

An Integrated Structure of Interacting Design and Agile Approaches

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ABSTRACT---Agile approaches have verified to be helpful in small organizations and also increasing curiosity in large organizations. Agile approaches refer to highlight the ability to change the amount of incremental and iterative software development approaches. The agile approaches ability to produce software is reliable, quicker and with better control than the traditional development. User centered design is basically about knowing what users deeply use information to inform design. It is a problem resolving procedure that needs to check expectations and authenticate your concepts with users. Interaction design and agile approaches need to integrate. These two areas are different in natures. Agile approaches have an individual culture which is conflict with user centered design. Hence, integration of these areas has become a challenge. This research was focused on integration of these two areas, which provide a set of practice and artifacts to help agile teams and user centered designer to control this challenge. An integrated structure has proposed for interacting design and agile development approach.

Keywords— Agile approaches, iterative software, User Centered Design, Interacting Design, User Experience Designer

1. INTRODUCTION

Agile methodology and user centered design focus on the user with continuous testing. These shows great differences related to how act and their interests. The philosophy of agile to recommendation of flexibility in action to face changes is at odds with the user centered design principle of interface design prior to implementation [1]. The Agile method emphasizes that develops software in iterations. Iterative software improvement involves small specific modules construction apparatus, which is then integrated to type the application of the ending software. These features of the flexibility lead to various problems of integration [2]. On the other hand, user centered design develops a holistic product; the agile process is incremental and results in sub products. Agile approaches focus on code development and user centered design focus

on designing the interactions in which users engaged.

Agile approach involves the user to check the correct functionality of the application, and user centered design check the user's view about the satisfaction or efficiency of use [3]. User centered design focus on how end users work with the system but agile approaches related to how successfully built software or process [4]. The objective of this research is to propose an integrated structure of interaction design and agile approaches, which provide a set of practices and artifacts for helping the agile teams. This research mentions an extensive literature review according to agile approach and interaction design which facilitate the agile teams and interaction designer.

Agile processes have a high risk of not suitably address usability concern. The major objective of agile processes is how to organize the work required achieving the overall objective of software distribution

job. The delivery of working software is clearly a obligatory condition for any system usable [5].

Interaction Design to build the relationship between the users and developers of software solutions so that each group brings their own knowledge. It is necessary to identify the needs of future users and subsequently to involve users in the iterative estimation of the product [6]. Interaction Design approach and agile focused on the user and on an iterative process of development with continuous testing. The contrast with traditional architecture development processes based research has led developers to achieve a good focus most [7].

The core of the research paper was on the integrated structure of interacting design, the agile approaches with the aspire to define a structure surrounding practices and common artifacts, well-known both in the academy and industry to assist agile teams concerning this topic.

1.1 Data Sources and Search Strategy

In this research User-Centered Design and Agile was a combination of categories.

Calls for the selected digital resources include:

- ACM Digital Library
(<http://www.acm.org/dl>)
- Science Direct
(<http://www.sciencedirect.com>)
- IEEEExplore
(<http://ieeexplore.ieee.org>)
- Citeseer (citeseer.ist.psu.edu/).
- ISI Web of Science
(apps.isiknowledge.com/).

- EI Compendex
(<http://www.engineeringvillage2.org/>).
- Springer Link
(<http://www.springerlink.com/>).
- Scopus
(<http://www.scopus.com>).
- Google Scholar
(<http://scholar.google.com>).

Each Digital Library, has its own characteristics on the search engines is worthwhile to mention, therefore, must be adapted to each source search strings.

2. PROPOSED STRUCTURE:

Interaction design and agile methods fit well, and the challenge is not to do less agile, but at the same time so that the user center designs methods to adapt to the "light" and be productive.

Agile and User Centre Design who has the client site, for example, some useful similarities between the test and development continues recursively. The results of these tests are included in the next iteration of iterations to ensure agile developers, usability testing to facilitate the addition; the two methods have much to share when iterating [8]. However, it indicated that the methods improve the usability of the product rationalization, even if does not come without cost or risk. The structure is like the processes. Difference-in-one systematic review identified the most common applications and processes [9]. This structure is obtained from systematic literature findings. This is not to mention the valuable intention to open a hard time, we have that this integration can be adapted to

the reality of each company to strive to provide a set of tools and artifacts.

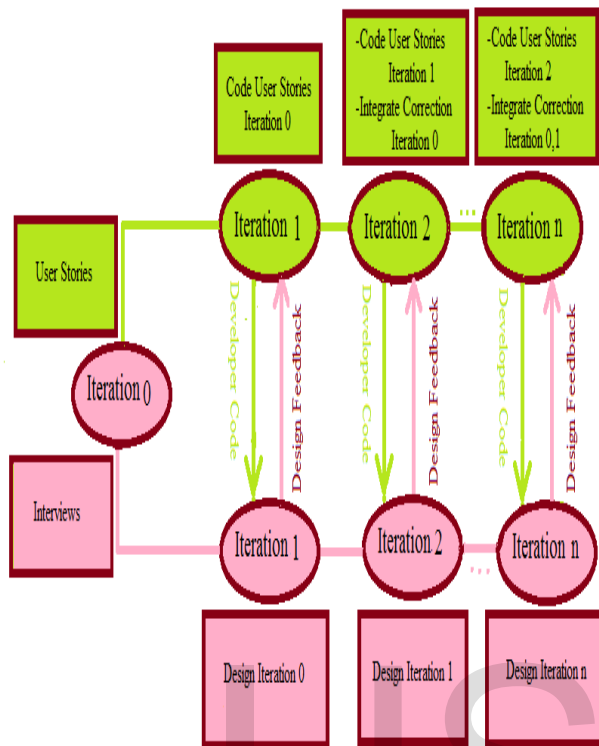


Figure 1: Proposed Structure

It is the important point how to communicate of design decision with stakeholders. Most of the papers address how to improve the communication between the User Center Design team and the development team but do not how to improve the communication with the stakeholders of a project [10].

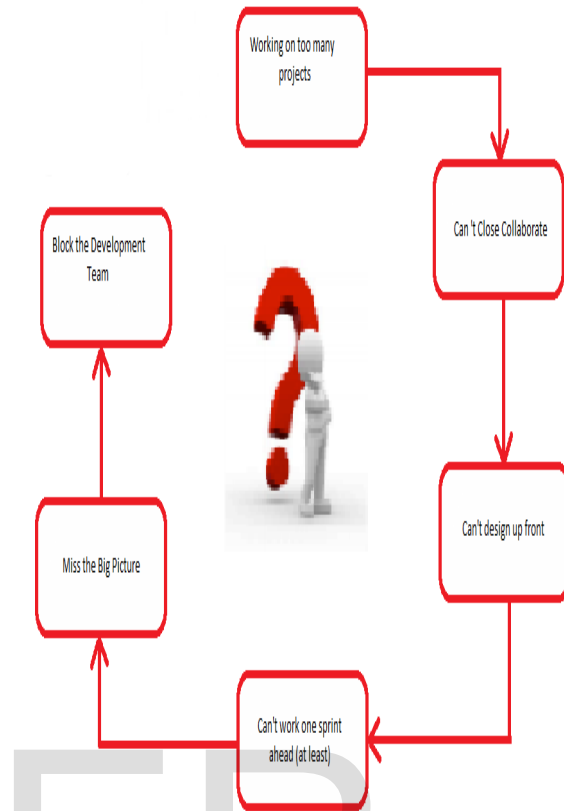


Figure 2: Problems that the UED may face or lead

In the Figure 2, the researcher observed that whenever a Interaction Designer is working on too many projects, he cannot close collaborate with the Business Analysts or with the Development Team, and it may not allow the Designer to design up front or work one sprint ahead of the Development Team.

3. RESULTS AND DISCUSSIONS

Digital libraries search conducted in June 2013. A total of 735 papers were found, as shown in Table 1. After a consolidation of the results, there are 312 papers repeated. Therefore, the final amount of paper to be analyzed was 423 papers. Two researchers at the 110 titles and abstracts of selected studies. Based on this reading, 105 papers were selected for full-text reading.

Digital Library	Amount of Papers	Percentage
ACM	50	6.80%
Science Direct	125	17%
IEEE Explore	119	16.19%
ISI Web of Science	97	13.20%
Springer Link	85	11.57%
Google Scholar	259	35.24%
Total of Papers	735	100%
Repeated	312	42.45%
Set of Papers to be Analyzed	423	57.55%

Table 1: Sources used

Amount of Papers	Selected Based on Title and Abstract	Selected Based on Full Text	Final Amount After the Quality Assessment
423	110	105	97
57.55%	14.96%	14.29%	13.20%

Table 2: The results of the papers selection

Quantitative analysis of the findings, as already mentioned the information and content of research information on the left. Agile methods, and the growing interest in dealing with issues related to usability, given the number of articles published each year is remarkable. This information is shown in Figure 3 are presented.

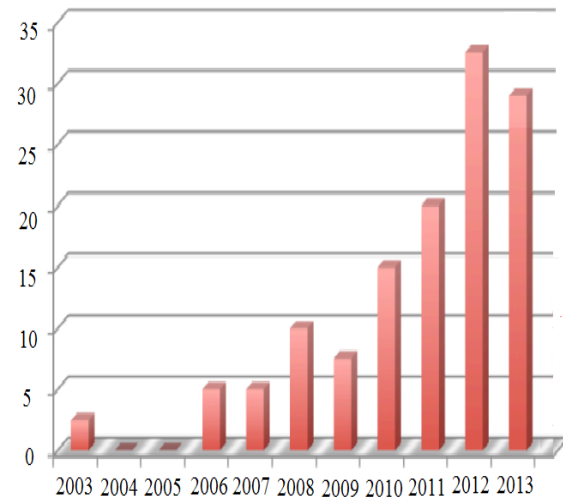


Figure 3: Papers by years

3.1 Descriptive Information:

Selected parts 215, 127 research papers and articles in the industry was 88. As we can notice in Figure 5, the industry newspaper reports. We are facing the challenge of adapting themselves to an agile project reporting experience I believe is due to the number of User Experience Designers.

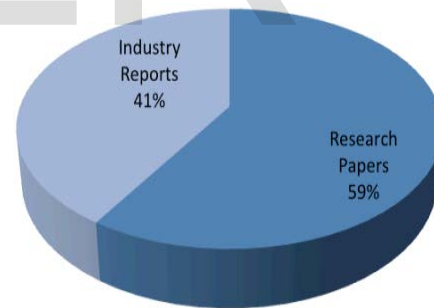


Figure 4: Descriptive information

This systematic review has a number of implications for research and practice. For research, review more about Interaction Design and Agile Methods empirical and / or indicates a clear need for experimental studies [11]. As we can notice, the studies in this systematic review, 41% were industry reports. Another important point is directly

involved in the project is more common for an Interaction Designer.

5. Conclusion and Future Work

The systematic review conducted in June 2013 and then held back in July 2013. In addition, the methodology adopted to carry out the studies facilitated the entry of the academy in the industry, enabling and enhancing collaboration between these two "worlds" and contribute to the theory and practice. Although the interviews and observations only helped the team members to do a self analysis of their individual work. According the practical point of view this research has contributed a lot. The researches pointed the interest in the industry and continue in the companies which participate in the studies. Even on the practice based on the lessons learned from these studies in the context of the industry. As to the method adopted as has been noted in the literature, this method does not permit generalizations as concentrates in a specific environment without separation of variables. Also, since it is not possible to perform the action stage. Therefore, researcher says that this structure can be applied to analyze and evaluate whether Interaction Design blends harmoniously with agile development.

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