iscte
BUSINESS SCHOOL

Department of Marketing, Operations, and General Management

Design Project: A Client-Designer Communication Failure Improved Through Agile Methodology

Nuno Miguel Silva Carrasqueira

Masters in Business Administration

Supervisor:

PHD, Eng. Carlos Jerónimo, Assistant Professor

ISCTE

Fevereiro, 2022

iscte
BUSINESS
SCHOOL

Design Project: A Client-Designer Communication Failure Improved Through Agile Methodology

Nuno Miguel Silva Carrasqueira

To my Parents and Brother

Acknowledgments

Abstract

Communication: a vital factor when it comes to design projects. Despite the importance of communication, design projects on delivery aren't meeting the initial requirements. That happens because of different factors since bad briefings, lack of knowledge, and assumptions from both designers and clients alike.

The current study has the objective of proving that poor communication is a problem, and how it's happening. And to show that agile methodology is a valid and viable solution to this problem, because of its characteristics of flexibility, regular deliveries of work, and constant communication between the designers and the clients.

To prove that, interviews were done on both sides, to designers and clients who defined/commissioned design projects. The results show that both sides identified communication as a major issue. The agile methodology due to its characteristics is a good option to help improve/solve this issue. And that despite being a methodology created for IT projects, it can be applied to other fields of work and business.

Resumo

Comunicação: fator vital em projetos de design. Apesar da importância da comunicação, os projetos de design na entrega não atendem aos requisitos iniciais. Isso acontece por causa de diversos fatores, desde maus *briefings*, falta de conhecimento e suposições dos designers e clientes.

   O presente estudo tem como objetivo provar que a falha na comunicação é um problema e como este esta a ocorrer. E mostrar a metodologia ágil como uma solução válida e viável para este problema, pelas suas características de flexibilidade, entregas regulares de trabalho e comunicação constante entre os designers e os clientes.

   Para provar isso, foram feitas entrevistas com as duas partes, isto é, com os designers e com os clientes que definem/encomendam projetos de design. Os resultados mostram, que ambos os lados identificam a comunicação como uma questão pertinente. A metodologia ágil pelas suas características, é uma boa opção para ajudar a melhorar/solucionar este problema. E que apesar de ser uma metodologia criada para projetos de IT, pode ser aplicada a outras áreas de trabalho e negócios.

Index

List of Tables

List of Figures

CHAPTER 1

Introduction

Accordingly to the research carried out, the probability of finding research/studies where the communication failure between clients and designers that may use agile methodology to try to fix the issue is practically nonexistent. To just identify a problem in design projects it was necessary to go back more than five years. After the study of this problem, Agile Methodology was identified to be a possibility to try and fix the communication problem between designers and clients.

Their is a lack of research regarding the use of methodologies to improve communication, so is very important and urgent to use and find the right one to help improve the problem between designers and clients, regarding communication, so that both of them can achieve the best possible outcome in their projects.

1.1. Research Problem

Design projects have to be visually clear and accessible to everyone (Cornish et al., 2015). For that to happen communication between the client and the designer has to be clear, being this one of the most important points. "*The communication based on poor foundation might create huge communication problems for the system designer and user*"(Zeb & Fahad, 2012). Designers and clients come from two different worlds, which can make communication a challenge, leading to the misunderstanding of information. (Schön, 1988).

If used in design projects will the agile methodology improve one of the great problems, that is communication? Being this the core question of this research.

1.2. Objectives

The purpose of this research is to try and help study, deepen and debate the problem of communication between clients and designers. And study Agile Methodology has a possible solution since it has been strongly aimed at solving issues like this in IT (Santos et al., 2011), this could be the proper solution. *" … as because of the frequent meetings prescribed by agile, which are often short and which are enhanced by face-to-face communication; therefore, the combination of the two has strong communication requirements."* (Yagüe et al., 2016).

To try and answer the research problem, it is intended to pursue the following specific steps:

Step 1: Conduct a literature review to gather information regarding communication problems between designers and clients. After that, gathering information on the features and benefits of agile methodology, as a possible and viable solution to try and fix this problem;

Step 2: Based on the literature review, design a questionnaire/script and conduct interviews to try and understand if, in the current design project, those issues still exist. If so, what are designers and clients doing to try and fix this issue;

Step 3: Trying to understand if they are trying to fix the communication between designers and clients, and what tools/methodologies are they using. With that trying to identify if those correspond to Agile Methodology features.

1.3. The Motivation

The motivation to carry out this research arises from personal interest and experience as a designer, the interest in project management, and the willingness of the author to deepen the knowledge in project management, mainly in agile methodology, while at the same time trying to improve design projects. All this is because with poor communication the project, the client, the user, the designer, and their perspective of future projects may be in peril. The possibility of adding more methodologies as viable options and deepening the subject adds value to the business world, to companies, and the academic world.

1.4. The Implications and Relevance

The urge in trying to improve the communication client-designer so that a design project can succeed. So that the satisfaction and objectives of the clients can be achieved in the best possible way. Design main objective is transmitting a message. And for that message to be "clean" and understandable for everyone, the client has to be able to transmit what they want clearly and the designer has to understand exactly what the client wants. Agile is a possibility that may allow both client and designer to produce the best possible product, through improving their communication.

This research becomes important at two levels: a)Academic because it can address a new topic to be discussed in more depth; b)In business, for the design professionals who will be able, from this study, to take these ideas/concepts and apply them.

CHAPTER 2

Literature Review

The present chapter of the literature review is necessary to answer the objectives of the investigation described in the previous chapter. The aim is to deepen the problem and try to study possible paths and rationales linking these themes.

The literature review is oriented into three themes: design, as a base concept, communication client-designer failure, as the identified problem, and agile methodology as a possible solution for it. To be able to produce this literature review was necessary to go back more than 5 years since the available literature regarding design and agile is practically nonexistent.

2.1. Design

Design can communicate and be visually informative (Meggs & Purvis, 2012). So it has to be clear and accessible, to ensure that the proper message/information is conveyed and received.

Inclusive design is when the designer creates to include the widest possible audience fulfilling this way all of their needs. Having the capacity to include or exclude potential customers (Waller et al., 2015). Inclusivity is important across all the design areas for social, legal, and business reasons. A general approach to designing is in which designers ensure that their products and services address the needs of the widest possible audience, irrespective of age or ability (Waller et al., 2015).

There are two different types of design: a printed-based one (e.g. graphic design) and a screen-type (e.g. web design, UX/UI design, multimedia design, among others). The printed-based ones the easiness to change things is more challenging than in the screen-type designs, forcing the user to relay very must in their visual capabilities (Cornish et al., 2015).

2.2. Design Communication Failure

Effective client-designer communication is a vital component (Paton & Dorst, 2011), so both parties have to communicate clearly, and not have the misconception that the other will take and/or assume certain needs and requirements, so all of those, must-have to be properly communicated during the brief. All this is because it is assumed that the client always conveys what they want and need clearly and that the designer understands and interprets it perfectly (Shen et al., 2013).

The client that orders the project to the designer acts as an intermediary of the final user or might be himself that user. So all the communication has to have into account that is three parties involved in the communication: the client, the designer, and the end-user. It's by interviewing all these three elements that the brief is created. The project starts with the brief from the client, then the designer as to fulfill it, to satisfy the client. So that brief as to be as clear as possible and must convey all the needs and requirements. But sometimes if the original client requirements and/or needs aren't as clear as they should be, the designers have to turn to the clients, owners, or end-users for more details and better/clear descriptions (Shen et al., 2013).

Communication client-designer imposes a challenge, because of the different backgrounds of each one (Schön, 1988). Communication has to be clear because failing in doing so, can lead to misunderstanding regarding important information. So a common language (Paton & Dorst, 2011) or specific methodology has to be put in place so that communication problems don't occur. Most of the time what happens is that the client doesn't request inclusivity (Dong et al., 2004), and if that is not mentioned in the brief the designer won't have a lot of space to introduce it, just because of time and costs constraints. All this is because clients just assume that the designers will take inclusivity into account, even if they don't specify in the brief. This suggests the ineffective communication that exists between the two of them (Cornish et al., 2015). All as to be specified because the clients could not be interested in inclusivity and the designer can't justify using it because they believe it to be potentially expensive and time-consuming (Cornish et al., 2015). The communication problem can be simply described as what the designer thought, what the client apparent them to think, and the other way around. The client has to include everything he needs and requires in the brief or else they won't allow for time and money to be spent on all that, limiting this way the consideration that the designer will have into account when creating. Creating this way, the results won't be able to fulfill the requirements and needs, all this because the client just assumes that the designer will have everything into account even if they don't tell them everything they need. On the other hand, the designer should take responsibility for considering everything even if the client doesn't request it. So both groups should take responsibility for their communication mistakes (Cornish et al., 2015). One should express everything that is needed, and the other should warn the other that he needs to take other factors into account. Clients and designers might be having difficulties in verbalization the needs and requirements, all because they are not using the same language. Designers think that the resources of time and cost will prevent a new methodology to be worthwhile (Cornish

et al., 2015). Sometimes the clients themselves don't want the designer to use the proper tools but in the end, they have the last decision (Cornish et al., 2015). All this is because time and cost may be more important to clients.

So basically theirs two ways to improve communication: 1) Clear brief: every information should be "put on the table", each group shouldn't just assume that the other know something that wasn't expressed or verbalized(Cornish et al., 2015); 2) Feedback: more feedback from clients is expected to improve the design solution because both groups will be working collaboratively and incrementally in the project, (Shen et al., 2013).

2.3. Agile Methodology

Agile methodology is an efficient development process that divides work into realistic manageable portions, based on a gradual approach (Ciric et al., 2019), wherein each delivered working product is given to the client, and feedback is given in return, then quick adjustments are made if needed (Ciric et al., 2019). This process is repeated until a final product is reached.

The unpredictability of projects and clients' requirements makes that each delivery is done with value (Ciric et al., 2019). So this methodology is known for its flexibility, constant changes, upgrades due to the strong interaction with the clients (Papadakis & Tsironis, 2018), all this to make the best possible product, for them and the users.

Agile is known for the unpredictability of the scope of the project. The product owner and the client work together to verify the scope of the project, defining which features are accepted and rejected in each iteration phase. (Marnada et al., 2022).

Communication in agile projects is vital. For that the project manager must follow 8 different steps, to ensure that: 1) Identify all the stakeholders: together with all the needs and requirements; 2) Standup meetings: where all agile team members that are involved in the projects have the opportunity to pitch in; 3) Visually communication: all the progress must be on display through graphics, charts, and boards; 4) Workshop: using it to make the team involved and accounted for in planning; 5)Monitoring: all the different team members to establishing teamwork; 6)Communication in the team: make sure that the communication flows through the team; 7)Sponsor: keep the client informed of the evolution and strategy put in place; 8)Communication plan: needs to be checked regularly (Miguel, 2019). So a project done in agile methodology has to have a broad collaboration and communication, if necessary face-to-face, with the customer. While communication between the team will be informal just

to convey the requirements and needs of the clients to the team, that can be done as mentioned in step 2) (Hess et al., 2019).

The triple constraints in agile differ from traditional approaches. In the agile approach, fixed restrictions are the cost and time, while the scope will be the variable of those constraints. In the meanwhile, the traditional approaches will have the scope fixed while time and cost are going to be variables (Miguel, 2019). These constraints can influence and be perceived differently by clients and the agile team, so communication between them is vital (Miguel, 2019), to define these constraints, that will set the "tone" of the project.

Agile methodology has several strong points/benefits, compared to more traditional approaches such as: a)Project flexibility: time and resources are not wasted in projects that might be rejected by the client; b) Client satisfaction: he is involved since the beginning of the project and through the entire development; d) Interaction: there is a constant interaction between all the parts who participate in the project; e) Quality warranty: because the project is developed in short interactions, the testing parts are done continuously (Miguel, 2019).

Agile methodology compared to traditional approaches is more flexible bringing benefits, such as handling requirement changes, improves in productivity and product quality, business alignment, and the product can reach the market faster (Campanelli & Parreiras, 2015). On top of that is a viable option to attain quality, so that the project budget is controllable, each delivers ad's value frequently and continuously, all this align with the business strategy of the organization (Santos et al., 2011).

Agile has consolidated its values and principles in the *Agile Manifesto* (Beck et al., 2001) on the software development industry. Agile values: a) Individuals and interactions; b) working software; c) Client Collaboration; d) Responding to change. Agile principles: a) Early and continuous delivery of valuable software; b) Changes are welcome; c) Regular delivers; d) People interaction (business and developers); e) Motivated people; f) Face-to-face communication; g) Working software progress; h) Constant pace; i) Technical excellence and good design; j) Simplicity; k) Self-organized teams; l) Continuous improvement. So basically agile methodology has on its core the values, principles that are on the *Agile Manifesto* (Beck et al., 2001) and collected by agile principles (Jalali & Wohlin, 2010).

So basically Agile can be defined as: a) Adaptive planning; b) Continuous improvement; c) Frequent consultation with participants; d) Small and regular releases; e) Simplicity and dynamism (Hidalgo, 2019).

In different research its shown that the best projects performance is obtained when a high level of collaboration and communication exists between the client and project manager, as well as the product owner with the project manager (Turner & Müller, 2004). A product owner produces a product backlog that has all the known requirements (Radhakrishnan et al., 2021). If the proper collaboration isn't set in motion that could lead to the failure of the project (Radhakrishnan et al., 2021). In agile projects, each agent, the client and the project team members possess different expertise and skills with this diversity it's possible to produce the best possible result because their different areas of knowledge and the shared of said knowledge among them will help achieve the success of the project (Radhakrishnan et al., 2021). During the life cycle of a project, the project manager needs communication changes, in the beginning, the gathering of the requirements and project framework of the owner is needed to be known (Turner & Müller, 2004). Their different frequencies of communication suggested: unchanging intervals of communications, variable communication (according to milestones or the project different phases), and finally and the most preferred one, continuous communication because with regular communication the client is more informed of the progression of the project (Turner & Müller, 2004). That communication should be formal and informal, maintain with a face-to-face meeting, where informal and implicit knowledge is shared (Radhakrishnan et al., 2021). With this constant mutual exchange of information, a long-term relationship can be built (Turner & Müller, 2004). This constant interaction, collaboration, and feedback between the client and the team members can help the project to successfully reach the best possible outcome (Radhakrishnan et al., 2021). Due to fast business environments, the constant interaction with the client can help, better understand their needs (Radhakrishnan et al., 2021).

CHAPTER 3

Research Methodology

The main goal of this chapter is to present the methodology used, how was the data collected, the type of interviews that were put in motion, as well explaining what were the research objectives and the questions created to answer them.

3.1. Process

Two sets of interviews were set in motion, one for the designers (appendix A) and the other for the clients who define/order design projects (appendix B), to be considered as qualitative research. For that, the software MAXQDA, were used to run some analyses of word frequency, keywords in context, and word combination, highlighting this way the most used words, ideas, concepts, being possible to better understand the lines of thought from the designers and clients, crossing both to see if there are any similarities in their toughs, and ways of work.

Both interviews were created online so that was easy for the interviewees to answer at their own time. So they were shared throw several online platforms, with the intention, of being shared to personal contacts and for them if possible to share with their contacts, reaching this way a wider audience.

3.2. Objectives

With this research, the study of communication failure between clients-designers opens some questions and with it a possible solution. Thus this research has the following objectives:

i. Confirming that the failure in the communication client-designer has two sides, because of the different backgrounds (Schön, 1988). The clients just assume the designer will do everything they want even if not specified in the briefing (Cornish et al., 2015), and because of that is the designer's job to warn the client of the things that he might have forgotten to communicate that may influence, and be relevant to the project (Cornish et al., 2015).

ii. Some of the agile methodology methods might help improve the communication between designers and clients. Because of its flexibility, and constant interactions with the clients, having this way regular delivers of work, with feedback from the clients, resulting in constant upgrades (Papadakis & Tsironis, 2018), with the main objective of producing the best possible product that fulfills everyone needs and requirements.

3.3. Research Questions

The answers to the following sub-questions will help provide an answer to the main the question of this research: If used in design projects will the agile methodology improve one of the great problems, that is communications?

1)What are the causes for design projects upon delivery not meeting the initial requirements?

The main core of this research is to try and understand why design projects fail, this sub-question was set in motion in both interviews, to the designers and the clients, trying this way, understand both sides**.**

To better perceive what the problems are, to both the designers and the client. It was asked to identify the possible causes for the requirements not being achieved upon delivery. With the answer from both sides, it will be possible to understand if the problems are the same or if each one of them identified different problems. Resulting in a more deepen investigation, on other possible issues, allowing this way to expand the study of this problem.

2)Indicate possible solutions/improvements, so that the initial requirements are met upon delivery?

With the replays to this sub-question, the main objective is to see if both the designers and the clients are looking for similar solutions or methods to help them improve their projects. And with it, try to see if with the solutions/improvements they suggest is possible to identify any known methodology, looking specifically to agile methodology characteristics, according to the study in question. Or just to try and understand if both of them are looking for the same answers.

3)Were the number of interactions enough?

This sub-question was the only one in both interviews that are not of the open answer, just a "yes" or "no" reply.

Interactions between designers and clients, are important to understand the process and identify possible methodologies that are being used. That is very relevant to understand if those possible processes or methodologies, have any characteristics of the agile methodology. Because the agile methodology has one of its trademarks the deliver in gradual phases, wherein each delivers there is an interaction with the client, and with his feedback, improvements can be made to the project. As well because agile methodology defends strong and constant interaction with clients. That's why is important to ask both the designers and the

clients, to compare their answers. And with their answers trying to understand if there's an openness to try a new methodology.

4)What are the reasons for the client in defining/commissioning a project having difficulties in informing and defining all the requirements?

In the little literature that exists concerning problems between designers and clients, the main one identified was the communication problem. Concerning that, one of the main issues raised was because the clients do not always specify and tell everything they want, they just assume that the designer understands and interprets what they want (Shen et al., 2013). This is to help better understand the "why?". If it's just poorly defined briefing from the clients, or if theirs any other reason underneath that. This question can be considered a very important one because it can corroborate and support the literature found while writing this research. This is the reason why this question was made in the designer interview, to try and verify this claim.

CHAPTER 4

Data Analysis

Data analysis, this chapter is to presents the qualitative results, expose the collected data, and provide results for the next chapter. The interviews as explained before were done to both designers and clients that defined/commissioned design projects.

Because of it, the data analysis is comprehensive to the same sub-questions chosen in the research methodology chapter, the answer to those sub-questions can help provide the answer to this research core question.

When the interviews were created, some of those questions were asked to the designers and the clients alike. So it was possible to analyze both answers and understand if there were similarities in their answer, to see if both of them were experiencing the same problems and were looking for the same solutions.

So to differentiate the questions, the designers' ones were defined as a). And the clients' answers were defined as b), this was none to be easier to separate the data analysis of the two focus groups. In the previous chapter done of it was done, just because the content of the designers and the clients' questions were written differently but the content and the objectives of them were the same.

a) There were 14 designers that participate in the interviews, that give direct answers to the questions made. Providing this way knowledge, insight, and different points of view and ways of work.

b) Clients participating in the interviews were 10. The direct answers were obtained as well, giving this way insight into the other counterpart study in this research.

Almost all the given answers to these questions allowed to execute 3 types of analysis:

i. Word frequency

ii. Keyword-in-context (the selected word were: client; designer; requirement; project; communication; briefing)

iii. Word combination.

The following data is relative to the sub-questions mentioned in the previous chapter:

1a)What are the causes for design projects upon delivery not meeting the initial requirements?

The data collected from the 14 interviews done to designers, resulted in some words that show more frequently than others (table 1).

Excluding the word "client" with a frequency of 4,62%, because that word shows who the designer was talking about in their replies. Words that can be relevant to analyze with these interviews, and are according to the research in question are: "change" with the frequency of 3,08%, corresponding to 28,57% of all the interviews, "communication", with 3,08%, being that also correspondent to 28,57% of the interviews. With less percentage but still very relevant we have "brief" and "lack" with a frequency of 2,31%, present both in 21,43% of the interviews "idea", and "poorly", have a frequency of 2,31%, present in 14,29% of the interviews.

Word	Frequency	%	Rank	Documents %
client	6	4,62	1	35,71
work	5	3,85	2	35,71
change	4	3,08	3	28,57
communication	4	3,08	3	28,57
want	4	3,08	3	21,43
brief	3	2,31	6	21,43
idea	3	2,31	6	14,29
lack	3	2,31	6	21,43
poorly	3	2,31	6	14,29
creep	2	1,54	10	7,14
customer	2	1,54	10	14,29
good	2	1,54	10	14,29
initial	2	1,54	10	14,29
meet	2	1,54	10	14,29
plan	2	1,54	10	14,29
project	2	1,54	10	14,29
scope	2	1,54	10	7,14
start	2	1,54	10	14,29

Table 1: 1a) Word frequency

As mentioned before there were define a set of keywords, to help look for specific pieces of information.

With the 14 interviews, we can get the main ideas and information, for this question. Showing this way the possible causes for design projects not meeting the initial requirements upon delivery. Such as: "Good communication and zero egos" "Lack of communication poorly transmitted/poorly received", "Mostly bad initial briefing", and many others as shown below (table2).

Context	Keyword	Context
well-defined	briefing	and work plan from the
Mostly bad initial	briefing	.
Existence of a good	briefing	.
The vast majority of	clients	have an idea of what
us and that, at the	clients	initiative, end up undergoing changes
Good	communication	and zero ego.
of the client. Lack of	communication	or poorly transmitted / poorly received
work they wanted. Lack of	communication	of all ideas even after
	Communication	with customers and perception of
received client message by the	designer	
from the beginning of the	project	
what they want after the	project	started.
planning helps to ensure that	requirements	are met, however, there are

Table 2: 1a) Keyword-in-context

And with these 14 interviews, it was possible to extract the most present word combination (table 3) in all of them, giving this way a more defined/concrete set of main ideas to help answer the question.

Both these word combinations have the same frequency of 2 interviews each with a percentage of 0,33%, being that " lack of communication", "what they want". Considering this way, this two are the many problems identified in this specific question.

Word combination	Words	Frequency	%	Rank
lack of communication	3	2	0,33	1
what they want	3	2	0,33	1

Table 3: 1a) Word combination

1b)What are the causes for design projects upon delivery not meeting the initial requirements?

The 10 clients that define/ordered design projects, that answer the interview has the following frequency of word used (table 4).

Present in 2 interviews, with a frequency of 3,90%, the word "requirement", is mentioned by the clients. The word "lack" with a frequency of 2,60%, present in 20% of the interviews is relevant because also shows in the same question in the designers' interviews. To mention as well the word "perception", with a perception of also 2,60%.

Word	Frequency	%	Ranking	Documents %
requirement	3	3,90	1	20,00
always	2	2,60	3	20,00
arise	2	2,60	3	20,00
client	2	2,60	3	20,00
design	2	2,60	3	20,00
different	2	2,60	3	20,00
lack	2	2,60	3	20,00
perception	2	2,60	3	20,00
preference	2	2,60	3	10,00
project	2	2,60	3	20,00
team	2	2,60	3	20,00
write	2	2,60	3	10,00

Table 4: 1b) Word frequency

With the same keywords, as defined in the beginning, this question is aimed at clients instead of designers, as the previous questions were.

The information present below (table 5) show us the main ideas that might have been the cause of design projects not meeting the initial requirements upon delivery, such as: "differences in clients idealization versus, designer perception", "...requirements poorly written or too vague" and "Requirements that are not always clear".

Context	Keyword	Context
Differences in clients idealization versus	designer	perception
in the execution of the	project	.
any doubts that may arise,	requirements	poorly written or too vague
	Requirements	that are not always clear
	Requirements	sent to the team without

Table 5: 1b) Keyword-in-context

2a)Indicate possible solutions/improvements, so that the initial requirements are met upon delivery?

From the data collected from the interviews with the designers, regarding possible solutions/improvements, for the requirements to be met upon delivery, it was extracted the following table regarding word frequency (table 6).

Like it was done in a previous question in this chapter we can exclude the word "client", with a 3,97% word frequency, because it shows who was the designer referring to.

Theirs 3 words that represent 2,38% of frequency, that we will have into account they correspond to 21,43% of the 14 interviews and can be very relevant to the study in question, being those words, "brief", "communication", "good".

Word	Frequency	%	Rank	Documents %
client	5	3,97	1	35,71
project	5	3,97	1	21,43
work	4	3,17	3	14,29
brief	3	2,38	4	21,43
communication	3	2,38	4	21,43
good	3	2,38	4	21,43
basic	2	1,59	7	14,29
change	2	1,59	7	14,29
clear	2	1,59	7	14,29
date	2	1,59	7	14,29
deadline	2	1,59	7	14,29
designer	2	1,59	7	14,29
final	2	1,59	7	14,29
goal	2	1,59	7	14,29
meet	2	1,59	7	7,14
objective	2	1,59	7	7,14
requirement	2	1,59	7	14,29
time	2	1,59	7	14,29

Table 6: 2a) Word frequency

When analyzing the keywords define previously, their important ideas become more important than others, because they refer to the same thing. Such as "Do a good briefing", "Good communication during the project...", "Good communication during the project, between designer and the...", "...Good communication throughout the entire project.

Context	Keyword	Context
Do a good	briefing	
When delivering information/	briefing	, the client should always be
schedule feedback dates within the	briefing	parameters
Good	communication	during the project between the
Improved	communication	and standardize basic concepts
for the time frame. Good	communication	throughout the entire project.
time and work of a	designer	and does not expect free
during the project between the	designer	and the client.
Good communication during the	project	between the designer and the

Align goals before starting the	project	, requirements have to be reasonable
or they change scope of	project	during project.
change scope of project during	project	.
Good communication throughout the entire	project	.
Only consider the list of	requirements	closed by presenting to the
goals before starting the project,	requirements	have to be reasonable for

Table 7: 2a) Keyword-in-context

2b)Indicate possible solutions/improvements, so that the initial requirements are met upon delivery?

The clients in their interviews have some words that can be relevant for further analysis, relating to these questions, as can be seen, below (table 8).

"requirement" with a frequency of 8,05%, corresponding to 5 of those 10 interviews (50% of the total interviews), where that word is mentioned. Being the most mentioned in this question.

Important words to be mentioned are: "communication", "involve", both with a 2,30% frequency of those words in the interviews performed to the clients who define/commission design projects. For the discussion of this question that will be done in the next chapter, the following words can be important: "meeting", "regular", with both a frequency of 2,30%, present in 10% of the total interviews and 20% of the total interviews, respectively.

Word	Frequency	%	Rank	Documents %
requirement	7	8,05	1	50,00
design	3	3,45	2	20,00
initial	3	3,45	2	20,00
proposal	3	3,45	2	20,00
work	3	3,45	2	20,00
client	2	2,30	6	20,00
close	2	2,30	6	20,00
communication	2	2,30	6	20,00
define	2	2,30	6	10,00
involve	2	2,30	6	10,00
meeting	2	2,30	6	10,00
question	2	2,30	6	20,00
regular	2	2,30	6	20,00
session	2	2,30	6	10,00
team	2	2,30	6	20,00

Table 8: 2b) Word frequency

In the keyword context, the main ideas to retain are: "Identification of the client's needs and expectations; ...", "..better communication, between parties", "clear definition of requirements, deadlines and better communication", "Concrete, realistic requirements", among other as can be seen in the table bellow (table9).

In this analysis, one of the main ideas/answers that might be very helpful to better understand the next question is: "regular meetings to monitor the project", "objective of gathering the clients, requirements/needs; regular meetings to monitor"

Context	Keyword	Context
Identification of the	clients	needs and expectations; adjusted budget
the objective of gathering the	clients	requirements/needs; regular meetings to
	communication	, basic questions
of requirements, deadlines and better	communication	between the parties
regular meetings to monitor the	project	.
Clear definition of	requirements	, deadlines and better communication between
Concrete, realistic	requirements	
design team to read the	requirements	from start to finish and
objective of gathering the clients	requirements	/needs; regular meetings to monitor
team in defining the initial	requirements	; once initial requirements are defined
the initial requirements; once initial	requirements	are defined, do not allow
will definitely match the initial	requirements	.

Table 9: 2b) Keyword-in-context

3 a)Were the number of interactions enough?

The designers 57,1% said that the number of interactions they had with the clients was enough, representing 8 out of 14 interviews (figure 1).
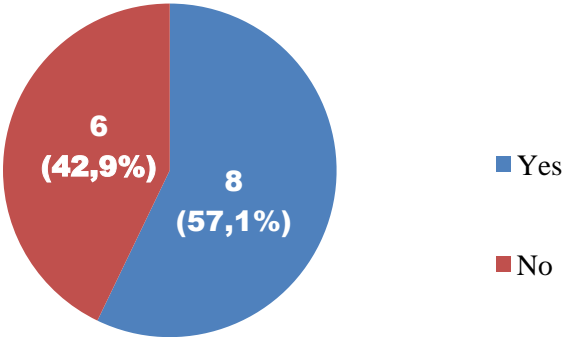

Figure 1: 3a) Number of interaction

3 b)Were the number of interactions enough?

The clients' results are very similar to the designers because 60% of them said that the number of interactions they had with the designers was enough (figure 2).

So both parties are almost in sync with each other regarding this issue. But on the other hand, as mentioned before in the clients' keyword context of the question - 2b) Indicate possible solutions/improvements, so that the initial requirements are met upon delivery? - some answers suggest that one of the possible solutions/improvements could pass by increasing the number of interactions between the designers and the clients.
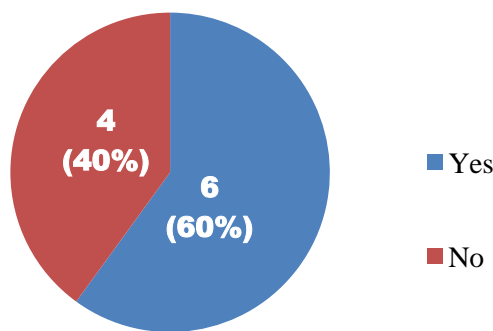

.

Figure 2: 3b) Number of interactions

4a)What are the reasons for the client in defining/commissioning a project having difficulties in informing and defining all the requirements?

Like in some of the previous answers provided by the designer the word "client", will be excluded, because that word shows who the designer was talking about in the answer.

To further analyze this question regarding word frequency (table 10), the word "lack" with a frequency of 3,52%, corresponding to 28,57% of the total 14 interviews. And the words "know" and "knowledge" with both a frequency of 2,11%, can be very useful in the study of this answer, given to us by the clients.

Word	Frequency	%	Rank	Documents %
client	8	5,63	1	57,14
lack	5	3,52	2	28,57
want	5	3,52	2	28,57
work	5	3,52	2	35,71
not	4	2,82	5	28,57

dont	3	2,11	6	21,43
idea	3	2,11	6	14,29
know	3	2,11	6	14,29
knowledge	3	2,11	6	21,43
project	3	2,11	6	21,43
really	3	2,11	6	21,43
result	3	2,11	6	21,43

Table 10: 4a) Word frequency

Using specific/keywords words to look for certain ideas and concepts to better help understand what the designers wanted to convey, the following table (table 11), will shed some light on the matter.

"The vast majority of clients, have an idea of what ", "Lack of clarity in the, projects objectives and identity", this could be some of the main ideas to retain, the can help to better understanding this issue, and help further this research.

Context	Keyword	Context
When some	clients	have a marketing department with
The vast majority of	clients	have an idea of what
Varies by client and	project	
Lack of clarity in the	project	's objectives and identity
which can affect the overall	project	and deadlines.

Table 11: 4a) Keyword-in-context

The final analysis that can be done to better understand this question is the qualitative analysis of word combination, to give a better insight into what words were used together to give convey an idea.

As we can see below (table 12), they are two main ideas that come up: "...a idea..." and a idea of what...", these two can be related because they refer to the concept of "idea", and together with "lack of knowledge", can help give us the answer to this question replies by the designers.

Word combination	Words	Frequency	%	Rank
a idea of	3	2	0,24	1
a idea of what	4	2	0,24	1
a idea of what they	5	2	0,24	1
client have a	3	2	0,24	1
don t know	3	2	0,24	1
have a idea	3	2	0,24	1

have a idea of	4	2	0,24	1
have a idea of what	5	2	0,24	1
idea of what	3	2	0,24	1
idea of what they	4	2	0,24	1
idea of what they want	5	2	0,24	1
in the area	3	2	0,24	1
lack of knowledge	3	2	0,24	1
many time they	3	2	0,24	1
of what they	3	2	0,24	1
of what they want	4	2	0,24	1
they don t	3	2	0,24	1
what they want	3	2	0,24	1

Table 12: 4a) Word combination

CHAPTER 5

Discussion and Findings

The current chapter is aimed to analyze the findings and results of all the information gathered from the interviews done to designers and clients (24 in total) and cross that information with the previous one gather from research papers and books.

The following subchapters will provide the answer to this research. And the contribution for theory and literature review. The analysis will be done to each question mentioned in the previous chapters, being that the reason for the titles to be similar, so it can be easier to identify them.

Each subchapter will be approached in four fronts of analysis, (apart from the last one, that because that one is going to be only a three-part analysis, the reason is that one was just for the designers): 1)Literature review, that supports this question; 2)Analysis of the designers' answers; 3)Analysis of the clients' replays; 4)And the final part: the comparison, and the findings of common grounds between the answer of the designers and the clients, so a conclusion can be made about it.

5.1. The causes for design projects upon delivery not meeting the initial requirements

With the answers given to this sub-question in the interviews done to the designers and to the clients who define/commission design projects, it was possible to identify and relate the problem to existing literature. Concluding what cloud be the causes for design projects upon deliver don't meet the initial requirements.

It was possible to identify five major problems: 1)Clients changing their minds; 2)Briefing; 3)Communication (identified by the designers); 4)Requirements; 5)Different perceptions (identified by the clients). Some of the interviewees, as they identified the problem, they also suggest some possible solutions.

Designers identified one of the problems as clients changing their minds on what they want. Sometimes they need to see something first, some mockup before deciding exactly what they want or even knowing exactly what they want in the first place. All of this could be explained sometimes because of their lack of knowledge, or because they come with pre-constructive ideas. The literature has discussed the unpredictability of projects and clients' requirements (Ciric et al., 2019). Despite this question being aimed to figure out the problems,

it could be important to mention that in literature, agile methodology is described for its capabilities of handling changes in the requirements (Campanelli & Parreiras, 2015) and for its adaptive planning (Hidalgo, 2019). There are a couple more causes identified by the designers, first: bad briefings. That can simply solve with good ones. The briefings' main requirements are that they should be clear as they can be, and should transmit all needs and the requirements for the project (Shen et al., 2013). All of this happens because the clients just assume that the designer will have everything's into account even if they don't specify it in the briefing (Cornish et al., 2015); secondly: poor communication or lack of ideas. Communication, good communication, could not only be just the client conveying everything they want, but the designer has the perception of its needs (what exactly they want, what they want to convey, what's the main objective/goal of the project). On top of that, the communication between the two of them has to be clear, has set a good foundation (Zeb & Fahad, 2012).

From the clients' perspective given by their interviews the causes for the projects not to meet the initial requirements could be because of poorly written requirements, or because of those being too vague and difficult to develop. In the brief, the client should include everything they want/required/need, for the designer to have all the information he needs when creating (Cornish et al., 2015). Clients suggest as a possible solution for that, the requirements to be checked together, to see if anything could be missing or lacking. One of the other causes identified by the clients is the different perceptions/understandings between the clients and the designers. Once was said that the communication between both parties could be a challenge, due to their different backgrounds (Schön, 1988). This type of cause came across in more different parts of the literature: explaining this way the difficulty of communication, which can lead to misunderstandings of what could be important information. Because both parties come from different worlds, different backgrounds (Schön, 1988). There's a misconception that the client always conveys what they want and that the designer will always interpret and understand exactly what the client wants (Shen et al., 2013). Creating this way, the project won't fulfill the initial requirement and needs because the clients just assume that the designer will have everything into account without even telling them, but the designer should take into account everything even if the client doesn't request it, so basically, each one of them should be accountable for their communication mistakes and misconceptions (Cornish et al., 2015).

In general, the causes for the design projects to fail on meeting their initial requirements are bad briefing exposed in poorly writing requirements, and because of the different backgrounds from the designers and the clients, resulting in bad communication and assumptions from both parties regarding the other one.

5.2. Possible solutions/improvements, for a design project to meet the initial requirements upon delivery

In the previous subchapter, the problem was identified in design projects. The current subchapter will analyze the answers from both the designers and the clients for possible solutions/improvements, for the initial requirement to be met upon delivery.

The main concepts where the solutions are going to base upon will be the requirements, communication, and the different perceptions from both sides.

Proposed by the designers regarding the requirements are that those should be clear and a well-define in the briefing, along with good ideas as well as a good definition of objectives/goals of what the client wants. Backing up the concept of a good briefing we can find in the literature that a clear brief, it's an asset, that every side of the table should "lay everything on the table", and not just assume that the other parties know everything, without the need to verbalize it (Cornish et al., 2015). The agile methodology could help in this solution since compared to traditional methods, is well known for being is more flexible in managing requirements changes (Campanelli & Parreiras, 2015). The designers defend that good communication is important throughout the entire project. That communication is to be clear from both parties, because if not can lead to misunderstandings on important information. That should be done properly during the briefing. For that, a common ground/language can help on this matter (Paton & Dorst, 2011). Returning to agile methodology, this method defends that communication is vital, being one of its strong characteristics (Miguel, 2019).

Last the designers defend that aligning the goals/objectives and expectations is vital, because the difference in perceptions, of what the project needs/requires, is vital. Everything has to be very specific because if the client doesn't request something the designer can't justify using it, and that can potentially make the project more expensive and time-consuming (Cornish et al., 2015).

The clients' solutions are based upon two main concepts as mentioned before: 1)Communication, that as to be better. The feedback given back should be assertive, and their

needs/expectations have to be identified. The communication has to be done properly during the brief, for misconceptions not to occur (Paton & Dorst, 2011); 2) Requirements: they have to be realistic, clear, and should be revised by both parties. For that, all the stakeholders that are part of and will influence the project should and have to be identified as well as all their needs and requirements (Miguel, 2019)

In conclusion, both parties believe that the solution for the design project to meet the initial requirements can pass for improving communication, being this one more assertive and the needs/expectations have to be identified. As well the requirements were these have to be more clear, and approved/aligned by both parties.

5.3. Interactions between designer and clients

Agile methodology as one of its main characteristics regularly work delivers to the client and with is feedback improve on the product until a final one is reached. With this question, the goal was to understand is both the designers and client were happy with the number of interactions they had with the other counterpart.

Despite the 57,1% of the designers (14 total), and 60% of the clients (10 total) said that the number of interactions they have with each other is enough, has part of the solution for the problem previous identified, where design projects fail to meet to the initial requirements, both parties suggest that regular meeting could be a good answer to help to solve this problem.

 The designers suggest defining feedback dates with the client. The clients were more active suggesting this approach:1)From them to participate with the design team, were the client is involved from the beginning through the entire project (Miguel, 2019); 2)To set up regular meetings to monitor the project, because with feedback from clients and with both sides working together the final product can be improved (Shen et al., 2013), and with each part of work deliver to the client, value is always added, aligning better with the strategy of the clients business (Santos et al., 2011); 3) Arranging regular delivers of work; 4)To have a close collaboration , agile is well known for its flexibility due to changes (Papadakis & Tsironis, 2018) and for its constant interactions with the different parts of the project (Miguel, 2019), On the agile manifest, is defended that the core values of this methodology are interactions, clients collaboration, reacting to changes, among others (Beck et al., 2001); 5) And finally to have status sessions to correct understandings and see proposals, because face-

to-face interaction with the client is very important, providing this a way to strong collaboration (Hess et al., 2019).

These suggestions can be identified as a very unique set of characteristics of the agile methodology, where work is divided and delivered gradually, wherein each delivery, feedback is given by the client and then adjustments are done is needed according to those, repeating the process until a final product is reached (Ciric et al., 2019).

All these answers provided by the designers and clients suggest that theirs is an openness to the agile methodology, despite them considering that the number of interactions they have is enough. All of this because they countless times keep referring as a solution to the problem, this means with regular deliver of work and close collaboration. Being those trademarks from the agile methodology.

5.4. The difficulties of the client in informing all the requirements when defining/commissioning a project

And those reasons are based on three major concepts: Different perceptions, the requirement themselves, and that the client changes their mind. The designer said in the interviews, as was mentioned in previous subchapters, that the clients don't understand what they want or need, and that is reflected in the requirements they present.

 All of this can happen because of their lack of knowledge, objectives, and even processes. Or that they just have difficulty expressing what they want. This happens because the requirements could be not as clear as they should be, so the designer has to turn to the clients, owners, or even the end-users for more detail, to better understand what is needed/wanted (Shen et al., 2013). Some of the designers talk about some solutions they normally use to try and reduce this lack of knowledge. Some of them steer the meetings to make the client understand, to try instructing them in what is doable or not, according to the triple constrain (time, price, scope, and quality), because even if they don't mention something that is needed, something that the designer will have to use, that can affect some of the constrains (Dong et al., 2004). All of this and defining guidelines, goals, and deadlines, preventing this way the possibility of extreme changes.

In summary, the different perceptions and the lack of knowledge from the clients can have a possible solution, if the designer themselves instruct the clients and steer the meetings, where everything is defined, reducing this way the possibility of future changes from the clients.

CHAPTER 6
Conclusion

The conclusion chapter aimed to show the findings to the researched questions and briefly resume the problem, the needed solutions, proving that agile methodology could be a plausible candidate to help improve the communication between designers and clients in design projects. Contributing this way to the business, to companies, and the academic world.

In summary, both sides could agree that the communication has to improve since it's because of it that some design projects don't meet the initial requirements. Designers and clients have different backgrounds and experiences, being difficult for them to see "eye to eye".

After the identification and/or confirmation of the problem, the next step was to identify possible and viable solutions to help improve design projects. Both sides agreed upon improving communication would be an important factor for that to happen. That could pass through improving the requirements, they need to be more accurate and assertive as well the needs and expectations on both sides. Communication has to be as clear as possible, becoming impossible this way to have room for misunderstandings (Paton & Dorst, 2011), for that specific and clear briefings are very important (Cornish et al., 2015).

For design projects to be done through agile methodology, several things have to change. Regular meetings with the clients, instead of just the delivery of the briefing and the delivery of the final work. Regular delivers of work, provide more feedback from the clients, achieving a final product, that satisfied the client's needs. This way even if the initial briefing, does not explain or convey everything, as the work progresses, adjustments can be made, since the project is more flexible and easy to change, instead of one final delivery, where changes become more difficult.

We can conclude that implementing the agile methodology in design projects can be a challenge, because 57,1% of the designers and 60% of the clients, said that the number of interactions they had with one another was enough, demonstrating that could be a little bit of resistance in using agile methodology since one of its main characteristics is regular interactions and communication. But despite that without them realizing the suggestions they gave to improve design projects, all of the key characteristics from agile, with showing as well an openness to the use of this methodology, with the main goal of achieving a project that fulfills all the requirements and needs.

Designers since it's their field of expertise could have a deeper and better understanding of the problem since they deal with clients regularly, and the clients are not always ordering design projects. So it could fall into the designer's hands to guide/instructed the clients through the process, making them understand what's doable or not, since there are not in their area of knowledge/expertise.

All the literature review found is confirmed by the interviews done with the designers and clients, from the problem to the possible solutions.

This study can be explained in 4 important points: 1)Both the designers and clients agree upon communication problems in the design projects; 2)The communication problem can be seen in the form of bad briefings, with poorly defined requirements, happening due to their lack of knowledge for each one field of expertise; 3)Both agree that they need to be more assertive in exposing and guiding through the process (designers) and to be more accurate and clear of what they want (clients); 4)The number of interactions they had with each other was enough, but in their suggestions of improvement all of those had the characteristics of the agile methodology, suggesting an openness introduce agile methodology in design projects.

To finish, this study also contributes the increasing the existing knowledge of this communication problem in a design project, coming up with a possible solution for it, that even if it does not cover or protect from communication problems, increases highly the changes of the project not falling, because of the constant interactions and improvements of the projects due to constant interactions and communication between both parties.

As a proposal of future research is suggested to investigate if there's any design company using agile as a working methodology with their clients. Making this way a study case, to prove to other businesses that agile methodology is not just for the IT market, and can be applied in other markets with success.

CHAPTER 7

Limitations

The biggest limitation of this research is the lack of literature regarding design problems and solutions for them. No literature was found using the agile methodology in design projects, only in IT projects.

Another limitation, where the interviews. Being this a very specific research to the designers and the clients, the difficulty to find professional dispose to help, making the sample size not as big as wanted.

Due to the lack of time of most designers and their clients, the answers given by them were sort and direct, lacking a little bit more elaboration.

And finally, both parties weren't impartial in their replays to the questions. Both of them talk mainly about what the other was doing wrong and do not talk as much about what they, were doing wrong.

CHAPTER 8
References

Beck, K., Beedle, M., Van, A., Bennekum, Cockburn, A., Cunningham, W., Fowler, M., Grenning, J., Highsmith, J., Hunt, A., Jeffries, R., Kern, J., Marick, B., Martin, R. C., Mellor, S., Schwaber, K., Sutherland, J., & Thomas, D. (2001). *Agile Manifesto*. https://agilemanifesto.org/iso/en/manifesto.html

Campanelli, A. S., & Parreiras, F. S. (2015). Agile methods tailoring - A systematic literature review. *Journal of Systems and Software*, *110*, 85–100. https://doi.org/10.1016/j.jss.2015.08.035

Ciric, D., Lalic, B., Gracanin, D., Tasic, N., Delic, M., & Medic, N. (2019). Agile vs. Traditional approach in project management: Strategies, challenges and reasons to introduce agile. *Procedia Manufacturing*, *39*(2019), 1407–1414. https://doi.org/10.1016/j.promfg.2020.01.314

Cornish, K., Goodman-Deane, J., Ruggeri, K., & John Clarkson, P. (2015). Visual accessibility in graphic design: A client-designer communication failure. *Design Studies*, *40*, 176–195. https://doi.org/10.1016/j.destud.2015.07.003

Dong, H., Keates, S., & Clarkson, P. J. (2004). Inclusive Design in Industry: Barriers, Drivers and the Business Case. In C. Stary & C. Stephanidis (Eds.), *User-Centered Interaction Paradigms for Universal Access in the Information Society* (pp. 305–319). Springer Berlin Heidelberg.

Hess, A., Diebold, P., & Seyff, N. (2019). Understanding information needs of agile teams to improve requirements communication. *Journal of Industrial Information Integration*, *14*(February 2018), 3–15. https://doi.org/10.1016/j.jii.2018.04.002

Hidalgo, E. S. (2019). Adapting the scrum framework for agile project management in science: case study of a distributed research initiative. *Heliyon*, *5*(3), e01447. https://doi.org/10.1016/j.heliyon.2019.e01447

Jalali, S., & Wohlin, C. (2010). Agile practices in global software engineering - A systematic map. *Proceedings - 5th International Conference on Global Software Engineering, ICGSE 2010*, *August 2010*, 45–54. https://doi.org/10.1109/ICGSE.2010.14

Marnada, P., Raharjo, T., Hardian, B., & Prasetyo, A. (2022). Agile project management challenge in handling scope and change: A systematic literature review. *Procedia Computer Science*, *197*(2021), 290–300. https://doi.org/10.1016/j.procs.2021.12.143

Meggs, P. B., & Purvis, A. W. (2012). *Meggs' histor of graphic design* (5th ed.). Hoboken, N.J. : John Wiley& Sons.

Miguel, A. (2019). *Gestão Moderna de Projetos* (L. FCA-Editora de Informática (ed.); 8ª).

Papadakis, E., & Tsironis, L. (2018). Hybrid methods and practices associated with agile methods, method tailoring and delivery of projects in a non-software context. *Procedia Computer Science*, *138*, 739–746. https://doi.org/10.1016/j.procs.2018.10.097

Paton, B., & Dorst, K. (2011). Briefing and reframing: A situated practice. *Design Studies*, *32*(6), 573–587. https://doi.org/10.1016/j.destud.2011.07.002

Radhakrishnan, A., Zaveri, J., David, D., & Davis, J. S. (2021). The impact of project team characteristics and client collaboration on project agility and project success: An empirical study. *European Management Journal*, *September*. https://doi.org/10.1016/j.emj.2021.09.011

Santos, M. de A., Bermejo, P. H. de S., Oliveira, M. S. de, & Tonelli, A. O. (2011). Agile Practices: An Assessment of Perception of Value of Professionals on the Quality Criteria in Performance of Projects. *Journal of Software Engineering and Applications*, *04*(12), 700–709. https://doi.org/10.4236/jsea.2011.412082

Schön, D. A. (1988). Designing: Rules, types and words. *Design Studies*, *9*(3), 181–190. https://doi.org/10.1016/0142-694X(88)90047-6

Shen, W., Zhang, X., Shen, G. Q., & Fernando, T. (2013). The user pre-occupancy evaluation method in designer-client communication in early design stage: A case study. *Automation in Construction*, *32*, 112–124. https://doi.org/10.1016/j.autcon.2013.01.014

Turner, J. R., & Müller, R. (2004). Communication and co-operation on projects between the project owner as principal and the project manager as agent. *European Management Journal*, *22*(3), 327–336. https://doi.org/10.1016/j.emj.2004.04.010

Waller, S., Bradley, M., Hosking, I., & Clarkson, P. J. (2015). Making the case for inclusive design. *Applied Ergonomics*, *46*(PB), 297–303. https://doi.org/10.1016/j.apergo.2013.03.012

Yagüe, A., Garbajosa, J., Díaz, J., & González, E. (2016). An exploratory study in communication in Agile Global Software Development. *Computer Standards and Interfaces*, *48*, 184–197. https://doi.org/10.1016/j.csi.2016.06.002

Zeb, I., & Fahad, S. (2012). *W Hat Improves the User - Designer Communication in Co - Design ? I Ntroducing a Tentative Model of*.

Appendix

Appendix A - Designers Interview

Thank you very much for your time, this interview should take no more than 10 minutes. Your answers are completely anonymous, and will be used only for the purpose of studying in this master's thesis, on how to improve design projects using the agile methodology.

Design can be defined as the conception/creation of a product (publication, website, logo, appliance, furniture, packaging, etc.), with regard to its physical form and functionality

1. Many of the design projects defined/ordered by clients upon delivery do not meet the initial requirements. What are the possible causes for this to happen?

2.Indicate possible solutions/improvements, so that this does not happen, that is, so that the initial requirements are met upon delivery?

3.The client in defining/commissioning a project has difficulty in informing and defining all the requirements (that is, everything he wants). What are the reasons for this to happen?

4. Are there projects in which the clients information in the definition/order is not validated by the designer, what are the possible causes for this?

5.Do you think the number of interactions you had with the clients who defined/ordered the project was enough?
o   Yes
o   No

6. How is the information for the project defined/ordered by the client sent?

7. How is the information for the project defined/ordered by the client handled?

8. How is the information for the project defined/ordered by the client validated?

9. Finally, how is the project delivered to the client, for validation/approval?

Appendix B - Clients Interview

Thank you very much for your time, this interview should take no more than 5 minutes. Your answers are completely anonymous, and will be used only for the purpose of studying in this master's thesis, on how to improve design projects using the agile methodology.

Design can be defined as the conception/creation of a product (publication, website, logo, appliance, furniture, packaging, etc.), with regard to its physical form and functionality

1.Many of the defined/commissioned design projects (either individually or as part of a team/group), do not meet the defined initial requirements. What are the possible causes for this to happen?

2.Indicate possible solutions/improvements, so that this does not happen, that is, so that the initial requirements are met upon delivery?

3. When defining/commissioning a project (either individually or as part of a team/group), it is not always possible to define all the initial requirements (that is, everything you want). What are the reasons for this to happen?

4.Do you think the number of interactions you had with the designers who defined/commissioned the project was enough?
o   Yes
o   No