focusing on team selection, emphasized the importance of recognizing cultural differences. Equally important seems to be the fact that stereotyping

and prejudices should be banned when managing culturally diverse team, thus showing respect to all members of the project team. Mäkilouko (2004) presented different leadership styles, of which the polycentric one appears very similar to the preferred style in the findings: the polycentric leaders “often acted as a link between team members according to cultural division. The leaders were confident that they understood how people from both cultures think and could integrate the team without team members being fully aware of their differences” (Mäkilouko, 2004, p. 392). Again the findings support the existing theory, also in relation with what Ochieng and Price (2010) observed about the management style in construction projects, where manager should motivate by setting example and possessing technical competence.

### **5.7 Communication**

The communication theme emerged from the interviews as a separate one; the informants insisted very much on the fact that, despite language differences constituting a potential problem for daily life, in general they did not consider miscommunication as a challenge when it came to project activity. This impression could be related with the discussion by Stahl et al.(2010), who opposed the mainstream theory on the miscommunication due to cultural diversity. According to Stahl et al. (2010), this is true if the culture is studied at a surface level aspect, namely race or country of origin. But when the culture is measured at a more deep level, communication is more effective because the team members are more inclined to examine different perspectives, there is a deeper interaction and efforts to explain thoughts and ideas. Conversely, other scholars consider cultural difference as detrimental to project work (Brett et al., 2006; Ochieng & Price, 2010), and in general communication is perceived as less effective in multicultural than in mono-cultural teams.

The fact that multiculturalism appears to encourage attention to technical specifications can be seen in relation with the view that project documents may assume the



role of boundary objects, which “can create shared points of reference through which information and knowledge can be directed” (Iorio & Taylor, 2014, p. 9) in project activity. Research shows that boundary objects, if plastic enough, can work as a bridge in global project networks. Therefore, the use of technical specifications can somehow be assimilated to that of boundary objects; nevertheless, the investigation of this role in shipbuilding project could be further developed.

Findings pertaining to this theme are only partially supported by theory, and those related to the shipbuilding technical language as a natural translator may enrich the theoretical field of communication in multicultural projects.

### **5.8 Naval shipbuilding projects**

All the informants who worked in naval shipbuilding projects underlined the fact that the setting was very peculiar, especially in connection with communication issue, which cannot be related to multicultural issues, but rather to military regulations and security agreements. These findings are not related to any theory discussed in the literature review, and could be a starting point to explore the topic of communication in military settings.

### **5.9 Relevance of multiculturalism**

The informants believe that multiculturalism is relevant when considering the culture of the clients, suppliers and subcontractors. As already explained when discussing the implications of globalization, the same as been done when exploring differences in laws and regulations. Communication strategies have been discussed in relation to the equivalent themes as well as in the presentation of management style. The findings related to competence in manual jobs reveal that multiculturalism is considered as relevant by some informants in view of the fact that in the Western World culture has developed in such a way that some kinds of jobs are not considered worthy or prestigious anymore. Therefore, in order

to carry out some fundamental activities in shipbuilding yards, the management must rely on workers coming from other cultures.

### **5.10 Irrelevance of multiculturalism**

The informants believe that multiculturalism is irrelevant when it comes to some characteristics that can be ascribed to shipbuilding projects.

According to several informants, the fact that the industry appears to be very specific and highly regulated by supranational instruments, such as International Conventions or international rules, is somehow not affected by multicultural issues.

If the project comprises only few members from different cultures, it is perceived as homogeneous by several informants, and therefore multiculturalism is not considered relevant. According to the informants, this does not imply any cultural dominance by the larger group, but rather an accommodation by the smaller group.

These findings appear quite specific for the shipbuilding industry and could be useful as a starting-point for further exploration of theory.

### **5.11 Summary of the discussion**

The discussion is summarized in table 10 by placing the relevant theories in correspondence with the findings. The findings not supported by any theory are indicated in bold and they may represent contributions to develop new theories.

Table 10: *summary of the findings coupled with relevant theories*

<b>Themes</b>	<b>Main findings</b>	<b>Supported by literature Y/N</b>
Definition of multicultural Shipbuilding Projects	Effect of globalization	(Adler & Gundersen, 2008; Ochieng, 2012)
	Ultra-national aspects of operations and acquisitions	(Adler & Gundersen, 2008)
	Cultural diversity in project team	(Stahl et al., 2010; Ochieng, 2012; Adler & Gundersen, 2008)
	Opportunity	(Adler & Gundersen, 2008)
	<b>Marginalization of manual labor in certain cultures</b>	-
Advantages of multicultural Shipbuilding Projects	Synergy creator	(Adler & Gundersen, 2008; Schneider, 1995; Trompenaars & Hampden-Turner, 2012)
	Multiple solutions to problems	(Appelbaum et al., 1998; Ochieng & Price, 2010)
	Increases efficiency	(Ochieng & Price, 2010)
	<b>Increases attention to contracts and technical specification</b>	-
Challenges of multicultural Shipbuilding Projects	Compliance with other habits and languages	(Hofstede, 1983; Schneider, 1995; Adler and Gundersen, 2008; Appelbaum et al., 1998; Brett et al., 2006)
	Different working techniques and working attitudes	(Trompenaars & Hampden-Turner, 2012; Hofstede et al., 2010)
	Physical distance and delocalization	(Adler & Gundersen, 2008; Iorio, & Taylor, 2014)
	Diversity in law and regulations	(Adler & Gundersen, 2008)
Success criteria in Shipbuilding Projects	Time, cost and quality	(de Wit, 1988)
	Client satisfaction and other stakeholders satisfaction	(de Wit, 1988)
Success factors in Shipbuilding Projects	Planning	(de Witt, 1988)
	Team selection and balanced team composition	(Ochieng and Price, 2009; Adler and Gundersen, 2008)
	Technical competence of project team	(Ochieng and Price, 2009)
	Motivation and involvement of project team	(Ochieng and Price, 2009)
	Openness and trust among of project team members	(Appelbaum et al., 1998; Trompenaars & Hampden-Turner, 2012; Ochieng and Price, 2010)
	Good technical specifications	

Project Management in Shipbuilding Projects: actions	Facilitate team integration Clear roles and responsibilities Team building and multicultural workshops Facilitate transfer of knowledge and continue learning	(Ochieng & Price, 2010) (Ochieng & Price, 2010) (Ochieng & Price, 2009) (Sæther & Karlsen, 2012)
Project Management in Shipbuilding Projects: manager qualities and management styles	Awareness of cultural differences and communication styles Avoiding stereotyping  Project manager as mediator Project manager as motivator Technical competence	(Adler & Gundersen, 2008) (Adler & Gundersen, 2008)  (Mäkilouko, 2004) (Ochieng & Price, 2010)
<b>Communication</b>	Improves in multicultural setting Language difference problematic for daily life Technical language as natural translator <b>Local language knowledge an asset for the social sphere</b>	(Stahl et al., 2010) (Brett et al., 2006, Ochieng & Price, 2010) (Iorio & Taylor, 2014) -
<b>Naval Shipbuilding Projects</b>	<b>Security clearance</b> <b>Mainly US environment</b>	-
<b>Relevance of multiculturalism</b>	<b>Culture of client, subcontractors and suppliers</b> <b>Laws and regulations</b> <b>Communication strategies</b> <b>Competences in manual jobs</b>	
<b>Irrelevance of multiculturalism</b>	<b>Assimilation of smaller cultural groups in the dominant one</b> <b>Very specific ghly regulated industry</b> <b>Quality product as a goal</b>	-

## 6. Conclusions

### 6.1 Concluding remarks

This study deals with multiculturalism in shipbuilding projects. It has explorative aims and the objective is to illuminate some of the management processes related to shipbuilding projects rather than to investigate all of them. The study contributes to analytical generalization by presenting relevant theories that have been expanded by utilizing the research design of an embedded single case.

The main research question is: *How is multiculturalism related to success in shipbuilding projects?* This study reveals that some different aspects of multiculturalism can have different impact on project activities, both positive and negative, thus affecting the final successful outcome of the project. Multiculturalism is identified as an opportunity that can help a project to be successful. Moreover, suitable management practices can increase positive impacts of multiculturalism and decrease the effects of negative impacts. The most relevant positive effect of multiculturalism is synergy, and the fact that multicultural project teams tend to be more creative with wider problem solving skills. The study, furthermore, identified that the specific nature of the shipbuilding industry, being highly international and regulated, with a highly technical content, helps mitigating the negative components of multiculturalism. The negative components are connected to physical distance and delocalization, different working techniques and working attitudes, compliance with other habits, languages and regulations.

The first sub-question is: *What are the success factors in shipbuilding projects?* The study identified projects completed within time, cost and the required quality as the main success factors in shipbuilding projects. Other factors to increase the success are identified related to the “hard” issue of project management, such as planning and technical specifications, and to more intangible factors such as trust among project team members. The

definition of project success can, however, vary somewhat according to the involved stakeholders.

The second sub-question is: *How can the project management improve the success factors determined by the multicultural setting of a shipbuilding project?* The study identified that project management strategies can mitigate the negative impacts of multiculturalism and increase the positive ones. A balanced team selection and composition, and the project manager's role as a mediator are important factors regarding to successful outcome. Team building activities are also perceived as useful to facilitate team integration and motivate team members. Project management should facilitate the transfer of knowledge and the continued learning. Awareness of cultural differences and communication styles are also relevant in order to mitigate possible negative outcomes due to multiculturalism. The dynamics related to multicultural projects tend, however, to be different when the setting is a naval shipbuilding project, and this is topic that can be further explored in theory.

This study has theoretical and practical implication. The theoretical implications are mostly that the study supports the existing literature on management style in multicultural projects setting. However, some of the findings, such as the idea of technical language as a natural translator and the fact that communication improves in multicultural settings, are not widely supported in existing theory and therefore also represent possibilities for developing theory, and hence a contribution of the thesis. The practical implications relates to the question of how to improve the benefits of multiculturalism in shipbuilding projects.

## **6.2 Limitation and suggestions for further research**

This study has some limitations that suggest fruitful suggestions for further research. First, the data were collected in a single organization in the shipbuilding industry; therefore the generalizability of the findings is questionable. Second, most of the informants were managers, therefore other project roles' interpretation about multiculturalism might not be

fully covered. Third, six of the eight interviews were conducted in a different language that is English, thus some of the interpretation could have been lost in translation. Fourth, supporting the findings by a quantitative study would have strengthened the abilities for generalization.

The idea of technical language as a natural translator and the fact that communication seems to improve in multicultural settings, need to be investigated further. An interesting discovery in the literature review is that theory on multiculturalism as a facilitator of communication is scarce, as scarce is the literature on the role of specific features of an industry as facilitator in cross-cultural communication. Therefore, further research on these two topics is needed.

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## Appendix A: Interview guide

- 1.1 What is your nationality?
- 1.2 How long have you been working in this company?
- 1.3 Can you briefly describe your background and your position in this company?
- 1.4 What kind of shipbuilding projects have you worked on? Many projects?
- 1.5 What was the background of the people involved in the project (nationality, gender, etc.)?
- 2.1 When do you consider a shipbuilding project to be multicultural?
- 2.2 Have you worked in many multicultural shipbuilding projects?
  - 2.2.1 . Can you please tell me a little bit about your last / current project experience?
- 2.3 What do you think are the major advantages of working in/managing a multicultural sb project ?
  - 2.3.1 Can you please tell me one example?
  - 2.3.2. Why do you think these advantages exist?
  - 2.3.3 What could be done to increase the advantages? (And ‘what could you have done as a manager’? when relevant)
- 2.4 What are the major challenges of working in /managing a multicultural shipbuilding project ?

Follow up:

  - 2.4.1 Can you please tell me one example
  - 2.4.2 Why do you think these challenges occur?
  - 2.4.3 What could be done to prevent /reduce these challenges? (And ‘what could you have done as a manager’? when relevant)
- 2.5 How do you think more knowledge about cultural differences would have influenced the challenges and advantages you just told me?
- 3.1 When do you consider a shipbuilding project to be successful?
  - 3.1.1. Follow up (if necessary): Can you please be a little more concrete, what are the criteria?
  - 3.1.2. Can you please give me some examples?
- 3.2 Which would be the actions that could help improving success in shipbuilding projects?
  - 3.2.1 Can you please give me some examples of actions (to improve the success in shipbuilding projects) you have experienced
- 3.3 Do you believe that the actions affecting the success in multicultural projects are the same that are affecting mono-cultural projects?

If not the same:

  - 3.3.1. What are the differences?
  - 3.3.2. Why do the differences occur?
  - 3.3.3. What can be done to prevent the negative affecting factors?
  - 3.3.4. What can be done to increase the positive affecting factors?