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The Diffusion of Innovation in the Era of Social Networks

A case study of VIMML's adoption process

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“A mio Padre ed a mia Nonna che,
nonostante la loro assenza,
sono sempre presenti nelle mie scelte
e parte di questo traguardo.”

ABSTRACT

This inquiry aims to study the adoption process of a new social application in the Swedish market. By examining the case study of VIMML, a startup that launched the first Swedish anonymous social network in the cities of Karlstad, Gothenburg, Stockholm and Malmö, the thesis focuses on the user behavior in the decision process of downloading a new social application. The research is deeply contextualized in the theoretical framework of the diffusion of innovation and attempt to understand which are the new factors that the digital era brings to the well-known model of innovation decision process theorized by Rogers (2003). Drawing specific attention to the social network market, this model is applied to the VIMML's case study and, with the cooperation of the startup, empirical findings are used to endorse the theory. As the result of the research, the model used in the theory is subjected to some changes when applied to VIMML. Moreover, the thesis merges these new characteristics of the model with the findings of the most recent studies regarding the needs satisfaction that affect the adoption process of a social network. Thanks to a qualitative and quantitative research the results are validated for the case of the social platform VIMML and the generalization to the market of social networks is left to future researches. The inquiry concludes with some managerial implications for the startup.

Keywords: Innovation adoption process, Social network, Startup, Diffusion of innovation.

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Many Thanks

Piero Pascucci

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1. INTRODUCTION

“If I had asked people what they wanted, they would have said faster horses.”
This quotation by Henry Ford perfectly represents the central theme of the diffusion of innovation as it portrays the difficulties that emerge between the launch of an innovative product and the penetration into the market.

Nowadays, in a dynamic and highly globalized economy, companies have to compete not only on the innovativeness of the product but also on how to achieve as many consumers as possible. Therefore, the communication strategies play a crucial role in the diffusion of innovation. There are many examples of innovative product or service that did not penetrate in the market despite their qualities. The firm plays an important role in the diffusion process as it can influence the speed of adoption by making the most proper strategy decision. This decentralized diffusion system concept has been opposed to the classical diffusion model and affirms that the diffusion process is influenced by several variables that from which innovation evolve (Schön 1968; Rogers 1997). As a matter of fact, the way in which the pros of the product is sold through the means of communication has to be very efficient as it will increase the likelihood of adopting the next technology affecting the customer’s decision process. All these topics will be better illustrated in the following paragraphs.

1.1 The diffusion of innovation

Before discussing the characteristics and the models used to describe the innovation diffusion, it has to be reasoned the extent by which a product or a service can be considered innovative. Probably one of the most popular study around the themes of innovation and diffusion is documented in the book, Diffusion of Innovations by Rogers in which the author offers the following description of an innovation: “An innovation is an idea, practice, or project that is

perceived as new by an individual or other unit of adoption" (Rogers, 2003, p. 12). He underlined the concept of perception as the product has not to be 'objectively' new. In fact, "If the idea seems new to the individual, it is an innovation […]. The 'newness' aspect of an innovation may be expressed in terms of knowledge, persuasion, or a decision to adopt." (Rogers, 2003, p. 12). As described in the following paragraphs, this concept will be a constant in Rogers' work and it will contribute to determine the shape of the curve at the center of the model of the diffusion of innovations theory.

Clarified what can be considered an innovation, it is appropriate to introduce the topic of diffusion of innovation. From the definition made by Rogers in the very beginning of his book, a "Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system" (Rogers, 2003, p. 5). The author represents the diffusion as information flows between two or more individuals in which both of them influence the other rather than one-way message. It is a special type of communication in which the messages contain new ideas and the newness that characterizes them sways the diffusion. As expressed in this definition, innovation, communication channels, time, and social system are the four key components of the diffusion of innovations.

Innovation has been already illustrated but as one of the four main element of the diffusion of innovation it has to be underlined the fact that innovation is negatively linked to 'uncertainty'. This uncertainty is an obstacle and limits the adoption rate of a new product or service. In fact, the adoption of innovation creates unknown results that the author calls consequences. "Consequences are the changes that occur in an individual or a social system as a result of the adoption or rejection of an innovation" (Rogers, 2003, p. 436). Hence, it is pivotal for companies to reduce uncertainty showing what are the advantages and disadvantages of their new product. This theory becomes useful when we will talk about the case study of this thesis. The second element stated by Rogers is the Communication Channel. It is represented by the process of

sharing information and it can be distinguished in mass media and interpersonal communication. While the last is made between two persons, the mass media communication is directed to a multitude of people. This distinction will be important during the digression about the social network and their challenges and opportunities. Time is the element that is present in all the aspects of the diffusion of innovations theory from the innovation-diffusion process to adopter categorization, passing for the rate of adoptions. Finally, the author considered the social system as the diffusion is strictly related to the social structure in which is settled.

This brief overview of this theoretical framework has the aim to introduce the reader to the central theme of the thesis, underlying some aspects that companies have to control during the commercialization of a new product or service. The next paragraph will contextualize the study into the digital era and it will spoiler some of the challenges and opportunities emerged with the diffusion of social networks.

1.2 The diffusion in the Digital Era

Nowadays, we are continuously bombed of news and information from different channels. We experience a type of information that is ‘active’. In fact, it is the information that reaches you and no more the opposite when you should actively search for some news. One of the reasons of that can be explained by the massive use of technologies in every-day-life. It has a strong effect on the speed of information flows and hence on the breadth of knowledge turnover within the economy and society. Therefore, Digital Era is characterized by a very high-speed knowledge turnover that accelerates our habits and attitudes. As we can see later, it also influences our adoption behavior and then the diffusion process.

The Digital Era and its rapid exchange of knowledge gave birth to many digital innovations. From the Schumpeter studies (1934), the latter can be defined as

an innovation that has both digital and non-digital characteristics. This process of Digitization makes physical products programmable, addressable, sensible, communicable, memorable, traceable, and associable (Yoo 2010). The e-book industry is significant to address these adjectives. It represents both a product innovation and process innovation. For example, Kindle revolutionizes the concept of the book. One device can store millions of books reducing dramatically the marginal production and distribution costs. While Amazon made a game-changing process innovation, digitalizing almost the whole customer purchasing process.

Belonging to the report by Yoo et al. (2010), there are three main characteristics that distinguish a digital innovation from a traditional technology. First, it is reprogrammable, enabling the separation of the device into two parts: one tangible (the hardware) and the other intangible (the software). Secondly, digital innovation leads to homogenization of data. Each digital content is converted into bits in order to transmit, store and display the information. This characteristic creates positive externalities in the diffusion of innovation speed as we will analyze later. Finally, digital innovation is self-reference as it requires technology to make the digital contents visible and accessible to everyone.

In the previous paragraph, we analyzed that one of the key element of the diffusion of innovation is the social contest (Rogers, 2003). As the quality and quantity of information have been altered in the Digital Era, it is a matter of fact that the digital environment can influence both adoption behavior and the diffusion process in significant ways. As we will talk about later, the advent of social networks has simplified interpersonal communication and lowered mass media communication marginal cost, decreasing the cycle time of the new technology. Moreover, as underlined by the study conducted by Arvind Rangaswamy and Sunil Gupta, a “two-way interactions between companies and customers” has born. “Traditional diffusion modeling has explored the effects of one-way communication (e.g., advertising) from the firm to its customers. Increasingly, the Internet is facilitating two-way and multi-way communications

between the firm, its customers, and possibly third parties that can significantly influence adoption decisions, particularly among innovators." (Rangaswamy and Gupta, 2000). The Digital Era affects the decision process in several ways. It is no more constitute by an adoption-non-adoption decision. The consumer has the tools to deepen the awareness of product category, knowledge of product and attributes. Already in 1998, Bayus in the work "An Analysis of Product Lifetimes in a Technologically Dynamic Industry" found out that internet was dramatically reducing the life span of an innovation. This challenges firms as their product will not remain a long on the market, reducing the chance to reach the Break Even Point. At the same time, a digital diffusion has no geographical boundaries as everyone in the world can easily purchase that product-service. On the other hand, globalization enhances competition and in this case, reduce the margin. For example, the smallest Swedish company has to compete with the most known firms on the market. The case study of this thesis is closely related to this thematic. Moreover, this market is characterized by a strong volatility as no one can really know if a new radical innovation is a yet to come. Hence, the entry barrier in the digital market is very low. In fact, even low-investment-startup can have a remarkable effect in a determinate field. Facebook, Apple and Whatsapp are just a few examples of the disruptiveness of a new entrance. In the end, it is generally agreed that is becoming increasingly problematic to distinguish your own product or service to the other present into the market. The attraction of new customers is getting more difficult as result of the great quantity of product and service offered on the market. Companies are always seeking some innovative channels and tools in order to reach them.

Another phenomenon that characterizes the Digital Era and has a strong effect on the diffusion of innovation is Social Networks. This reasonably new form of interaction was launched in 2004 with the advent of Facebook. The study among the effect of social networks on the diffusion of innovation is still at the early stages as the result of the lack of data. New large-scale sampling and analyzes of online networks are requested to understand how to incorporate the

social network in the research (Dorogovtsev & Mendes, 2003; Jackson, 2008). Right now, these platforms are used to reach new customer thought the online marketing campaign as they guarantee to target the users more efficiently and increase your influence of the company among the community (Peres et al., 2010). The social network can be seen as an agent-based model in which the market is summarized in a multitude of units of individual that interact between them through different links. A well-fitting model is the “cellular automata” of Goldenberg, Libai and Muller (2001). In this model the customer that potentially adopts the product has been influenced by a combination of external influences and internal influences (Peres et al., 2010). This model and others can be used to address the difficulties to study the effect of social media marketing in the adoption rate of a new product and therefore on the diffusion of innovation. Looking at the social networks not as a tool to enhance innovation but as a market, it is easy to notice the competitiveness of this market. The latter is characterized by few main players as Facebook, Instagram and Tweeter, followed by Pinterest, Linkedin and Google+ and some emerging like Snapchat and Periscope. However, it is constituted by thousand of medium-small other social networks that are continuously trying to enter into the market. Therefore, social media can be seen both as tools of marketing communication and data collection and as a high competitive market.

1.3 Introduction to VIMML

As a new social application in the market, the case study is facing most of the challenges described before. The high level of competition and volatility that characterize this market makes the diffusion of this innovation particularly challenging. Therefore, the commercialization of VIMML in Sweden is exceptionally representative of the difficulties of the Digital Era.

Founded in 2015, VIMML is a Swedish startup located in the cities of Karlstad, and Gothenburg. It has been incubated by the private company Invencon. The latter is a hybrid product/consulting company that focuses on digital innovation

in the Swedish market. After a 6-months of pre-study and implementation phase the team, composed of both entrepreneurs and engineers with a deep experience in the field of mobile application, run the first release of the application and, in December 2015, they launched it in the cities of Karlstad, Gothenburg, Stockholm and Malmö. VIMML is the name of a social mobile application that wants to compete in the crowded social network market with an innovative combination of value propositions. It offers a totally new social experience to the user, being at the same time local, anonymous, present and open. Through these characteristics, the team wanted to follow some of the most upcoming trends such as real-time sharing and an anonymity. This unique set of combinations allows the user to share real-time pictures without being "locked" into social patterns and inhibiting users willingness to share different content. Moreover, the application filters of the feed range giving the opportunity to be updated on the activities located around you and it allows the new user to easily enter on the platform as it is open and registration-free. In addition, users can comment beside the 24h life pictures and chat anonymously on VIMML. Nevertheless, the team is continuously updating the next release depending also on the feedback of the users. From February and May 2016 the team will focus their efforts on implementing the next releases, on the roll-out in Sweden and on the growth of the user base and usage.

1.4 Purpose and Research Question

Based on the founding of the previous paragraphs, the author of the thesis deeply contextualizes VIMML's case in the Digital Era. As a small entity in the competitive market of social application, this startup is facing most of the challenges underlined before. Therefore, it is a significant case study for the overall topic of the diffusion of innovation. Hence, the attention is focused on the commercialization phase of this application in the cities of Karlstad, Gothenburg, Stockholm and Malmö during the period December-May 2016. Moreover, having the opportunity to work in close cooperation with the VIMML's team during the roll-out phase from Gothenburg, the author uses secondary

data to enrich the research and using direct interviews in order to extrapolate some theories from the practice. Furthermore, as the researcher performs an active role in this phase both in the strategic and digital marketing planning, the author brings some of the knowledge acquired on the field to better contextualize VIMML in the innovation diffusion process. On the other hand, the theoretical contribution of the thesis aims to apply traditional innovation diffusion theory into digital innovation era in order to understand which aspects of those models are still working and which are becoming more relevant. Thereby, the ultimate purpose of this master thesis is to address some of the aspects of the social network adoption process that VIMML should consider.

In the end, considered all these factors, the research questions is:

'What factors characterize VIMML's adoption process?'

1.5 Thesis disposition

The paper is composed of the following chapter:

1. Introduction
2. Theoretical framework
3. Research methodology
4. Empirical findings
5. Analysis
6. Conclusion

The introduction aims to give a general picture of the themes touched during the thesis. It is structured as a funnel in which the reader, starting with the broad topic of diffusion of innovation, can focus on a most specific subject. It is composed of both some theory and empirical pieces of evidence portrayed from a wide point of view. This chapter ends with an introduction to the case study and the research question.

The second chapter of the thesis gives a theoretical framework of the innovation topic. In particular, it introduces the model of adoption of innovation that will be used among all the thesis. Then, the theory continues of the topic of adoption of social network. In fact, it will be analyzed some academic papers regarding the needs that boost a user to adopt the new platform.

The research method's chapter will underline the technique and instruments used to collect and analyze data. In particular, it makes the reader aware of the method used to collect data from external and internal sources. In the end, the chapter will define the external validity and reliability of the research.

Empirical findings chapter has the aim to collect all the data regarding the model adopted in this work. The purpose of this section is to grasp some evidences from the practice in order to compare them with the theory. Through secondary data and semi-structured interviews, the chapter will exploit all the available internal and external sources for the case of VIMML.

In the chapter named Analysis all the evidence from the theoretical framework and the empirical findings merge. In fact, the model described in the second chapter will be applied to the case study of VIMML. The aim of this chapter is to give a theoretical contribution considering the tools available and competencies of the researcher.

On the other hand, the outcome of the Conclusion is to give some practical recommendations to the company and the answer to the research question. Moreover, the chapter will indicate the possible future research as well as the constraints of this research.

2. THEORETICAL FRAMEWORK

Once introduced the topic of diffusion of innovation, this chapter will give the reader all the knowledge required to have a complete view of this thematic focusing on most known models of adoption of innovation. In particular, it will be analyzed the theoretical framework around the models mentioned before in order to explain the connection between this topic and the diffusion of social platforms. Therefore, the second part of the chapter has the aim to conceptualize the theoretical framework in which social network are placed. In particular, it will focus on the needs that influence the adoption and the usage of these platforms as it can be interesting to merge this study perspective to the most known model of diffusion of innovation.

Before starting the illustration of the model, it is worthy to clarify that during the whole duration of the thesis, the author is going to use the concept of diffusion of innovation and adoption of innovation as synonymous or at least, when it is specified, as two closely related vision of the same topic. In fact, it can be said that the diffusion of innovation leads to a firm perspective while the adoption more from a user or individual view. In the end, for the final objective of the thesis, this distinction is not relevant as they both the face of the same coin.

2.1 Theoretical Model of Diffusion of Innovation

As emerges from the theory, modeling the diffusion of innovation is a topic that fulfills an important role in the academic studies since the 1960s. Fourt and Woodlock (1960), Mansfield (1961) Floyd (1962), Rogers (1962), Chow (1967) and Bass (1969) can be reported as some of the pioneers of this theme. Their works contribute to making a game-changing improvement in the way in which academy world and not was dealing with innovation as confirmed by the numbers of citations of them. In fact, as reported by the ISI Web of Science,

until April 2005, they have been mentioned cumulatively more than 2000 times. Moreover, belonging to the report made by Nigel Meade and Towhidul Islam in 2006, among the last 25 years, several reviews of diffusion models have been made. These include Meade (1984); Mahajan and Peterson (1985), Mahajan, Muller and Bass (1990, 1993), Baptista (1999), Mahajan, Muller and Wind (2000) and Meade and Islam (2001). The references contain all the details of their writings as, for a matter of format and length of the thesis, they were not all included into the digression.

2.1.1 Rogers' Model

The model presented in the chapter is not one of the most famous of Rogers such as the Adopter Categorization that constitutes the well-known bell-shaped curve but it is still very relevant in the literature as shown by the number of quotations. Among all the authors, Rogers perfectly fits with this case study and as it represents one of the greatest work from all the other get inspired (almost 990 citations for ISI Web of Science). In the previous chapter, it was defined the 4 key elements define the Rogers' definition of diffusion: "the process in which an innovation is communicated through certain channels over time among the members of a social system" (Rogers, 2003, p. 5). They are innovation, communication channels, time, and social system and they constitute the fundamental of Rogers' diffusion of innovation model. However, the Rogers' theory that best fits with the case study of the research exploit the topic of adoption of innovation and the process by which an individual decides to acquire and actively use an innovative product or service after he get aware of the existence of it.

2.1.1.1. Innovation-Decision Process Model

Rogers develops the Innovation-Decision Process model as "an information-seeking and information-processing activity, where an individual is motivated to reduce uncertainty about the advantages and disadvantages of an

innovation" (Rogers , p. 172). The latter is constituted of five phases: knowledge, persuasion, decision, implementation, and confirmation. Each of them follow a chronological order without which it would not be possible to formulate this model. As reported in the book 'Diffusion of Innovations', the Innovation-Decision Process model is structured as Figure 2.1:

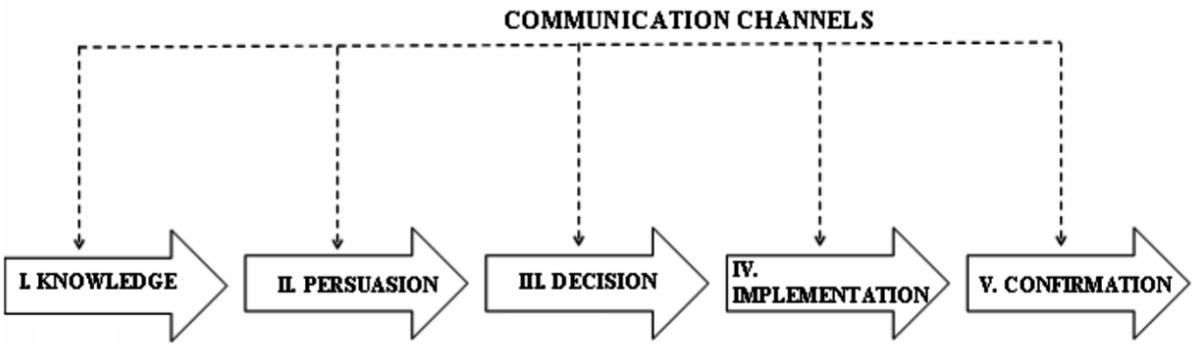


Figure 2.1: A Model of Five Stages in the Innovation-Decision Process. Sources: Diffusion of Innovations, Fifth Edition by Everett M. Rogers; Self-editing.

Therefore, belonging to this model, the consumer would follow the five steps when he is approaching to an innovation. In the following paragraph, the analysis of each phase has been made as it plays a significant role in the empirical finding of the case study.

The Knowledge Stage

"What the innovation is and how and why it works?" (Rogers, 2003, p. 21). These are the question that the consumer faces during this first step of the decision process. In fact, it makes the user aware of the existence of the innovation. Moreover, according to Rogers, it helps the consumer to reach three different types of knowledges: awareness-knowledge, how-to-knowledge, and principles-knowledge (Sahin, 2006). The first is constituted by the information that creates the awareness of the innovation's existence. Instead, the how-to-knowledge, is the knowledge needed to understand how this new technology works. More than others, the how-to-knowledge is considered a crucial variable

by the author as it constitutes a prerequisite for the innovation to be adopted. The last knowledge is not considered essential from Rogers but it can boost the adoption process. It “consists of information dealing with the functioning principles underlying how the innovation works” (Rogers, p. 168). In the end, all the firm launching a new product or service should consider these notions and try to communicate as well as possible all the information needs to achieve this knowledge.

The Persuasion Stage

During this stage of the innovation-decision process the “individual forms a favorable or unfavorable attitude toward the innovation” (Rogers, 2003, p. 170). It represents a mental process in which the consumer grasps information from external and internal sources. “Here the important behaviors are *where* he or she seeks information, *what* messages he or she receives, and *how* he or she interprets the information that is received” (Rogers, 1983). In this phase, as argued by the author, it is crucial the natural predisposition of the individual to project the present into the future in order to visualize the usage of the innovation.

The Decision Stage

Now the individual chooses to adopt or reject the innovation. While adoption refers to “full use of an innovation as the best course of action available,” rejection means “not to adopt an innovation” (Rogers, 1983, p. 177). As stated by Sahin, 2006 “Rogers expressed two types of rejection: active rejection and passive rejection”(Sahin, 2006). The first one is characterized by two moments. First, he or she choose to adopt the innovation and later the same individual decide not to proceed with this willingness. Hence, a discontinuance decision follows the same path but after the adoption. In fact, the individual reject the innovation after he adopted it. While in a “passive rejection (or non-adoption) position, the individual does not think about adopting the innovation at

all”(Sahin, 2006). Once more, the importance of the reduction of uncertainty it is crucial and therefore for some kind of innovation “most individuals will not adopt an innovation without trying it first on a probationary basis to determine its usefulness in their own situation” (Rogers, 1983). However, it is remarkably important for this thesis the consideration made by the author at this point. In fact, even if the Decision stage is placed after the Persuasion stage, for some sector and in some circumstances the order might be inverted. More specifically, “the knowledge-persuasion-decision sequence proposed in our model of the innovation-decision process may be somewhat culture-bound. In some sociocultural settings, the knowledge-decision-persuasion sequence may frequently occur, at least for certain innovations” (Rogers, 1983, p.173).

The Implementation Stage

“Implementation occurs when an individual (or other decision-making unit) puts an innovation into use”(Rogers, 1983, p. 163). In this phase, the new product is really on the market and it is exposed to a hight level of uncertainty. Usually, during this step reinvention may occur. Rogers stated that reinventions are “the degree to which an innovation is changed or modified by a user in the process of its adoption and implementation” (Rogers, 2003, p. 180)

The Confirmation Stage

Here the decision to adopt or not the innovation has already been made and the individual is seeking to messages that confirm his or her decision. Thereby, there is a tendency to look for messages that confirm the decision instead of opposing. However, during the confirmation stage, two types of discontinuance may verify, making the user reject or replace the innovation: replacement discontinuance and disenchantment discontinuance. The first occurs when the individual replace the innovation for a better one and the second when one chosen does not meet the expectation of the individual (Sahin, 2006).

All these insights implement the scenario of the Innovation-Decision Process Model, however, as we have seen in the previous paragraph, the diffusion of an innovation is negatively linked with uncertainty. Therefore, Rogers stated that innovation diffusion is the process to reduce uncertainty and, thanks to the individuals' perception of the five attributes of innovation, it can be predicted the rate of adoption. They are respectively: relative advantage, compatibility, complexity, trialability, and observability. Hence, they respectively have an effect on the rate of adoption, defined by Rogers as "the relative speed with which an innovation is adopted by members of a social system" (Rogers, 2003, p. 221). All of them will be reported by definition as they will be relevant for the case study of the thesis and all of them refer to the Persuasion stage.

Relative Advantage is "the degree to which an innovation is perceived as being better than the idea it supersedes" (p. 229). It refers to the degree of advantages that the innovation brings to the individual. For Rogers, it represents the best indicator for the rate of adoption. Positive correlated with the speed of adoption.

Compatibility "is the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters" (Rogers, 2003, p. 15). Positive correlated with the speed of adoption.

Complexity is "the degree to which an innovation is perceived as relatively difficult to understand and use" (Rogers, 2003, p. 15). In fact, As Martin (2003) underlined, this complexity is crucial in the hardware and software industries. If those innovations can be considered user-friendly, the rate of adoption may be faster and more successful. As we can see later, this variable strongly characterizes the success of social media. Negatively correlated with the speed of adoption.

Trialability is "the degree to which an innovation may be experimented with on a limited basis" (Rogers, 2003, p. 16). The more an innovation is used the faster

is the rate of adoption. These characteristics contrast the uncertainty that negatively effect of adoption speed. Positive correlated with the speed of adoption.

Observability is “the degree to which the results of an innovation are visible to others” (Rogers, 2003, p. 16). As reported by Sahin (2006), if many can verify the result of a certain innovation, they will more easily choose it. Positive correlated with the speed of adoption.

In the end, the shown picture of characteristics of innovation and the other descriptions of the different details of the decision process steps enlarge the whole scenario around the model as it can be seen from Figure 2.2.

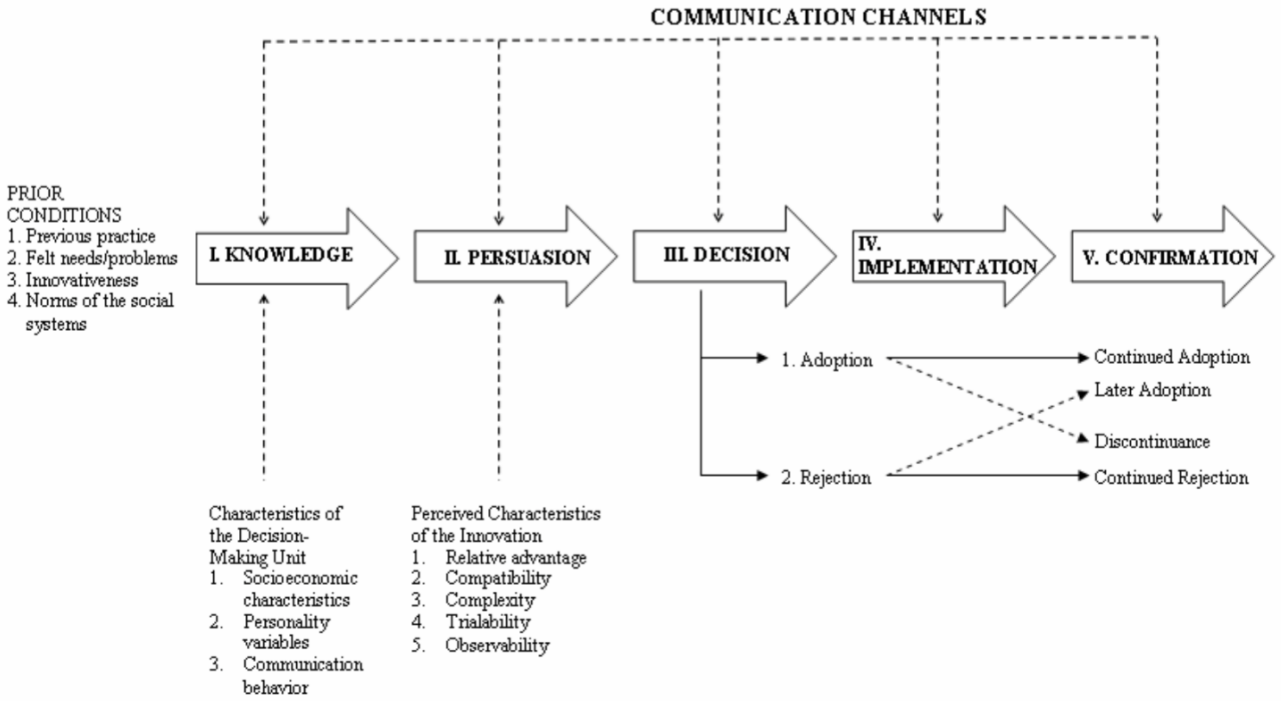


Figure 2.2: A Model of Five Stages in the Innovation-Decision Process. Sources: Diffusion of Innovations, Fifth Edition by Everett M. Rogers.

From Figure 2.2, it can be noticed that Rogers outlines some preconditions. In fact, the author argued that this process of information seeking starts if there are some prerequisites. However, Rogers did not spend too much time on this topic and left the reader with a lot of questions such as “does a need precede knowledge of an innovation, or does the knowledge of an innovation create a need for that new idea?” or “how are needs created?” (Rogers, 1983, p. 167). The author explained that “available research does not provide a clear answer to this question of whether awareness of a need or awareness of an innovation (that creates a need) comes first” (Rogers, 1983, p. 167). Therefore, it can represent an interesting starting point where to start a research. In the continuum of the thesis the topic of “needs” will be deeply treated when it comes to social network.

Some criticisms emerge when the model described before is applied in the digital era. In order to have a better view of the topic, it results useful to deepen the themes regarding digital diffusion and social media. Therefore, after the social networks literature review of the following paragraphs, the inquiry reports some of the criticisms this model in the last part of this chapter.

2.2 Diffusion of innovation and social media

Resuming the paragraph dedicated to the digital era in the previous chapter, it has been mentioned the importance of the contextualization of the diffusion of innovation in the digital era as it may influence the speed of adoption or the decision process of an innovation. Now, after the description of one of the most known diffusion of innovation models, the digression can be continued with a deeper awareness of the dynamics and characteristics of these models in the social media era. In fact, from the research by Gizem KOÇAK et al., emerges that “it is possible to associate the diffusion and widespread use of social media in the context of the decision-making process for innovation” (Gizem KOÇAK et al., 2013). Social media, seen as a product-service, can be considered one of the greater recent innovation as shown by the radical impact on the social

system. The statistics reported by the Internet World Stats in 2012, counts 2.405.518.376 users all over the word with a dramatic increase since 2000 (Internet World Stats., 2012). Those incredible numbers are confirmed by the increased amount of active social networks users. Over one billion of them actively login on Facebook, 800 million on YouTube, 343 million on Google+ and 200 million on Twitter and LinkedIn (Pick, 2013). These platforms introduce innovative instrument “to create, generate and exchange media content between users” (Cooke et al., 2008) such as “instant messaging, blogging, video/music sharing, and games” (Zolkepli; Kamarulzaman, 2015).

At this stage of the thesis is appropriate to give a definition of social network. In fact, from what emerges from the theory, the definition of social media are several but the most suitable with the final scope of this work is the one given by Zolkepli et al. (2015) that states: a social network is a ”group of Internet-based applications that are built on the ideological and technological foundations of Web 2.0, which allow the creation and exchange of user-generated content” (Zolkepli; Kamarulzaman, 2015). Belonging to the literary review, it has seven roles: identity, conversations, sharing, presence, relationships, reputations, and groups. Where each of them is linked to a particular social network experience (Kietzmann et al., 2011). All these functions bring the user from a passive mood to an active one as it shares share opinions, insights, knowledge and content (Cho et al., 2010) and forms relationships with users with a compatible profile (Smock et al., 2011). In the end, social medias represent a digital bridge between online and offline life as they represent the answer to several new needs that will be illustrated later.

2.2.1 The Social Networks adoption literature review

From what emerges from the theory, there are few studies that try to address the topic of the diffusion of social media in the digital era. Even if all of them analyze the topic from several different prospectives, the majority look at social networks as the answer to some user needs and therefore they positively

correlate the adoption of social media to the degree of gratification of these needs. In the following paragraph, the author reports some of these studies focussing on the mentioned perspective.

Uses and Gratification Theory (UGT) is an approach to understanding why and how people actively seek out specific media to satisfy specific needs. UGT is an audience-centered approach to understanding mass communication (Severin et al., 1997). Diverging from other media effect theories that question "what does media do to people?", UGT focuses on "what do people do with media?" (Katz; Elihu, 1959). This theory has been largely used by all the authors to address the topic of social media adoption. It is crucial as it "redefines how and why the individual uses media; explains the motivational needs that motivate the user to select the media, media channel or media content; and also describes the subsequent attitudinal and behavioral effects" (Zolkepli; Kamarulzaman, 2015 o Diddi & La Rose, 2006; Lee & Ma, 2012; Rubin & Perse, 1987; Ruggiero, 2000). Moreover, as reported by Zolkepli et al. (2015), Cheung et al. (2010) claim that "UGT assumes that users are goal-directed in their behavior and are aware of their needs. Purposive value, self-discovery, entertainment value, social enhancement and maintaining interpersonal connectivity are the key needs that are widely adopted for online media" (Cheung et al., 2010). Using this background, many authors tried to define which are the needs that are on the basis of the adoption of media. For example, Perse and Courtright's (1993), published a study in which they identify four types of need that increase the likelihood to adopt newer media: relaxation, entertainment, self-awareness, and excitement. While Perse and Dunn (1998), focusing on the computer connectivity as a tool to communicate, identifies six needs: learning, entertainment, social interaction, escapism, passing time and out of habit. All these studies find which needs can play an active role in the decision of use or not a new social media. It involves interpersonal, social and communicational needs to address the same topic. For a matter of format, in the following table from the paper by Zolkepli et al. (2015) are reported all the main studies.

Source	Medium	Media needs
Parker and Plank (2000)	Internet	Companionship, social relationship, surveillance, excitement, relaxation, escape
Papacharissi and Rubin (2000)	Internet	Entertainment, pastime, interpersonal utility, information seeking, convenience
Ferguson and Perse (2000)	TV related web surfing	Entertainment, pastime, relaxation, social information
Leung (2001)	Instant messaging	Entertainment, affection, relaxation, fashion inclusion, sociability, escape
Stafford et al. (2004)	Internet	Entertainment, search factor, cognitive factor, news, unique factors
Charney and Greenberg (2002)	Internet	Division entertainment, peer identity, good feelings, coolness, keep informed, communication, sights and sounds, career
Papacharissi (2002a)	Personal homepage	Entertainment, pastime, information, self-expression, professional advancement, communication with friends and family
Kaye and Johnson (2002)	Political uses of website	Entertainment, guidance, surveillance, social utility
Ko et al. (2005)	Internet	Entertainment, social interaction, information, convenience
Diddi and La Rose (2006)	Internet news	Entertainment, escapism, habit, pastime, surveillance, news quizzes
Chang et al. (2006)	Online games	Companionship, action, substitution for friends, passing time, popularity
Haridakis and Hanson (2009)	Video-sharing website	Convenient, entertainment, convenient information, co-viewing, social interaction
Quan-Haase and Young (2010)	Facebook – instant messaging	Passing time, sociability, social information, fun, relationship maintenance, relationship development
Lee and Cho (2011)	Social media via mobile broadband	Entertainment, interactivity, mobility, passing time, substitute, companionship, solitude, popularity
Zolkepli and Kamarulzaman (2011)	Social media	Personal integrative needs, social integrative needs, tension release needs

Figure 2.3. Social media adoption: The role of media needs and innovation characteristics. Source: Izzal Asnira Zolkepli from the Department of Persuasive Communication, School of Communication, 11800 Universiti Sains Malaysia, Malaysia and Yusniza Kamarulzaman from the Department of Marketing, Faculty of Business & Accountancy, University of Malaya, 50603 Lembah Pantai, Kuala Lumpur, Malaysia

Another important contribution has been given by the categorization on Katz et al. (1973) that used “UGT to analyze mass media adoption in detail, which covers five important media - television, radio, magazines, books, and cinema. Katz et al. list 35 needs that were drawn from the social and psychological functions of the mass media, and which have been categorized as cognitive needs, affective needs, personal integrative needs, social integrative needs and tension release needs” (Zolkepli; Kamarulzaman, 2015). After this overviews on the authors that studied the topic of the diffusion of media, the thesis is about to focus on one in particular: “Social media adoption: The role of media needs and innovation characteristics” by Izzal Asnira Zolkepli and Yusniza Kamarulzaman. It is particularly significant for the thesis and therefore it is appropriate to analysis it better.

2.2.1.1. Needs satisfaction and Innovation-Decision Process

In this model, the authors “look at the holistic view of social media adoption in which emphasis is given to what drives consumers to adopt social media” (Zolkepli; Kamarulzaman, 2015). This study represents the union point

between the researchers on the needs that boost media adoption and Rogers' theory. In fact, They try to find a connection between a classification of needs based on Katz's work and the five innovation characteristics that influence the persuasion stage of Rogers' Innovation decision process model. As claimed by the Zolkepli et al. (2015) "these characteristics are considered relevant in the context of social media adoption since they touch on the relative advantage of the social media, observability of the medium, compatibility of the medium with other technological media, and their complexity and trialability in terms of usage" (Zolkepli; Kamarulzaman, 2015). Based on this consideration, the researchers, following a parsimonious approach, categorized the needs into three different areas: personal needs, social needs, tension release needs. Each of them is characterized by several sub-needs that will be illustrated later. The final aim of the author is to verify to what extent these needs influence the innovation characteristics and therefore the adoption of a social network. Hence, after elaborating some hypothesis, the authors quantify the influence of these needs through a mixed methods approach based on qualitative and quantitative researchers. The following paragraph illustrates by quotes the different needs reported by the authors.

AREA	**NEED**
1. Personal Need	*1.1 Trendiness*
"individual's desire to appear credible, confident, and project high self-esteem"(Katz et al. 1974)	"the extent to which an individual perceives themself to be involved in the latest (technological) trends" (Boyd et al., 1999)
	1.2 Enjoyment
	"happiness, pleasure and flow when using any medium" (Lin, Gregor, & Ewing, 2008)
	1.3 Entertainment
	"the way social media serves as a means for entertaining and escaping pressure" (Lee & Ma, 2012)
	1.4 Interactivity
	"process of message exchange" (Song & Zinkhan, 2008)
2. Social needs	*2.1 Social influence*

“affiliation needs where the consumer intends to be part of a group, wants to be recognized as part of the group and relates to a sense of belonging” (Zolkepli; Kamarulzaman, 2015 according to Katz et al., 1974)	“the degree to which a consumer perceives that important others believe he or she should use certain technology” (Venkatesh, Morris, Davis, & Davis, 2003).
	2.2 Social interaction
	“communication that occurs between two or more individuals, in which each person is aware of both his or her own membership in the group and relationships to and with others that belong to the group and in which the interactions occur primarily through an Internet venue to achieve mutually shared goals” (Bagozzi, Dholakia, & Pearo, 2007)
3. Tension release needs	*3.1 Belongingness*
“the need for escape and diversion from problems and routines” (Katz et al., 1974)	“being part of” something “to avoid feelings of loneliness and alienation” (Kohut, 1984)
	3.2 Companionship
	“the feeling of being together and being a member of a group of friends, spending time together, socializing and networking” (Ridings, Gefen, & Arinze, 2002)
	3.3 Playfulness
	“the degree to which a current or potential user believes that the social site will bring a sense of pleasure” (Sledgianowski & Kulviwat, 2009)
	3.4 Escapism
	“the extent to which the user becomes so absorbed that they tend to fulfill their desire to ‘leave’ the reality in which they live in a cognitive and emotional way” (Henning & Vorderer, 2001)

Figure 2.4: Social media adoption: The role of media needs and innovation characteristics. Source: Izzal Asnira Zolkepli from the Department of Persuasive Communication, School of Communication, 11800 Universiti Sains Malaysia, Malaysia and Yusniza Kamarulzaman from the Department of Marketing, Faculty of Business & Accountancy, University of Malaya, 50603 Lembah Pantai, Kuala Lumpur, Malaysia. Self editing.

Having all the scenario in mind, the thesis is about to focus the results and the contributions of this research without focussing on the analysis made by the authors for a matter of time. The study sums up all the studies in the literature of social media, needs, and UGT. Moreover, it underlines which are the most important needs that influence the adoption of social media such as enjoyment, entertainment, social influence, social interaction, companionship, belongingness, playfulness, and escapism. In the end, the results underlined that some of the hypothesis are effectively right and therefore, the authors

extrapolate some important conclusion: “the innovation characteristics derived from the Diffusion of Innovation Theory by Rogers (2003) found that three characteristics have a direct and indirect effect on bridging the needs felt in respect of social media adoption: relative advantage, compatibility, and observability” (Zolkepli; Kamarulzaman, 2015). This underlines the importance the need satisfaction in enhancing the adoption behavior of consumers.

The whole scenario is portrayed by the authors in the following images:

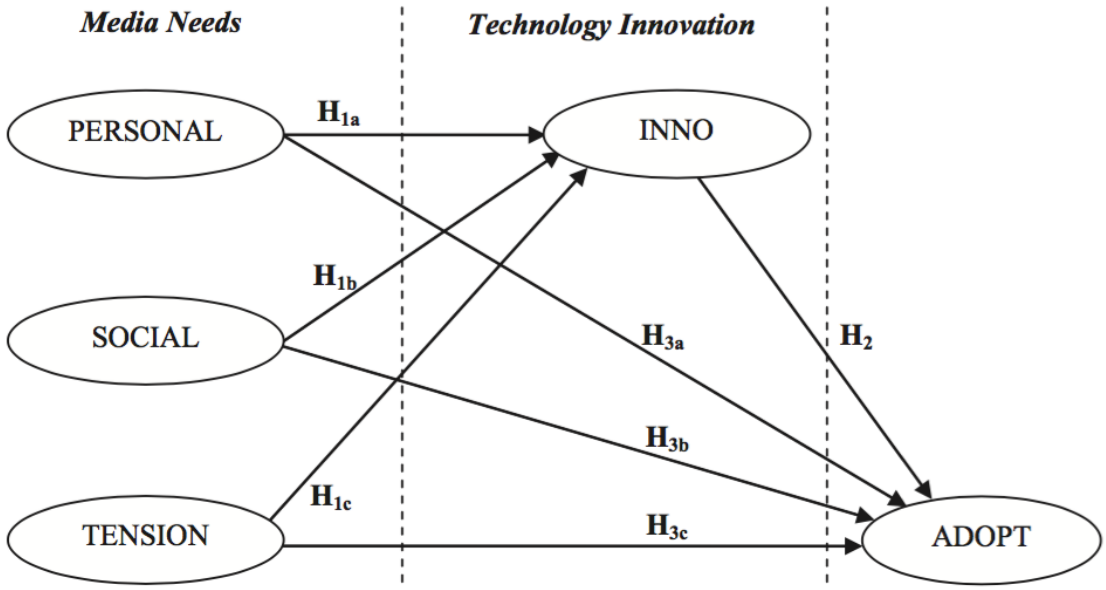


Figure 2.5. The Conceptual Model and Hypotheses; Social media adoption: The role of media needs and innovation characteristics. Source: Izzal Asnira Zolkepli from the Department of Persuasive Communication, School of Communication, 11800 Universiti Sains Malaysia, Malaysia and Yusniza Kamarulzaman from the Department of Marketing, Faculty of Business & Accountancy, University of Malaya, 50603 Lembah Pantai, Kuala Lumpur, Malaysia.

As shown, different authors study the needs that incentive the user to adopt a new social network and Zolkepli et al. (2015) developed an interesting model to understand the connection between those needs, Rogers’ five innovation characteristics and the rate of adoption. On the other hand, the study from Gizem KOÇAK et al. (2013), illustrates the effect of social media on the decision

process. This work gives important generic considerations that can be useful in following stages of the work. It states that social media influence knowledge stage of the Rogers' Innovation-Decision Process Model as highly increase the volume of information flows, affecting both awareness-knowledge, how-to-knowledge, and principles-knowledge. Instead in the "persuasion stage, individual becomes more psychologically involved with the social media platforms" (Gizem KOÇAK et al., 2013). However, belonging to the authors, the major contribution of social networks in the innovation decision process is shown in the persuasion stage. As we know from the Rogers' model (2003), it is characterized by compatibility, complexity, trialability, observability and the relative benefit. The authors affirm that "in the context of compatibility, having an Internet experience and being familiar with the Internet-based applications before the existence of social media, provide the necessary conditions for the acceptance and widespread use of these platforms" (Gizem KOÇAK et al., 2013). Also, for their user-friendly structure, it easy to start using social network and to get involved in dynamics proper of them. Moreover, it positively affects the trialability as the user does not need any prerequisite to starting using the platform. From what concern the characteristic of observability, the results of social media are becoming more visible as more individual register on it. In the end, social networks give a strong relative advantage, one of the most important characteristics in Rogers' opinion, as "open and free access to social media platforms provides an economical advantage in terms of communication and interaction among people. Also, these platforms facilitate easy, quick and free access to information which can be considered as another economic profitability" (Gizem KOÇAK et al., 2013). In the end, the social networks can be considered a great innovation that revolutionizes our social life, adding some new dimension to the physical interaction. On the other hand, socials can be seen as a tool to boost innovation. In fact, companies are increasingly using social media to communicate the values and the characteristics of their new product, exploiting the possibility to achieve directly the consumer and enabling him to relational with you. This creates new dynamics in the world of diffusion of innovation. It would be interesting to understand if and how they effect on the

models analyzed before, and if we are close to a game-changing phase in the way in which communicate and diffuse innovation.

2.3. Criticisms of the previous models

As said before, the Rogers' model represents the starting point of all the discipline and even if it is from the '60th, it is still applicable to most of the products on the market nowadays. On the other hand, for a matter of fact, digital era and social media come up with new dynamics that Rogers could not take into consideration. Not many authors have spent efforts explaining how and why the process in which an innovation is chosen had changed some of its characteristics. As showed before the Innovation-Decision Process model is composed of five different steps: knowledge, persuasion, decision, implementation, and confirmation (Rogers, 2003). Each of these phases plays an important role in the decision process. However, in the digital era, characterized by instant messaging, social interaction, sharing economy, accelerated knowledge transfer flow, these steps could not remain neutral to this change. For instance, the knowledge phase, described as the step in which the adopter get aware of the existence of the innovation, is radically changed. In fact, the information of the presence of an innovation reaches the individual in a very different way from the past. The direction and the source of the information changed (Gizem KOÇAK et al., 2013). From what concern the step of persuasion, the consideration made by Gizem KOÇAK et al. (2013) are largely embraceable as the features proper of social network positively affect the five innovation characteristics.

Even if the paper by Zolkepli et al. (2015) can not be criticized for the efficient use of the UGT theory they made, it can be extended to all the Innovation-Decision Process Model and not only to the persuasion stage. In fact, as confirmed by the recommendation made by Rogers, the researches on the need should be better scrutinized.

This suggestion as well as the one which claims that “there is usually the implicit assumption in the diffusion studies of a linear sequence of the first three stages in the innovation-decision process: knowledge, persuasion and decision. In same cases, the actual sequence of the stages might be knowledge, decision, persuasion” (Rogers, 2003, p. 177), are considered the main pillars from where continue the research. Hence, the attempt is to study the analyzed models in the digitalized era using the case study of VIMML to find some insights for the future researches concerning the customer behavior in the social network adoption process.

3. RESEARCH METHODOLOGY

This chapter has the purpose to explain what are the research instruments and the strategies that has been used to exploit the central topic of the thesis. As a scientific tool to investigate on a certain topic, the research methodology is an important part to be described during the dissertation of a master thesis work. According to Bryman and Bell (2007), it describes the methods, practices, and procedures that a researcher should take into consideration during his work. Research strategy, research method, research design, data collection and data analysis are just some of the themes touched in this chapter as they justify the whole research.

In the previous chapter, a deep literary review has been done. The topic of the diffusion of innovation was treated since its first footprint in the business literature. Everett M. Rogers' Model has been largely exploited and in particular, the Innovation Decision Process Model was mentioned as one of the most important for the continuum of the thesis. The literary review continued with the studies of the diffusion of digital innovation with a focus on the adoption of a social network. This first part was crucial to a broad theoretical picture in which place the case study of VIMML. In fact, the case study of VIMML plays an important role as it will be used to verify if the theoretical model works in the practice. However, what emerges the empirical study is that the adoption of a new social network does not flow precisely the same path described by Rogers but a variation of it as hypothesized by the same author for some cases. In fact, the intent is to update the past models to the new dynamics and needs that make social networks diffusing. The reason of this has to be found in the fact that not many studies have been developed in the really recent field. In the end, the model will be used to see the startup performance in order to come up with a valuable suggestion for the VIMML itself.

3.1 Research strategy

Belonging to Bryman and Bell (2007), there are two distinct approaches in which a researcher can collect data. In fact, business research methodological can be both quantitative and qualitative and their differences are more than just the fact that quantitative researchers employ measurement and qualitative researchers do not. In effect, regarding the principal orientation to the role of theory in relation to research, the first is deductive while the second is inductive. Moreover, they differ in the Epistemological or Ontological orientation as the first is characterized by Objectivism and the second by Constructionism (Bryman & Bell, 2007).

As the nature of the thesis, the author is going to collect data and pieces of evidence primary through a qualitative research without renouncing to integrate them with some quantitative study approach. In fact, even if the different topics are treated from a both theoretical and practical point of view, the outcome of the research leads to a qualitative approach. On the other hand, as the author works in strict contact with the founders of VIMML, he will have the availability of a lot of secondary data processed by real-time analytical software that the startup is using to monitories its users.

All these evidence and data are used to understand if and to what extend the new model is applicable to VIMML and, thereby, to give some suggestions for the following phases of the launch of this application.

3.2 Literature review

As mentioned before, the author deeply reviews the theory in order to grasp some inspiration for the described model. Moreover, this work was mandatory as the qualitative research is an inductive approach (Bryman & Bell, 2007).

Therefore, after the problem definition, the author described the contest in which the thesis is written such as the market of social networks, the startup environment, and the Swedish market. The work continued with a long digression on one of the most famous innovation diffusion models and on the theoretical background on the social networks.

3.3. Research design

From the theory emerges that business and management researchers have a different design. For a matter of fact, the design used for this thesis is a Case study design. It can be considered a single organization case study as it analyzes VIMML as an organization located in Gothenburg but with different office among Sweden (Bryman & Bell, 2007).

The strategy was chosen and described few paragraph before is confirmed by Bryman and Bell (2007) to be the most suitable one as “there is a tendency to associate case studies with qualitative research” (Bryman & Bell, 2007). On the other hand, the authors affirmed that even if this design increase the likelihood of using the instrument of qualitative interviews, it is must be correlated with some quantitative studies. Moreover, as this case study is used to understand the effective applicability of the model, this study can be considered Instrumental case studies as it allows “a generalization to be challenged” (Bryman & Bell, 2007).

3.4. Research method

The worldwide agreed definition stands that it can be considered research method all the actions needed to collect and process the data derived from the different tools available for the researcher such as interviews, survey, empirical evidence or secondary data collection.

Assumed that the author of the thesis actively works at the office of the startup and that he has access to the most updated data related to the user behavior, it can be increased the quality of the research thank to a huge amount of secondary data. This will enhance the analysis of the thesis from a quantitative point of view. Despite this, the research method will focus on a qualitative approach. In fact, through semi-structured interviews, the author finds if the model works for VIMML.

For the peculiarities of the study, the author has divided the model into two parts in order to better collect data for each of the five stages of the Innovation Decision Process Model. In fact, it has been analyzed separately the phases before and after the decision. The first analysis would answer to the question: “What are the behaviors, the motivations and the needs that boost a user to *download* VIMML?” while the second analysis would answer to the question: “What are the behaviors, the motivations and the needs that boost a user to *keep using* VIMML?”. This particular structure reflects the source of data too. In fact, while the internal findings will collect data for the decision, implementation and confirmation stage, the external finding grasps some data for the knowledge and persuasion stage.

Internal forces

The data have been collected through qualitative interviews and with informal exchange of informations during the months spent working in the startup. The basic principle of qualitative researches, both in the unstructured and in the semi-structured method, is that it is not important to describe or predict anything in relation to large numbers, but rather investigate one aspect, event, issue, trying to get as much information as possible about it, considering size that could not be seen with quantitative techniques such as non-verbal language, emotion, proxemics, the life stories and so on. Therefore, the VIMML’s Board Member and VP Sales at Invencon, the VIMML’s Project Manager and the

Founder of VIMML were interviewed in order to gather some informations regarding the firm and product characteristics.

TABLE 1

Position	**Area of expertise**	**Previous experience**
Member of the Board	Business Development	Experience from the automotive and the IT-industry.
Senior Entrepreneur	Project Manager	Experience in the mobile app development
Founder	Innovator	Marketing and communication

Semi-structured interviews compose the framework of this part of the data collection. The aim is to collect as many informations as possible in order to provide some recommendations to the team. The guideline of the interview in provided in APPENDIX 1.

On the other hand, the qualitative analysis has been associated with some qualitative researches. In fact, working in the startup, the author had the possibility to have access to the softwares that the team uses to monitor the metrics of the application. They are: iTunes Connect, Mixpanel and Fabric. This fact enriches the thesis of useful data regarding the usage of the application, allowing the author to understand the behavior of the user not only from the interview insights. Those informations have been particularly meaningful for the last two set of the Innovation-Decision Process Model. In fact, the majority of the usage data were used to extrapolate some empirical evidences for the Implementation and Confirmation stage.

External forces

The external sources were focused mainly on the first part of the model and on the need analysis. This facts justify the use of the users interviews as it comes to be an optimal solution to understand what are the needs and the informational sources that boost them to download the application. Even if a questionnaire would have been an excellent tool in this phase, the lack of time makes the qualitative interviews the best way to collect these kinds of informations. Therefore, in this phase the qualitative analysis aimed to grasp some evidence regarding in particular the Knowledge, Persuasion and Decision stage. As it has been said before, this part is related to the question: “What are the behaviors, the motivations and the needs that boost a user to *download* VIMML?”. The three VIMML’s users were interviewed both on their user experience on VIMML and, in general, on their social network experience. The comparison of these two aspects, combined with the analysis of the secondary data, allows me to generalize the findings to the market of social network, hypothesizing a variation of the original model that has to be consolidate by future researches.

Interview guide

The semi-structured interviews have been developed in correspondence to the target I was referring to. Regarding the interviews on the inside the company, the most important players were taken in order to have the most accurate picture of the case study. On the other hand, the external sources were selected randomly among the users. The interviews have been taken to three active users and they lasts around 45 minutes. Moreover, a pilot of the interview has been run among few students in order to understand the reliability of the questions. All the interviews guides are in APPENDIX 2.

3.4.1. Data analysis

As explained before the thesis combine qualitative and quantitative data in order to have a better prospective of the topic. The strategy used by the author to process these data is the Grounded theory. In fact, it combines qualitative method with quantitative tool and it has been defined as “theory that was derived from data, systematically gathered and analyzed through the research process. In this method, data collection, analysis, and eventual theory stand in close relationship to one another” (Strauss and Corbin, 1998). After the collection of data the constant comparison with the qualitative data make the researcher confident to develop the concepts and the categories. The purpose of analyzing the metrics data was to use the results to find possible insights of the qualitative phenomena compared to understand its reliability with the research. In the end, the author collects the usage information regarding the Decision, Implementation and Confirmation stage on Mixpanel and Fabric and than compare it with the interviews and the informal conversation with the team of VIMML.

3.4.2. External validity

The external validity is the tool that the researchers have to control as it which “refers to the degree to which findings can be generalized across social settings” (Bryman & Bell, 2007). For what extent this thesis, it can be said that farther research has to be done in order to confirm the possibility to generalize my result. In fact, this work can be consider as a suggestion for future research on a topic that it has never been touched. However, the findings and the modification of the Rogers’ model are valid for my case study as they are based on qualitative and quantitative research. On the other hand, a questionnaire can be useful to increase the chance to generalize the VIMML’s case to the social network market, it has not be run just for a matter of time.

3.4.3. Reliability

Frequently, the qualitative and quantitative research are effected by some biases that could negatively influence the reliability and validity of the research. The origin of them are several and the researchers should pay attention at each. The first is directly linked with the figure of the moderator. In fact, during an interview the moderator can influence the answer and the behavior of the interviewee with his/her body language, tone or even with the manner of dressing. In this case, the author tried to avoid any of this situation making the interviewee as comfortable as possible and respecting all the behaviors proper of each situations. Then, the answer can be disposed of by the question itself. Question biases are frequent in this method. From what concern this issue interviewer payed attention to avoid these situations: formulate a question that itself suggests the answer, misunderstood question situation or just let the order of the question influence the interview. Hence, as moderator, he tried to be as neutral and comprehensible as possible. Regarding the sample of users interviewed, it has to mentioned that they have been selected randomly based on the availability of team.

4. EMPIRICAL FINDINGS

The following chapter contains the empirical finding collected during the research. It differentiates the internal findings from the external sources in order to better portrait the overall picture of the startup and to properly address each step or the model.

4.1. INTERNAL FINDINGS

The startup was born in Invencon in May 2015 from an idea of Viktor Algurén. As stated by the Project Manager of VIMML's team Rasmus Ahlberg, there was some empty space between the value proposition of the actual social networks. In fact, the application has been developed to accommodate some upcoming trends that will boost its diffusion in the close future. Digital is becoming an extension of the individual identity and the last generation of social network are characterized by time sensitive content and one-to-many sharing video. Moreover, the team focuses the development of the platform around the theme of anonymity. In fact, it breaks the normal social "lock-in" mechanism allowing the user to express his creativity and accommodate the increasing demand for privacy especially through young. The uniqueness and innovativeness of this social network can be summarized this statement that portraits the mission of VIMML:

"Helping people to discover what is happening around you, feeling free to express yourself avoiding to be crystallized in your traditional profile style"

Project Manager, VIMML

Even if VIMML has been launched in December, the startup is still in a prototype concept phase. In fact, belonging to Rasmus Ahlberg, the team adopted a trial and error strategy launching the application in the Swedish market and then

periodically testing it with the users feedbacks. After four months from the launch of the application, the team is in an implementation phase in which possible new features are evaluated. Thereby, the team is analyzing the possibilities to add some new characteristics in order to better fit one specific niche rather than target the whole market. In the Project Manager's opinion, it is worth to test the user response during this period in order to find the perfect target for the application. Moreover, once founded, it will be easier to find the right revenue model. Right now, VIMML is looking for the next round of investment for the new release. In figure 4.1 is summed up the strategy kept so far. The yellow stars represent the new release of VIMML.

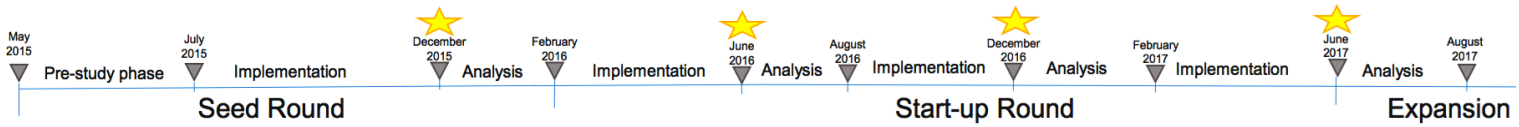


Figure 4.1: VIMML's short-medium term strategy. Source: VIMML's internal report (2015).

4.1.1. Product characteristics

The application has been downloaded 1508 times between iOS and Android and the App Store page totalized around 40.100 views. These are the numbers of VIMML until this stage. VIMML proposes to be the only social platform offering a unique set of use cases being local, present, anonymous and open at the same time. As claimed by the Member of the Board and VP Sales at Invencon Leif Sundström, the main feature of the application is the location awareness. In fact, it allows the users to be aware of the event located around them looking at the photos, comments and instant messages that people around them post. The Member of the Board then continued describing the next key features such as anonymous, time sensitive and open. Indeed, the team wants to give value to the positive aspects of anonymity. In their strategy, anonymity lets the user fell free to express his creativity posting anonymous

contents and being out of their traditional profile style. Furthermore, he claimed, being anonymous means that the application is open to everyone as, without asking for the registration, the user can feel free to join the application. He or she can get started, without being afraid of “lock-in” mechanism. In Mr. Sundström’s view, this inclusive model is the key differentiation from the other social networks, allowing everybody can talk with everybody.

“Just start the application and see what it is happening around you”

Member of the Board, VIMML

Nevertheless, the aim is to enhance anonymity but the concept has been treated in the whole perspective. As Mr. Sundström affirmed, the risk of abuse is mitigated by the use of special algorithms and filters to prevent screen abusive content both comment and photo. The other techniques reported by the Board Member as the tools to prevent this negative aspect are the design of the application, the development of a positive community, an active moderation of community and the Terms of Use and Community Guidelines. In addition, the user has the possibility to report images, comments, and chats and if the content receives three reports, it automatically disappears.

On the other hand, the purpose to be local and time sensitive is reinforced by the fact that VIMML’s contents are available on the platform just 48 hours. In this way, the users have to access only to fresh and updated contents the increases the value.

The team invests time and efforts to create an intuitive and minimal design in order to be attractive to the new generations of users. In fact, even if the right target is still under study, VIMML identifies the perfect user under the following characteristics: girl between 20 and 25 years old, student or early worker, single or curious to meet new people, traveler, and with a natural predisposition to experience new places (VIMML’s report).

Concerning what are the activity and the feature that VIMML offers, it can be said that the application follows the dominant design imposed by the main players in this market. VIMML is divided into three interfaces. The main one is the possibility discover and post photos. This interface constitutes the main screen of the application and through it, the user can see what the people around him are doing and posting. The platform gives the possibility to comment the picture and this represents the second interface. In the end, VIMML is provided a system of instant messaging that complete the spectrum of feature offered by the application.

The Board Member stated that the next release has the focus to be more local and now. The team is focussing how to get the application more dynamic and how to acquire more user in order to increase the local community. Indeed, the startup is managing to increase the user base and usage with new features. Moreover, as stated by the Inventor and Founding Partner Viktor Algurén, it can not be excluded that the next releases of the application will focus on the possibility for VIMML to be a social network that facilitates the communication between people and company.

4.1.2. Firm characteristics

VIMML is a startup incubated in Invencon. As stated by the Sale Manager of the company, Invencon is a private incubator that helps the entrepreneur to develop and launch a product on the market. Nevertheless, the company can provide a 100% consultant service for a fixed fee but, in the case of VIMML, it worked as an incubator. The manager continued by saying that Invencon is located in Karlstad and Gothenburg. The first office is focused on hardware development such as automotive industry products while the quarter in Gothenburg is specialized in digital solutions. The total amount of employee is 32, 11 in Gothenburg and 21 in Karlstad.

“We take an idea and bring it into the market”

Leif Sundström, VP Sales at Invencon, VIMML

As mentioned before, VIMML was born in 2015 from an idea of Viktor Algurén. In exchange for a percentage of equity shares, Invencon provides a 360° assistance from the idea development to launch on the market, from the development phase to the commercialization of the application. Nevertheless, Invencon constituted the team that composes the startup as illustrated in the following figure.

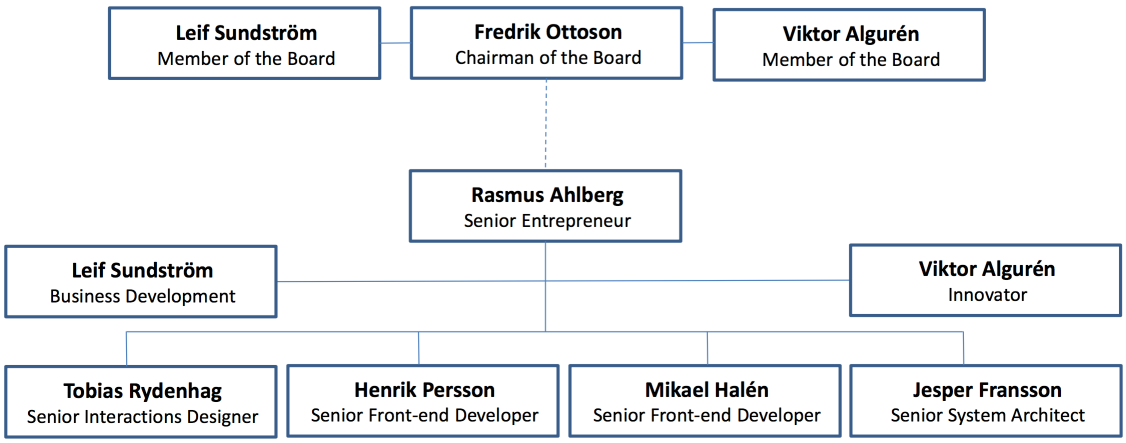


Figure 4.2: VIMML’s organizational chart until February the 1st - Source: VIMML’s report.

As emerges from the organizational chart, the Board is constituted by the founder and two private investors that became four after the 1st of February 2016 when two more private investors, respectively Mikael Brunnhagen (Private Investor) and Fredrik Johansson (Innovator), joined the startup. As well as being Member of the Board, both Leif Sundström and Viktor Algurén, constantly follow the development of the application, fulfilling the role of Business Development and Innovator. Rasmus Ahlberg is the Project Manager of Invencon and Product Owner. At the base of the scheme, the team of senior developers provided by the company within its network. Each of them have a particular role in the development phase as they created the application both for

iOS and Android. The objective of the Board Members is to bring VIMML successfully in the Swedish market. As stated by the Leif Sundström, Invencon is the typical seed financing incubator and it will support VIMML until the perfect market fit in Sweden and than let the startup go into the VC phase. The company already invested 2million SEK and it is currently looking for finding for the next releases in Sweden. In the end, the startup is outsourcing marketing competencies from partners such as Perfectly in order to find the perfect balance between offline and online marketing.

4.1.3. VIMML - App usage statistics

The analysis of the statistics of the application takes into the consideration the first trimester after VIMML was launched. As the Android version was developed and launched later, these first data take into consideration mainly iOS devices.

Belonging to iTunes Connect, the number of times the app on the App Store page was viewed on devices with iOS 8 or 9 TVOS, or later 40.104 times. Therefore, during the period between 15th of December 2015 - 15th of March 2016, VIMML's description and images have been viewed more than twenty-five thousand times even using iPad. The relevant number has been achieved in particular during the end of January. In fact, during those days, the team of VIMML made two pilot ads campaigns mainly across social media channels. However, as shown in figure 4.3, the rate remain stable during the whole trimester with an average of 4,23 visualization per day and two picks respectively of 10.445 and 11.578 views.

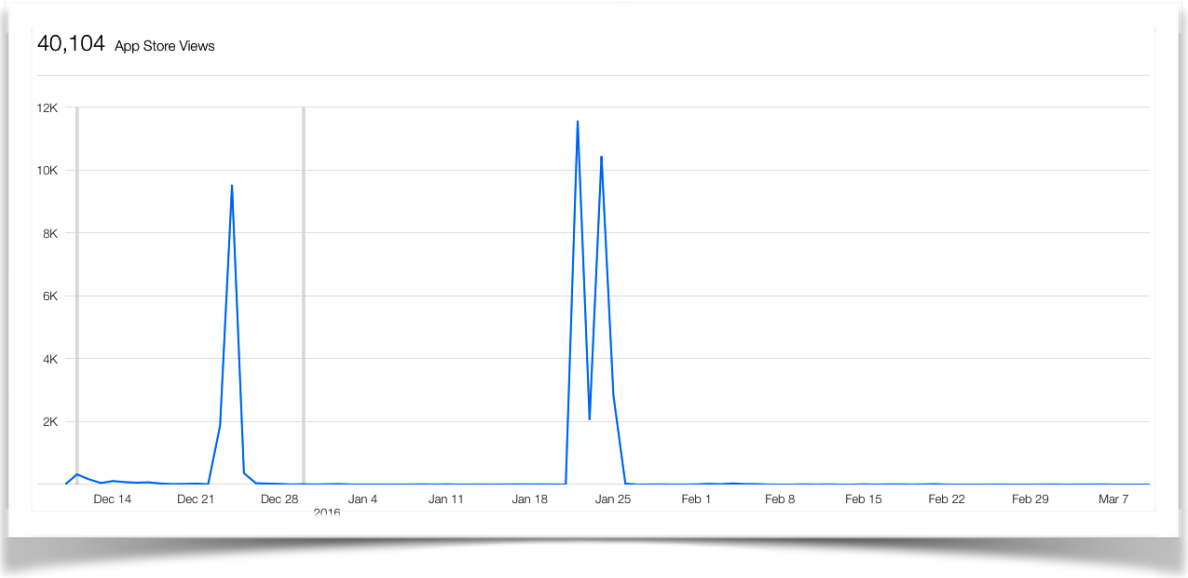


Figure 4.3: Number App Store's page views in the trimester December 2015 - March 2016. Source: iTunes Connect - VIMML's Account.

The following figure describes every single purchase apps on a device running iOS 8 or 9 TVOS, or later. It is evident that the downloading rate follows a similar path. It has been stable over the trimester, however, it presents to picks at the end of the January and the beginning of February. During those periods, the application has been download even 57 times per day.

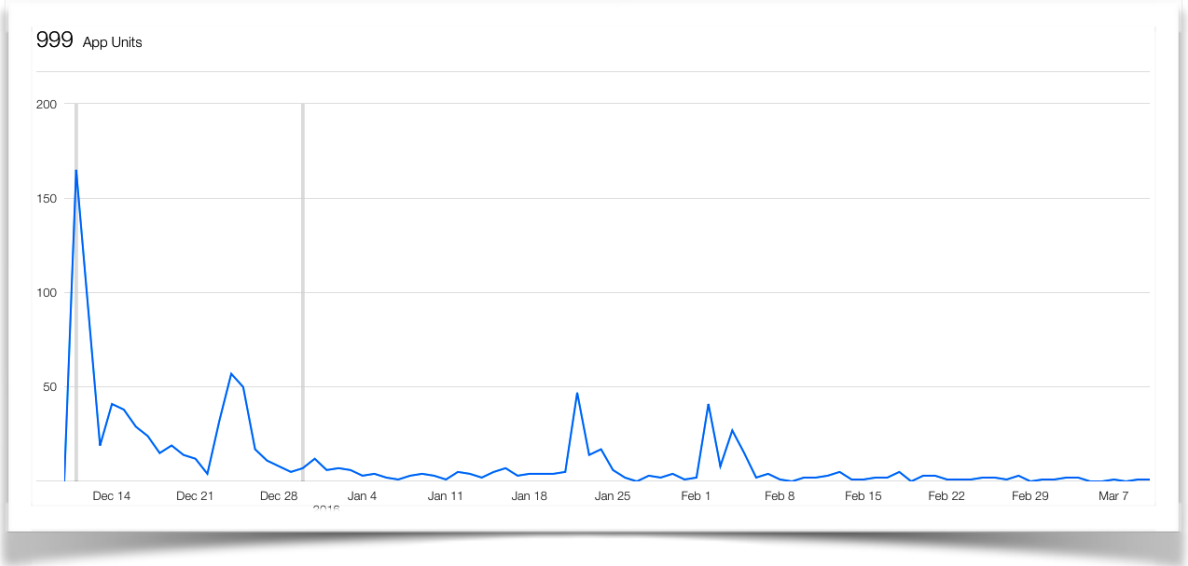


Figure 4.4: Number of Download in the trimester January-March. Source: iTunes Connect - VIMML's Account.

With iTunes Connect, it is possible to track the number of session since the launch of the application. The sessions represent the number of times the app has been used for at least two seconds. As it can be noticed from the figure 4.5, the application has been used in total 16.111 times until middle March. Each day, the application has been used several times, at least 68 sessions. The maximum per day has been reached the first days after the launch with more than 500 sessions. On the other hand, it has to be notified that these data only belong to “the user data that have agreed to share their information on use and diagnostics with app developers. This information includes installations, Sessions, Active Devices, Active in the last 30 days and Crash” (iTunes Connect, App Analytics). Therefore, in this case, the number of sessions is underestimated. Each session represents a conversion that is the most important parameter to understand if an application is used or not. In another word, the session constitutes the first signal of the usage of VIMML.

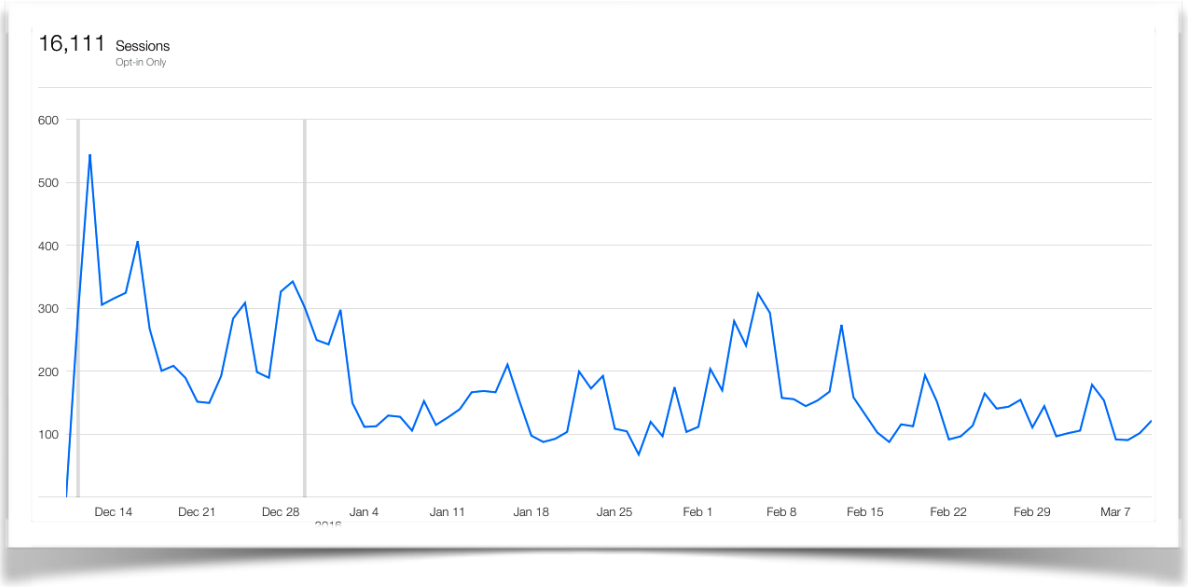


Figure 4.5: Number of Session in the trimester December 2015 - March 2016. Source: iTunes Connect - VIMML’s Account.

However, there are other events that can be considered a conversion. The following figure reports the most relevant for VIMML. The analytic tool used by the startup to monitor these activities is Mixpanel. The panel illustrates eight conversions that a user can make using VIMML from the most frequent to the

less. They are respectively App launched, Detail view shown, the camera started, comment posted, photo taken, a photo posted, photo deleted, chat message sent.

Figure 4.6: VIMML's Conversion events in the trimester December 2015 - March 2016. Source: Mixpanel - VIMML's Account.

From figure 4.7 emerges that the majority of the users launch the application very frequently during the day and zooming on pictures and comments. However, there is an important gap between this statistics and the number of times that the camera is started. Moreover, among them just half actually post the photo. On the other hand, it can be seen how posted comment are more frequent than photo posting. Instead, the instant message feature is really unpopular as infrequently used.

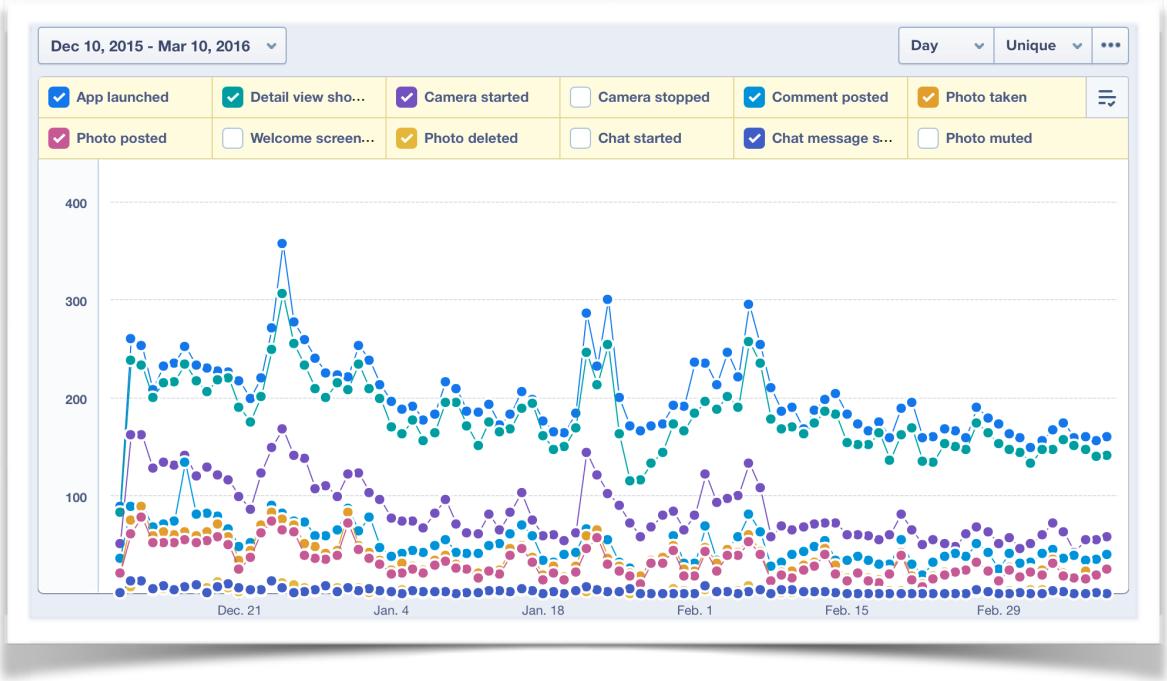


Figure 4.7: VIMML's Conversion events in the trimester December 2015 - March 2016. Source: Mixpanel - VIMML's Account.

This fact is confirmed by the "funnel study" reported in figure 4.8. In fact, it has been represented the three main events on VIMML such as photo, comment and message in comparison with the number of logins. Starting from the left, the people that effectively post a photo after the login give a 35,19% of completion rate. Just 48,17% of the once that started the camera. Instead, only 2,38% of the user that launch the app use the message feature. In the end, the number of users that post a comment after the login is around 42%.

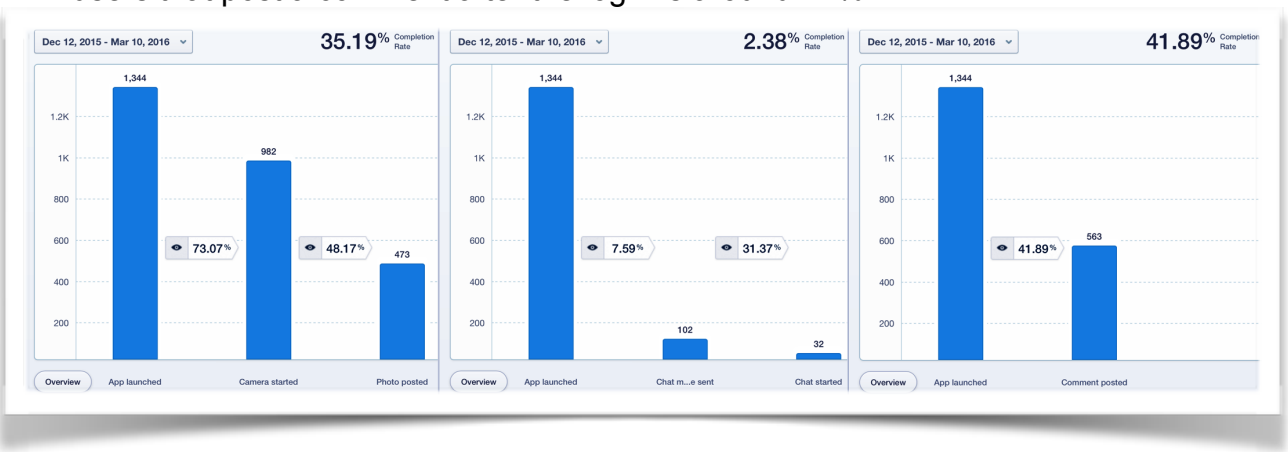
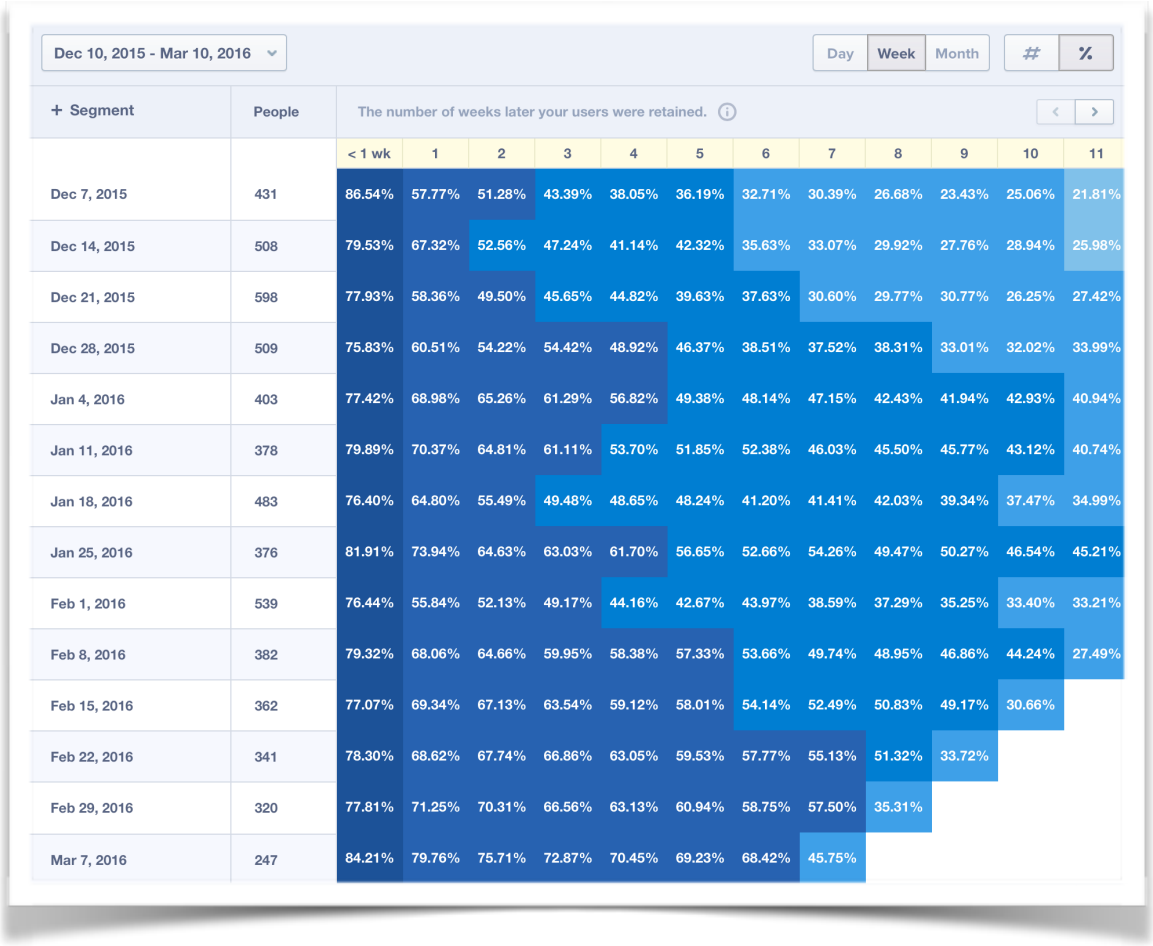


Figure 4.8: Funnel study in the trimester December 2015 - March 2016. Source: Mixpanel - VIMML's Account.

One of the most important metrics for a startup is the retention rate. It represents the percentage of a user that repeat the action after a certain period. The following figures show the retention rate of starting the app, posting a photo, leaving a comment and using the chat message.

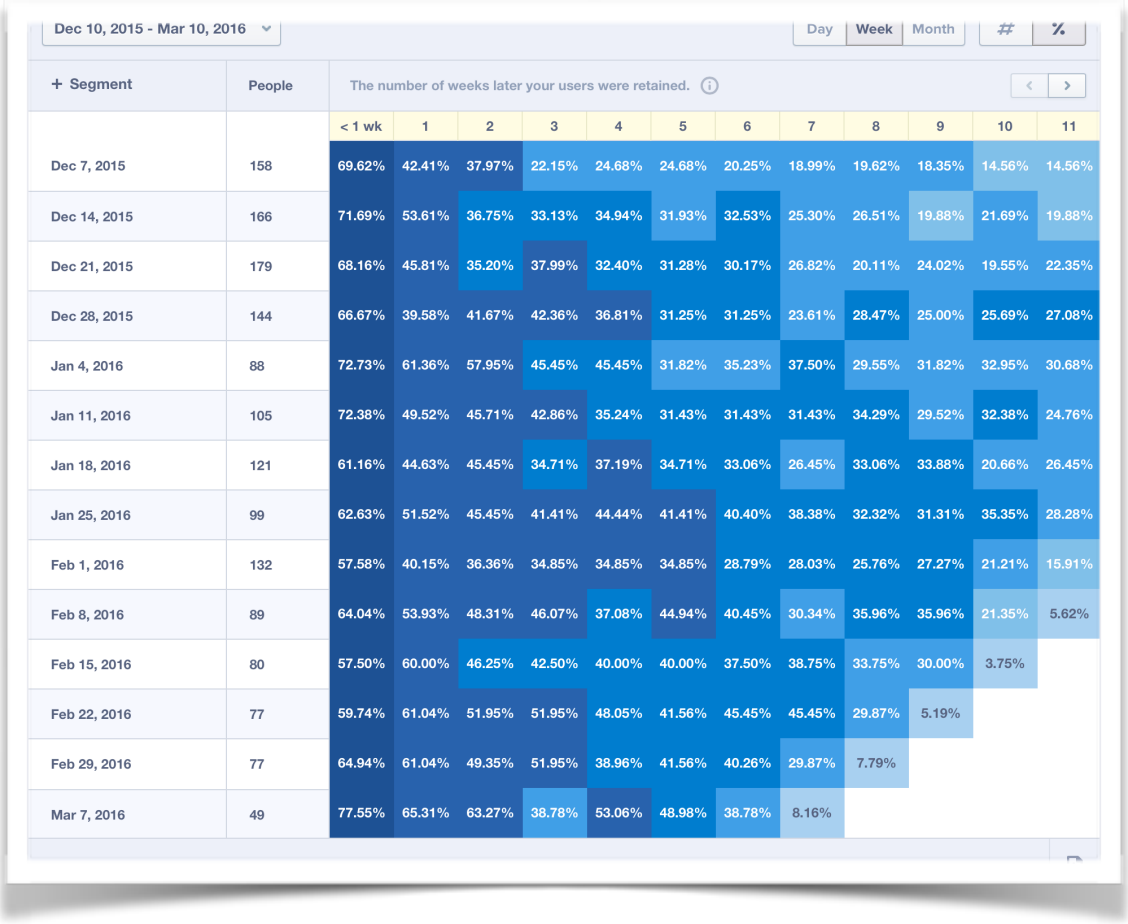


Dec 10, 2015 - Mar 10, 2016 | Day | Week | Month | # | %

+ Segment	People	The number of weeks later your users were retained.										
		< 1 wk	1	2	3	4	5	6	7	8	9	10	11
Dec 7, 2015	431	86.54%	57.77%	51.28%	43.39%	38.05%	36.19%	32.71%	30.39%	26.68%	23.43%	25.06%	21.81%
Dec 14, 2015	508	79.53%	67.32%	52.56%	47.24%	41.14%	42.32%	35.63%	33.07%	29.92%	27.76%	28.94%	25.98%
Dec 21, 2015	598	77.93%	58.36%	49.50%	45.65%	44.82%	39.63%	37.63%	30.60%	29.77%	30.77%	26.25%	27.42%
Dec 28, 2015	509	75.83%	60.51%	54.22%	54.42%	48.92%	46.37%	38.51%	37.52%	38.31%	33.01%	32.02%	33.99%
Jan 4, 2016	403	77.42%	68.98%	65.26%	61.29%	56.82%	49.38%	48.14%	47.15%	42.43%	41.94%	42.93%	40.94%
Jan 11, 2016	378	79.89%	70.37%	64.81%	61.11%	53.70%	51.85%	52.38%	46.03%	45.50%	45.77%	43.12%	40.74%
Jan 18, 2016	483	76.40%	64.80%	55.49%	49.48%	48.65%	48.24%	41.20%	41.41%	42.03%	39.34%	37.47%	34.99%
Jan 25, 2016	376	81.91%	73.94%	64.63%	63.03%	61.70%	56.65%	52.66%	54.26%	49.47%	50.27%	46.54%	45.21%
Feb 1, 2016	539	76.44%	55.84%	52.13%	49.17%	44.16%	42.67%	43.97%	38.59%	37.29%	35.25%	33.40%	33.21%
Feb 8, 2016	382	79.32%	68.06%	64.66%	59.95%	58.38%	57.33%	53.66%	49.74%	48.95%	46.86%	44.24%	27.49%
Feb 15, 2016	362	77.07%	69.34%	67.13%	63.54%	59.12%	58.01%	54.14%	52.49%	50.83%	49.17%	30.66%	
Feb 22, 2016	341	78.30%	68.62%	67.74%	66.86%	63.05%	59.53%	57.77%	55.13%	51.32%	33.72%		
Feb 29, 2016	320	77.81%	71.25%	70.31%	66.56%	63.13%	60.94%	58.75%	57.50%	35.31%			
Mar 7, 2016	247	84.21%	79.76%	75.71%	72.87%	70.45%	69.23%	68.42%	45.75%				

Figure 4.9: App starting retention rate in the trimester December 2015 - March 2016. Source: Mixpanel - VIMML's Account.

Using the data provided by the panel, it can be seen how people use the application over time. For example, looking at the week from the 4th of January, the percentage of users that repeat the action of launching the application decreases, reaching, 11 weeks later, 40,94% of the initial number. Usually, after the fifth week, the rate remarkably decreases and in week 10 the second high drop. Once again, the end of January appears more constant, probably for the ads campaign.

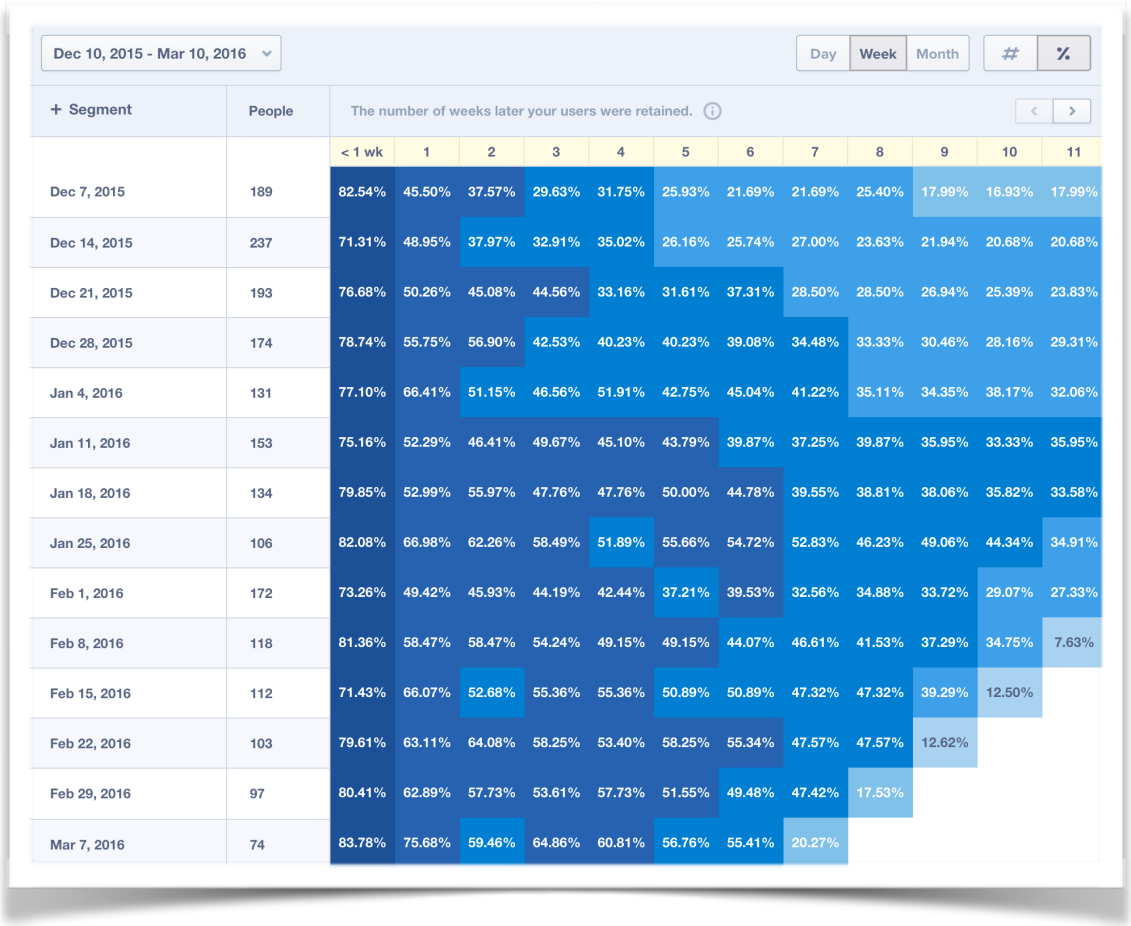


	People	< 1 wk	1	2	3	4	5	6	7	8	9	10	11
Dec 7, 2015	158	69.62%	42.41%	37.97%	22.15%	24.68%	24.68%	20.25%	18.99%	19.62%	18.35%	14.56%	14.56%
Dec 14, 2015	166	71.69%	53.61%	36.75%	33.13%	34.94%	31.93%	32.53%	25.30%	26.51%	19.88%	21.69%	19.88%
Dec 21, 2015	179	68.16%	45.81%	35.20%	37.99%	32.40%	31.28%	30.17%	26.82%	20.11%	24.02%	19.55%	22.35%
Dec 28, 2015	144	66.67%	39.58%	41.67%	42.36%	36.81%	31.25%	31.25%	23.61%	28.47%	25.00%	25.69%	27.08%
Jan 4, 2016	88	72.73%	61.36%	57.95%	45.45%	45.45%	31.82%	35.23%	37.50%	29.55%	31.82%	32.95%	30.68%
Jan 11, 2016	105	72.38%	49.52%	45.71%	42.86%	35.24%	31.43%	31.43%	31.43%	34.29%	29.52%	32.38%	24.76%
Jan 18, 2016	121	61.16%	44.63%	45.45%	34.71%	37.19%	34.71%	33.06%	26.45%	33.06%	33.88%	20.66%	26.45%
Jan 25, 2016	99	62.63%	51.52%	45.45%	41.41%	44.44%	41.41%	40.40%	38.38%	32.32%	31.31%	35.35%	28.28%
Feb 1, 2016	132	57.58%	40.15%	36.36%	34.85%	34.85%	34.85%	28.79%	28.03%	25.76%	27.27%	21.21%	15.91%
Feb 8, 2016	89	64.04%	53.93%	48.31%	46.07%	37.08%	44.94%	40.45%	30.34%	35.96%	35.96%	21.35%	5.62%
Feb 15, 2016	80	57.50%	60.00%	46.25%	42.50%	40.00%	40.00%	37.50%	38.75%	33.75%	30.00%	3.75%	
Feb 22, 2016	77	59.74%	61.04%	51.95%	51.95%	48.05%	41.56%	45.45%	45.45%	29.87%	5.19%		
Feb 29, 2016	77	64.94%	61.04%	49.35%	51.95%	38.96%	41.56%	40.26%	29.87%	7.79%			
Mar 7, 2016	49	77.55%	65.31%	63.27%	38.78%	53.06%	48.98%	38.78%	8.16%				

Figure 4.10: Photo posting retention rate in the trimester December 2015 - March 2016. Source: Mixpanel - VIMML's Account.

The figure 4.10 shows the retention rate of posting a photo over the first trimester. Here, even if the decreasing trend it is similar to the one in figure 4.9, it appears faster. In fact, the first high drop is at week 4 and the second at week 9.

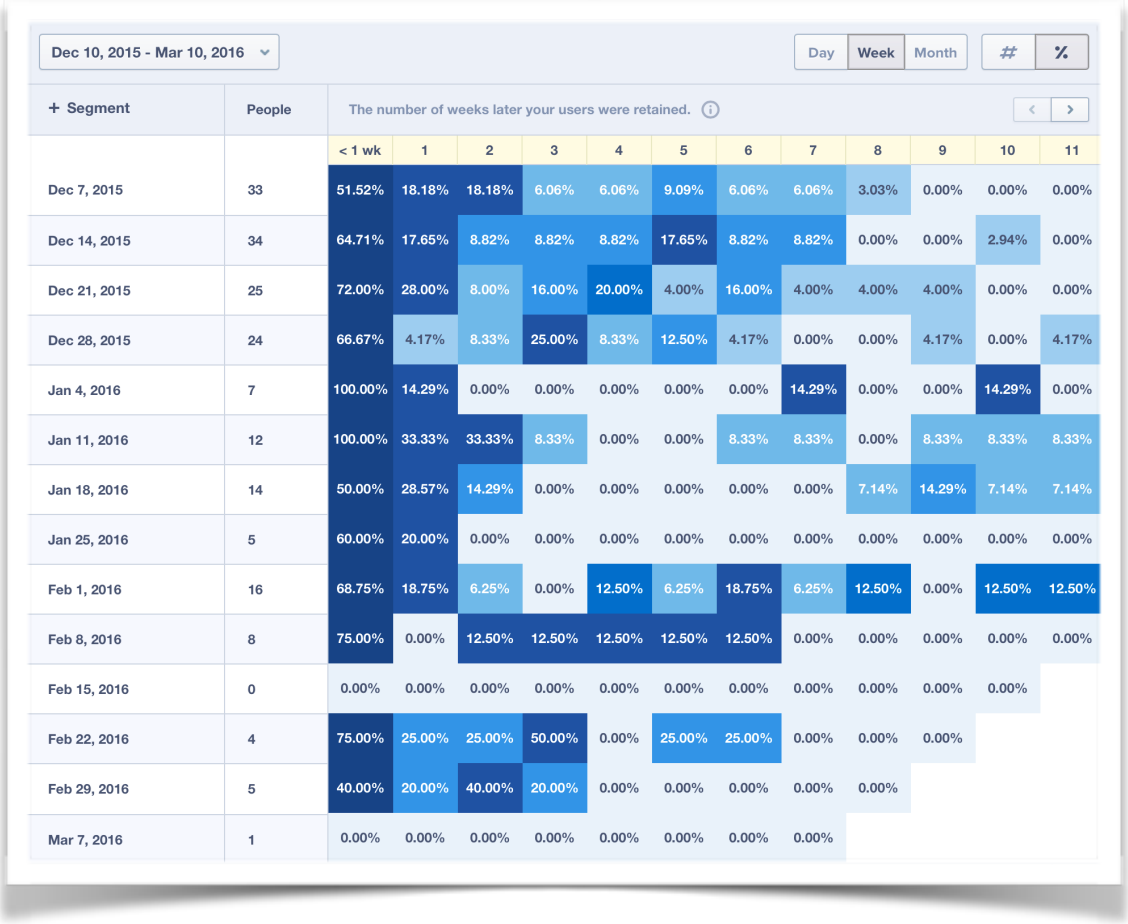
On the other hand, figure 4.11 shows a trend more similar to the App starting panel. It represents the retention rate of the users that post comment.



	People	< 1 wk	1	2	3	4	5	6	7	8	9	10	11
Dec 7, 2015	189	82.54%	45.50%	37.57%	29.63%	31.75%	25.93%	21.69%	21.69%	25.40%	17.99%	16.93%	17.99%
Dec 14, 2015	237	71.31%	48.95%	37.97%	32.91%	35.02%	26.16%	25.74%	27.00%	23.63%	21.94%	20.68%	20.68%
Dec 21, 2015	193	76.68%	50.26%	45.08%	44.56%	33.16%	31.61%	37.31%	28.50%	28.50%	26.94%	25.39%	23.83%
Dec 28, 2015	174	78.74%	55.75%	56.90%	42.53%	40.23%	40.23%	39.08%	34.48%	33.33%	30.46%	28.16%	29.31%
Jan 4, 2016	131	77.10%	66.41%	51.15%	46.56%	51.91%	42.75%	45.04%	41.22%	35.11%	34.35%	38.17%	32.06%
Jan 11, 2016	153	75.16%	52.29%	46.41%	49.67%	45.10%	43.79%	39.87%	37.25%	39.87%	35.95%	33.33%	35.95%
Jan 18, 2016	134	79.85%	52.99%	55.97%	47.76%	47.76%	50.00%	44.78%	39.55%	38.81%	38.06%	35.82%	33.58%
Jan 25, 2016	106	82.08%	66.98%	62.26%	58.49%	51.89%	55.66%	54.72%	52.83%	46.23%	49.06%	44.34%	34.91%
Feb 1, 2016	172	73.26%	49.42%	45.93%	44.19%	42.44%	37.21%	39.53%	32.56%	34.88%	33.72%	29.07%	27.33%
Feb 8, 2016	118	81.36%	58.47%	58.47%	54.24%	49.15%	49.15%	44.07%	46.61%	41.53%	37.29%	34.75%	7.63%
Feb 15, 2016	112	71.43%	66.07%	52.68%	55.36%	55.36%	50.89%	50.89%	47.32%	47.32%	39.29%	12.50%	
Feb 22, 2016	103	79.61%	63.11%	64.08%	58.25%	53.40%	58.25%	55.34%	47.57%	47.57%	12.62%		
Feb 29, 2016	97	80.41%	62.89%	57.73%	53.61%	57.73%	51.55%	49.48%	47.42%	17.53%			
Mar 7, 2016	74	83.78%	75.68%	59.46%	64.86%	60.81%	56.76%	55.41%	20.27%				

Figure 4.11: Comment posting retention rate in the trimester December 2015 - March 2016. Source: Mixpanel - VIMML's Account.

In the end, the last panel of figure 4.12 shows the unpopularity of the chat feature even related to the other events that can be done on the app.



Dec 10, 2015 - Mar 10, 2016 | Day | Week | Month | # | %

+ Segment	People	The number of weeks later your users were retained.										
		< 1 wk	1	2	3	4	5	6	7	8	9	10	11
Dec 7, 2015	33	51.52%	18.18%	18.18%	6.06%	6.06%	9.09%	6.06%	6.06%	3.03%	0.00%	0.00%	0.00%
Dec 14, 2015	34	64.71%	17.65%	8.82%	8.82%	8.82%	17.65%	8.82%	8.82%	0.00%	0.00%	2.94%	0.00%
Dec 21, 2015	25	72.00%	28.00%	8.00%	16.00%	20.00%	4.00%	16.00%	4.00%	4.00%	4.00%	0.00%	0.00%
Dec 28, 2015	24	66.67%	4.17%	8.33%	25.00%	8.33%	12.50%	4.17%	0.00%	0.00%	4.17%	0.00%	4.17%
Jan 4, 2016	7	100.00%	14.29%	0.00%	0.00%	0.00%	0.00%	0.00%	14.29%	0.00%	0.00%	14.29%	0.00%
Jan 11, 2016	12	100.00%	33.33%	33.33%	8.33%	0.00%	0.00%	8.33%	8.33%	0.00%	8.33%	8.33%	8.33%
Jan 18, 2016	14	50.00%	28.57%	14.29%	0.00%	0.00%	0.00%	0.00%	0.00%	7.14%	14.29%	7.14%	7.14%
Jan 25, 2016	5	60.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Feb 1, 2016	16	68.75%	18.75%	6.25%	0.00%	12.50%	6.25%	18.75%	6.25%	12.50%	0.00%	12.50%	12.50%
Feb 8, 2016	8	75.00%	0.00%	12.50%	12.50%	12.50%	12.50%	12.50%	0.00%	0.00%	0.00%	0.00%	0.00%
Feb 15, 2016	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Feb 22, 2016	4	75.00%	25.00%	25.00%	50.00%	0.00%	25.00%	25.00%	0.00%	0.00%	0.00%		
Feb 29, 2016	5	40.00%	20.00%	40.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
Mar 7, 2016	1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%				

Figure 4.12: Chat messaging retention rate in the trimester December 2015 - March 2016. Source: Mixpanel - VIMML's Account.

Belonging to Fabric, the third analytics tools used by the startup to monitor in real-time the user usage data, the monthly active users are on average around 400 with a reduction of 0,3% in comparison to the previous month. As the data are monitored in real time, the analysis takes into consideration the trailing 30 days period. Even if the time frame is different from the one unanalyzed before, it is still relevant in order to understand the usage of the users of VIMML.

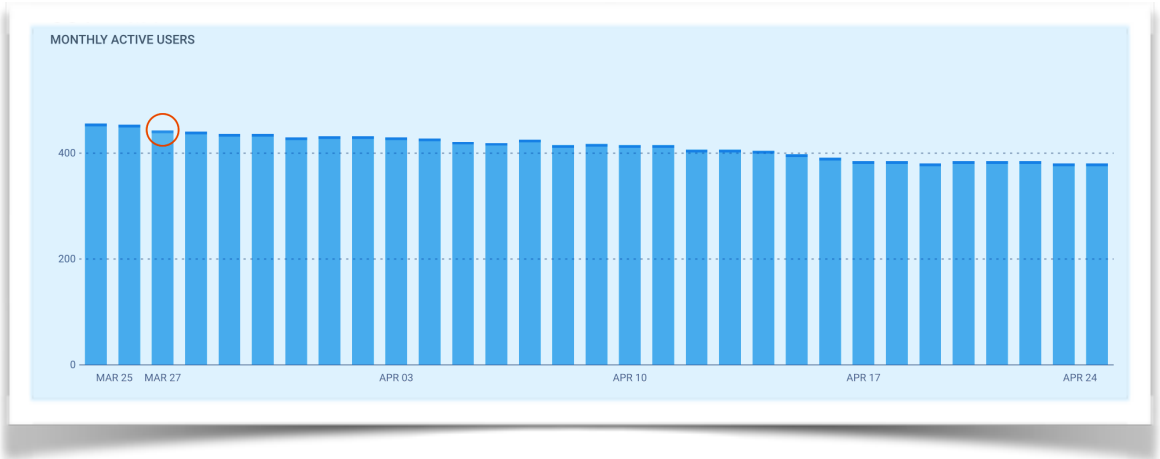


Figure 4.13: Monthly active users in the last 30 days. Source: Fabric - VIMML's Account.

Figure 4.14 illustrate the total number of sessions across all app installations on a given day. During those days, the platform counted the number of logins for each day underlining a trend. In fact, the application records a higher number of sessions during the end of the week, in particular on Friday.

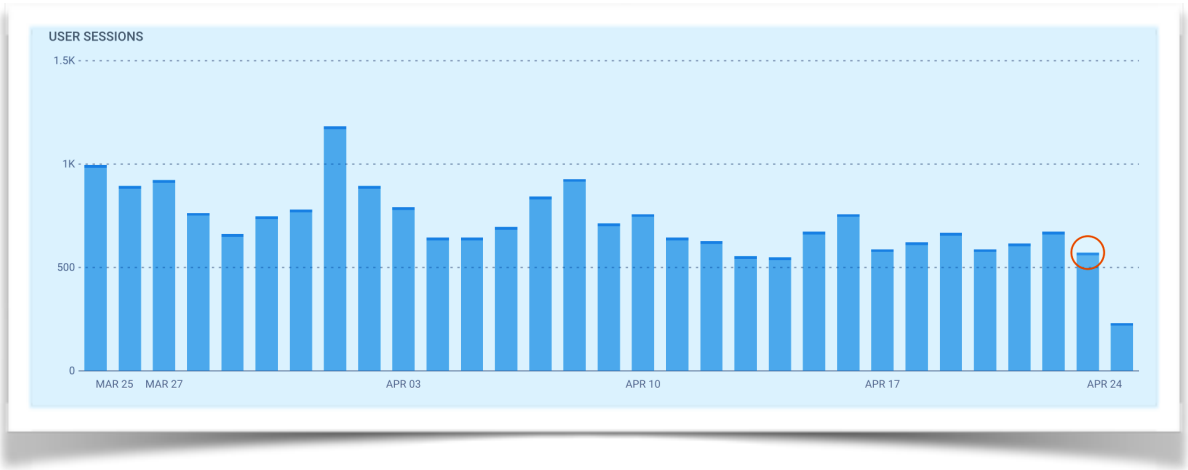


Figure 4.14: Session in the last 30 days. Source: Fabric - VIMML's Account.

Moreover, the software reports other three important data regarding the usage of an application such as the average session per user, the time spent in the app and the median session length. The first metric represents the number of sessions divided by the number of daily active users. It reports that on average, a VIMML's user, login around five times per day. The maximum time spent on the application has been reached a Friday with 3:40 min. In the end, the last metric that expresses "the median session length seen on a given day across all daily active users" (Fabric) underlines that the higher values are registered during Friday, Saturday and Sunday.

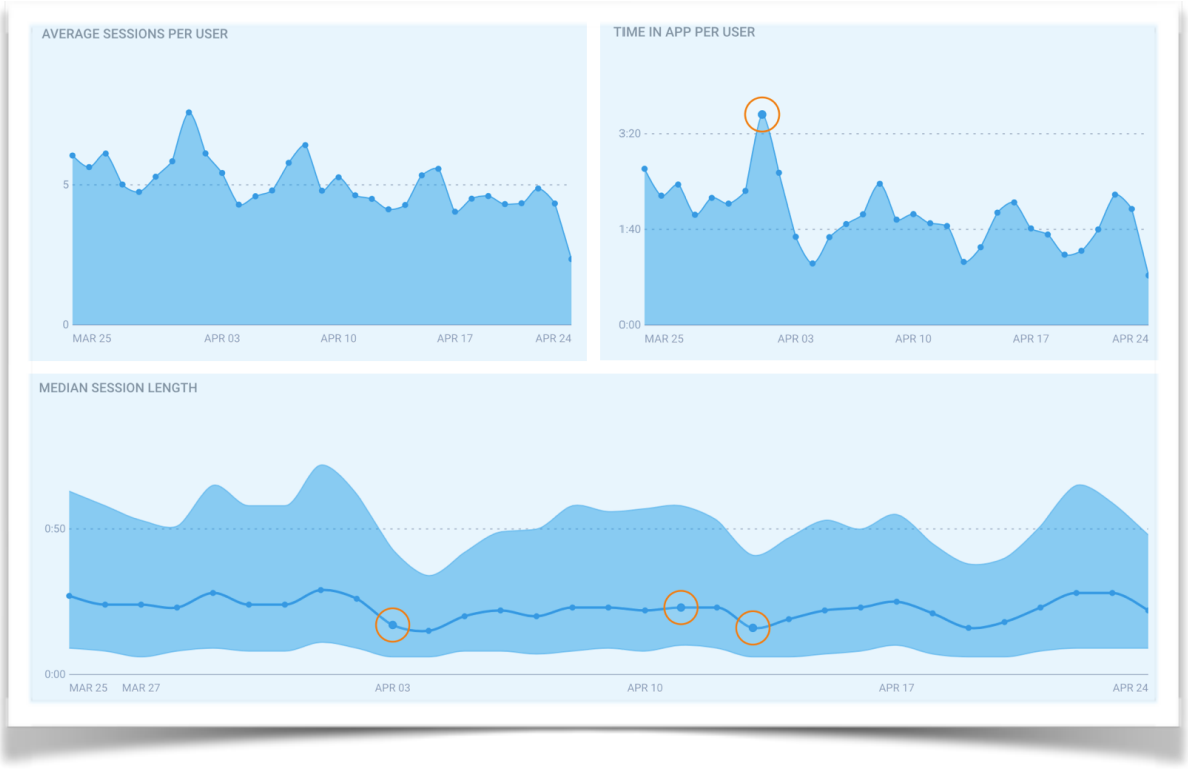


Figure 4.15: Average session per user, time in the app and the median session length in the last 30 days. Source: Fabric - VIMML's Account.

4.2 EXTERNAL FINDINGS

The findings related to the user experience of VIMML and the social network, in general, have been collected during the interviews with three active users and have been reported in the most authentic way possible.

The users that constitute the sample have a different background, age, and social status. This fact is reflected in the way in which they use social networks. The following profile descriptions have the goal to extrapolate some evidence from the user experience of those users.

Anna is a 21 years old Swedish girl from a little town in Sweden. She is a worker and she currently uses several social networks. In fact, she has an account on Facebook, Twitter, and Pinterest. However, the ones that she uses more is Facebook and Twitter. Anna uses Facebook mainly for her work and

Twitter to easily get some information and news. She prefers to use Twitter to be updated with the latest news rather than reading the article in the newspaper as it gets directly to the point. The characteristics preferred by Anna regarding Facebook are the possibility to get in touch with the different workgroups she is working with, the facility in which it is possible to create pages and events and the user-friendly layout. Moreover, she underlined the fact that it can be both professional and personal as one of the main positive characteristics. Regarding Twitter, she really likes the layout for its simplicity and synthesis. The fact that a user is allowed to write just a determined amount on letters, in Anna's opinion, makes the information clear and focused on the main facts. Therefore, the user logins on those platforms mainly to be updated on the news or to get information. It corresponds to the need called "Trendiness". Talking about VIMML's experience, Anna started using the platform few months ago. She got aware of the existence mainly from her friends that were using VIMML. People started to talk about it and she was curious about what VIMML was. Indeed, she immediately downloaded the application, without waiting too much before taking the decision to install it. This fact is connected to her attitude to downloading a free application with the minimum characteristic information needed. In fact, even if she had some general information about the features of VIMML, she did not spend too much time looking for articles or tutorial of the new social network. Nevertheless, she requires some general information before using a social network. In her opinion, VIMML is perfect to respond to the need for entertainment as the user can understand what it is happening around him. The constant flow of contents from the users around her is the features that Anna perceives as the most important but she has some doubts about the anonymous characteristics. She said that, even if there are some tools to avoid abuses, it is still too risky to be completely anonymous. It prevents her to post comment and pictures at least at this early stage. However, if the application will be used more for sports events and festival, she would really start using it more often. She likes the layout and she thinks that it is very user-friendly as she compared VIMML to his preferred social network. However, she defines herself as a not active social network user. Therefore, VIMML does not really fit her

need to be updated on the news but she added that if the user base will get bigger, she probably would find more value in this social network as she can get aware of what it is happening around her. In fact, she complains the length of the feed as she can only scroll down twenty pictures. Therefore, the main problem for her is the fact that VIMML has too few users and moreover, as VIMML has time sensitive content and she logins once a week, she loses a lot of contents. She has never posted any content as she is scared of anonymity. For Anna, this represents a barrier to the use of VIMML. She likes the idea of VIMML but she does not know how to use it. She would prefer an essential profile in order not to be 100% anonymous. She would like to have the possibility to connect a photo with a person. It would seem safer in her opinion. On the other hand, she would VIMML to be closer to the local event as she would find interesting to have different prospective of the same match for example. Photo and comment are preferred respect the messaging chat. In the end, she would work on the design because it is too simple.

Enrich is a worker of 31 years old from Karlstad. He is an active user of a social network. In fact, he has an account on Facebook, Instagram, and Snapchat. The favorite and most used is the second one as Enrich appreciates the fact that he can follow VIP or famous sportive athletes. He likes to be updated on the latest news of them and layout of the social network. As well as Instagram is good to use Facebook. In Enrich's opinion, the latter is more personal and more useful to interact with people you know with. The reason why he downloaded these two platforms has been found in the personal sources. In fact, Enrich's friends and colleges were adopting it and he felt the need to get on board with them. He did it without basically getting any pieces of information. Talking about the VIMML's experience, the Enrich expresses his concern about the quantity of users on the platform. In fact, few people on VIMML means few contents and therefore Enrich only see the same few person posting. It is too narrow on his view. The decision to download the application was taken instantly, immediately after the existence awareness. He did not take any pieces of information about the characteristics of the social network. "A new thinking" and "a new style" are

the expressions used by the interviewed to describe what he likes of VIMML. Indeed, he finds interesting the anonymity of the App. While Facebook is personal and Instagram impersonal, VIMML gives to the users a totally new experience allowing them to post photos and comments in a totally anonymous way and enabling to get in contact directly with the person who post without knowing his or her identity. Regarding the need analysis, it emerges that social needs and personal needs have been the most active. In fact, once he eared about the App, he felt the need to be part of this shake-up. Moreover, he was boosted by his curiosity. He was curious about something new on the market. Enrich finds similarity in the user experience with Instagram. For him, VIMML is really user-friendly and intuitive. It follows the dominant design of the most known social network. Answering to the question: “Would you prefer to try the social network before downloading it?”, the interviewed explains how it would be useless. He would have download it anyway for his curiosity and the fact it is local. This confirms his not attitude to not look at the characteristics of the application before the download. Regarding the actual usage of the application, Enrich is not using it so frequently as he needs more users the get involved. Actually, he is just scrolling down the timeline but not actively participating with some posts. In the opinion of the user, VIMML needs to do more advertising in order to get more users. In the end, he suggests adding the possibility to change the location in order to see contents from a different city.

Richard is a worker of 32 years old from Sweden. Even if he is not addicted to the social network but he tried many. The user has long experience on the social network since he uses them just for entertainment. In his opinion, there is not the need to take manny information or to have a trial session before using another social network. Regarding the experience of VIMML, the interviewed show immediately his enthusiasm about this new platform. The information of the existence of this new platform came from friends and he downloaded VIMML right away. He did not need many pieces of information but just the feedback of his friends. The interviewed can be considered an early adopter as he started to use the application from the very beginning. Despite his attitude

about the social network, he did not feel the need to be part of a group or to follow some trend, he uses social just for personal enjoyment and entertainment. In general, his opinion about social network and the people who use social is negative. In fact, he does not like the fact to share private content just to show what they are doing. Belonging to this argumentation, he really likes VIMML as it is anonymous. He was really curious to use the platform as he thinks the other social quite old. Richard is really active on the platform and he really likes the fact that you can not know the people who post the photo. He affirms that in some sense he has not the feeling to be on a social network as you can not know the information of everyone. He has the feeling that VIMML is something connected with the type of communication that date back before the advent of a social network. He experienced all the features, from the photo posting to comment posting but even the chat feature. In fact, he used the application to contact with people and go with them to have a beer. He did it more than once. Richard likes the fact he can know what it is happening around him and to get in contact easily with new people. At the beginning, he uses on a daily basis and not he decreases the number of session at three per week. More people on the platform is the main issue and new features would be something appreciated. He suggests adding the possibility to classify the content the users post on VIMML in some general classification.

5. ANALYSIS

5.1 Key theoretical and empirical findings

From what emerges from the literary reviews, the theory lacks an updated model of diffusion of innovation in the social media market. In fact, as it is illustrated in the second half of chapter four, the model that exploit the topic of social networks refers mainly to the needs that incentives the user to adopt the social media rather than creating a new model of innovation diffusion that describe the customer behavior. On the other hand, the original models that actually describes the way in which an innovation is adopted date back to a period in which social networks do not already exist. Moreover, the evidence emerged in the empirical findings make a revision of the model needed. In fact, the users detailed explained the process by which they decided to download VIMML and several insights comes out from their experiences. First of all, it results clear as in all the phases the process were influenced by their needs. Looking at the needs classification made by Zolkepli et al. (2015), several needs have been identified among each phases by the author. However, the main empirical finding emerged to be the fact that the users did not need to inform about the characteristics of VIMML before downloading it. The decision is immediately after the awareness of the existence of the platforms as the latter comes from a personal source. This aspects and the other founded in the empirical research will be deeply illustrated in the following paragraphs in order justify the model changes. However, the output requires farther researches as mentioned in the research methodology chapter. In the end, in the case of VIMML, the attempt is to slightly modify the model described in the literature and to merge it with all the different prospectives in order to better understand the social network diffusion phenomena in the VIMML's study case. The next paragraphs describes the steps and the paths that explain the adoption for the case study. All the components of this new model emerge from the practice of VIMML's case study and its user interviews. Indeed, the model can be applied

to this application but it can be generalized, considering the limitations mentioned in the Research Method Chapter, to the existing social networks and the once will come to the market. As we are going to see, VIMML has been used both to develop the new version of the model both as a case study for the model itself.

5.2. The Model for VIMML

Having in mind all the theoretical framework of the diffusion of innovation, the needs on the basis of social network usage and the empirical findings emerged both from the interviews and the usage data of VIMML, the new model is described in detail in this paragraph. It has been developed in order to best represent the process in which the new social network is adopted and therefore how it diffuse in the market. Indeed, the total lack of a dedicated model in the literature has been a great incentive as well as the inadequacy of existing models. As mentioned before, the Rogers model, focusing on the users experience, does not represent the process by which new social networks are adopted. It, although still valid for the majority of products on the market, does not reflect the characteristics inherent in these platforms. In addition, from the literature devoted to social networks, it can be noticed that they respond to the satisfaction of some social needs and therefore the new model merges these two aspects: new adoption path and need influence. Following these considerations and Rogers recommendations, the model is represented in figure 5.1 and figure 5.2:

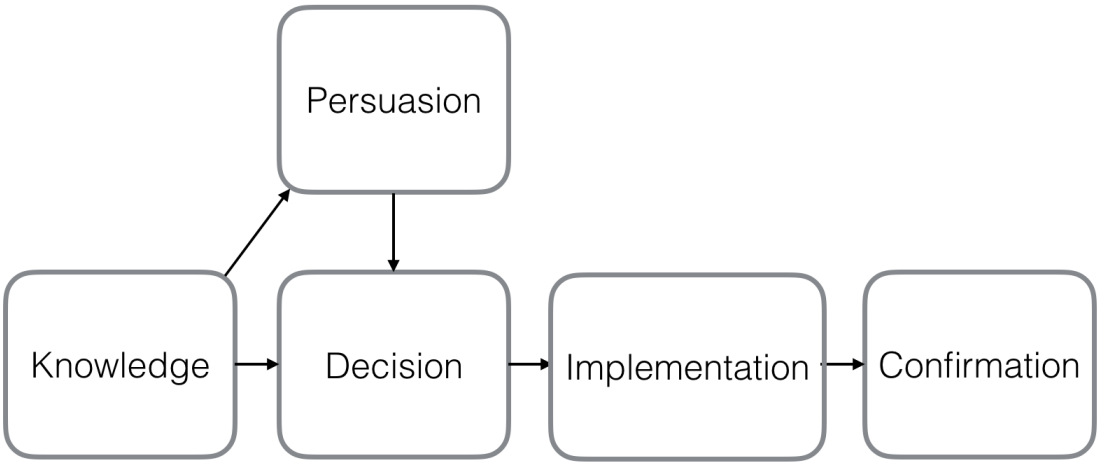


Figure 5.1. The social network innovation diffusion model. Source: Self-editing. From the Model of Five Stages in the Innovation-Decision Process. Sources: Diffusion of Innovations, Fifth Edition by Everett M. Rogers

As it can be seen from the figure, the social network adoption step follow a slightly different path respect to the traditional model as it is not linear. This new path and the variations that characterize each step are going to be analyzed in details focusing on the influence that the needs, underlined in the work of Zolkepli et al. (2015), have on each phase.

The Knowledge Phase

This stage remains one of the most important steps even in the adoption of social networks. It represents the moment in which the user becomes aware of the existence of the new social network. This step is crucial in the diffusion process of a new social platform because without a widespread distribution a Social can not exist. On the other hand, as emerged mainly from the user experience of VIMML and of the other most famous platforms, the social network knowledge phase has some particularities in comparison with other types of innovation. KOÇAK et al. (2013) claimed that the direction and the source of the information changed. In fact, nowadays, the user, through social networks and other new forms of communication such as video sharing and blogging, has no more the problem to reach the information because it is the

information that reaches the individual. Reporting the example of one of the user interviewed, if we think about a catastrophic event such as an earthquake, it is more likely that he gets aware of that while you are on Facebook rather than reading a newspaper. Moreover, most of the time, the source is not an official one such as newspaper or the company itself. In fact, individuals get aware of the existence of a new product or service from some social interactions or viral contents that spread on the web. It is an important change in the way in which innovation spread. The user knows before who use the innovation and only after the what it is. From Rogers' model emerges that the how-to-knowledge (the knowledge needed to understand how the new technology works) is the most important knowledge in this phase. However, with the advent of social media, individuals get aware of the existence of an innovation from the fact that a friend or a followed celebrity is using it. Indeed, it makes the user prone to use it without mattering how it works. In particular, regarding the adoption of a new social network, the user is attracted by personal source feedbacks rather public one. Besides awareness-knowledge, how-to-knowledge, and principles-knowledge (Sahin, 2006), it can be included who-to-knowledge, referring to an amount of people around you that use the innovation and constantly give feedbacks on that. It is out of doubt that the bigger your network it is, the faster your are exposed to the new social network.

Despite all these, it is important to mention the needs that influence this step. It has been reported some personal and social needs as the knowledge stage is influenced by internal and external sources. Trendiness, Interactivity, Social Influence and Social Interaction are the needs underlined by the users in the case of VIMML. The first affects the awareness of the existence of the social network as the person who needs to be updated with the latest trends is more likely to adopt new social media. As reported by Zolkepli et al. (2015) "trendiness is considered as part of a lifestyle" (Zolkepli et al., 2015) and the act of adopting the social network is reasoned by increasing social identity. The more interaction a user has the more likely he notice the existence of a new social network. This is the reason why Interactivity in this stage is particularly

important. However, “the degree to which a consumer perceives that important others believe he or she should use certain technology” (Venkatesh, Morris, Davis, & Davis, 2003) and “communication that occurs between two or more individuals, in which each person is aware of both his or her own membership in the group” (Bagozzi, Dholakia, & Pearo, 2007) are the needs that most influence this phase. They are respectively Social Influence and Social Interaction.

In the end, the knowledge phase preserves its position and importance in the digital era. However, with the advent of social networks, this step changes the way and sources of pieces of information. It became bigger as it involves more references and faster as the digital era is characterized by a high degree of knowledge transfer. The user is exposed to a greater volume of information, which do not always meet the minimum quality standards. Nevertheless, the most important differences from the past and new model regard the connection to the following phase. In fact, the steps do not follow a linear path. Therefore, the Knowledge stage is not necessary followed by the Persuasion one. The information seeking process done by the user in the perception stage is no more needed. As it will be described later, the user is influenced by his network and, from the knowledge stage, it can directly pass to the Decision stage by choosing to adopt the social network. This is an important change and it has been verified in the interviews process.

The Persuasion Stage

As mentioned earlier this step decreased its importance. For what emerges from the interviews, when it comes to social network, it is not that important to grasp much information about the features and the peculiarities of the new platform for several reasons. First of all, it has been settled a dominant design that more or less has been adopted by all the social platforms. Secondly, the developers look for simplicity and create social networks really user-friendly. Thirdly, it is always free. Then, it is reasonable to say that, at the list in a first

passage, it is more important how many of your friends have this new platform rather than what it is like. This important concept will be used in all the description of the model as it plays a crucial role in the diffusion of a new social network as well as the findings of the paper from KOÇAK et al. (2013).

In this stage, the needs that mostly affects the persuasion stage end, in particular, the five innovation characteristics are reported by Zolkepli et al. (2015). They are respectively: enjoyment, entertainment, social influence, social interaction, companionship, belongingness, playfulness, and escapism. They involve both personal, social and tension release needs. In fact, a social network must entertain the user giving pleasure time but it plays an important role in the dynamic with external factors such as groups, friends, and networking.

This step is often climbed over as many users do not need to check for the characteristics of a social network. They require some basic information that can be easily reached from an informal conversation with a friend in order to decide to download the social application. In the case of VIMML, this attitude is particularly evident as none of the users really inform themselves about the features owned by the application. From the users interviews emerge that this behavior is certainly valid for VIMML but it has been used even in the other social network adoption process. Therefore, it is reasonable to affirm that the Persuasion stage, at least in the social network market and in particular for the case study, is no more relevant and the user, from the Knowledge stage, can decide to pass over directly to the decision stage. On the other hand, it can be noticed that there are still some users that do inform before the downloading. In fact, from what emerges from the data of iTunes Connect, this phase can not be deleted as some individuals still look at the characteristic described on the iTunes page. Therefore, the user can both skip the Persuasion phase going directly to the Decision step or follow the normal path of the original model.

The Decision Stage

In the end, belonging to Rogers (2003) the user can make his decision to adopt or reject the new social both by passing through the persuasion stage or not. It is important to emphasize this fact as the decision is no more processed with all the pieces of information you where looking for in the past. Now the most relevant things to know is: how many of your friend already adopted the new social network. This leads to the fact that the decision can be made without awareness of the characteristics just for entertainment or curiosity. This fact is particularly evident if we notice that Friday and Saturday are the days of the week in which iTunes Connect registers more downloads and more sessions. In line with the theory of Rogers (2003), from the empirical findings appears that the real decision is made in the confirmation stage when the individual, aware of all the characteristics, decide or not implement his adoption.

As claimed by the users the needs to “be part of” something “to avoid feelings of loneliness and alienation” (Kohut, 1984) and “the feeling of being together and being a member of a group of friends, spending time together, socializing and networking” (Ridings, Gefen, & Arinze, 2002) play a main role together with the needs of Social Influence, Social Interaction, Companionship, Playfulness and Escapism.

The Implementation Phase

This phase can be easily monitored with the metrics of the usage of an application. In fact, the digital era allows the researcher to have a large amount of updated data. As stated by Rogers, the “Implementation occurs when an individual (or other decision-making unit) puts an innovation into use” (Rogers, 1983, p. 163). In the case of a social network, the implementation stage is represented by all the activities that the user can make on the platform. Indeed interviewed confirm that these activities respond to some of the needs reported by Zolkepli et al. (2015). In fact, the existence of these platforms are based on

the contents shared by their users. Without the pictures, videos, songs, geo-localization, and status, social networks would be empty boxes. Therefore, the users make Facebook a social network with all the social activities they make on that platform. Sharing is one of these activities and it is constantly made by most of the users. You can share pictures in order to make your friends aware that you have been somewhere or that you have met someone, you can share a status in order to show your ideas regarding a topic or you can share a song showing your musical taste. In the social media, posting represent a crucial dynamic in which all the activities are published within your network. From what emerges in the secondary data analysis of VIMML, the Implementation phase is not characterized by a lot of interactions and activities. As claimed by the users, this is mainly due to the fact that the user base is not yet big enough. For this reason, there are not many incentives to use the platform. This fact is confirmed by the funnel studies as they show that the most frequent activity after the launch of the application is a passive detail viewed rather than posting a photo or a comment. In fact, 41,89% of users that post a comment and only 2,38% of the user that launch the app use the message feature after 10 weeks of the fist login. On the other hand, the Implementation stage can be monitored through other metrics. In fact, VIMML has a good percentage of a user that login on a daily basis and that on average spend medium-low amount of time on the application. Once again from the empirical findings, it can be affirmed that the main reason of this is the absence of a good user base.

As Rogers (2003) stated, during this stages some reinventions may occur. The reinventions are “the degree to which an innovation is changed or modified by a user in the process of its adoption and implementation” (Rogers, 2003, p. 180). It can be affirmed that the social network companies do follow this attitude especially now when the competition is getting higher.

The Confirmation Phase

In the era of social media, this stage is characterized by the retention rate of the application. In fact, as well as the Implementation stage, this step can be easily monitored by the metrics available on the statistical software. The two types of discontinuance remain the same as the user can reject or replace the innovation (replacement discontinuance and disenchantment discontinuance) but it became easier to monitor. Therefore, the analysis of the last two steps of the Innovation-Decision Process, Rogers (2003), is data driven. The Digital era is characterized by a diversified offer of social media KOÇAK et al. (2013). The market is highly competitive and the switching cost to pass from a platform to another is very low. From what concern the analysis of VIMML, the retention matrixes show a negative tendency. The users tend to use less the application after two weeks from the decision to download the application (Mixpanel report- VIMML's Account, trimester December 2015 - March 2016) . In particular, there are two drops: one after two weeks and the other after ten weeks. This fact has been confirmed even in the interviews and argued with the same problem explained in the previous step. However, it has to be noticed how the retention rate is not equal for the different feature of the application. Indeed, the Chat messaging retention rate is really different from the Photo posting retention rate. The first is lower than the second. The users interviewed confirmed the preference of some features rather than others such as chat messaging (Mixpanel report- VIMML's Account, trimester December 2015 - March 2016).

The needs that emerge as relevant from the VIMML's users are mainly related to the tension release and personal sphere Zolkepli et al. (2015). In fact, at this point what really matter is connected to some personal satisfaction rather than some social interest.

In the end, the described model is characterized by different dynamics from the past in each of its phases. Moreover, it no more follows a linear path as it represents one of the special cases mentioned by Rogers (2013) in which the

process does not follow the Knowledge-Persuasion-Decision order. Hence, in the case study of VIMML, the adoption decision process is showed in the following figure. It includes all the needs, identified by Zolkepli et al. (2015), that has been identified by the users as relevant during each phase.

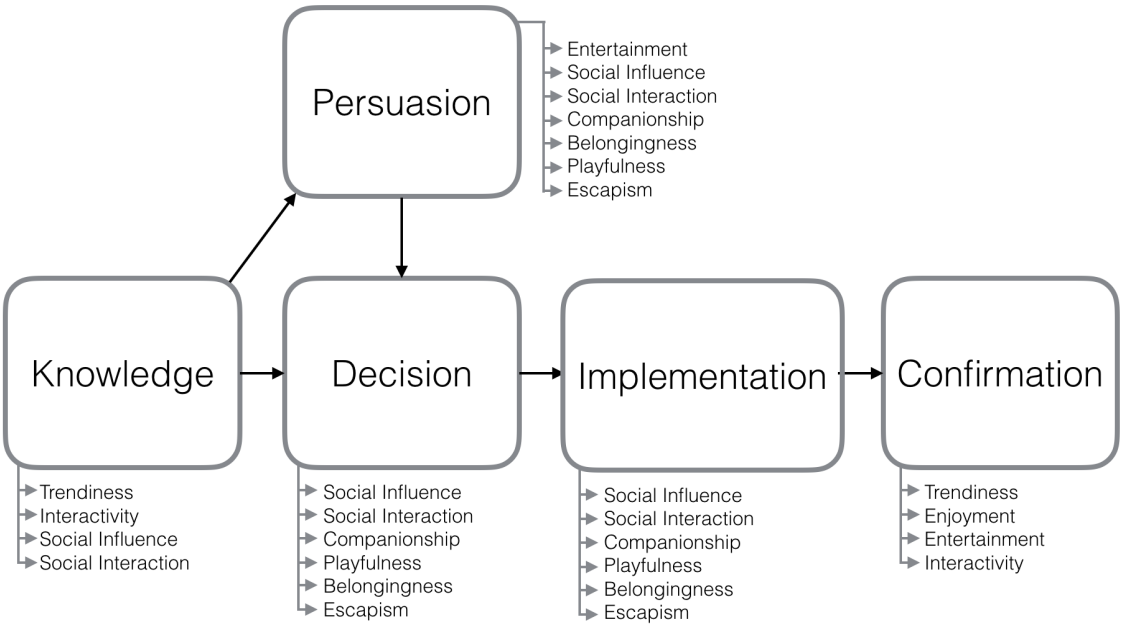


Figure 5.2. The social network innovation diffusion model. Source: Self-editing. From the Model of Five Stages in the Innovation-Decision Process. Sources: Diffusion of Innovations, Fifth Edition by Everett M. Rogers and Social media adoption: The role of media needs and innovation characteristics. Source: Zolkepli et al.

As it can be noticed, both the recommendations of Rogers (2003) has been followed. In fact, the case of VIMML does not respect the traditional Knowledge-Persuasion-Decision path as the Persuasion step does not result mandatory for the users of the application. They prefer to download the application immediately after the Knowledge phase. As described before each step is affected by some changes but the finding that emerges the most is that the needs affect the whole process and not just the Persuasion stage. In fact, each phase reports some of the needs, identified by Zolkepli et al. (2015), as emerged during the empirical researches.

6. CONCLUSION

Before answering to the research question, it results useful to summarize the crucial steps of this thesis collecting some of the evidences that emerged during it.

As theory has showcased, the topic of diffusion of innovation is still relevant in the digitalized era. Indeed, starting from the Innovation-Decision Process Model theorized by Rogers, many researchers studied its correlation with the digital era and in particular with social network. Hence, the theoretical framework focused on the relationship between the needs that boost an individual to adopt a social network and the Rogers' model. This paper has displayed that, at least for the case study of VIMML, the innovation adoption process flows a slightly different path. In fact, it emerged from the empirical findings that the advent of social networks brought to life some new dynamics that can not be related just to the needs satisfaction. As mentioned in the Analysis, the author followed two encouragements made by Rogers to further the study regarding the needs satisfaction and the order of the first three phases. Thereby, this thesis has the purpose of adapting the previous researches to the case study of the Swedish social application VIMML in order to understand what is the adoption process followed by its users and, hopefully, to find some insights for the future research regarding social network adoption process.

VIMML is a startup, incubated in Invencon, that had launched a social application in the Swedish market in December 2015. It offers a unique set of characteristics that, in the opinion of the team, will fit an unsatisfied niche of customers within the competitive market of social networks. The application constitutes the first open, anonymous, local and time-sensitive social network on the market. In fact, the user can be on the social platform posting photo and comment in total anonymity. This enables the user to express his or her creativity, breaking the normal social ”lock-in” mechanism and accommodating the increasing demand for privacy, especially for young people. Moreover, as

the contents are time sensitive and the application has geographical constraints, the individual can see just what is happening around him, in that moment. This constitute one of the main VIMML's value proposition as the users thought the usage of this local social network can get aware of which events are running around them or join new people for a dinner. The application is still in its initial phase and it is continuously updated with new releases. The team, constituted by experts in the market of digital solutions and IT, is testing the application on the Swedish market in order to understand the most appropriate target and to best fit it with the features proposed. The "trail and errors" strategy that the team is adopting aims to understand what the reaction of the market is before investing on the next releases.

The empirical findings gave many insights regarding the behaviors and the attitudes to using social networks. In particular, it has been tested the Rogers' model in order to grasp pieces of information for each of the five steps of it. Hence, internal and external forces represent the main pillars from which the author started to collect empirical data on the customer behavior. The first are composed of qualitative and qualitative data as it gathers interviews of the members of the startup and secondary data from the business analytic software that tracks user interactions with the mobile application. Therefore, these data describes the internal situation both from a managerial and corporate side, taking into consideration the characteristics of the product from an analytic point of view. These pieces of evidence have been used in particular for the last two steps of the Rogers' model such as Implementation and Confirmation phase. Instead, the external sources refer mainly to the first three steps of the model and on the needs satisfaction. It is constituted by users interviews and it had the aim to understand what are the behaviors, the motivations and the needs that boost a user to download VIMML.

6.1. The research answer

Considering the findings and the procedures illustrated before, the main purpose of this inquiry is to give an answer to the following research question:

'What factors characterize VIMML's adoption process?'

Given the particular phase in which the startup is, it is essential to understand what are the actions of their consumers in order to formulate the most appropriate marketing strategies and next development steps that best suit the market. Following the research question, the author reviewed the Rogers' model and the studies regarding the social network diffusion in order to understand what are the factors that characterize VIMML's adoption process. In particular, the analysis chapter focuses on the behavior followed by new users during the decisional process of adopting a new social platform. It highlights the theoretical and empirical findings of each of the five phases in the case of VIMML.

Looking at the research question, the conclusions can be summarized into three main factors that distinguish the adoption process of VIMML from the model reviewed in the theory. These three findings are respectively: the adoption process is not linear, the persuasion stage is not mandatory and the needs affect each step of the adoption process. In this paragraph, all these components are contextualized in order to illustrate the results of this inquiry. Besides the managerial implications that will be illustrated later, the research underlined some critical changing in the era of social media. Indeed, it results evident the importance and influence of social and personal needs for the behavior of the user in each of the steps of the Rogers' model. In fact, the empirical findings documented that each phase responds to some needs and that it not possible to limit the need satisfaction only to the five innovation characteristics of the Persuasion stage as in the research of Zolkepli et al. (2015). In particular, this evidence is in line with the suggestion made by Rogers to further the studies of the needs applied to the model (Rogers, 2003). This

important finding influences the whole adoption process and it can be useful to be considered in the phase of the launch of a new social application. However, it is important to clarify, once again, that this result and the others that follow are valid for the case study and that only future researchers can generalize them to the whole market of social network. Nevertheless, as spotted by the paper from KOÇAK et al. (2013), the data confirmed that the direction and the source of the information changed. It emerged that the channels and origins from which an individual get aware of the existence of an innovation had had a variation during the recent years. It deals with the new tools of communication available on the market such as video content, instant messaging and social network itself. This lead the digression to following finding according to which, in the case of VIMML, the source of information is bottom-up rather than vice versa. In fact, it emerges that the users, with the advent of social media, get aware of the existence of a new product or service from some social interactions or viral contents that spread on the web. It is an important change in the way in which innovation spread and the team should consider the importance of these new channels in order to develop the best communication strategy. Hence, it results that the users of VIMML know before who use the innovation and only after the what are the characteristic of the new platform. For these factors and many others contained in the analysis, it results feasible, for the case of VIMML, to affirm that the Persuasion stage is a step that is no more mandatory in the adoption process. Thereby, once the users pass through the Knowledge stage, getting aware of the existence of the new social network from friends or familiars, they can directly pass to Decision stage by deciding to download immediately the application. This fact appears particularly evident in the data collected from the users. However, at the same time, some users behave differently. They still look at the description of the characteristics as emerges from iTunes Connect's analytics. Therefore, the Persuasion stage can not be deleted in the case of VIMML even if it can be considered no more mandatory in the adoption process of a social network. Hence, the users can both pass from Knowledge to Decision or follow the original path. For these reason, as suggested by Rogers (2003), the adoption process of VIMML does not follow

the Knowledge-Persuasion-Decision order but rather a not linear one. However, even if this finding has been confirmed by the utilization of the Grounded theory, it is still subject to some limitations mentioned in the research methodology. In the end, the analysis of the case study emphasizes the importance of the Confirmation stage. In fact, the retention rate study shows some negative insights as always fewer users are active on VIMML. On the other end, the users interviews have been useful to find the main cause of this negative trend. Indeed, the application is still in an early stage and therefore it has not yet reached its critical amount of users. Belonging to their user experiences, the interviewees identified the lack of contents as the main issue of the application at the moment. This fact prevents VIMML to express its real potential. The findings illustrated lead to a managerial implication that is going to be illustrated in the following paragraph.

6.2. Managerial implication

After the description of all the theoretical and empirical findings, it is feasible to report some suggestions that might be useful for the future development of the application. Since the product has been on the market for few months, further improvements both in the application future release and in the marketing strategy have already been planned, and therefore, the followings have to be considered as additional recommendations. All the successive bullet points refer to the commercialization in the Swedish market and they are reported in a chronological way.

1. *Close interaction with customers*: From what the author of this inquiry experienced during these months, working both for the VIMML's team and on the development of the thesis, a closer relationship with the customers would increase the likelihood of success of the startup. In fact, since the team is applying a "trial and error" strategy, it should have a closer look at the adoption process and opinion of the latest release of the application. Indeed, VIMML should interview and monitor a pool of users (or testers) in a

more constant and frequent manner. There are many tools to enhance the quality of these investigations. VIMML can create a stable group of users that periodically give feedbacks on the usage of the application and occasionally contact some random user asking for an interview. In fact, as the author had noticed, the user interviews have been a really powerful tool to investigate the weaknesses and the strengths of the social network. Besides the fact that, by working hard on a project, your opinion can get away from reality, the interviews can be even seen as a powerful channel to get new ideas. Furthermore, VIMML can use powerful and innovative way to reach their customers. Since the application is anonymous, the team does not have any email address to contact the user, however, Mixpanel offers the possibility to get to the user directly across a notification on the application interface. These important feedbacks can be used by VIMML in its Implementation stage when reinvention are preparatory to attract the user to the platform.

2. *Target and market definition*: Therefore, the team should put more effort to understand the target best fit its product. Today, it has not yet been defined. This lead to several risk the least of which is to spend too much on a marketing campaign that targets to many categories of users rather than focussing on the most responsive. Together with the tool explained above, the online marketing gives the efficient instrument to understand the right target. In particular, social media marketing would allow the company to understand the categories of people that best fit the application using the high level of user categorization based on preferences, tastes, and networks available on social platforms.

3. *Definition and communication the value proposition of VIMML*: Before talking about the marketing strategy, it emerges from the interviews that the users are not aware of all the messages that the team associate to the brand VIMML. This fact is particularly evident in the Implementation and

Confirmation stages. Moreover, they can be better defined in the team itself before starting the marketing campaign.

4. *Marketing strategy*: The first three points are preparatory to the creation of the marketing strategy that publicizes the application in a cost-effective way. As seen from the model, the Knowledge phase remains one of the most important in the adoption process of the VIMML's user. Therefore, the team should aim to increase the awareness of the application across a marketing campaign. In fact, it should focus on word of mouth since it was confirmed in the theory that the user looks more at how many friends have adopted the VIMML rather than the characteristics thereof. In addition, belonging to the theoretical framework, the startup should choose the proper communication channel to reach its customer. Once more, the online marketing represents the most effective tool to attract more users to the platforms. It would allow the company to target the customer that has more willingness to download the application and at the same time to better communicate the value proposition of VIMML. However, since the main purpose is to reach new potential users through other users, the guerrilla marketing could represent an inexpensive way to enlarge the user base. In this case, it is the best instrument to create viral content and to spread the innovation of VIMML into the offline and online market.

5. *New potential features*: As emerges from the theory, much relevance is given to reinventions in the Implementation stage. Therefore, it can be recommendable to focus on a next release to divert the negative trends in the retention rate metrics. In fact, only after a deep customer analysis and marketing campaign, it can result useful to develop the next release on the of preferences the target identified. The pre-study of the user behavior aims to avoid waste in the development of unrequested new features.

6. *Revenue model*: The analysis described can be also preparatory to find the revenue model. In fact, VIMML is now financed by investors but it has to find

a way to produce revenue. As all the social networks in the early stages, VIMML does not monetize through paid app download, in-app purchases or in-app ads. Therefore, the close interaction with customers and Target and market definition can facilitate the team to find a good revenue model to add in the next releases. However, it emerges during the cooperation with the team and from the empirical finding that VIMML has the right prerequisites to become the first advertising social platform for small-medium business. In fact, the characteristics to be local and time sensitive could boost shops to promote products on VIMML. Nevertheless, this fact has to be verified with a deep market research.

7. *Enlarge the team competencies*: In the end, it can result useful to enrich the competencies of the team with one or two experts in marketing. In fact, since the marketing strategy appears to be the most relevant topic in this phase of the application commercialization, the startup should consider hiring some marketing professionals rather than outsourcing those competencies. This, belonging to the empirical findings, would increase the speed of VIMML's diffusion.

6.3. Future research proposal

When dealing with social media adoption process, it has been observed that the theoretical framework has indicated a lack of consistency in the definition of this theme. Not many authors have put efforts in the analysis of the adoption process of these new forms of innovation. Indeed, the Rogers' model has been the main pillar of the inquiry in order to understand how the VIMML's users adopt and use the application. However, it has been noticed that the mentioned model has some levels of criticality when it was applied to social networks since it was developed for not digitalize products or services. Therefore, the author attempt to adapt it to the VIMML's case study considering all the constraints typical of a master thesis project. Thus, the quality of the research can be enhanced by enlarging the sample of users contacted and by running an online

questionnaire in order to increase the amount of quantitative data. However, the interviews remain the most proper tools to understand the behavior of the VIMML's users and their adoption process. Regarding the data collection, it is suggested to make a comparable study of the data related to the usage of existing platforms with those for the first three months of VIMML existence. This could help the startup to have the clearest picture of benchmark to follow. The mentioned research is feasible by investing a considerable amount of money in acquiring those data from some specialized companies and therefore it resulted not feasible for this inquiry.

On the other hand, it is worth further study of social networks and how the adoption process is characterized by the pursuit of some need satisfaction. In fact, the research of Zolkepli et al. (2015) underlined the importance of this aspect in the theory related to social networks. This important contribution has been particularly useful for the presiding of the thesis as it applied the Innovation Decision Process Model of Rogers to the study of the need satisfaction. However, from what emerges from the interviews, future researchers should enlarge this study to each of the phases of the Rogers' model. In fact, it results evident how the users behave on a social network following some needs. Moreover, it can be suggested to deeper the identification of the needs successfully started by Zolkepli et al. (2015).

In the end, as this research aimed to find the adoption process of an innovative social network and the academia has dedicated much effort on this field of inquiry, it can be recommended to enhance this study to the whole market of social network. The result should be generalized to the study the different existing platforms through the use of interviews or online questionnaires to the different user in order to understand if the insights found for VIMML are also valid for these platforms. In fact, even if social networks appeared on the market more than ten years ago, still many unanswered questions seek for an explanation. Future researchers are thereby recommended to understand the adoption process of social networks.

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APPENDIX 1

Interview guide - Internal interviews

1. Personal Information

a. Your background

b. Your role in VIMML

2. General firm information

a. Origin of VIMML

b. Value offering

c. Vision

d. Mission

e. Company strategy

3. Product characteristics

a. Future release of the application

b. Competitors analysis

c. Market analysis

4. Developing phase

a. Strategy for manufacturing

b. Location

c. Dimensions: Cost, Time

5. Customer considerations

a. Critical performance measures for customers

b. Customization

6. Firm characteristics

a. Number of employees

b. Background and expertise of employees

c. Foreign market introduction

7. Financial resources

a. Capital structure

b. Financing

c. Long-term financial plans

d. Dependency of external financing

8. Networks

a. Partnership, collaborations, suppliers

APPENDIX 2

Interview guide - External interviews

1. Personal Information

a. From Sweden?

b. Age?

c. Student or worker?

2. Your user experience with social network

a. How many social networks do you use?

b. Which one do you use more? why?

c. What are the main characteristics that boost you to adopt the social network?

d. What is your general opinion of social network?

VIMML's experience

1. Knowledge phase

a. Where did you get aware of the existence of VIMML?

b. Who did tell you about it?

c. How long did it take you to decide to download?

d. If there is, which of those needs did influence your predisposition to be aware of the new social application?

e. Does trendiness influence you in this phase?

2. Persuasion phase

a. Did you grasp some informations about the characteristics of VIMML before the download?

b. Do you need to inform about the characteristics of a social network before starting using it?

c. Now that you know, what are the characteristics that most attract you?

d. Do you perceive VIMML as consistent with the existing values, past experiences, and needs of potential adopters?

e. Do you think that VIMML is user-friendly?

f. Would you prefer to try the social network before downloading it?

g. Which of those needs did positively influence your opinion about VIMML?

3. Decision phase

a. Why did you decide to download?

b. The informations collected have been useful for your final decision?

c. Which needs did intervene?

4. Implementation phase

a. Why do you still use it?

b. What feature do you use most? post photo, post comment or chat

c. Which need does it encourage you to continue to use VIMML?

*5. User experie*nce *phase*

a. What is the feature you like most?

b. What would you improve?

c. What is the worst?

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