**AN EXPLORATORY STUDY ON THE USE OF FACEBOOK BY
PRE-SERVICE TEACHERS IN TURKEY AND THE U.S.A.:
A MIXED METHOD DESIGN**

**A THESIS SUBMITTED TO
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OĞUZHAN ATABEK

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ABSTRACT

**AN EXPLORATORY STUDY ON THE USE OF FACEBOOK BY
PRE-SERVICE TEACHERS IN TURKEY AND THE U.S.A:
A MIXED METHOD DESIGN**

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Ph.D., Department of Computer Education and Instructional Technology

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A cross-cultural explanatory sequential mixed method design was utilized to investigate the implementability of social networking services for educational purposes. It was aimed to shed light on the nature of relationship between the use of social networking services and pre-service teachers' personality, motivation to use Facebook, motives to use Facebook, and attitude towards using Facebook. In addition to that, it was aimed to understand the perceived usefulness and feasibility of Social networking services as educational tools and the feelings of the future teachers about the "appropriateness" of Facebook as an educational implementation. In the quantitative phase of the research, which was carried out in both Turkey and then the United States of America, a correlational study was utilized. For scaling motives, motivation, personality, Facebook use, and attitude towards using Facebook, five questionnaires which were developed and used in English were translated into Turkish. Multiple linear, ordinal logistic, and binomial logistic regression analyses were conducted for quantitative data analysis. In the qualitative phase, Turkish pre-service teachers were interviewed and a constant comparative analysis was conducted on the transcripts. It was found that personality is not a major predictor of Facebook use. Pre-service teachers have a positive perception of the use of Facebook for educational purposes in both countries. However, there have been many differences between the two countries' pre-service teachers in terms of Facebook use and motives.

It was demonstrated that pre-service teachers associate Facebook mostly with relationship, communication, and learning and they see Facebook as educationally implementable.

ÖZ

FACEBOOK'UN TÜRKİYE VE A.B.D.'DEKİ ÖĞRETMEN ADAYLARI TARAFINDAN KULLANILIŞI ÜZERİNE AÇIKLAYICI BİR ÇALIŞMA: KARIŞIK YÖNTEMLİ BİR TASARIM

Atabek, Oğuzhan

Doktora, Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümü

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Toplumsal ağ oluşturma hizmetlerinin eğitimsel amaçlar için uygulanabilirliğini araştırmak için kültürlerarası açıklayıcı ardışık karışık yöntemli bir tasarım kullanıldı. Toplumsal ağ oluşturma hizmetlerinin kullanımı ile öğretmen adaylarının kişilikleri, Facebook kullanımına olan güdülenimleri, Facebook kullanımı için olan güdüleri ve Facebook kullanmaya karşı olan tutumları arasındaki ilişkinin doğasını açıklığa kavuşturmak amaçlanmıştır. Buna ek olarak, toplumsal ağ oluşturma hizmetlerinin – birer eğitim aracı olarak, algılanan kullanışlılık ve yapılabilirliği ile öğretmen adaylarının Facebook'un eğitimsel uygulanışının uygunluğu hakkındaki hislerinin anlaşılması amaçlanmıştır. Hem Türkiye'de hem de sonrasında Amerika Birleşik Devletleri'nde gerçekleştirilen araştırmanın nicel aşamasında, korelasyonel bir çalışmadan yararlanıldı. Güdüleri, güdülenimi, kişilik, Facebook kullanımını ve Facebook kullanmaya karşı olan tutumu ölçmek için İngilizce olarak geliştirilip Türkçeye çevrilen beş anket kullanıldı. Nicel veri çözümlemesi için çoklu doğrusal, sıralı lojistik ve iki terimli lojistik regresyon çözümlemeleri gerçekleştirildi. Nitel aşamada, Türk öğretmen adaylarıyla görüşme yapıldı ve görüşme dökümleri üzerinde sürekli karşılaştırmalı çözümleme gerçekleştirildi. Kişiliğin, Facebook kullanımının başat bir yordayıcısı olmadığı bulundu. Her iki ülkede de, Facebook'un eğitimsel amaçlar için uygulanışıyla ilgili öğretmen adaylarının olumlu bir algıları var. Ancak,

Facebook kullanımı ve güdülenimler açısından, iki ülkenin öğretmen adayları arasında birçok farklılıklar vardı. Öğretmen adaylarının Facebook'u en çok ilişki, iletişim ve öğreneme ile ilişkilendirdikleri ve de Facebook'u eğitimsel olarak uygulanabilir olarak gördükleri gösterildi.

Anahtar Kelimeler: Toplumsal Ağ Oluşturma Hizmeti; Facebook; Kişilik; Beş Faktörlü Model; Sürekli Karşılaştırmalı Yöntem

Hakan'a;

Unutulamayan,

Unutulmayan.

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LIST OF ABBREVIATIONS

CEIT   : Computer education and instructional technology

CFA   : Confirmatory factor analysis

CFI   : Comparative fit index

CMC   : Computer mediated communication

DV   : Dependent variable

ECE   : Early childhood education

EFA   : Exploratory factor analysis

EME   : Elementary mathematics education

E-Learning   : Electronic learning

ESE   : Elementary science education

ET   : Educational technology

FB   : Facebook

FFI   : Five Factor Inventory

FLE   : Foreign language education

GFI   : Goodness-of-Fit index

IV   : Independent variable

LMS   : Learning management system

M-Learning   : Mobile learning

METU   : Middle East Technical University

ML   : Maximum likelihood

MLR   : Multinomial logistic regression

NEO   : Neuroticism-Extroversion-Openness

NEO-FFI   : NEO Five Factor Inventory

OCW   : Open courseware

OLE   : Online learning environment

OLR   : Ordinal logistic regression

PCA   : Principal component analysis

RMSEA   : Root mean square error of approximation

RQ   : Research question

SCE   : Secondary chemistry education

SN   : Social network

SNS   : Social networking service

SPE   : Secondary physics education

SUNY   : State University of New York

TLI   : Tucker Lewis index

UH   : University of Houston

USA   : The United States of America

VLE   : Virtual learning environment

WBT   : Web-based training

CHAPTER I

INTRODUCTION

This chapter of the thesis focuses on the background of the study, statement of the problem, purpose and the significance of the study, overview of the research design, the research questions and the definition of the key terms used in the study.

1.1. Background of the Study

Social networking services (SNS) are tremendously popular and they keep increasing their popularity among the digitally literate people of all ages. They have hundreds of millions of users and Facebook (FB) is the "overwhelmingly more popular" (Kirschner & Karpinski, 2010, p. 1239) one. FB is more than a website or a hypermedia application. It is a social and cultural phenomenon influential in the lives of individuals in various ways. The movie about it (The Social Network by David Fincher) was "the movie of the year" (Travers, 2010). The founder of it -Mark Zuckerberg- was the "Time's 2010 Person of the Year" (Grossman, 2010). It is a medium which is described as the impetus for "the changing face of social interaction" (Puig, 2010) and a technology which changed the society (Hornaday, 2010).

In consideration of foregoing, it is not hard to realize the massive impact of SNSs on the society –FB in particular. Considering those connotations of FB regarding its impact –such as: "changing the face of social interaction", "hundreds of millions of online users", "changing society by a technology", "new media"- one can easily come up with serious questions about this "society changing" technology regarding learning, teaching, and education in general.

Moreover, cultural world isn't the only scene where we can find the evidence of the impact of FB and other SNSs on society. The world economy informs us about FB, and its impact on the society, as well. In order to be able to see users of SNSs as a phenomenon to research, one may need to see World Economic Forum's "The Global Information Technology Report" depicting FB as a major player in the world economy which grew at a brisk pace even in the economic crisis (Dutta et al., 2010, p. 3). The same report indicates that "social networking and Web 2.0 companies such as Facebook" emerged as the "major segment" of information and communication technologies (ICT) throughout 2008, even while the core subsectors, such as

semiconductors have suffered. As a consequence of its economic success, FB leads all online publishers with a 23% market share in display ads market (Lipsman, 2010).

Apparently, information technology is not being used just for business for a long time. Computer networks, once considered the "hard side" of computing, are now utilized for helping bring the private lives of individuals to online SNSs. And these SNSs are increasing in their importance as they become part of many people's daily lives. Being used for many purposes, SNSs can also serve as educational applications. The National School Boards Association, representing 95,000 local school board members across the United States, has released a report on student use of social networking and reported that 59% of students who use social networking say they talk about education related topics (NSBA, 2007, p. 1). More significantly, 50% of those students who use social networking say they talk specifically about schoolwork.

Given the overwhelming popularity of FB, its profound social and cultural impact, and its potential for educational implications, the purpose of this research study is to investigate the nature of FB use among pre-service teachers and find out personality, competency, and attitudinal factors that influence its use. It is also aimed to understand the perceptions, and feelings of the students and future teachers via an interpretive approach regarding the implementation of FB for educational purposes.

1.2. Statement of the Problem

Social networking sites are increasing their popularity and are being adopted in the educational institutions for educational purposes. SNSs are being used informally among the students, teachers, and educational administrators, etc., as well. But there is a lack of scientific knowledge regarding the utilization of SNSs in educational settings. Earlier examples of information technologies which –without relying on research outcomes- were employed in educational settings for educational purposes resulted with dissatisfaction and were subjected to criticism.

There is a risk of iterating the same mistakes. Lack of scientific knowledge regarding the educational implementation of SNSs and rapid adoption of them reminds us about the risks and previous experiences regarding the educational misimplementation of information technologies. Will rapid adoption of SNSs in educational institutions for educational purposes fail because of "unscientific" utilization and misuse?

Another point of concern is the obviously "free" nature of SNS: free from interpersonal boundaries and behavioral codes. That "free" nature of SNS makes them "personal", "informal", and "casual" media for interaction. Will SNSs which are "unceremonious" and "personal" fit in the "pre-planned" and "well-defined" educational settings for all students and teachers?

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Moreover, educational professionals should take the interpretations, perceptions and feelings of the students and teachers about the SNSs and their implementation in the educational settings for educational purposes. An interpretive approach is also needed in order to delve into the perceptions of the students and teachers for producing a comprehensive and complete understanding. Do students, pre-service teachers, teachers and other professionals think that SNSs are "necessary", "useful", "functional", "appropriate" or at least implementable?

Finally, the "social" and "personal" nature of SNSs raises the question of cultural differences. Is there a difference between cultures regarding the use and possible educational implementation of FB?

1.3. Purpose of the Study

In this study, the research was conducted on Facebook® users both in Turkey and The United States of America (USA). The obvious impact of FB on the society, together with its economic existence, its association with the university students, and its overall popularity may be accounted for the motivation behind the research. Since FB is a new phenomenon, not only in the field of Educational Technology (ET) but also in the entire scientific literature amount of the research on FB is limited. It is also aimed to increase the amount of scientifically produced information about FB in the context of ET.

The purpose of the research is to shed light on the relationship among personality, motivation, motives, and attitudes associated with FB use in a cross-cultural fashion. In addition to that, within a pragmatic paradigm, the research takes an interpretive approach in its qualitative phase for the purpose of producing scientific knowledge regarding the perceptions of the pre-service teachers -who use FB- about the SNSs and their possible implementation in educational institutions for educational purposes. In the qualitative phase, the purpose is to understand the perceived usefulness and perceived feasibility of SNSs as educational tools. It is also aimed to understand the feelings of the future teachers about the "appropriateness" of FB as an educational implementation.

1.4. Significance of the Study

Even though SNSs are a relatively new phenomena and related literature is very limited, FB is at the outset of becoming a commonly used educational medium. Given the overwhelming popularity of FB, its profound impact on society and culture, and its potential for educational implications, this paper aims to extend the existing literature by reporting the findings from a mixed-method research study on Turkish pre-service teachers who use FB. The purpose of the study is to provide scholars and professionals in the field of educational technology and the teacher training community with useful information by investigating the nature of FB use among pre-service teachers. For the

purpose of this study we investigated how personality, motives, motivation and attitude correlate with the use of FB.

Another point is that the study is a mixed-method research and it is aimed to produce interpretive knowledge regarding the perceptions and feelings of the pre-service teachers regarding SNSs. Pre-service teachers are students who will become teachers in the future. This study shed lights on the interpretations of students and –to some extent- teachers as well.

Finally, the study is designed as a cross-cultural research. Within a pragmatic paradigm and mixed-method design, both qualitative and quantitative methods are employed to produce knowledge in two countries which are associated with different cultural traditions. While USA is a "western" country, with its official language English being an Indo-European one traces its roots to Ancient Roman Empire and Germanic tribes. But, it also imports the cultures of Indigenous Americans and other peoples and "melts" it into the contemporary culture of USA. Turkey, with its official language Turkish being an Altaic language, traces its roots as far back as to Hyung-Nu Empire and Turkish nomadic peoples. But, it also imports the cultures of surrounding peoples such as Chinese, Mediterraneans and Persians.

Apart from the nature of the research, this study is significant considering the implications of its outcome, as well. It is aimed to benefit learners, teachers, instructional designers, educational institutions, developers, researchers, and policy makers.

By the help of the knowledge produced in this study:

Learners will be able to be provided with a "better" SNS which is more suitable for their motives and skills. But most of it, their concerns may be better taken in the account especially considering their personal differences and intimate and confidential sensibilities. Moreover, learners may be provided with the functions and tools they were seeking for and they may better utilize SNSs or particularly FB for their educational activities.

Teachers will be able to be provided with a "better" SNS as well. Their concerns regarding disinhibited behavior and distraction may be better taken into account by the developers. Privacy and confidentiality is a major concern for teachers as well as learners. Both learners and teachers will benefit from a better handled privacy policy, developed by informed developers.

Moreover, **teachers** will be provided with the knowledge of how different students are using SNSs in different ways and how they are concerned with different issues. This research aims to provide teachers with a set of knowledge about how to use SNSs appropriately with students having different personalities and motives to use SNSs.

For **teachers**, finally, this paper clarifies which functions of SNSs are most used and what do students like or dislike about them. This is a major advantage for an informed teacher who is willing to use FB or another SNS for educational purposes.

Instructional Designers are also among the audiences who are aimed to be benefited from this research. First of all, the knowledge produced by this research provides instructional designers with most of the benefits of the teachers. They may better design a program, course, or lesson utilizing SNS considering the concerns and motives of students who use SNSs. Moreover, **instructional designers** may have the opportunity of designing an "SNS friendly course" by help of the knowledge produced in this research. An entire educational program, a course or a lesson specifically designed for SNSs –even the option of providing the instruction online via the SNS itself.

Educational institutions are among the audience aimed to benefit as a result of this study. Educational institutions are supposed to provide teachers, learners and other professionals with the best educational environment, tools and methods for learning and teaching. In the competitive educational arena, institutions need to implement the best solutions for the needs of learners and teachers. SNSs are the media that young people spend the most of their time and interact through.

Implementing SNSs for educational purposes provides educational institutions with the contemporary, already adopted, widespread used, unanimous and up-to-date educational environment. This study provides institutions with "how to" knowledge regarding the implementation of the SNSs.

Moreover, by using the results of this study, educational institutions may increase the motivation of students and job satisfaction of the teachers. Finally, this research aims to produce knowledge which may help educational institutions to pick the right SNS and right developer for implementation giving way to get the most out of their investments.

This research is significant for **developers** as well. Developers may know how to develop but educational technology is a different story compared to a regular or even professional website. Developers need to know what is best for learners, teachers, instructional designers and institutions. This research study provides developers with knowledge which may be critical for them developing products which will be implemented for educational purposes.

This research study fills a void in the research literature regarding the implementation of SNSs for educational purposes. It is aimed to provide **researchers** with useful knowledge with a cross-cultural emphasis and a mixed method design. Both qualitative and quantitative researchers may find this research report as useful reference and it is aimed to enrich the literature with an insightful discussion.

Finally, **policy makers** as an intended audience may find this PhD research significant for their work. The issues under focus of this study are related to popular concerns which are major inputs of **lawmakers**. Especially considering the "social" and "personal" dimensions of the nature of SNSs, policy makers may find the results of this research intuitive regarding the importance of protecting the rights and increase the well-being of citizens.

1.5. Overview of the Research Design

A cross-cultural mixed method design was employed for the research study. Research is comprised of two phases: quantitative and qualitative. **Qua**ntitative phase is twofold, as well. In this phase, data was collected –first- from Turkey and then The United States of America (USA). **Qua**litative phase follows the Turkish part of the **qua**ntitative phase and prepared according to the results of that part.

In the **qua**ntitative phase, six questionnaires were used to survey the pre-service teachers (one of them is for demographics). Results of that correlational run were analyzed by statistical techniques. In the **qua**litative phase, Turkish pre-service teachers were interviewed by a questionnaire of 8 open ended questions. The interview data were analyzed by constant comparative method.

1.6. Research Questions of the Study

A mixed-method, cross-cultural research is designed for the study. In order to shed light on the possible implementation of SNSs in educational settings, the research aims to find out the answer of the following main question in the quantitative phase:

> Do personal differences associate with the use of FB and if
> there is an association, how do cultural differences affect
> that association?

In addition to that main question, in the qualitative phase, following main question is asked in order to investigate pre-service teachers' perceptions regarding educational implementation of SNSs:

> How do pre-service teachers perceive the educational
> implementation of SNSs?

In the quantitative phase, following research questions were posed for this study:

1. To what extent personality traits, motivation to use FB, attitude towards FB, and motives to use FB is related to the number of friends on FB?
   1.1. If there is a relationship, do cultural differences between Turkey and the USA affect that relationship?

2. To what extent personality traits, motivation to use FB, attitude towards FB, and motives to use FB is related to the duration of FB membership?
    2.1. If there is a relationship, do cultural differences between Turkey and the USA affect that relationship?
3. To what extent personality traits, motivation to use FB, attitude towards FB, and motives to use FB is related to the time spent on FB during a day?
    3.1. If there is a relationship, do cultural differences between Turkey and the USA affect that relationship?
4. To what extent personality traits, motivation to use FB, attitude towards FB, and motives to use FB is related to the level of privacy of FB profile?
    4.1. If there is a relationship, do cultural differences between Turkey and the USA affect that relationship?

In the qualitative phase, following research questions were asked:

5. What are the pre-service teachers' perceptions of FB?
    5.1. What do pre-service teachers like or dislike about FB?
6. Are pre-service teachers motivated to use FB?
    6.1. What are the factors motivating the pre-service teachers to use FB?
7. How do pre-service teachers associate FB with teaching profession?
8. How should FB be used according to pre-service teachers if it is to be used in education for educational purposes?

1.7. Assumptions of the Study

This study is guided by following assumptions

1. The participants of this study were assumed to represent the population of pre-service teachers in Turkey and the USA.
2. Data were collected from all grades of the schools. Populations of these grades were assumed to have shown similar characteristics.
3. Participants understood and used the tools, functions, and functionalities of FB adequately and truthfully.
4. It was assumed that participants gave careful attention to and understood the items of the questionnaires and responded to them accurately.
5. Participants were assumed to have responded honestly to the questions during the interviews.
6. The data were assumed to have been retrieved, recorded, and stored accurately.
7. Reliability and validity of all measures in the study were assumed to be accurate enough to permit and interpret accurate results.

1.8. Limitations of the Study

Readers of this thesis should be deliberate while interpreting the results of this study and pay attention to certain limitations that it has.

1. Since online survey was used for data collection, even though the participants are identified by IP addresses, accuracy of demographic information such as gender and department couldn't be controlled by the researcher.
2. Only one type of SNS –FB- was considered while determining the participants to ensure consistency among responses. Thus, the results of FB use were not compared with the results of other SNSs.
3. FB use scales were limited in scope and especially time us of FB couldn't be measured.
4. All participant of this study were students of state university. Students of private universities may differ in their use of Internet and SNS.
5. Participants of this study were all university students. K12 students may use the Internet and SNSs differently.
6. This study was a correlational one rather than experimental. Correlations reported in this study do not convey the meaning of causation.
7. Data was collected in a limited period of time. Thus, information that could be reached in longitudinal periods might not be measured.

1.9. Definition of Terms

This section is aimed for elucidating the meanings of the ley terms used in this study.

Agreeableness

Being "concerned with interpersonal relationships that are based on the equal and honest exchange of information" (Butt & Phillips, 2008, p. 357)

Attitude

"[A] psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly & Chaiken, 1993, p. 1).

Attitude towards using

"Attitude towards using" refers to an individual's positive or negative feeling associated with using online software such as the ones hosted on a website.

Conscientiousness

"[A] tendency to show self-discipline, act dutifully, and aim for achievement against measures or outside expectations" (Big Five personality traits, 2013)

Extraversion

"[T]he act, state, or habit of being predominantly concerned with and obtaining gratification from what is outside the self" (Extraversion, n. d.).

Motivation

"[T]he reasons that individuals are aroused to action" (Covington, 2000, p. 22).

Neuroticism

"[T]he tendency to experience negative emotions, such as anger, anxiety, or depression" (Big Five personality traits, 2013).

Openness to Experience

"[A]n active imagination, aesthetic sensitivity, attending to inner feelings, prefernce for variety, intellectual curiosity and independence of judgment" (Costa & McCrae, 1992).

Personality

"[I]mportant and relatively stable characteristics within a person that account for consistent patterns of behavior" (Ewen, 2003, p.5).

Pre-service Teacher

"Pre-service teacher" refers to undergraduate students of Faculty of Education of Universities, particularly the ones who have taken "teaching experience" courses and who will be officially eligible for being a teacher after their graduation.

Social Network

"Social network" refers to the social structure which comprises of individuals and dyadic ties (relationships) among them.

Social Networking

"Social networking" refers to using SNSs, CMCs and other internet communities in order to interact and network with other individuals or groups who –generally- share interests, purposes and/or values.

Social Networking Service

In this study, Facebook was considered as the social networking service (SNS) of the pre-service teachers.

Trait

"[D]imensions of the periphery in personality theories, to be contrasted with dimensions of the core, which address fundamental issues of human nature and personality organization" (McAdams, 1992, p. 336).

1.10. Summary

SNSs remarkably rise in popularity. Especially FB, which is the most used SNS, has become the most popular place for young people to spend their time, socialize, play, search, interact, network, get informed and keep up to date with events. FB like other SNSs is the place where people get the latest news. It is not possible to think that education, educational institutions and educational processes will be immune and stay unaffected from the overwhelming popularity, widespreadness, and unanimity of FB.

A significant proportion of students use FB for educational purposes even though their institutions are not officially using FB as an educational tool. Students and teachers are using FB to communicate with each other also for educational purposes. Most of the educational institutions and organizations even companies significant to educational community have FB pages. Despite all, there is very little scientifically produced knowledge regarding the educational implementation of SNSs.

Considering the "personal", "informal", "unceremonious" and "social" nature of SNSs and concerns about "confidentiality" and "privacy" there is a void of knowledge for researchers to fill regarding SNSs –especially FB. In the context of the nature of and ways of using SNSs, it may be crucial to take personality, motivation and motives in the account for a sound research aimed to provide learners, teachers and other professionals in the field of education with useful knowledge that will guide them through utilizing SNSs.

Another point is the "cultural" and "cross-cultural" sides of SNSs. SNSs are places for almost the most intimate and informal social interaction. SNSs are places where people around the world interconnect and communicate. SNSs are places where "bilingualism" is the official language. Religions, ethnicities, life styles are represented, advertised, propagated and experienced" on SNSs by their users who includes but not limited to learners, teachers, researchers and scientists in the field of education and professionals and policy makers related to the field of education.

In this research study, personal differences, motivation, motives and attitudes are studied for to shed light on the questions of "who uses FB?" and "how they use it?" While doing the research a mixed-method cross-cultural approach is taken to deeper investigate the phenomena.

1.11. Organization of the Dissertation

This paper which constitutes the research report of the doctoral study consists of five chapters.

Chapter I presents the research topic followed by a brief introduction to the rationale and background of the study. Statement of the problem, purpose and significance of the study, research questions and definition of key terms are provided.

Chapter II provides a review of related literature pertaining to the research study. Review of the literature discusses social networks, social networking services, Facebook, internet hypermedia, personality, motivation, and motives.

Chapter III describes the methodology used in this study, research questions are restated, and purpose of the research is briefly reviewed. Research design, instruments used in the study, pilot study, procedures, methods and strategies used for data collection and analysis are detailed.

Chapter IV presents the findings –the research results. Results coming from the quantitative and qualitative phase are given. Related statistical outcomes for the quantitative phase and coding outcomes and themes for the qualitative phase are detailed.

Chapter V discusses the entire research in the context of the findings and related literature. Implications are provided as well.

CHAPTER II

LITERATURE REVIEW

This chapter reviews the related literature in order to provide the theoretical background of the research study. Throughout the chapter, major concepts, related theoretical works and associated research studies are reviewed and all are tried to link the pre-existing scientific knowledge to this dissertation study.

The current research aims to investigate the implementability of SNSs for educational purposes. For being able to reach this goal, association of personality, motivation, motives and attitude towards FB use is examined to see if they are correlating with FB use and demographics of the pre-service teachers. It is thought that, investigating pre-service teachers will provide us with insights about both students and teachers considering that pre-service teachers are student at the moment and will be teachers in the near future.

Data were collected from both American and Turkish pre-service teachers in order to reach a cross-cultural understanding about a "social" and "personal" phenomenon. It is thought that such a medium like FB which is one of the most popular places for cultural experience and realization, a cross-cultural study will let us comprehend more of the picture. A qualitative phase followed the quantitative phase to reach even more close to the actual explanation about "what is going on those websites."

Eight questions were asked. The quantitative ones were as follows:

1. To what extent personality traits, motivation to use FB, attitude towards FB, and motives to use FB is related to the number of friends on FB?
   1.1. If there is a relationship, do cultural differences between Turkey and the USA affect that relationship?
2. To what extent personality traits, motivation to use FB, attitude towards FB, and motives to use FB is related to the duration of FB membership?
   2.1. If there is a relationship, do cultural differences between Turkey and the USA affect that relationship?
3. To what extent personality traits, motivation to use FB, attitude towards FB, and motives to use FB is related to the time spent on FB during a day?

3.1. If there is a relationship, do cultural differences between Turkey and the USA affect that relationship?

4. To what extent personality traits, motivation to use FB, attitude towards FB, and motives to use FB is related to the level of privacy of FB profile?

4.1. If there is a relationship, do cultural differences between Turkey and the USA affect that relationship?

In the qualitative phase, following research questions were asked:

5. What are the pre-service teachers' perceptions of FB?

5.1. What do pre-service teachers like or dislike about FB?

6. Are pre-service teachers motivated to use FB?

6.1. What are the factors motivating the pre-service teachers to use FB?

7. How do pre-service teachers associate FB with teaching profession?

8. How should FB be used according to pre-service teachers if it is to be used in education for educational purposes?

As a review of the literature, this chapter is intended to embody the current understanding of phenomena related to the research questions of that study.

This chapter is organized according to 8 main themes. At the outset of the review, the first section is to disambiguate some of the concepts that will be re scrutinized in the subsequent sections and a final summary section is provided:

1. Disambiguation
2. Social Network
3. Social Networking Service
4. Facebook
5. Internet
6. Hypermedia
7. Personality
8. Motivation
9. Motives
10. Summary

2.1. Disambiguation

Before defining social network and other important concepts of this study, it may be helpful to briefly address the confusion surrounding the concepts like "social network," "social networking service," "social networking," and "social network site."

First, "social network site" and "social networking service" are the same thing and those expressions are used interchangeably. Second, in the popular media, "social network" (without "service") is used instead of "social networking service." But social

network (without "service") has a distinct meaning in the scientific literature which bears the meaning of a specific type of social structure.

On the other hand, "Social networking service" is an Internet technology utilizing social networks. Therefore, in the popular media, "social network" is used instead of "social networking service" –by dropping "service."

Third, there is "social networking." In the popular media, social networking basically means "using social networking services." It is also used to mean "working with or on social networking services". Social networking may also mean "social networking service" as a synonym of it together with "social network site." These meanings are connoted especially in popular media and they differ from their usage in scientific literature. Finally, there is "social media." Social media indicates the information or "content" produced on the social networking services by the users of those services.

In this thesis, "social network" (SN) indicates that specific social structure as used in the scientific literature. The Internet technology is "social networking service" (SNS) again as used in the scientific literature. The incorrect usages of these terms in the popular media are avoided.

As previously mentioned, FB is an SNS. An SNS is an internet website that highly invests in SNs. Those services represent and recreate the SNs among the users of the service on the Internet, and build many features on the relationships of those users. Therefore, it's crucial first to understand the SN before moving through SNS and FB.

2.2. Social Network

An SN, which is a critical concept for FB -as for other SNSs, is a social structure that comprises of individuals, who have relationships among each other. An SN is made up of those individuals, their relationships, attributes of those relationships, and properties of those individuals such as personality and motivation. Among many other definitions, Mitchell defined SN as a "specific set of linkages among a defined set of persons, with the additional property that the characteristics of these linkages as a whole be used to interpret the social behavior of the person involved" (1969, p. 2). As seen in Mitchell's definition, SN is about (1) individuals, and (2) the interactions of those individuals. Interpersonal interaction and individual differences have a central role in learning and teaching processes. Therefore, shedding light on SN in an educational context is actually shedding light on learning and therefore teaching.

In parallel with Mitchell, Wellman and Berkowitz (1988) defined social network as "a set of individuals or groups who are connected to one another through socially meaningful relationships" (cited in Prell, 2003, p. 0). On the other hand, highlighting the personal side of SNs, Liccardi et al. (2007) argue that SNs are usually built on the "trust between members" (p. 225). Moreover, regarding the "personal" nature of social

networks, Wellman (1999) define SN as "personal community" as opposed to "whole networks" (p. 18).

As depicted in the definitions, SN is a concept, which has strong ties with concepts like individual, personality, motivation, society, relationship, interaction, and interpretation. Therefore, the author of this thesis thinks that, investigating SNs provides an opportunity to gain further insights into those related concepts within a holistic picture of the phenomenon, which is under study.

Of course, SN is even more than individuals and interactions. As briefly mentioned in previous paragraphs, SNs have a profound impact on learning experience. Regarding computer science students, Liccardi et al. highlight (2007, p. 224) many roles of social networks in learning experience especially in the context of "pedagogies of social-cultural theories of learning" (p. 226). They especially highlight the roles below:

- SNs can act as a pedagogical agent, for example, with problem-based learning (p. 224).
- In an educational context SNs can be construed as communities of practice (p. 226).
- SNs that manage their time effectively can supply a successful learning experience for each group member [in a computer mediated communication environment] (p. 231).

They also argue certain benefits of SN knowledge in terms of teacher training. They indicate that study of social networks can assist educators with their teaching in the ways below (p. 225):

- Detecting plagiarism.
- Forming groups for collaborative learning.
- Enhancing distance learning.
- Building strong communities of experts.

SN is a key issue for teaching, teachers and, thus, teacher training. Coburn et al. (2010) state that "teachers' [SNs] are an important part of the school improvement puzzle" (p. 33). They argue that the nature and quality of SNs are associated with "a myriad of outcomes that are central to instructional change and school improvement." They indicate that "[SNs] with strong ties can facilitate diffusion of innovation, transfer of complex information, and increased problem solving." Moreover, regarding teaching and SNs, Atteberry et al. (2010) state that SNs "play a key role in understanding the degree of success schools experience in terms of improvements for teachers and students" (p. 73).

Thus, SNs are phenomena which affect learning and therefore, should be considered while teaching. On the other hand, SNs –naturally- also exist among teachers themselves. Shedding light on SNs provides insights into various domains from learning itself to teaching practice and to profession of teaching.

While trying to understand SNs, concepts like personality and motivation should be considered because of the relationship of SNs with those concepts. Daly (2010) states that, SN theory "provides insight into motives of resisters to change, and spheres of social influence" (p. 3). Thus, while researching SNs, taking motives, motivation and other related psychological constructs into account may provide a deeper understanding of the phenomenon. In this research study, personality of the user, motivation to computer mediated communication (CMC), attitude towards FV, and motives to use FB are analyzed at the same time within the same research process to produce knowledge about the potential benefits of using SNSs for educational purposes.

2.3. Social Networking Service

SNS is a relatively new technology. As a computer software operating online, it is one of the functionalities of the Internet which was "discovered" in the 2000s. They grew out as new communication tools before fully turning into services which extensively reflect the SNs of their users into massive electronic platforms. They not only reflect the SNs but also process those linkages and operate on top of the complex relational structure of those networks. While the infrastructure of an SNS is a computer database storing information uploaded and continuously modified by the user, the interface of an SNS is a fancy web page showing the personal content of the user to himself or herself. It also includes programs processing the database, facilitating relationship handling, providing communication tools, and presenting interfaces specific to functions of the website.

SNSs can be defined as "web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system" (Boyd & Ellison, 2008, p. 211). Obviously, from the point of an SNS, the one spoken to is an individual. Individuals who are using the service (to have an account in the website) and who share a connection input that information that they are connected to the website by using its tools. Vast amount of information regarding the connections of the users is collected by the SNS and stored in a database.

Thus, even though an individual uses the service personally, other users who he or she knows in real life are required to be users of the same service to fully operationalize the SNS. As well as inputting already established connections, users may request to

initiate a connection with other users whom they don't know in their real life. The letter requires the consent of the addressee to form a connection.

There are numerous SNSs varying in the number of their users, focus of the site, or the geographical area that the site is popular. The number of SNSs has grown rapidly due to their "explosion in number and popularity" (Patchin & Hinduja, 2010, p. 198). On his Mashable blog, which also is an SNS, Sharma (2007) covers 350 SNSs. As of October 7, 2010, the Wikipedia entry "List of social networking websites" cited 191 "major active social networking websites" excluding "dating" and "defunct" ones (Wikipedia, 2010). Therefore, as well as general purpose ones, there are special purpose SNSs. Existence of special purpose SNSs such as "dating" ones indicate that there are certain actions or behaviors that users abstain from in general purpose SNSs. Therefore, morality is a dynamic playing an influential role in SNSs.

Facebook®, MySpace®, Cyworld®, and Bebo® are examples of those SNSs having millions of users (Boyd & Ellison, 2008, p. 211). Friendster®, Tagged®, Xanga®, LiveJournal®, and LikedIn® (Barnes, 2006) being other popular ones. Twitter® and Ekşi Sözlük® are also very popular. Ekşi Sözlük is a special case which is specific to Turkish audience and it combines certain features of SNSs with online encyclopedias.

SNSs are software which builds on SNs, and therefore, nature of an SNS is inherently interpersonal. This interpersonal nature, according to McKenna et al. (2002) causes "many relationships formed online" to "eventually result in real world contact" (p. 28). They state that SNSs demonstrate an "online-to-offline" trend in the meeting of the people indicating the impact of SNSs on the actual lives of individuals. Online-to-offline trend has implications on education regarding the social aspects of learning and teaching.

On the other hand, Ross et al. strikingly state that FB "tends to demonstrate opposite progression" (p. 578). They argue that FB has the potential to carry the positive effect of "offline" SNs to its "online" platform. As with the online-to-online trend, offline-to-online trend also is important for learning and teaching. It should be noted that students form SNs and they value their relationships wherever they are. Offline-to-online trend implies that while implementing an SNS as an educational tool, educators are inheriting both positive and negative sides of their existing relationships, and this is not limited to the school setting.

While thinking about SNSs like FB as educational tools, one should keep in my mind that students using that tool will be in contact with all their existing friends, family members and relatives. The possibility of carrying over the negative aspects of "offline" SNs to the learning environment will always exist; however, FB has the potential to carry all the positive effects of "offline" SNs to an "online" platform.

Therefore, there is a constant flow between online and offline relationships. Wellman (2001, p. 228) state that "the rapid emergence of computer-mediated communications means that relations in cyberplaces are joining with relations on the ground." Educational implementation of the SNSs may benefit from this "joining" or "flow". But this "flow" nature of SNS calls to mind new concerns relating privacy and morality. Morality issue should be addressed while considering implementing SNSs as educational tools. In this study, SNSs (FB in particular) will be investigated while addressing issues related to morality and privacy.

While it would be assertive to say that SNSs will "improve" learning, they may be useful tools for providing modern quality education. SNSs may help bring positive influence of SNs on learning into use by educational institutions and educators to benefit from. They may provide a "personal" way of learning within the conformity of their existing social networks. They may help students and teachers to form better communities for learning. They may help teachers fight plagiarism and enhance distance learning. SNSs may help develop better ways for distance or face to face collaborative learning.

The benefits of SNSs are not limited to learners. SNSs can have a positive effect on teacher professional development as well. Baker-Doyle et al (2010) argue that using SNS increases collaboration (p. 119) and "teachers communicate with each other more frequently on the [SNS] during the school year to share resources, request directed help from peers for both curricular and technological instruction, and connect about difficulties experienced in implementation efforts" (p. 124).

Therefore, SN and SNSs can play a crucial role in teacher training considering their positive effect on pre-service teachers' future jobs regarding implementation, improvement and development of teachers' professions and it is crucial for teachers to gain knowledge about SNs and SNSs. Teacher training institutions are responsible for helping pre-service teachers gain that knowledge and related skills.

2.4. Facebook

Facebook® is an SNS which was put into service in 2003. Mark Zuckerberg from United States of America (USA) developed the Internet software and started his business which focuses on just one single website (facebook.com). Among many SNSs having millions of users, FB is "overwhelmingly more popular" (Kirschner & Karpinski, 2010, p. 1239). It has "more than 800 million active users." The users of FB constitutes a virtual country which is third most populated country in the world and make up 12.69% of total world population. Therefore it is an incredibly popular medium and one of the most used software applications.

The site accounted for 1 out of 4 page views in the USA (Grossman, 2010). Statistics page of FB (Facebook, 2012) reports that "50% of [its] active users log on to

Facebook in any given day." Therefore, it is a service used quite very often. Considering the "anytime anywhere" motto of distance education, FB is a charming target for educational implementation.

What is more charming is that even though it has users from any age group FB "remains primarily a college-age and emerging adult phenomenon" Kirschner & Karpinski, 2010, p. 1239). Operational realm of FB is overlapping with the one of education. It terms of accessibility and communication, FB is very suitable for teachers for to reach their students.

FB as other SNSs has many built-in features. Other than built-in software there is also plug-in type software that you can enhance the capability inventory of an SNS. Built-in or plug-in, SNSs incorporate numerous tools such as text messaging tools, instant messenger programs, bulletin boards, online role–playing games, computer supported collaborative work, image editing and publishing modules, video sharing web pages, internet radio broadcasting and listening tools, collaborative filtering for recommender systems, advertorial programs, tagging and cataloging tools, etc. Additionally, FB is a multilingual SNS. It serves in 75 languages (Grossman, 2010).

SNSs are sophisticated web sites that exist on the Internet. As an advantage of being an Internet based software, SNSs are accessible from many information technology environments. Being the leading and prominent SNS, FB has "apps" for operating systems of major smartphones, to be more precise: the iOS, the Android OS, and the WebOS. These apps (little software working on smartphone operating systems) make smartphones an access point for FB. Major mobile device manufacturers like Research in Motion, Nokia, and Samsung have built-in software on their GSM mobile devices which let users to access to certain features of FB just by using their cellular telephones without even needing an Internet connection. It is reported that "350 million active users" of FB access to the site through mobile devices and "more than 475 mobile operators globally" deploy FB mobile products (Facebook, 2012). Thus, a GSM mobile phone and/or a smartphone are devices that are used to access FB just like personal computers (PC).

FB, like all other SNSs, incorporates software "that control the exchange of interpersonal information" (Barnes, 2006). These software can basically be categorized as internet technologies. As previously highlighted, the Internet, defines the nature of SNSs. The Internet makes SNSs accessible "anytime, anywhere". Being almost infinitely accessible, information exchange woks like a charm via SNSs. Taking into consideration that how previous technologies changed how people communicated, FB has the potential to change how people behave. On the role of technologies that are changing human behavior, Plant (2000, p. 23) argues that:

> *Whatever it is called, and wherever it is used, this simple, accessible technology alters the way in which individuals conduct their everyday lives. It has extensive implications for the cultures and societies in which it is used; it changes the nature of communication, and affects identities and relationships. It affects the development of social structures and economic activities, and has considerable bearing on its users' perceptions of themselves and their world.*

The features and statistics of FB, gives way to rethink the possible opportunities that FB may provide for learners, teachers, professors, and teacher training institutions. It may be implemented as a tool for communication between learners and teachers in face-to-face traditional settings. It may be employed as an infrastructure for distance education applications to decrease the negative effects of "transactional distance". FB may let learners and teachers get the most out of the -previously mentioned- benefits of SNSs.

It may be used as a tool to bring the power of SNs to online distance education implementations. It may be used to help diffusion of innovation processes in the educational institutions. It may be used by teachers for peer-to-peer communication as well as for reaching out their students. It may be used as a tool to make online learning more charming for learners. Therefore, FB in particular, may be considered by teacher training institutions to be aware of. It should be noted that, FB is the most popular SNS and is -most probably- the one that teachers will use if SNSs ever becomes one of the educational technologies which often and widely used.

2.4.1. Facebook users

Facebook is an overwhelmingly popular hypermedia application in Turkey, the USA, and the rest of the world. Apart from economic reasons like advertisement and shopping, they are not only used for instant messaging and e-mailing but also used for relationship maintenance, getting information, learning, searching, game playing and entertainment and for seeking for more communication opportunities. In addition to all that it is also used for political reasons as well. Brenner (2012) argues that "Facebook users are much more politically engaged than most people." The use of social media for political reasons was well observed in "Arab Spring" and "Gezi" protests. Facebook –together with Twitter- was extensively used for political engagement.

The demographics of Facebook users are very important to understand the overarching spectrum of uses of Facebook. Facebook (2013) report that they have "1.19 billion monthly active users as of September 30, 2013" and 874 million of them uses Facebook through mobile products of Facebook.

In the USA, 245,203,319 people who make 78.13% of the population uses the internet and 67.71% of those internet users (52.9% of total population) are Facebook users ("Facebook statistics", 2013). In Turkey, Internet World Stats report that, 36,455,000 people who make 45.7% of the population uses the internet and 88.14% of those internet users (40.29% of total population) are Facebook users ("Internet and Facebook usage in Europe", 2012). Remarkably, in Turkey, more of the internet users use Facebook.

Moreover, Brenner (2012) argues that 72% of adult (Americans) use SNSs and 67% (of the total adults) use Facebook. According to her report, females use Facebook and other SNSs more than males. For the ones who are between the ages of 18-29 the percentage is remarkably 89%. Regarding the teenagers, Lenhart et al. (2010, p. 2) report that the percentage is 73%. They state that %72 of teenagers use Facebook among other SNSs. They state that "Facebook is currently the social network[ing service] of choice" (p. 18).

There seems a cultural difference between Turkey and the USA in terms of the demographics of Facebook users. Şener reports that –in contradiction to USA- most of the Turkish Facebook users are male (2009, p. 1). She reports that 63% of Facebook users are male and only remaining 37% are female. In addition to that, she also states that most of the Facebook users are within the age group of 25-30 (31.6%) followed by 18-24 (30.4%) and 31-40 (26.9%). Demographics of Facebook users in Turkey are remarkably "older" especially considering the 7.9% share of 13-17 age group. This statistic is more meaningful keeping in mind the fact that half of the population is below the age of 18 in Turkey. Thus, there are similarities and differences in terms of the demographics of Facebook users between Turkey and the USA. In both countries, Facebook users are highly educated. Hampton et al. (2012, p. 22) report that "education is a strong predictor of having a diverse social network." This information is in parallel with Şener's findings that level of education of Facebook users are above the average of Turkey (2009, p. 1).

2.5. Educational Use of Facebook

As a communication, relationship and hypermedia application Facebook is a potential educational tool and environment. Many learners, teachers and administrators are already using it for educational purposes. Since it is an environment for communication and access to information, people in the educational settings started using it spontaneously for at least communicating and sharing educational material through Facebook Wall. Unfortunately, literature on the use of Facebook by students and teachers in the USA is limited. Veletsianos and Navarrete (2012) state that even though "Online learning in higher education in the US is on the rise" (p. 162) "there is a lack of literature examining social networking sites" (p. 146) in educational settings and "even less of that literature is focused on student experiences in online courses"

(p. 146). They state that very few research report the current situation. In parallel with Veletsianos and Navarrete (2012), Brady et al. (2010) state that "there is little research detailing how educators are using such education-based SNSs for e-learning purposes" (p. 154). They also argue that "despite the growing popularity of commercial SNSs, namely Facebook or MySpace, U.S. higher education administrators have largely restricted instructors from adopting the use of SNSs in their courses" (p. 154). Thus, an organizational resistance is observed in the USA against the use of SNSs for educational purposes.

On the other hand, there are also reports on the use of Facebook and other SNSs for educational purposes in the USA. As mentioned in the first section, The National School Boards Association reported that 59% of students who use social networking say they talk about education related topics (NSBA, 2007, p. 1). More significantly, 50% of those students who use social networking say they talk specifically about schoolwork.

Moreover, in the USA, Selwyn (2009) reports extensive use of Facebook by students for various reasons. She discusses as follows (p. 171):

> *… the data show how Facebook has become an important item for the informal, cultural learning of 'being' a student, with online interactions and experiences allowing roles to be learnt, values understood and identities shaped. Much of the data showed students coming to terms with the roles and the nuances of the 'undergrad' culture within which they found themselves located. Facebook should therefore be seen as an increasingly important element of students' meaning-making activities, especially where they reconstruct past events and thereby confer meaning onto the overarching university experience.*

Regarding the use of Facebook for educational purposes by the students, Selwyn (2009, p. 161) reports five main categories:

1. recounting and reflecting on the university experience
2. exchange of practical information
3. exchange of academic information
4. displays of supplication and/or disengagement
5. 'banter' (i.e. exchanges of humor and nonsense)

In addition to that, Selwyn (2009, p. 171) argues that Facebook represents "a space where the 'role conflict' that students often experience in their relationships with

university work, teaching staff, academic conventions and expectations can be worked through." Finally, she states that Facebook is being used by students as:

> *... a space for contesting and resisting the asymmetrical power relationships built into the institutional offline positions of student and university system, therefore affording these students with 'backstage' opportunities to be disruptive, challenging and resistant 'unruly agents'.*

In Turkey, there is a lack of information regarding the current state of the use of Facebook for educational purposes. Facebook was introduced in Turkey in 2007 so that there is a lack of literature regarding Facebook except superficial demographics. But there are many suggestions to use Facebook for educational purposes. Kert and Kert (2010) argue that "%99.4 of students are using Facebook as the SNS" and "difference of opinions related to using SNSs as learning environments were statistically significant favor of positive opinions" (p. 487). They report that 60.35% of the students think that SNSs may be utilized as educational tools (p. 502). On the other hand, they report that 30.13% of the students thin that SNSs are "waste of time" and only 39.74% of them reject that idea (p. 498). Conclusively, they suggest using SNSs for educational purposes (p. 488).

Moreover; Gülbahar et al. (2010, p. 6), Balaman and Karataş (2012, p. 501), Kalafat and Göktaş (2011, p. 5), and Özmen et al. (2011, p. 46) suggest that SNSs –Facebook in particular- are potentially beneficial for educational implementation. But none of them report how learners and teachers use Facebook or other SNSs for educational purposes. Thus, how SNSs –Facebook in particular- are used for educational purposes in Turkey is unclear. Many researchers report the potentials of it and many others use SNS for their research, it is not documented how learners and teachers are currently using SNSs for educational purposes.

Finally, some obstacles are reported by researchers in terms of the educational implementation of SNSs. Even though Kalafat and Göktaş (2011, p. 4) report that 88% of the college students they investigated state that they think that Facebook is contributing to their learning Balaman and Karataş (2012, p. 503) report that 94.9% of high school students responded with "No" to the question "Do SNSs help/contribute [to your success for the] classes in the school?" They argue that this percentage may stem from the fact that SNSs are forbidden by the Ministry of Education of Turkey in the schools. Difference between high school and college students may be explained by the accessibility of the SNSs from the computers in the campus of the educational institution. Thus, organizational and political resistance to the adoption of SNSs as educational tools or environment is a common between Turkey and the USA.

2.6. Personality

As previously mentioned, in the context of SN and SNS, personality is an important phenomenon. FB processes not only social data but also highly personal information. FB users continuously upload personal information to their accounts. The profile a user creates is a reflection of her or his personality. Personality of the user is represented as functionalities of her or his profile. Thus, even though the functions and programs of FB are standard for every user, the operational structure of the environment dictates that what going on FB is highly determined by the personalities of FB users.

Personalities of the users also underline the privacy aspect of the environment. The data uploaded by the user are organized according to certain privacy structures. At the very beginning, users may determine their profiles' behavior when another user searches for people by their names. A user relatively more concerned with privacy may set her or his profile so that her or his profile doesn't show up in the results list of the search queries of other users. Moreover, users connect with each other by being "friends". User may classify her or his friends and determine access restrictions on certain "classes" within her or his friends list. User may classify her or his data in order to let only certain individuals or "classes" to see them.

Therefore, the data is structured according to the personality characteristics of the user and the user personally administers the structuring process. With this in mind, and considering SNSs are hypermedia internet applications, for FB, therefore, personality is a core concept. When it comes to (potential) educational implementation of FB, designers, developers, teachers should consider the personality aspect of this Internet technology. Strikingly, Keller and Burkman state that (1993, p. 4) "[since] courseware designers have little control over the personalities of their audience; this implies that their best chance to motivate learners is simply to select carefully what they teach, and to teach it well." Thus, FB is a technology that should be used by an educator knowledgeable of personality issues and FB itself should be "implemented" in a fashion sensitive to personality differences of the students.

Personality may be defined as "important and relatively stable characteristics within a person that account for consistent patterns of behavior" (Ewen, 2003, p.5). Ewen also states that aspects of personality "may be observable or unobservable, and conscious or unconscious." When it comes to individual differences and personality, there are several competing theories. Today, there exist many ones but "personality theory begins with Sigmund Freud" (p.6). A personality theory, according to McCrae and Costa (1996, p. 55), is a grand theory that organizes knowledge about personality and puts it in broad perspective. They state that those several personality theories serve three functions:

- They serve as a vehicle for addressing basic philosophical questions about human nature,
- They serve as a repository for insights about psychological mechanisms and human characteristics.
- They define scope and limits of personality psychology, identifying the variables to be studied and the phenomena to be explained.

In the other hand, McCrae and John (1992) stated that "a complete theory of personality should address universal personality process, common dimensions of individual differences, and unique characteristics of the individual" (p. 199). Philosophical aspects of personality theories dictates selection of sound theories while developing a research framework. It should be noted that theories of learning, teaching and teacher training is sensitive to culture dependent understanding of the phenomena. The personality theory that a research derives from should be an established, cross-cultural, and perennial one.

Personality is a phenomenon influencing learning, teaching, and therefore teacher training. Taking personality into account while designing or developing instructional and/or educational environments may be crucial. But, unfortunately, studying personality in the context of education is problematic.

Currently, there is no accepted referential framework, metaphor or paradigm to guide the researchers in this area (De Raad & Schouwenburg, 1998, p. 304). On the other hand, Cronbach and Snow (1977, p.6) state that "any aspect of the individual, including some matters untouched by conventional ability and personality measures, can predict response to instruction." They detail the scientific methods for studying the correlation between individual differences (personality) and learning outcome. Moreover, Snow (1977) states 8 points that "individual differences come into play" (p. 13):

- Individual's cognitive processes lead us to integrated models of learning and cognition
- Instructional objectives involve value judgments, and value is mainly an individual matter. Individual differences in values across educators and school communities cause variations in instructional objectives.
- Individuals organize their knowledge and skills differently for memory storage and retrieval, and will use them differently in problem solving.
- The initial state of the learner is the point at which individual differences in learner aptitudes become most important.
- Admissible instructional actions again involve individual differences in values.

- Monitoring of aptitude development as well as learning during instruction is also a matter of individual differences. Individuals learn at different rates but also adapt to different instructional conditions at different rates.
- Assessment of outcomes requires an examination of individual differences in outcome and ATI analyses using the initial state variables. This is required because the evaluation question is always, "Did the instruction work well for the students?" That is, for each student, not just for the few who stand in the vicinity of the group average.

The points that Snow makes, highlights the importance of personality in the educational settings. Especially cognitive processes are depicted as being correlated with individual differences (i.e. personality). The 8 point Snow makes are also related to social cultural construction of reality and social aspects of learning such as memory handling and knowledge organization. Building on personality's place in learning, scholars delineated many factors that contribute to the likelihood of success and for predicting scholastic outcome (De Raad, 1998, p. 304).

Of course, it's not only the cognitive domain that personality comes into play in terms of learning. Certain aspects of personality also shed light on the affective domain of learning theories. Messick (cited in De Raad, p. 305) draws a table of potential 'non-cognitive" personality factors contributing to learning success. Table 2.1 lists Messick's factors.

Keeping in mind that the definition of personality has philosophical and psychological aspects, it's natural to have many personality theories in the literature. Among many others, there is also "The Five Factor Model" which is also called "The Big Five" factor framework. The Five Factor Model (FFM) of personality is a hierarchical organization of personality traits in terms of five basic dimensions: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience (McCrae & John, 1992, p. 175). FFM is categorized as being in or associated with the "trait theory" of personality (p. 199). It is actually one of the first theories trying to describe personality in terms of traits.

A trait theory of personality tries to explain personality by using "trait constructs". Trait constructs are "dimensions of the periphery in personality theories, to be contrasted with dimensions of the core, which address fundamental issues of human nature and personality organization" (McAdams, 1992, p. 336). In this classification, concepts such as id, ego, superego, Oedipus complex, unconscious motivation, psychosexual stages, and the dreamwork are core characteristics of human functioning. Periphery constructs include the oral and the anal personality types. In this distinction "core characteristics are about human nature, and periphery characteristics are about differences among humans" (p. 336).

Table 2.1. Varieties of non-cognitive personal factors.

Varieties	Description/examples
Experiential/background	work experience, educational history, demographics
Affect	positive/negative feeling, state (anxiety)
Attitude/belief	action tendency, orientation to learning/self, locus of control
Interest	pattern of choice, preferences
Motivation	need for achievement, need for approval
Curiosity	exploratory drive
Temperament	disposition influencing behavioral style
Social sensitivity	interpersonal competence, empathy, leadership, tolerance
Coping strategy	meeting requirements of demanding environment
Cognitive style	information processing consistencies reflecting personality
Creativity	fostering originality and creative mind in education
Values	social standards, morality

As previously mentioned FFM is one of the first theories of personality. The FFM was developed by Raymond B. Cattell in a longitudinal study beginning in 1943 (Goldberg, 1990, p. 1216). Even though researchers has concluded with articles offering evidence for or against the model, McCrae and John (1992) state that "it is more fruitful to adopt the working hypothesis that the five-factor model (FFM) of personality is essentially correct in its representation of the structure of traits' and to proceed to its implications for personality theory and its applications throughout psychology" (p. 176). They imply the perennial nature of the theory with its more than 60 years of history. FFM continued its developmental process and established itself as a highly tested theory throughout numerous researches.

In this study, it's not only the relationship of personality with learning and teaching that is taken into account. Since FB is a computer technology, relationship of personality with technology is also one of the key concerns of this research and

personality traits correlate with technology use. For example Butt and Phillips state that (2008, p. 348) neurotics are "using the Internet to feel part of a group and to escape loneliness." Their research indicates both personal and social aspects of Internet usage, and they use trait theory for their research framework.

On the other hand, Kraut et al. (2002) report that the "Internet use with changes in community involvement was positive for extraverts and negative for introverts" (p. 61). Moreover, Schrammel et al. report that "interest of using the internet for communication" is high for those "with high levels on neuroticism" (2009, p. 170). When it comes to conscientiousness, Butt and Phillips report that (2008, p. 348) conscientiousness is "negatively related to the use of internet". As depicted by numerous researchers in numerous studies, certain personality traits correlate with certain aspects of using Internet technologies.

FFM is a very popular instrument in personality researches. McAdams (1992, p.332) states that "five-factor model is becoming an established dominant framework in the field of personality psychology." Thus, as a highly tested and perennially developed one, FFM is the factor framework of this research study.

FFM has five factors or dimensions for personality. Even though the factors have almost universal names, there still exist different usages according to the philosophical positions of the researchers using the model. For example "Emotional Stability" for "Neuroticism" and "Culture" for "Openness to Experience" are often used by researchers (McCrae and John, 1992, p. 180). In this research study, "Neuroticism" and "Openness to Experience" will be used respectively.

2.7. Motivation

When treating human behavior about internet and communication, personality and motivation go hand in hand. On the relationship of personality and motivation Ewen (2003) state that "personality is a comprehensive construct and motivation is a fundamental aspect of behavior … Therefore, theories of personality are in large part theories of motivation" (p.6).

On the other hand, FB is a communication tool and "it is necessary to take into consideration a person's motivation for communication" (Spitzberg, 2006, p. 580). Moreover, in parallel with Ewen and Spitzberg, Keller and Burkman state that (1993) "motivation to learn depends largely on the learner's personality" (p. 4). Thus, motivation influence learning and is sensitive to the design of learning medium. There is also a reported relationship between SNs and motivation. Designing and developing educational tools that include the use of FB should address the questions regarding the relationship of motivation with the use of FB.

Motivation is a concept which is related to volition, need, emotion, beliefs, values, and goals; and described as "the energizing component of competent performance" (Spitzberg, 2006, p. 637). Beginning with the lexical meaning; "to be motivated means to be moved to do something" (Ryan & Deci, 2000, p. 54), and "motivation means to move" (Eccles &Wigfield, 2002, p. 110). Therefore, basically, as Eccles and Wigfield nicely put, "the study of motivation is the study of action."

Similar to personality, there are more than one theories explaining motivation and those theories "have emerged from different intellectual traditions" (Eccles & Wigfield, 2002, p. 110). But it's "typically" described as "the reasons that individuals are aroused to action" (Covington, 2000, p. 22). In a familiar language, Keller and Burkman (1993) define motivation as "that which determines the magnitude and direction of behavior" (p. 3). They state that "the design of the instructional message is not complete without considering its motivational appeal." This understanding of motivation highlights the significance of motivation for learning and for technologies that will be used for educational purposes.

Moreover, after underlining the "primacy of motivation for learner," Keller and Burkman (1993) argue that –in terms of "ways to use media to motivate"- effective use of communication media can contribute to increasing motivation to learn" (p. 4). Therefore, motivation is not only enormously influential in learning but also sensitive to the design and use of the instructional message and the medium. FB, as a potential learning medium should also comply with required motivational factors for instructional implementation. This study will shed light on the relationship of "way to use" FB and motivation to use FB.

Even though it has got "typical" definitions in the hand, motivation is not a unitary phenomenon. Ryan and Deci (2000, p. 54) state that people "not only in level of motivation …, but also in the orientation of that motivation." Level of motivation is how much motivation a person has and orientation of motivation means what type of motivation it is.

Ryan and Deci state that orientation concerns "the underlying attitudes and goals that give rise to action." Therefore, "attitude" also is an important aspect of motivation. Attitude is scaled separately in this research study. It is aimed to access more of the constructs to reach a clearer understanding of relationships in the context of SNs, SNSs, learning and teaching.

As previously mentioned, there are alternative theories trying to explain motivation. First, there is a distinction between intrinsic versus extrinsic motivation. Covington (2000, pp. 22,23) argues that "[i]ndividuals are said to be driven to act for extrinsic reasons when they anticipate some kind of tangible payoff, such as good grades, recognition, or gold stars. These rewards are said to be extrinsic because they are

unrelated to the action." In parallel with Covington's argument, Eccles and Wigfield (2002, p. 112) state that "[w]hen extrinsically motivated, individuals engage in activities for instrumental or other reasons, such as receiving a reward."

By contrast with intrinsic motivation, Covington (2000, p. 23) argues that "individuals are said to be intrinsically motivated when they engage in activities for their own sake. In this instance, the rewards reside in the actions themselves; that is, the actions are their own reinforcement." Again in parallel with Covington's argument, Eccles and Wigfield (2002, p. 112) state that "When individuals are intrinsically motivated, they engage in an activity because they are interested in and enjoy the activity." Therefore, intrinsic motivation highlights reasons to actions, which individuals spontaneously have a feeling about while extrinsic motivation indicates rewards and external stimuli for arousal to action.

Intrinsic motivation theories are "theories focused on the reasons for engagement" (Eccles & Wigfield, 2002, p. 112). Intrinsic motivation is one of the most significant factors influencing learning and it's the most studied motivation type in social and educational researches. Ryan and Deci (2000) state that intrinsic motivation is an "important phenomena for educators" (p. 55) and argue that it is "a natural wellspring of learning and achievement that can be systematically catalyzed or undermined by parent and teacher practices." They state that the intrinsic motivation intrinsic motivation results in high-quality learning and creativity. Moreover, Wigfield et al. (2004) state that persons who are intrinsically motivated to learn "become deeply involved in their activity and devote much time and energy to it" (p. 306).

Intrinsic motivation is also the "social" type of the motivation. Reiss (2004) ranks "social status," "social contact," "romance," and "family" among 16 basic desires of intrinsic motivation (p. 187). Thus, intrinsic motivation is the motivation which is "personal" and "social" and which is most influential in learning and (therefore) teaching. While investigating SNs, SNSs and personality, motivation is an important construct that should be taken into account. And for a research study focusing on social and personal aspects of learning, intrinsic motivation is the most important motivation construct to consider.

Moreover, a significant point regarding intrinsic motivation is that, it's subject to teacher intervention. Wigfield et al. (2004) state that the "instructional programs can affect children's motivation as well as their achievement" (p. 306). Therefore, while investigating the educational implications of SNSs, shedding light on the relationship of intrinsic motivation with use of SNSs may provide useful information for facilitating and even improving the use of SNSs as a tool for learning and teaching.

What makes motivation even more important for this study is that, it highly correlates with personality and even "depends" on personality. Therefore, investigating

personality and motivation at the same time promises to deliver more than studying motivation and personality separately. This research study aims to investigate the association of use of FB with personality and (intrinsic) motivation, in the same research design.

2.8. Motives

Motive is another psychological construct that is related with personality. As an indicator of this relationship, motives "formed the basis of numerous personality questionnaire measures" (Barenbaum, & Winter, 2003, p. 188). Murray (2008)

Current research indicates that various motives exist for use of SNSs. The motives vary according to the site as well. DiMicco et al. (2008) report that "patterns of use and user motivations differ from users of Internet social network sites" (p. 719). In this context, Ellison et al. (2007) argue that FB provides its users with social capital (p. 1164). They define social capital as "resources accumulated through the relationships among people" (p. 1145) and report that accumulation and maintaining of social capital is a major motive for FB use. In another study, Lampe et al. (2006) conclude that "Facebook members seem to be using Facebook as a surveillance tool for maintaining previous relationships, and as a 'social search' tool by which they investigate people they've met offline" (p. 170).

Moreover, vom Brocke et al. argues that (2009) "maintaining a form of social relatedness" and "to support the intensification of social relations through gaining new knowledge with respect to one's contacts" (p. 39) are two other motives to use SNSs. In sum, motives to use FB reported to be varying. Therefore, it is possible for users to have different patterns of FB usage depending on their motives, which in turn, correlating with motivation and, therefore, eventually with personality.

On the relationship of motives and usage Haridakis & Rubin state that (2003) "different motives are linked to different media prefernces, leading to different patterns of media exposure and use and to different outcomes" (p. 33). In this research study, association between motives to FB and FB usage is investigated.

2.9. Summary

This research is aimed to shed light on the implementability of SNSs for educational purposes. To achieve this goal, association of personality, motivation, gravitational motives, and attitude towards using FB with FB use was investigated. Quantitative and qualitative methods were used in a mixed-method design with a pragmatic view. Instead of collecting data from the users of all SNSs, FB was chosen due to its overwhelming popularity.

This chapter reviews the literature in the context of the research questions. Since personality, motivation, motives, and attitude were scrutinized as psychological constructs, naturally, literature review focused on them, as well. Before reviewing the literature focusing on those constructs, author of this paper focused on issues related to the phenomenon at the core of this research such as social network, social networking service, and Facebook. Like all SNSs, FB is a hypermedia application works on the Internet. Therefore, Internet and hypermedia related literature was reviewed as well.

SNs have many roles in learning experience especially in the context of social-cultural theories of learning. Especially problem-based learning, collaborative learning, distance learning and communities of practice are highlighted fields when it comes to SN and learning. SNSs are new information technology utilities which extensively reflect the SNs of their users into electronic platforms and operate over the complex relational structure of those networks.

SNSs are web services or simply websites that allow individuals to construct a profile, represent a list of other users with whom they share a relationship, and view and navigate through their list of connections. There is a plethora of SNSs of which some are general purpose services and some track a certain interest or a focus on a subject such as "Star Wars". In general, SNSs are online-to-offline platforms but FB in particular has an offline-to-online aspect meaning it has the potential to carry the positive effect of "offline" SNs to its "online" website.

It has been shown that using SNS increases collaboration and not only learners but also teachers benefit from SNSs. Teachers using SNSs have been shown to communicate more frequently and help each other about their jobs more than non-users. Considering the benefits of SNs and SNSs, This research study aims to produce a piece of knowledge about how to benefit from SNSs (and therefore also from SNs) for learning and teaching and for educational purposes in general.

As the most used SNS –with more than a billion users- FB was picked in this research study. It has all the functionalities of SNSs and is the one where the young people spend most of their times socializing. FB, like all other SNSs, is a hypermedia application running on the Internet. It may have the advantages of Internet tools developed for educational purposes and it may have the advantages of hypermedia applications developed for educational purposes.

Hypermedia has been shown to better suit with "learner control." In terms of sequencing, selection, and representation of content in terms of pacing, hypermedia applications are advantageous for learners. Hypermedia applications are beneficial for accessing, exploring, interacting, and engaging with information.

On the other hand, SNSs such as FB are places where people profile their personalities and access to others'. An excessive amount of personal and to some extent

confidential information is posted and exposed on SNSs and users are exposed to personal information even if/when they don't want to. While using an SNS "friendship", "linking", and "allowing" are major issues.

On the other hand, people are using SNSs with motives different than each others'. Moreover, attitude and motivation also have been shown to affect the use of FB and other SNSs. Therefore personality, motivation, motives, and attitude are among the most influential factors of using SNSs.

What is more striking is that, personality, motivation, motives, and attitude are among the most influential factors of learning and teaching as well. Therefore, these constructs are selected for investigation in this study to shed light on the dynamics of SNS use.

When it comes to psychological constructs such as personality and motives, there is always a set of competing theories. In this research study author relied on the trait theory of personality and gravitational theory of motives. Trait theory was selected because it is the most studied and most fostered one among others. Moreover, it provides the most reliable, most valid and most tested instruments when it comes to serious and sound research.

On the other hand, gravitational theory is relatively a modest theory compared to trait theory of personality. This theory was chosen because of its popularity among online digital media literacy researchers.

2.9.1. Rationale of the Research

In a nutshell, SNSs such as FB are promising mediums to implement for educational purposes. They are promising not only for learners but also for teachers, educational institutions, and developers as well. It may be used to enhance or enrich learning. It may be used to increase the success and job satisfaction of teachers. It may be used to better handle collaborative processes in online learning environments. It may be used for many other benefits. But what needed is to better understand how do people with different personalities use it compared to each other? How do people with different motives use it compared to each other? How do people with different levels of motivations use it compared to each other? How do people with different attitudes toward using SNSs use it compared to each other? How do people around the world with different cultural backgrounds use it compared to each other? And what do pre-service teachers think about using SNSs for educational purposes as students and future teachers. This research study aims to answer all these questions.

The literature indicates that almost everybody in the world is using SNSs in the same way. Relationship maintenance, social interaction, communication, getting information, entertainment and searching for interesting and unusual content are main

motives for using FB and other SNSs. Thus, SNSs develop "universals" among people. On the contrary, there are also some differences in the ways people use Facebook and other SNSs. For example, we see that while both American and Turkish educational institutions and their administrators tend to prohibit the use of SNSs (universal), in the USA female use SNSs more than males and in Turkey male use them more than females (cultural difference). In some cases online to offline trend is prominent (using SNSs for making new friends and meeting new ones) while in others offline to online trend is more preponderant (privacy concerns).

These differences may stem from cultural differences such as individualism-collectivism dichotomy regarding the two societies. USA is renowned for the individualistic character of its culture while Turkey is a more collectivist society. Digital media literacy is another separation point. While Facebook users are more educated compared to the totality of their societies in both Turkey and the USA (universal) more digitally literate individuals tend to get bored of the "the next big thing" faster and seek for more interesting stuff online (personal/cultural difference). Thus, e pluribus unum!

This study aims to investigate where universals and the separation points emerge in both individual and societal levels. In the societal level motivation, motives, attitude and personality are compared among two countries regarding the use of Facebook. In the personal level, again, motivation, motives, attitude and personality are compared within countries. In the second phase of the research, usefulness and feasibility of Facebook is investigated within an interpretive paradigm and the feelings of the pre-service teachers are explored in order to understand the "appropriateness" of implementing Facebook for educational purposes. Finally, this study aims to reach the ones who are supposed to use SNSs in educational settings -the future teachers- and grounding on their voices, tries to provide scientific knowledge for answering the question "if SNSs are to be implemented for educational purposes, how they should be?"

CHAPTER III

METHODOLOGY

This chapter of the thesis focuses on the methodology of the research embarked on during the course of the study. Throughout the chapter, research questions, research design, issues related to cross-cultural research, issues related to mixed-method design, issues related to the correlational and constant comparative research, context of the study, population and sampling, protection of human subjects, researcher's role, instrumentation of the research, pilot study and its results, data collection methods, data analysis methods, and issues related to validity and reliability are presented.

3.1. Research Questions

The purpose of this research is to investigate the implementability of SNSs for educational purposes. In order to investigate this possibility, a mixed-method cross-cultural design was used. Initially, the study is two-fold. It comprises of quantitative and qualitative phases. The quantitative phase of the research is also two fold and administered in both Turkey and The United States of America. Qualitative phase followed the Turkish lap of the quantitative phase. In quantitative and qualitative phases, 4 research questions each were posed. While all quantitative research questions had sub-questions, only two of the qualitative ones had sub-questions.

In the quantitative phase, following research questions were posed for this study:

1. To what extent personality traits, motivation to use FB, attitude towards FB, and motives to use FB is related to the number of friends on FB?
   1.1. If there is a relationship, do cultural differences between Turkey and the USA affect that relationship?
2. To what extent personality traits, motivation to use FB, attitude towards FB, and motives to use FB is related to the duration of FB membership?
   2.1. If there is a relationship, do cultural differences between Turkey and the USA affect that relationship?
3. To what extent personality traits, motivation to use FB, attitude towards FB, and motives to use FB is related to the time spent on FB during a day?
   3.1. If there is a relationship, do cultural differences between Turkey and the USA affect that relationship?

4. To what extent personality traits, motivation to use FB, attitude towards FB, and motives to use FB is related to the level of privacy of FB profile?
   4.1. If there is a relationship, do cultural differences between Turkey and the USA affect that relationship?

In the qualitative phase, following research questions were asked:

5. What are the pre-service teachers' perceptions of FB?
   5.1. What do pre-service teachers like or dislike about FB?
6. Are pre-service teachers motivated to use FB?
   6.1. What are the factors motivating the pre-service teachers to use FB?
7. How do pre-service teachers associate FB with teaching profession?
8. How should FB be used according to pre-service teachers if it is to be used in education for educational purposes?

3.2. Design of the Study

The purpose of this PhD research study is to investigate the implementability of SNSs for educational purposes -such as learning, teaching and teacher training. In order to investigate this possibility, a cross-cultural and mixed-method design was utilized. Research design is depicted in Figure 3.1.

In the first level, the study is two-fold. It is comprised of quantitative and qualitative phases, thus mixed-method. In the second level, the quantitative phase of the research is also two fold and is comprised of laps administered in both Turkey and The United States of America, thus cross-cultural. Qualitative phase followed the Turkish lap of the quantitative phase. Quantitative phase was a correlational design. Five instruments were used to collect data: NEO FFI Personality Scale, CMC Motivation Scale, Facebook Motives Scale, Attitudes toward Facebook Scale, and Facebook Use Scale. Demographics were also collected via another questionnaire. All of these questionnaires were Likert scales. All of them except the demographics were developed by non-Turkish researchers abroad in English. In the Turkish lap, translated versions of the English originals were administered.

Before the actual study of the Turkish lap of the quantitative phase, a pilot study was administered. All of the instruments were prepared into one online survey and data was collected at ones. Researcher travelled to USA for accomplishing the American lap after finishing the Turkish lap. In between, already collected data were analyzed and qualitative phase was accomplished. Qualitative phase was a face to face interview with open ended questions. Eight questions were asked to the participants. Three of the questions had sub-questions. The questions of the interview were developed according to the results of the Turkish lap of the quantitative phase. The interviews were administered by the researcher.
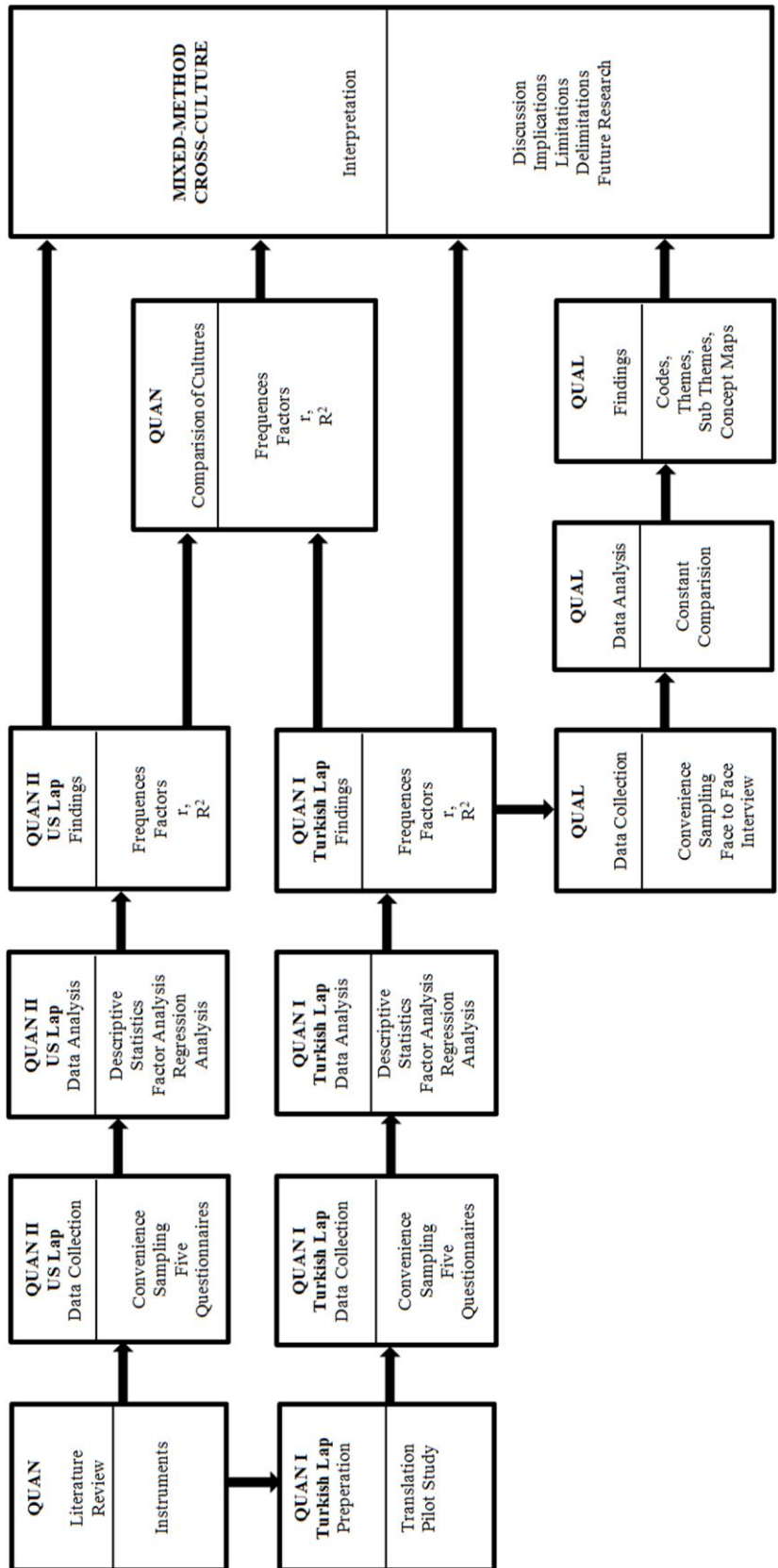
Note: "QUAN" stands for "quantitative" and "QUAL" stands for "qualitative."

Figure 3.1. Research design.

All of the participants were pre-service teachers. In the quantitative phase, Turkish and American pre-service teachers were asked to participate in the study. While the Turkish lap was being administered, only Turkish pre-service teachers attended. In the US lap which was accomplished after the Turkish lap and qualitative phase were finished, only American pre-service teachers attended. Qualitative phase was only for Turkish pre-service teachers.

Data collected in the quantitative phase –which was designed as a correlational research- were analyzed by statistical measures. Qualitative data which is comprised of the answers of the pre-service teachers is analyzed by constant comparative method.

3.2.1. Mixed method

Mixed method research is a research approach which utilizes methods for collection and analysis of both quantitative and qualitative data. Ross et al. (2008) defines mixed method research as "those studies that combine qualitative and quantitative methods" (p. 751). Essential goal of mixed method design is to approach the problem from different angles and to utilize different research perspectives where appropriate. On the "different angles and worldviews" issue, Van Gog et al. (2008, p. 768) states as follows:

> *Quantitative and qualitative methods for data collection*
> *derive in some measure from a difference in the way one*
> *sees the world, which results in what some consider a*
> *paradigm debate; however, in assessing learning processes,*
> *both approaches to data collection have importance, and*
> *using elements from both approaches can be very helpful.*

Mixed method design is an implementation of the pragmatic paradigm. The major purposes of mixed method design is (a) for having a holistic view of the world to avoid the misrepresentative understandings of the narrower views such as the ones upheld in the single method approaches, (b) being able to benefit from the strengths of particular research methods for certain cases and to avoid the weaknesses of other methods for that case, and (c) to cope with real world settings which already is comprised of combinations of methodologies to solve problems.

Mixed method research was developed after quantitative and qualitative methodologies as the "third methodological movement" (Creswell & Clark, 2011, p. 1) and was described as "third research paradigm" (Johnson & Onwuegbuzie, 2004, p. 15). As the third research methodology, mixed-method research was received with a warm welcome by the educational research community. Mayring described mixed method research as (2007) "a new star in the social science sky" (p. 1).

This third research approach has many definitions. Among those many definitions, relying on the core characteristics of mixed methods research, Creswell and Clark define mixed method research as follows (2011, p. 5):

In mixed methods, the researcher:

- *collects and analyzes persuasively and rigorously both qualitative and quantitative data (based on research questions);*
- *mixes (or integrates or links) the two forms of data concurrently by combining them (or merging them), sequentially by having one build on the other, or embedding one within the other;*
- *gives priority to one or to both forms of data (in terms of what the research emphasizes);*
- *uses these procedures in a single study or in multiple phases of a program of study;*
- *frames these procedures within philosophical worldviews and theoretical lenses; and*
- *combines the procedures into specific research designs that direct the plan for conducting the study.*

Mixed-method research has strengths and weaknesses. Johnson and Onwuegbuzie (2004) summarize the strengths as follows (p. 21):

1. *Words, pictures, and narrative can be used to add meaning to numbers.*
2. *Numbers can be used to add precision to words, pictures, and narrative.*
3. *Can provide quantitative and qualitative research strengths*
4. *Researcher can generate and test a grounded theory.*
5. *Can answer a broader and more complete range of research questions because the researcher is not confined to a single method or approach.*
6. *The specific mixed research designs discussed in this article have specific strengths and weaknesses that should be considered (e.g., in a two-stage sequential design, the Stage 1 results can be used to develop and inform the purpose and design of the Stage 2 component).*

7. *A researcher can use the strengths of an additional method to overcome the weaknesses in another method by using both in a research study.*
8. *Can provide stronger evidence for a conclusion through convergence and corroboration of findings.*
9. *Can add insights and understanding that might be missed when only a single method is used.*
10. *Can be used to increase the generalizability of the results.*
11. *Qualitative and quantitative research used together produce more complete knowledge necessary to inform theory and practice.*

They list the weaknesses of mixed-method research as follows (p. 21):

1. *Can be difficult for a single researcher to carry out both qualitative and quantitative research, especially if two or more approaches are expected to be used concurrently; it may require a research team.*
2. *Researcher has to learn about multiple methods and approaches and understand how to mix them appropriately.*
3. *Methodological purists contend that one should always work within either a qualitative or a quantitative paradigm.*
4. *More expensive.*
5. *More time consuming.*
6. *Some of the details of mixed research remain to be worked out fully by research methodologists (e.g., problems of paradigm mixing, how to qualitatively analyze quantitative data, how to interpret conflicting results).*

When it comes to mixed-method research, another major concern is the type of the mixed-method research that will be used. Mixed-method research combines quantitative and qualitative methods to benefit from the strengths of both and to gain a holistic perspective giving way to being able to look at the question from different angles. When it comes to mixed-method research, sequence and way of utilizing of the quantitative and qualitative phases differ.

According to Creswell and Clark there are six types of mixed-method research designs (2011, p. 69):

1. *Convergent parallel design*
2. *Explanatory sequential design*
3. *Exploratory sequential design*
4. *Embedded design*
5. *Transformative design*
6. *Multiphase design*

Convergent parallel design is the one where quantitative and qualitative data collection and analysis are carried out independent from each other or at the same time. The results of each phase are compared and interpreted at the end. Explanatory sequential design is the one where quantitative phase is administered first and according to the results of that phase qualitative phase follows up. Finally, all results are interpreted.

Exploratory sequential design is the opposite of the explanatory one and this time qualitative phase is administered first. Embedded design allows researchers to administer one of the phases within the other. Transformative design is similar with the explanatory design but it has an emphasis on the theoretical framework. Multiphase design is used through a course of time or within a program using quantitative and qualitative phase over and over again –sometimes sequential sometimes concurrent.

3.2.1.1. Explanatory sequential design

In this research study, explanatory sequential design is utilized. Explanatory sequential design is a research design where both post-positivist and constructivist paradigms are implemented. In this kind of mixed-method research, results of qualitative phase are used to explain the quantitative results of the first phase. Creswell and Clark argue that there are six important considerations when it comes to choose the explanatory sequential design (2011, p. 82):

1. *The researcher and the research problem are more quantitatively oriented.*
2. *The researcher knows the important variables and has access to quantitative instruments for measuring the constructs of primary interest.*
3. *The researcher has the ability to return to participants for a second round of qualitative data collection.*
4. *The researcher has the time to conduct the research in two phases.*

5. *The researcher has limited resources and needs a design where only one type of data is being collected and analyzed at a time.*
6. *The researcher develops new questions based on quantitative results, and they cannot be answered with quantitative data.*

The explanatory sequential design is used when it is wanted to investigate the relationships among quantitative data but it is also wanted to explain the mechanisms behind those relationships. This kind of research design has its strengths and Creswell and Clark list four major ones of those (2011, p. 83) as follows:

1. *This design appeals to quantitative researchers, because it often begins with a strong quantitative orientation.*
2. *Its two-phase structure makes it straightforward to implement, because the researcher conducts the two methods in separate phases and collects only one type of data at a time. This means that single researchers can conduct this design; a research team is not required to carry out the design.*
3. *The final report can be written with a quantitative section followed by a qualitative section, making it straightforward to write and providing a clear delineation for readers.*
4. *This design lends itself to emergent approaches where the second phase can be designed based on what is learned from the initial quantitative phase.*

A diagram of the way explanatory design is administered is depicted in Figure 3.2.
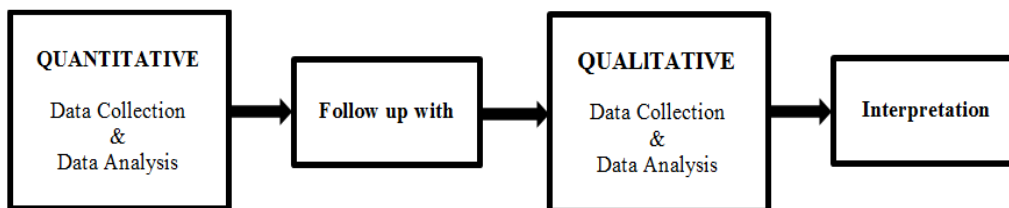
Figure 3.2. Explanatory sequential research design.

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3.2.2. Quantitative phase

The purpose of the quantitative phase was to identify and analyze the relationships between FB use and personality as well as motivation, motives and attitude towards FB use. A cross-cultural quantitative phase was utilized. Same instruments were administered in both USA and Turkey. It was aimed also to compare the results coming from two different countries. To investigate those relationships mentioned above, a quantitative research was designed. Four instruments will be used to measure psychological constructs and demographics: "NEO Five Factor Inventory", "CMC Motivation Scale", "Facebook Motives Scale", and "Facebook Attitudes Scale". All of the instruments were previously developed and used for previous researches. All the instruments were originally developed in English language. One of the instruments (NEO Five Factor Inventory) was previously translated into Turkish by a Turkish researcher. The other three will be translated into Turkish by the researcher and tested in a plot study. In the actual study of the Turkish lap of the quantitative phase, only the Turkish versions were used.

The purpose of utilizing a quantitative research is to better identify and analyze the relationships among phenomena. Quantitative methodology allows researcher to measure and analyze relationships among variables. Matveev (2002) states that; "clearly and precisely specifying both the independent and the dependent variables under investigation" is one of "the strengths of the quantitative method". The nature of this research is to investigate relationships between predictor and criterion variables. "Personality of FB users", "motivation to use FB", "motives to use FB", and "attitudes towards FB use" are predictor variables of the study while "Facebook use" is the criterion variable. While predictor variables are all constructs, the criterion variable consists of demographics of Facebook users.

Another advantage of quantitative methodology is that it provides higher levels of validity and reliability. Validity is defined as "an account is valid or true if it represents accurately those features of the phenomena, that it is intended to describe, explain or [theorize]" (Hammersley, 1987, p. 69) or defined simply as "accuracy" (Lehner, 1979, p. 130). Contrasting with validity Lehner defines reliability as "stability" and "Reproducibility of the measurements".

Quantitative methodology is the best design when reliability and validity are concerned by the researcher. Winter (2000) argues that "validity" criterion is rooted in the positivist tradition. He also states that validity and other "empirical conceptions" such as "evidence, objectivity, truth, actuality, deduction, reason, fact and mathematical data" resides within "positivist terminology". Therefore, quantitative design is "based on" validity.

Moreover, Matveev (2002) states "achieving high levels of reliability of gathered data due to controlled observations, laboratory experiments, mass surveys, or other form of research manipulations" as one of the strengths of quantitative method. On the reliability and validity regarding quantitative methodology, Libarkin and Kurdziel (2002) state that "The tools and techniques used for gathering and analyzing data are well established, and the validity and reliability of a study typically depend upon following pre-existing methodologies" (p. 78). They also state that "validity and reliability are highly controlled variables established statistically; limited training required" (p. 79).

When it comes to scale psychological constructs -as in this study, reliability and validity are even more important. A psychological construct is an abstract theoretical entity which is "constructed" to represent, model, explain, and/or to name a phenomenon. This research aims to measure many constructs such as "attitude", "motivation", and "personality". Since they are not directly observable, measuring a psychological construct like "attitude" is an extremely challenging job. On the arduousness of measuring constructs, Hinkin (1998) state that, "the adequate measurement of abstract constructs is perhaps the greatest challenge to understanding the behavior ... Problems with the reliability and validity of measures used on survey questionnaires continue to lead to difficulties" (p. 104). There exist a plethora of quantitative research tools with remarkable validity and reliability. In this research, four research instruments will be used and all those four instruments were used in previous research studies reporting outstanding reliability and validity statistics.

3.2.2.1. Correlational research

The quantitative phase of the study was designed as a correlational research. Correlational research is a descriptive research since it tries to investigate existing relationships among variables. Fraenkel & Wallen (2010) defines correlational research as a research "seeking out associations among variables" (p. 359). They also state that "correlational studies investigate the possibility of relationships between only two variables, although investigations of more than two variables are common" (p. 328). Since this research is aimed to identify and analyze existing relationships among (more than two) existing variables, correlational research was considered as the appropriate method of investigation.

A correlational research may be conducted to "predict" the possible outcomes of human behaviors as well as explaining them. If a relationship is found to exist, then, predicting a value of one of the variables by using the value of another variable is possible. "The variable that is used to make prediction is called the predictor variable" and "the variable about which the prediction is made is called the criterion variable" (Fraenkel, & Wallen, 2010, p. 359). They state that the "major purpose of correlational research is to clarify our understanding of important phenomena by identifying

relationships among variables (p. 329)" and add that "prediction" is "a second purpose of correlational research" (p. 330).

In this study, the predictor variables were "attitude towards using FB", "motives to use FB", "motivation to use CMC", "personality". Two of the predictor variables were comprised of dimensions. Personality was comprised of five dimensions which are: "Extraversion", "Agreeableness", "Conscientiousness", "Neuroticism", and "Openness to Experience" (McCrae and John, 1992, p. 175). The "motives to use FB" was comprised of three factors which are: "Friendship", "Relationship maintenance", "Passing time". Therefore ten psychological constructs constituted the set of predictor variables. The criterion variables were demographic information about the use of FB.

3.2.3. Qualitative phase

The purpose of the qualitative phase was to investigate the perceptions of the pre-service teachers who use FB about the SNSs and their possible implementation for educational purposes. In this phase, the purpose is to understand the perceived usefulness and perceived feasibility of SNSs as educational tools. It is also aimed to understand the feelings of the pre-service teachers about the "appropriateness" of FB as an educational implementation.

In order to accomplish the qualitative phase, an interview with 8 open ended questions was developed according to the results of the analysis of the data gathered from Turkish lap of the quantitative phase. Three of the questions had sub-questions (each of them has only one). Sixteen pre-service teachers were sampled first by convenience sampling then through expert opinion. Interviews were carried out one-on-one and face to face. Sessions took approximately half of an hour. All interviews were recorded by video.

Qualitative research differs from the quantitative one on the philosophy level. Quantitative research which is also called "positivist research" assumes that the reality is independent of the observer. Therefore, quantitative researcher tries to "picture" or "scale" or "grasp" that reality through quantitative measures which relies highly on numbers and objects. On the other hand, qualitative research which is also called "post-positivist research" or "interpretive research" assumes that reality is constructed by the society which the observer is part of it. Qualitative researcher assumes that the reality which is in his or her mind is being constructed through his or her interpretations. Denzin defines the qualitative research as follows (1994, p. 2):

> *Qualitative research is multimethod in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret,*

> *phenomena in terms of the meanings people bring to them.*
> *Qualitative research involves the studied use and collection*
> *of a variety of empirical materials – case study, personal*
> *experience, introspective, life story, interview,*
> *observational, historical, interactional, and visual texts –*
> *that describe routine and problematic moments and*
> *meanings in individuals' lives. Accordingly, qualitative*
> *researchers deploy a wide range of unconnected methods,*
> *hoping always to get a better fix on the subject matter at*
> *hand.*

Moreover, Denzin and Lincoln highlight the "interpretive" nature of qualitative research as follows (2000, pp. 4-5):

> *Qualitative research is a situated activity that locates the*
> *observer in the world. It consists of a set of interpretive,*
> *material practices that make the world visible. These*
> *practices transform the world. They turn the world into a*
> *series of representations, including field notes, interviews,*
> *conversations, photographs, recordings, and memos to the*
> *self. ... This means that qualitative researchers study things*
> *in their natural settings, attempting to make sense of or to*
> *interpret, phenomena in terms of the meanings people bring*
> *to them.*

Thus, qualitative research is aimed to address the subjective nature of phenomena such as feelings, experiences and perceptions regarding events, objects, peoples, behavior, and relationships. Qualitative research focuses on "how" and "why" instead of "what", "where" and "who." It focuses on meanings rather than names and measures. Qualitative research is best suited for reaching to subjective entities. It is inductive and holistic in its nature. Qualitative methodology has its pros and cons as quantitative methodology does. Johnson and Onwuegbuzie list the strengths of qualitative research as follows (2004, p. 20):

1. The data are based on the participants' own categories of meaning.
2. It is useful for studying a limited number of cases in depth.
3. It is useful for describing complex phenomena.
4. Provides individual case information.
5. Can conduct cross-case comparisons and analysis.
6. Provides understanding and description of people's personal experiences of phenomena (i.e., the "emic" or insider's viewpoint).
7. Can describe, in rich detail, phenomena as they are situated and embedded in local contexts.

8. The researcher identifies contextual and setting factors as they relate to the phenomenon of interest.
9. The researcher can study dynamic processes (i.e., documenting sequential patterns and change).
10. The researcher can use the primarily qualitative method of "grounded theory" to generate inductively a tentative but explanatory theory about a phenomenon.
11. Can determine how participants interpret "constructs" (e.g., self-esteem, IQ).
12. Data are usually collected in naturalistic settings in qualitative research.
13. Qualitative approaches are responsive to local situations, conditions, and stakeholders' needs.
14. Qualitative researchers are responsive to changes that occur during the conduct of a study (especially during extended fieldwork) and may shift the focus of their studies as a result.
15. Qualitative data in the words and categories of participants lend themselves to exploring how and why phenomena occur.
16. One can use an important case to demonstrate vividly a phenomenon to the readers of a report.
17. Determine idiographic causation (i.e., determination of causes of a particular event).

They also summarize the weaknesses of qualitative research (p. 20):

1. Knowledge produced may not generalize to other people or other settings (i.e., findings may be unique to the relatively few people included in the research study).
2. It is difficult to make quantitative predictions.
3. It is more difficult to test hypotheses and theories.
4. It may have lower credibility with some administrators and commissioners of programs.
5. It generally takes more time to collect the data when compared to quantitative research.
6. Data analysis is often time consuming.
7. The results are more easily influenced by the researcher's personal biases and idiosyncrasies.

There are many qualitative research methods such as ethnography, case study, action research, and constant comparative method. In the qualitative phase of this study, as part of the explanatory sequential mixed-method design, constant comparative method was used to "generate inductively a tentative but explanatory theory about a phenomenon" (Johnson & Onwuegbuzie, 2004, p. 20).

3.2.3.1. Constant comparative method

Constant comparative method is a qualitative research method in social sciences which seeks to discover the "theory" through the analysis of qualitative data. It is also called "grounded theory." Researcher who uses constant comparative method tries to "ground" the theory on the data. Johnson and Christensen argue that (2004, p. 381, 383) grounded theory is the name of the product but the analysis method is called "constant comparative." Strauss and Corbin defines the grounded theory as (1994) "a general methodology for developing theory that is grounded in data systematically gathered and analyzed" (p. 273). The data may be collected from (Van Gog et al., 2008, p. 772) "observations, interviews, and video or document analysis, and, as in other qualitative research, these data may be considered strictly qualitative or may be quantitative." Even a piece of paper is considered a data source in constant comparative method.

The purpose of constant comparative method is to develop the theory through an iterative process of qualitative data analysis and theoretical analysis during the course of the study. The study begins without a well pre-defined set of research questions and continues through the data collection and analysis phases with an open mind. Research continuously seeks for patterns in the data and as the patterns emerge, these set of patterns take the researcher to the "theory", thus, the theory is "grounded" on the data, thus, "grounded theory". Van Gog et al. state that (2008) "The researcher continues collecting and examining data until the patterns continue to repeat and few new patterns emerge. The researcher builds the theory from the data, and the theory is thus built on, or grounded in, the phenomena" (p. 772).

Moreover, "grounded theory" is not only the name of the method but also the name of the product. Researcher inductively generates a theory through iterative examination of the qualitative data –i.e. interview transcripts- and produce a theory which is grounded on the theory and hence the product of the research is also called a "grounded theory." Johnson and Christensen argue that (2004) "when you do grounded theory research, your goal is to construct a grounded theory. It is important to understand that [sic] *a grounded theory is not generated a priori* (i.e., based only on reasoning). Rather, a grounded theory is based on concepts that are generated directly from the data that are collected in one or more research studies. This is another way of saying that the theory is inductively derived" (p. 381).

In this study, constant comparative method –or grounded theory- was used to qualitatively analyze the interview transcripts. Analysis began without a set of research questions or themes or sub-themes. After coding, categories and concepts emerged through repeating patterns and the theory stood on the phenomena as the answer of its own questions. The research question of the qualitative phase was

formulated after the analysis. All the analyses were subject to colleague peer review processes.

3.2.4. Cultural issues in FB use

In this study, the research was designed to compare two cultures in order to overcome the cultural bias while conducting the quantitative phase which was –in first place- utilized to understand the relationships between the pre-service teachers' personality, motivation, motives, attitude towards FB and FB use.

Cross-cultural research is a research which is conducted to compare and contrast shared constructions and phenomena as they exist in different cultures. Ilesanmi defines cross-cultural research as (2009) "a scientific method of comparative research which focuses on systematic comparisons that compares culture to culture and explicitly aims to answer questions about the incidence, distributions, and causes of cultural variation and complex problems across a wide domain, usually worldwide" (p. 82). Culture and comparison are the core elements in cross-cultural researches.

Culture is a socially constructed phenomenon that influences human behavior in the society. Werner and Roythorne-Jacobs argue that (2006) culture is "a system of values, beliefs, customs and habits that are carried over from generation to generation" (p. 263). Johnson and Christensen define culture as "a system of shared beliefs, values, practices, perspectives, folk knowledge, norms, rituals, and material objects, and artifacts that members of a group use in understanding their world and in relating to others" (2004, p. 369). As appears in the definition of Johnson and Christensen, culture consists of material and immaterial elements. They argue that, when trying to explain and understand human behavior, "the nonmaterial component is usually the focus of attention" (p. 370). This "nonmaterial component" is subjected to correlational and constant comparative analysis in this research study within a cross-cultural design.

Cross-cultural research aims to compare and contrast cultures and the definitions of cross-cultural research generally reflects dichotomies of cultures. Marcello states that cross-cultural researches "help to a certain extent but some categorizations like collectivism, or communalism vs individualism, closed vs open societies, rigid vs flexible societies, horizontally vs vertically oriented societies are, sometimes, a little too comprehensive to really represent the great variety of existing cultures" (2011, p. 191). In this study, two countries are being compared: Turkey and The United States of America.

Turkey is an Asian country with historical, cultural, and social links to Europe and Mediterranean Basin. Most of the Turkeyian people are Muslim and Turkish. But there is a rich ethnic and religious structure of the country. Many ethnic groups apart from Turkish ones live in Turkey. Some of them like Kurds are predominantly Muslim

as well. There are also non-Muslim people living in Turkey. Some of them are Turkish. Christians and Jews have ancient roots in Turkey. Apart from Semitic religions, Asian, Persian and "new" religions are also represented in Turkey.

USA is a "western" country located in the continent of the North America. It is predominantly European and Christian. But other races, ethnicities and religious groups live in the USA as well. USA traces her roots to Roman Empire and Judeo-Christian tradition or culture. USA and Turkey share the "predominantly Semitic religion" characteristic while Americans adheres to Christianity, Turkeyian adheres to Islam. Both have minorities from other Semitic and Asian religions as well as new religious movements.

What contrasts is the individualistic nature of American culture and collectivist nature of the culture of Turkey. Triandis (2001) argue that "individualism-collectivism cultural syndrome appears to be the most significant cultural difference among cultures" (p. 907). In his research, Triandis found that individualism correlates with "more emphasis on internal processes, more emphasis on consistency, and more self-enhancement" while collectivism correlates with "more focus on contexts, less concern for consistency, and less self-enhancement" (p. 920). He states that "changes in the ecology result in changes in culture which result in changes in personality" (p. 920) and he adds (p. 921):

> People in collectivist cultures see themselves as interdependent with their in-groups, which provide for them a stable social environment to which they must adjust. So their personality is flexible, and their personality traits are not so clear. People in individualist cultures see the self as stable and the social environment as changeable, so they tend to shape the social environment to fit their personalities. Since personality has both genetic and environmental bases, when, in the future, we trace the links between genes and personality, we may find clearer links in individualist than in collectivist cultures.

Another difference between USA and Turkey is the language. The facto official language of USA is English. Official language of Turkey is Turkish. Language difference counts when it comes to cultural or cross-cultural studies. Geddes (2012) argues that "[l]anguage is an inherent part of culture and is one of the mediums through which culture is expressed" (p. 10). In his brilliant paper titled "*My heart is on my tongue: the untranslated self in a translated world*", Krog (2008) expounds the unbreakable and "shouldn't-be-broken" relationship of language and culture. He suggests that "the interpreter should also be the culture broker in a discussion afterwards because it is only when the interviewer brings his or her own questions and

assumptions, often underpinned by colonial, racist, gender or religious notions, that the possibility of real understanding opens up" (p. 235). Cross-cultural research also aims to overcome the language biases and cross-cultural researcher tries to understand the cultural differences regarding phenomena.

SNSs such as FB are places where spent an important amount of time socializing, interacting, and networking. While they are socializing and learning, students –as well as teachers- judge, learn, internalize and adapt to the culture that the socialization and interaction processes are carrying together with or embedded within. Language difference as well as cultural difference influences the use of SNSs. Johnson and Christensen state that (2004, p. 370) "[i]ndividuals become members of a culture through the socialization process by which they learn and are trained about the features of the culture. During the socialization, they usually internalize the culture; that is, they take the values and beliefs to be their own. Over time, people identify so strongly with their culture that the ways of doing things in their own culture might seem natural to them, and the ways of doing things in other cultures might seem strange." Thus, socialization is a process where cultures are exchanged, learned and judged. Therefore, SNSs are the places where they spent most of their "cultural internalization" experiences since they spent most of their time socializing on the SNSs.

Johnson and Christensen also mentions "subculture" (2004) as a culture which is "embedded within a larger culture" (p. 271). Such as the "school culture" in a society and "teacher culture" or "student culture" within the school. They state that people are affected by multiple cultures and subcultures simultaneously throughout their lives. SNSs are places where subcultures are organized into "groups", "discussion forums" etc. SNSs are places where people socialize and commit extensive cultural exchange. Therefore culture is a core aspect of SNS and investigating SNS should encompass cultures as well. In this study, two different cultures with dichotomies such as "individualistic-collectivistic", "predominantly Christian-predominantly Muslim", and "Turkish-English" are investigated in a cross-cultural design.

3.2.5. Rationale of the research design

In this research study, implementability of SNSs for educational purposes was investigated. To investigate this question, relationships between personality, motivation, motives, attitude towards FB use and FB use were examined. A qualitative follow up study, developed upon the results of the first quantitative phase was utilized. In the qualitative phase, perceptions of the pre-service teachers about the SNSs and their possible implementation in educational institutions for educational purposes were examined. The purpose of the qualitative phase also is to understand the perceived usefulness and perceived feasibility of SNSs as educational tools. Finally, it was also aimed to understand the feelings of the pre-service teachers about the

"appropriateness" of FB as an educational implementation. While quantitative phase was administered only in Turkey, quantitative phase was utilized both in Turkey and the USA.

The study is a cross-cultural mixed method research. As a **mixed method**, qualitative phase followed and built upon the results of the quantitative phase, hence **explanatory sequential design**. In the quantitative phase, relationships between psychological constructs were examined, hence a **correlational** design. This correlational study was administered in two different cultures, hence **cross-cultural**. In the qualitative phase, rather than beginning from a theory, analysis begun with an open mind and grounded the theory on the data, hence **constant comparative** analysis. In the quantitative phase, individuals who were "available" to the study were sampled, hence **convenience sampling**. In the qualitative phase, individuals who were perceived as representative of the population and possess the necessary information regarding the population were sampled, hence **purposive sampling**.

The first decision made was to design the research as a mixed-method study. The study needed both quantitative and qualitative phases. Johnson and Onwuegbuzie argue that pragmatism which is the underpinning paradigm of mixed-method design (2004) "[r]ecognizes the existence and importance of the natural or physical world as well as the emergent social and psychological world that includes language, culture, human institutions, and subjective thoughts" (p. 18) and "rejects reductionism (e.g., reducing culture, thoughts, and beliefs to nothing more than neurobiological processes)".

Thus, in a study, where the perceptions, beliefs, and subjective thoughts of pre-service teachers are questioned and where language and culture are core elements, mixed method design is better equipped with necessary tools and advantages. They also state that mixed-method research "[c]an add insights and understanding that might be missed when only a single method is used" (p. 21). For a study which focuses on a subject associated with lack of literature and scientific knowledge, every insight and understanding counts and valuable. Therefore, mixed-method research is the best design for this study.

Moreover, Gemma Edwards, in her paper titled "*Mixed-Method Approaches to Social Network Analysis*" points out that "mixed-method approach can add value in several areas" (2010, p. 24) to researches conducted on social networks and social networking. While she acknowledges that "there is no 'one best way' of integrating quantitative and qualitative methods"; she advocates for welcoming qualitative methods in addition to the quantitative ones. She argues that (p. 24):

> *Qualitative approaches add an awareness of context which*
> *aids the interpretation of network maps and measures; they*

add an appreciation of the perception of the network from
the inside; and an appreciation of the content of ties in terms
of quality, meaning, and changes over time.

There are more calls for mixed-method design in social network and social networking researches. Lievrouw et al. (1987) argue that, with a mixed-method design, the researcher "has a more comprehensive view" (p. 245) of the network and social networking going on. Fischer (2011) argues that "mixed-methods research design has proved to be clearly beneficial" (p. 39) in his social network analysis research. Knox et al. (2006) note that there is potential for interdisciplinary approaches for researching social networks (p. 136). Moreover, on the necessity of utilizing mixed-method research investigating social networking and social networking services, Thelwall (2008) state that (p. 1321):

Qualitative and mixed method approaches are more
valuable than quantitative research for investigating the real
meaning of new culture-related phenomena like social
networking friendship. Nevertheless, quantitative methods
are needed to test and confirm the insights of qualitative
research, to provide method triangulation, and to produce
new findings. Quantitative data is also essential to give a
broad overview of the demographics of social networking
for site designers, researchers, and advertisers.

Therefore, mixed-method design was utilized for this research. Correlational hence quantitative design was necessary to be able to identify the relationships among psychological constructs and make "predictions" upon them. Fraenkel and Wallen (2010) state that the "major purpose of correlational research is to clarify our understanding of important phenomena by identifying relationships among variables (p. 329)" and add that "prediction" is "a second purpose of correlational research" (p. 330).

Qualitative phase was necessary to be able to reach to the interpretations of pre-service teachers about the SNSs –FB in particular. For a phenomenon which is associated with culture, language, and personality, qualitative design was the right choice as part of the mixed-method. Rather than trying to "fit" the thoughts of participant into "our" theories, it was aimed to see what actually pre-service teachers were thinking and feeling about SNSs. In a situation where "lack of evidence" prevails, it was aimed to begin with what pre-service teachers think, feel and how they perceive. So, researcher decided to ground the theory on the interpretations of pre-service teachers, themselves. A constant comparative analysis was selected to "inductively derive" (Johnson & Christensen, 2004, p. 381) the theory "directly from the data."

SNSs are places where languages and cultures meet and people exchange their beliefs, norms, values and information. SNSs are places where the entire world meets in one medium without barriers except from language. Studying the educational implementability of SNSs urges the researcher about "culture." A cross-cultural design was decided to see how a "cultural" medium such as FB is being used and perceived by pre-service teachers. Marcello (2011, p. 191) argue that "The world has been called a global village, a global community. People from different 'cultures' meet more and more frequently. Is all this leading to a global union or is it leading to a global clash? To answer that question it is necessary to exploit some basic issues with the help of psychology, principally cross-cultural psychology."

Moreover, it was intended to see the differences between two cultures that one is associated more with individualism and the other is associated more with collectivism. On the other hand, Marcello argues that (2011) "[t]he issue of education, whose central role is based on language, leads to another relevant aspect of the acculturation process, which is schooling" (p. 195). Considering SNSs in educational settings or for educational purposes inevitably brings cultural and cross-cultural issues into question.

Another factor in the decision of cross-cultural design was that personality is one of the core constructs scrutinized in this research. Personality and culture are already associated, interrelated and well-studied constructs in the literature. Church (2000) argues that, in the study of culture and personality, two distinct theoretical perspectives dominate the research and argues that these are "the *cross-cultural trait psychology* approach, in which the trait concept is central, and the *cultural psychology* approach, in which the trait concept is questioned" (p. 651). He argues that **cultural psychologist** tend to define personality as a product or extension of culture. They seem to think that personality or self is "socially constructed" and "raddled and entangled with culture".

In contradistinction to cultural psychologists, **cross-cultural psychologists** tend to see personality as universal and explain the personality in terms of universal traits (Ilesanmi, 2009, p. 82). In this research study, cross-culturalist position is taken to deal with personality traits and to compare two cultures through universal traits by using "NEO FFI" personality scale which is a "Big Five" instrument.

Moreover, "culture undoubtedly plays a crucial role in personality" (Geddes, 2012, 12). Even though a cross-culturalist position is taken in this study, the relationship between culture and personality is evident as well. Especially considering the relationship between culture and language, both views need to be encompassed at least to a certain extent. Valchev et al. (2011) state that "culture specific personality traits" are not well tapped enough by cross-cultural understanding of personality (p. 238). They argue that "The universal replicability of a fixed array of personality concepts does not preclude the possibility that there may be other personality concepts

especially salient in certain cultural contexts" (p. 238). In their study, cultural groups are associated and identified according to the language groups (p. 255).

Turkey is a Turkish speaking, predominantly Muslim, and culturally collectivist country. USA is an English speaking, predominantly Christian, and culturally individualist country. Huntington (1996) states that "[t]he central elements of any culture or civilization are language and religion" (p. 59) and Triandis (2001, p. 920) argues that individualism and collectivism are correlated with personality traits. Thus, language and religion are central elements of culture and culture plays a crucial role in personality. As Geddes put it; "culture, personality, and language create a complex dynamic" (2012, 14).

On the other hand, trait theory of personality is the dominant form of research in cross-cultural studies and this research is based on the trait theory of personality considering that -in its FFM arrangement- it is "is becoming an established dominant framework in the field of personality psychology" (McAdams, 1992, p.332). As a trait personality instrument, FFM is the most tested and most "translated" scale. Therefore, trait personality scales and cross-cultural research are best suited designs for this study. In the quantitative phase, convenience sampling was designed to reach the maximum number of "available" participants in order to satisfy the assumptions of factor analysis which will be needed to extract factors for correlational analysis. Fraenkel and Wallen (2010) state that a convenience sample is "a group of individuals who conveniently are able for study" (p. 112).

In the qualitative phase purposive sampling was used to reach to the individuals who are perceived by the researcher and his consultant expert as possessing the necessary information about and who are representative of the population. Fraenkel and Wallen (2010) define purposive sampling as the one in which the researcher believe that the selected sample will be representative of the sample and/or the participants will be informative about the population (p. 113). Purposive sampling is in parallel with "theoretical sampling" defined by Corbin and Strauss (2008, p. 143) as follows:

> *A method of data collection based on concepts/themes derived from data. The purpose of theoretical sampling is to collect data from places, people, and events that will maximize opportunities to develop concepts in terms of their properties and dimensions, uncover variations, and identify relationships between concepts.*

3.3. Context of the Study

The study took place in two higher education institutions. First place was the Faculty of Education of Middle East Technical University in Ankara, Turkey; then, College of

Education of University of Houston in Houston, Texas, USA. Middle East Technical University (METU) is one of the top leading universities in Turkey. It is a public and technical university which puts special emphasis on natural sciences and engineering. METU is ranked in Times Higher Education university lists. Faculty of Education is one of its "social" schools offering graduate and undergraduate programs. Faculty of education of METU offers following undergraduate programs:

- Foreign Language Education (FLE)
- Secondary Physics Education (SPE)
- Secondary Chemistry Education (SCE)
- Elementary Mathematics Education (EME)
- Elementary Science Education (ESE)
- Early Childhood Education (ECE)
- Computer Education and Instructional Technology (CEIT)

METU cooperates some of its programs with State University of New York (SUNY). In the Faculty of education, some of the FLE students continue their education in SUNY. In this research study, CEIT students will be reserved for pilot study of the instruments. Rest of the students will be invited for the actual study. Finally, the researcher is a PhD candidate and research assistant in the CEIT department of the Faculty of Education of METU.

University of Houston (UH) is public research university located in Houston, Texas, USA. It is one of the largest universities of the Texas state. College of Education is providing undergraduate and graduate programs in accordance with the teacher education system of the governments of Texas State and the USA. UH is ranked in Times Higher Education lists as well. UH College of Education offers following undergraduate programs:

- EC6 Generalist (EC6G)
- EC6 Bilingual Generalist (EC6BG)
- EC6 Generalist Special Education (EC6GSE)
- 4-8 Mathematics Education (Math48)
- 4-8 Science Education (Spe48)
- 4-8 Social Studies Education (Soc48)
- 4-8 Language Education (Lang48)
- Certified Health Education Specialist (CHES)
- Human Development and Family Studies (HDFS)

Teachers graduating from "EC6" programs teach students in the range between early childhood to 6th grade. Teachers graduating from "4-8" programs teach students in range between 4th to 8th grades. CHES and HDFS teachers teach according to the

regulations related to the working place. The researcher was a visiting scholar in the Department of Curriculum and Instruction of UH College of Education.

3.4. Population

Population is a concept which refers to the group of individuals that the researcher wants to apply the results of his or her research. Actual population or "target population" is defined by Fraenkel and Wallen as (2010) the population the researcher "would really like to generalize" (p. 105). On the other hand, they define "accessible population" as the population "to which a researcher is [sic] *able* to generalize" (p. 105).

In accordance with the definitions of Fraenkel and Wallen, the target population of this research study is all of the undergraduate pre-service teachers in the USA and Turkey. Accessible population was all pre-service teachers who are enrolled in the undergraduate teacher training programs of UH College of Education and METU Faculty of Education. On the other hand, sample was the group of people who participated in the study and who had a FB account. Fraenkel and Wallen (2010) define sample as any group of individuals "on which information is obtained" (p. 103).

While the target population was a remarkably big number, for the quantitative phase, the accessible population of this study was 3254. This group consisted of 1744 UH students (N_{A_US} = **1744**) and 1510 METU students but 229 of METU students were reserved for the pilot testing (N_{A_TR}=**1281**). Therefore actual accessible population was 3025 (N_A = **3025**). Accessible population is depicted in Table 3.1.

Table 3.1. Accessible population(s) of the quantitative study.

Group	Frequency	Percentage in Total
USA (N_{A_US})	1744	57.65
Turkey (N_{A_TR})	1281	42.34
Total (N_A)	3025	99.99

Among these 3025 students, who were all invited to participate in the study, only 924 of them (N_R =924, 30.54%) responded: 144 UH students (N_{R_US} = **144**, 8.25%) and 780 METU students (N_{R_TR} = **780**, 60.88%). Participation was considerably low in the

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USA compared to the Turkish sample. Individuals who responded to the invitations are depicted in Table 3.2.

Table 3.2. Distribution of quantitative respondents and accessible populations.

Group	Frequency	Percentage in Related Accessible Population
USA (N_{R_US})	144	8.25
Turkey (N_{R_TR})	780	60.88
Total (N_R)	924	30.54

Sample consisted of respondents who completed the study and who had a FB account. In Turkey, among those "780 of 1281" respondents only 641 could actually participate in the study ($N_{TR} = \textbf{641,}$ 50.03% of N_{A_TR} and 82%, 17 of N_{R_TR}). In the USA, among those "144 of 1744" respondents; only 121 could actually participate in the study ($N_{US} = \textbf{121,}$ 6.93% of N_{A_US} and 84.02% of N_{R_US}). Conclusively, 762 pre-service teachers in Turkey and USA participated in the study ($N = \textbf{762,}$ 25.19% of N_{A_Total} and 82.46% of N_{R_Total}). The sample and its ratio to accessible populations are depicted in Table 3.3.

Table 3.3. Distribution of quantitative sample(s) and accessible population(s).

Group	Frequency	Percentage in Related Accessible Population	Percentage in Related Responder Group
USA (N_{US})	121	6.93	84.02
Turkey (N_{TR})	641	50.03	82.17
Total (N)	762	25.19	82.46

Moreover, 18 students were interviewed in the qualitative phase. The interviewees were among METU Faculty of Education students who had previously participated in the Turkish lap of the quantitative phase of the study and who were in their at least 3rd year of study. Being at least in 3rd year of study was put forth in order to reach an informative group of interviewees. One of the interview data was lost due to technical reasons and one of the interviewee was a second grade student, thus dismissed. Hence, 16 pre-service teachers who were in their at least 3rd year of study were interviewed.

3.5. Sampling

In the quantitative phase of the study, convenience sampling was used to reach maximum number of participants in order to empower the results of the statistical measures that will be used at the end. In Turkey, 1510 pre-service teachers formed the accessible population. 229 of that group were reserved for the pilot study. Thus, Turkish accessible population was 1281 people. Accessible population in USA was 1744 people (see Table 3.1). In the qualitative phase, purposive sampling was used. 18 students who were thought to be representative and informative enough of the population were sampled. One of the interviews was lost due to technical reasons and one of the rest was dismissed since the participant was a 2nd grade student. Therefore in the qualitative phase, 16 pre-service teachers who were interviewed formed the sample.

3.5.1. Quantitative sample

Correlational study is inclusive when it comes to sampling. Fraenkel, and Wallen (2010) state that "the sample for a correlational study, as in any type of study, should be selected carefully and, if possible randomly" (p. 335). They state that the minimum acceptable sample size for a correlational study is 30. In this research, a total of 3254 individuals were asked to participate in the study of which 229 are reserved for the pilot study ($N_{A\_P}=229$), 1281 forms the Turkish accessible population ($N_{A\_TR}=1281$) and 1744 forms the American accessible population ($N_{A\_US} = 1744$). Hence, total accessible population was 3025 ($N_A = 3025$). The sampling method was convenience sampling. A convenience sample is defined as "any group of individuals that is conveniently available to be studied" (Fraenkel, & Wallen, 2010, p. 106).

The target population of the study is all the pre-service teachers in Turkey and USA. Accessible population is all the pre-service teachers who are currently enrolled in the METU Faculty of Education and UH College of Education. The sample is the group of individuals who participated in the study by fully attending the data collection (submitting a complete survey) and who has a FB account. There are seven undergraduate programs in the METU Faculty of Education. The total number of the undergraduate students is 1510. Of this 1510, 229 are enrolled in the department in which the author of this thesis is a research assistant: Computer Education and

Instructional Technology (CEIT). CEIT students were reserved for the pilot study and the remaining students participated in the Turkish actual study which followed the pilot study. Those who are enrolled in both CEIT and another Faculty of Education undergraduate program could only participate in the pilot study.

In the actual study, those students who are enrolled in two of the Faculty of Education undergraduate programs are allowed to participate once and their major programs appeared in demographics. Therefore 229 students were reserved for the pilot study (N_{A_P}=229) and only 1281 of 1510 Faculty of Education students were reserved for the actual study. Thus, there are seven undergraduate programs:

1. Foreign Language Education (FLE)
2. Secondary Physics Education (SPE)
3. Secondary Chemistry Education (SCE)
4. Elementary Mathematics Education (EME)
5. Elementary Science Education (ESE)
6. Early Childhood Education (ECE)
7. Computer Education and Instructional Technology (CEIT)

FLE program has a joint program with State University of New York and some of the students are enrolled accordingly. Those FLE students who are enrolled in with State University of New York have "SUNY" value instead of "FLE" in their demographics. Associated with their departments; total number of Turkish students and the study that they are reserved for are depicted in Table 3.4:

UH College of education has nine undergraduate programs. There are 1744 students are enrolled in one of these programs:

1. EC6 Generalist (EC6G)
2. EC6 Bilingual Generalist (EC6BG)
3. EC6 Generalist Special Education (EC6GSE)
4. 4-8 Mathematics Education (Math48)
5. 4-8 Science Education (Spe48)
6. 4-8 Social Studies Education (Soc48)
7. 4-8 Language Education (Lang48)
8. Certified Health Education Specialist (CHES)
9. Human Development and Family Studies (HDFS)

Programs coded with "EC6" are for groups between early childhood and 6th grade. Programs coded with "4-8" are for groups between 4th and 8th grade. The researcher couldn't get the departmental information of the American pre-service teachers. Therefore only the ones who participated are known to researcher.

Table 3.4. Groups within Turkish quantitative accessible population.

Department of Participants	Total Number of Students	Study Type
FLE	477	Actual
SUNY	73	Actual
SPE	119	Actual
SCE	97	Actual
EME	197	Actual
ESE	189	Actual
ECE	153	Actual
CEIT	229	Pilot
Total	1510	-

Table 3.5. Groups within Turkish quantitative sample.

Department of Participants	Total Number of Students
FLE	292
SUNY	21
SPE	45
SCE	40
EME	98
ESE	78
ECE	67
Total	641

In the actual study, In Turkey, 641 undergraduate pre-service teachers who have a FB account could actually participate in the study (NTR = 641). Associated with their departments; Turkish sample is depicted in Table 3.5.

In the USA, 121 pre-service teachers who have a FB account could actually participate in the study ($N_{US} = 121$). American sample is depicted in Table 3.6.

Table 3.6. Groups within American quantitative sample.

Department of Participants	Total Number of Students
EC6G	60
EC6BG	27
EC6GSE	8
Math48	4
Spe48	3
Soc48	2
Lang48	1
CHES	6
HDFS	10
Total	121

Conclusively, 762 pre-service teachers in Turkey and USA participated in the study (**N = 762**). Turkish and American samples form 84.12% and 15.87% -respectively- of the total sample. Country distribution of the actual samples is depicted in Table 3.7.

Table 3.7. Countries and quantitative samples.

Group	Sample Size	Percentage in Total Sample
Turkey	641	84.12
USA	121	15.87
Total	762	100

In Turkey, more than half of the faculty students participated in the study. On the other hand, in the USA only 6.93% could participate in the study. Nevertheless, both populations satisfied the sample size assumptions of the statistical measures. Table 3.8 depicts the distribution of gender. Age distributions of the quantitative samples are depicted in Table 3.9.

Table 3.8. Distribution of the quantitative sample(s) by gender.

Group	Gender	Frequency	Percentage in the Country Sample	Percentage in the Total Sample
Turkey				
	Male	123	19.19	16.14
	Female	518	80.81	67.98
USA				
	Male	10	8.26	1.31
	Female	111	91.74	14.57
Total				
	Male	133	-	17.45
	Female	629	-	82.55

Table 3.9. Age distribution of quantitative sample(s).

Group	Minimum	Maximum	Mean	Median
Turkey	17	32	21.29	21.00
USA	18	56	23.83	22.00
Total	17	56	21.69	21.00

3.5.2. Qualitative sample

Purposive sampling was used in the qualitative phase in order to reach "informative" and "representative" individuals. Qualitative phase was administered only in Turkey on Turkish undergraduate teachers just after the Turkish lap of the quantitative phase. According to the results of the Turkish lap of the quantitative phase, interview questions were prepared and the interviewees are selected by the help of the expert opinion of a colleague. To satisfy the "informativeness" criterion, pre-service teachers who are at least in their 3rd year of study were selected.

Age and year of study of the interviewees are depicted in Table 3.10. Gender and department of the interviewees are depicted in Table 3.11.

Table 3.10. Age and year of study of the interviewees.

Category	Minimum	Maximum	Mean	Median
Age	19	23	21.43	21.5
Year	3	4	3.68	4

Table 3.11. Gender and department of the interviewees.

Category	Value	Frequency	Percentage
Gender			
	Male	4	25
	Female	12	75
Department			
	FLE	8	50
	EME	6	37.5
	ESE	1	6.25
	BÖTE	1	6.25

3.6. Protection of Human Subjects

This research study complies with the Ethical Principles of Psychologists and Code of Conduct set by American Psychological Association (2010) and ethical standards set by METU Applied Ethics Research Center and the entire study is reviewed by Human Subjects Ethics Committee of METU. The researcher and the author of this thesis work applied to Human Subjects Ethics Committee of METU Applied Ethics Research Center for the Turkish lap of the quantitative phase and the qualitative phase and received approval (Appendix A). In the USA lap of the quantitative phase, the researcher applied for ethical approval for the USA lap of the study. He received approval from UH Committees for the Protection of Human Subjects (Appendix B). All the individuals will only be able to participate to the study after declaring their consent.

All the participants will be informed about the nature of the study when they are invited to the study, when they are at the outset of participation (Appendix C, D, and E), and after they have completed the survey. Considering that the students were responding about their personality anonymity and confidentiality of the students were not compromised. The confidentiality and anonymity of the students were protected by automating the invitation and data collection procedures by the medium of the instruments. The materials were not disclosed to anyone other than the researcher. The

responses were kept in the servers of the Informatics Institute of METU and researcher accessed to the files only for conducting statistical analysis.

3.7. The Researcher

The researcher is a PhD candidate and a research assistant at the department of CEIT in METU Faculty of Education. This research is part of his PhD studies and this dissertation is his PhD dissertation. He is a Turkish individual, thus, shares the culture of the Turkish sample. He collected the quantitative and qualitative data from his home institution. In the American lap of the quantitative phase, he resided in the USA for almost one year as a visiting scholar at the department of Curriculum and Instruction in the UH College of Education. He collected the second part of the qualitative data from his host institution.

In the groundwork phase, researcher has reviewed the literature and determined the research questions by the help of his advisor. He found the scales for the quantitative part of the study. The researcher translated the scales into Turkish. All of them were in English, at first place. He got help for back-translating them into English and comparing with the originals from METU Academic Writing Center. Finally, he received the ethical approval from METU Applied Ethics Research Center. After receiving ethical approval, he collected the e-mail addresses of the students enrolled in the METU Faculty of Education in order to use them for invitation.

In the pilot phase, newly prepared Turkish scales were arranged as a single online survey. The researcher developed the online survey by using the LimeSurvey service of METU. After the development, he visited the classrooms and informed the students about the upcoming survey and its invitations that they will receive. The researcher offered chocolate to everyone as incentives while he was publicizing the study. After all, he invited the individuals and administered the survey.

In the Turkish lap of the quantitative phase which followed the pilot study, according to the results of the pilot study, he developed a new online survey for modified scales. The researcher visited the classrooms of the students who were in the Turkish accessible population and again promoted the upcoming survey and offered chocolate as incentives. Finally, he invited the individuals and administered the survey. During the administration of the survey, the students who haven't yet submitted the surveys were reminded again three times.

After the Turkish lap of the quantitative phase, based on the results of the fresh run, Together with his advisor, the researcher has prepared the interview questions for the qualitative study and determined the interviewees. He interviewed the students one-on-one and face to face in one of the meeting rooms of the CEIT department. The researcher recorded all of the interviews by a handycam. During the interviews, he asked the open ended questions and listened the answers. When he needed, the

researcher asked additional questions to get more information in order to increase the chance of reaching patterns in the analysis. The researcher didn't manipulate or deceive the interviewees in any part of the interviews.

After the qualitative phase, the researcher headed to UH College of Education and started his work as a visiting scholar. He developed a new online survey with original English scales and applied for ethical approval. After some minor modifications required by UH officials, new instrument received ethical approval. After the ethical approval he collected the e-mails of students enrolled in the UH College of Education. In the USA lap of the quantitative phase, the incentive was determined as a 100$ Amazon.com gift card according to the US research customs (see Appendix F for the written minute for the drawing). The researcher invited the students and informed them about the incentive in the invitation e-mail. During the administration of the survey, the students who haven't yet submitted the surveys were reminded again three times, as in the Turkish lap. The researcher administered the US lap of the quantitative phase successfully just like the Turkish lap and the qualitative and pilot phases.

3.8. Instrumentation

In this study, an explanatory sequential mixed-method and cross-cultural design was utilized. In total, six questionnaires and interviews were used to collect data. In the quantitative phase, questionnaires were used. Questionnaires were as follows:

1. NEO Five Factor Inventory
2. CMC motivation scale
3. FB motives scale
4. FB attitude scale
5. FB use scale
6. Demographics questions

NEO Five Factor Inventory, CMC motivation scale, FB motives scale, FB attitude scale, and FB use scale were developed by other researchers and all were originally in English. All except FB use scale consist of Likert-type forced multiple choice questions with 5 choices. FB use scale consists of Yes/No questions, non-Likert-type multiple choice questions and open ended numerical-entry questions.

Demographics questions were arranged by the researcher for age, gender, department, year of study. Demographic questions consist of numerical-entry open ended questions and non-Likert-type multiple choice questions. Demographics questions were developed both in English and Turkish.

NEO Five Factor Inventory was already translated into Turkish by other researchers. CMC motivation scale, FB motives scale, FB attitude scale, and FB use scale were translated into Turkish by the researcher. In the translation process, back-translation

technique was used. Two English linguistic expert, one Turkish linguistic expert, and two bilingual experts in the field of ET helped the researcher to reach a quality translation.

Initially, the researcher translated the English items (EI_1) into Turkish and these items were labeled as "TI_1." One linguistic expert and one bilingual ET expert checked the Turkish items. Then, the other ET expert translated the new Turkish items back into English (EI_2) and the other linguistic expert checked the quality of those new English items. Finally, the researcher and four of the experts compared the two set of English items: IE_1 and IE2. Based on this comparison, some items were translated into Turkish again. Finally, the researcher and the Turkish linguistic expert refurbished the Turkish items (TI_2). That final set of Turkish items (TI_2) was used as the translated questionnaires.

The interview questions were developed according to the results of the Turkish lap of the quantitative phase. All were prepared in Turkish as open ended questions. The questions aimed to collect data which will be used to "explain" the dynamics and relationships that emerged in the correlational analysis of the quantitative data.

3.8.1. Questionnaires

Four instruments will be used in the study. As previously mentioned, all the instruments are developed previously by other researchers in English and used in multiple researches. One of the instruments is already translated into Turkish and other instruments will be translated into Turkish by the author of this work.

3.8.1.1. NEO Five Factor Inventory

NEO Five Factor Inventory (NEO-FFI) is a personality scale developed by Robert R. McCrae and Paul T. Costa and first published in 1985. NEO FFI is a shortened (60 item) version of the revised NEO Personality Inventory (NEO PI-R) which consists of 240items. The scale is based on trait theory of personality and an "operationalization of the Five-Factor Model (FFM), which structures specific traits in terms of five broad factors" (Costa et al., 2001, 322). The scale is designed to "measure the five factors of personality: Neuroticism (N), Extraversion (E), Openness to Experience (O), Agreeableness (A), and Conscientiousness (C). Items in NEO FFI are answered on a 5 point Likert scale, ranging from "strongly agree" (1) to "strongly disagree" (5).

The scale is one of the most respected personality scales in the world. Numerous cross-cultural studies are carried out for different languages. McCrae and John (1992) state that "cross-cultural replication, and empirical validation across many methods and instruments make the five-factor model a basic discovery of personality psychology -core knowledge upon which other findings can be built" (207). It is translated into Turkish by Ersin Kuşdil for his doctoral thesis research and, later on, by

Dr. Diane Sunar and her colleagues from Boğaziçi University, Turkey (Kuşdil, 2000, p. 147). Kuşdil (2000) reports that the two separate translations of the instrument are "almost identical".

Moreover, he reports that he "was able to extract five distinct factors with at least six items out of twelve loading on them with a coefficient over .35". In Kuşdil's research "the first five factors in the analysis explained 29.1 % of the total variance and all had eigenvalues over 2.0, whereas the sixth factor had an Eigen value of 1.78" (p. 148). He reports that he calculated the reliability coefficients "by using the raw scores of British and Turkish subjects collected in the main study" (p. 153). The reported alpha values are 0.74 for Neuroticism, 0.68 for Extraversion, 0.60 for Openness to Experience, 0.58 for Agreeableness, and 0.75 for Conscientiousness (p. 153). English and Turkish versions of the NEO FFI scale are provided in Appendix G and Appendix H respectively.

3.8.1.2. CMC motivation scale

For measuring the "motivation to use FB", in this study, "motivation to use CMC" is scaled. It should be noted that as vom Brocke et al. states (2009) "[research] on SNSs rests upon a large foundation of research on CMC" (p. 35).

Computer Mediated Communication Competence Measure version 5 (CMC competence measure) was developed by Brian H. Spitzberg (Spitzberg, 2006, p. 629). Ross et al. (2009) used three factors of Spitzberg's CMC competence measure in their research: "Motivation", "Knowledge", Efficacy" (p. 580) and reported that only the "motivation" factor was correlating with FB usage (p. 581). Ross et al. (2009) reports that the "reliability for the three domains is acceptable (from a =0.73 to a = 0.90)" (p. 580).

Thus, even though only the motivation factor seems to be necessary for this research, just to be cautious, three factors of Spitzberg's measure as used by Ross et al. were decided to be used. The measure consists of 18 items being answered on a 5 point Likert scale, ranging from "not at all true of me" (1) to "very true of me" (5). Original English version of the scale is provided in Appendix J.

3.8.1.3. Facebook motives scale

Facebook Motives Scale was first developed by Pavica Sheldon (2008, p. 44) based on gratification theory. She used 38 items and extracted 6 factors of which the Eigen values are greater than 1.0 and altogether are accounted for 60 percent of the variance. The factors she extracted and (named as) are "relationship maintenance", "passing time", "virtual community", "entertainment", "coolness", and "companionship" (p. 45). Cronbach's alpha values ranged from 0.75 to 0.90 (p. 47). The items are being

answered on a 5 point Likert scale, ranging from "not at all" (1) to "exactly" (5). Original English version of the scale is provided in Appendix K.

3.8.1.4. Facebook attitude scale

Facebook Attitude Scale was extracted from the Facebook Questionnaire developed by Ross et al (2009, p.580). The questionnaire consists of 28 items. They describe their questionnaire as follows:

> *It contained three categories of items assessing basic use of Facebook, attitudes associated with Facebook and the posting of personally identifying information. Response alternatives ranged from nine-item multiple choices to yes/no depending on the nature of the item. Basic use items were devised to gather data on the frequency of use of functions that are common to the most basic Facebook profiles. Included in this list of basic functions were: the use of the Wall (a public forum where other Facebook users can post messages on one's Facebook profile); posting photos; sending private messages (which allows Facebook users to communicate with one another, in a manner accessible only through the Facebook server); the use of the ''poke'' function (which allows one Facebook user to indicate an interest or intent to speak with another Facebook user); participating in groups (online forums for which members with similar interests can join and discuss the topic of interest); posting of and participating in events (which, on Facebook, serve as indications of real world events); status changes (which allow a Facebook user to indicate what they are doing in the present moment when they change their status); and the use of comments (whereby a Facebook user can comment on their friends' posted material, such as photos).*

The scale includes an attitudes factor comprising of 7 items. These seven items was used as the "Facebook Attitude Scale" in this research. Items are being answered on a 5 point Likert scale, ranging from "strongly disagree" (1) to "strongly agree" (5). Original English version of the scale is provided in Appendix L.

3.8.1.5. Facebook use scale

FB use scale is part of the scale developed by Ross et al (2009, p.580) as Facebook Questionnaire. It consists of Yes/No questions, multiple choice questions and open ended numerical-entry questions. The scale is part of the one provided in Appendix L.

3.8.2. Interview questions

The interview questions were developed according to the results of the statistical measures applied to the data collected in the Turkish lap of the quantitative phase. All of the questions were prepared in Turkish as open ended questions. The questions aimed to collect data which will be used to "explain" the underlying dynamics of the phenomena and relationships among the psychological constructs that emerged in the correlational analysis of the quantitative data. Eight open ended questions were asked. Three of them had one sub-question. Turkish interview questions are provided in Appendix M and the English one is provided in Appendix N.

3.9. Pilot Study

For the Turkish lap of the quantitative phase, a pilot study was administered. A group of 229 pre-service teachers who were enrolled in the CEIT department of Faculty of Education of METU were reserved as the accessible population of the pilot study at the very beginning. After the preparation of the Turkish questionnaires and then the online survey website, all were invited to the study as described before. Out of 229 invitees, 179 responded to the invitation ($NR\_P=179$, 78.16% of NA_P) but only 136 completed and submitted the survey and had a FB account. Therefore, pilot sample was a group of 136 CEIT students ($NP=136$, 59.38% of NA_P and 75.97% of NR_P). Table 3.12 depicts the distribution of gender in the pilot sample and Table 3.13 depicts the distribution of the year of study of the participants in the pilot study.

3.9.1. Pilot sample

Before the Turkish lap of the quantitative phase, a pilot study was administered so test the newly translated instruments. Pilot study was administered only in the Turkish lap of the quantitative phase. In the pilot study, 229 of the 1510 undergraduate students of the METU Faculty of Education were invited to participate in the study as the accessible population of the pilot study ($N_{A\_P}=229$). These 229 invitees were CEIT students and were reserved for the pilot study at the beginning of the sampling phase.

Table 3.12. Gender distribution of the pilot sample.

Gender	Frequency	Percentage
Male	96	70.6
Female	40	29.4

Out of 229 invitees, 179 responded to the invitation (NR_P=179, 78.16% of NA_P) but only 136 could complete and submit the survey and had a FB account. Therefore pilot sample consisted of 136 CEIT students (NP=136, 59.38% of NA_P and 75.97% of NR_P). Table 3.12 depicts the distribution of gender in the pilot sample and Table 3.13 depicts the distribution of the year of study of the participants in the pilot study.

Table 3.13. Distributioın of the year of study in the pilot sample.

	Minimum	Maximum	Mean	Median
Year	1	10	2.66	2

3.9.2. Pilot study of FB attitude scale

A principal component analysis with varimax rotation was conducted on FB attitude questions of FB Questionnaire. Eigenvalue was calculated as 3.811 and 54.447% of the total variance was explained by one factor. Seven items formed the factor. The factor yielded a Cronbach's α of 0.859. The factor was named as "FB Attitude" refereeing to "attitude towards using FB." And the new scale was named as "FB Attitude Scale." The output of the analysis is depicted in Appendix O. The resulting Turkish and English FB attitude scales are provided in Appendix P and Q, respectively. Finally, a new FB use scale was developed both in Turkish and English; provided in Appendix R and S, respectively.

3.9.3. Pilot study of CMC motivation scale

A principal component analysis with varimax rotation was conducted on the motivation part of the CMC competence scale. Eigenvalue was calculated as 2.685

and 44.758% of the total variance was explained by one factor which consisted of six items. Factor yielded a Cronbach's α of 0.747. Items 2 and 5 were reversed. The factor was named as "FB Motivation" referring to "motivation to use FB." And the new scale was named as "FB Motivation Scale." The output of the analysis is depicted in Appendix T. The resulting Turkish and English FB motivation scales are provided in Appendix U and V, respectively.

3.9.4. Pilot study of FB motives scale

A principal component analysis with varimax rotation was conducted on FB motives scale. Three factors explained 69.901% of the total variance. Entire scale with three factors yielded a Cronbach's α of 0.865. First two factors included five items each and the third factor consisted of four items. The first factor was named as "Friendship", the second was named as "Passing Time", and the final factor was named as "Relationship." Friendship received an eigenvalue of 5.128. Passing Time received an eigenvalue of 3.167. Relationship received an eigenvalue of 1.492. On the other hand, Friendship explained 36.627 of the variance. Passing Time explained 22.620% of the variance. Relationship explained 10.654% of the variance. Reliability analyses were run for each of the factors separately. Friendship had a Cronbach's α of 0.911. Passing time had a Cronbach's α of 0.883. Relationship had a Cronbach's α of 0.807. The output of the analysis is depicted in Appendix W. The resulting Turkish and English FB motives scales are provided in Appendix X and Y, respectively.

3.10. Actual Study

In the Turkish phase of actual study, 1281 individuals were asked to participate in the study (N_{A_TR}=**1281**). But only 641 of them - undergraduate pre-service teachers who have a FB account- could actually participate in the study (N_{TR} = 641). In the USA, 1744 individuals were asked to participate in the study. But only 121 of them -pre-service teachers who have a FB account- could actually participate in the study (N_{US} = **121**). Thus, total accessible population was 3025 (N_A = **3025**). Conclusively, 762 pre-service teachers in Turkey and USA participated in the study (**N = 762**). Turkish and American samples form 84.12% and 15.87% -respectively- of the total sample. After the data was collected, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) procedures were conducted on the scales.

3.10.1. Exploratory factor analysis

According to Field (2009), EFA is a statistical technique for "(1) to understand the structure of a set of variables; (2) to construct a questionnaire to measure an underlying variable; and (3) to reduce a data set to a more manageable size while retaining as much of the original information as possible" (p. 627). He argues that EFA is used to generate theories by constructing latent variables (factors). In order to

investigate the associations among those variables by other statistical techniques such as regression latent variables are needed to be constructed.

There are many methods for EFA. In this study, principal component analysis (PCA) with varimax rotation was used to get the factors. PCA with Varimax rotation is the most popular technique among researchers (Costello & Osboren, 2005, pp. 1, 3). Factor extraction method also varies. Factor extraction was done by "regression coefficient" method since it maximizes the validity of the instrument (DiStefano et al., 2009, p.9).

Table 3.14. Criteria for sample size in Factor Analysis.

Rule	Criteria	Author(s)
N.100	N>100	Gorsuch (1983) and Kline (1979)
p.5 or N.100	N>100 or N>5xI	Hatcher (1994)
N.150	N>150	Hutcheson and Sofroniou (1999)
N.200	N>200	Guilford (1954)
N.250	N>250	Cattell (1978)
N.300	N>300	Norusis (2005)
Significance	N> I +51	Lawley and Maxwell (1971)
N.500	N>500	Comrey and Lee (1992)
p.20	N>20xI	Hair, Anderson, Tatham, and Black (1995)
p.10	N>10xI	Everitt (1975), Nunnally (1978)
p.5	N>5xI	Bryant and Yarnold (1995), Gorsuch (1983)
p.3 or p.5	N>3xI or N>5xI	Cattell (1978)
p.2	N>2xI	Kline (1979)

Notation: "N" refers to sample size, "p" stands for case to item ratio, "I" refers to the number of the items, and "x" is the multiplication operator.

Sample size is another important consideration for conducting factor analyses. There are various suggestions for minimum sample sizes regarding factor analysis. Costello and Osboren (2009) state that majority of the factor analyses in their survey utilize an item to case (or participant) ratio of 10:1 (p. 4). But ratios such as 2:1 and 5:1 have a percentage of 14.7% and 25.8%, respectively. Zhao (2009) summarized the suggestions of various researchers in his web page as depicted in Table 3.14.

In the quantitative phase of this study, a total of six questionnaires were used to collect data. Questionnaires were as follows:

1. NEO FFI
2. CMC motivation scale
3. FB motives scale
4. FB attitude scale
5. FB use scale
6. Demographics questions

Same scales were used both in Turkey and USA. In Turkey, modified Turkish versions of the questionnaires were utilized. FB use scale and demographics questions were not subjected to factor analyses but NEO FFI, CMC motivation scale, FB motives scale, and FB attitude scale were. CMC motivation scale, FB motives scale, and FB attitude scales were modified according to the results of the factor analyses. NEO FFI was kept intact.

In the other hand, all of these four scales including NEO-FFI were subjected again to factor analyses in order to generate latent variables for using in the subsequent correlational analyses. In this research study, two samples and two set of scales were used. Scales were the same but Turkish ones were modified so that there was difference between Turkish ones and English ones. In the Turkish lap of the quantitative phase, 641 individuals participated (NTR=641) while in the USA 121 individuals participated (NUS=121).

Thus, sample sizes were calculated accordingly. Number of items in each factor is depicted in Table 3.15. In Turkish lap, greatest number of items is 13. Since 641 (NTR) is greater than 260 (13x20 for p.20), Turkish sample satisfies all of the suggested criteria regarding sample size. In the US lap, greatest number of items is 9. Factor analyses of US lap satisfy all except p.20 (90< NUS <180) and constant sample size rules above 121.

Table 3.15. Number of items within factors.

Scale	Factor (Variable)	Number of Items in Turkish Study	Number of Items in US Study
FB Attitude	Attitude	6	5
FB Motivation	Motivation	4	4
FB Motives			
	Passing Time	5	5
	Friendship	3	5
	Relationship	3	3
NEO-FFI			
	Agreeableness	8	5
	Conscientiousness	10	7
	Extraversion	8	9
	Neuroticism	13	9
	Openness to Experience	6	5

3.10.1.1. Factors extracted from Turkish scales

Principal component analyses with varimax rotation were conducted by using SPSS. A total of 10 factors were extracted from Turkish scales.

3.10.1.1.1. FB attitude

Factor analysis statistics of FB attitude scale is depicted in Table 3.16 and factor loadings are depicted in Appendix Z.

Table 3.16. Parameters of Turkish FB attitude factor.

Parameter	Value	Criterion
Eigenvalue	3.440	>1
% of Variance	57.330	
Cronbach's α	0.849	[0.7 … 0.9)
Determinant	0.074	>0.00001
KMO	0.820	>0.5
Bartlett	χ^2 (15)=1663.1, p < 0.000	p<0.05

As seen in Table 3.16; sphericity, multicollinearity, sample size, and reliability assumptions were satisfied for FB attitude scale.

3.10.1.1.2. FB motivation

Factor analysis statistics of FB motivation scale is depicted in Table 3.17 and factor loadings are depicted in Appendix AA.

Table 3.17. Parameters of Turkish FB motivation factor.

Parameter	Value	Criterion
Eigenvalue	2.278	>1
% of Variance	56.957	
Cronbach's α	0.745	[0.7 … 0.9)
Determinant	0.391	>0.00001
KMO	0.731	>0.5
Bartlett	χ^2 (6)=598.5, p< 0.000	p<0.05

As seen in Table 3.17; sphericity, multicollinearity, sample size, and reliability assumptions were satisfied for FB motivation scale.

3.10.1.1.3. FB motives

Factor analysis statistics of FB motives scale is depicted in Table 3.18 and Table 3.19. Factor loadings are depicted in Appendix AB.

Table 3.18. Parameters of the factors of Turkish FB motives scale (I).

Parameter	Value	Criterion
% of Total Variance	69.393	
Determinant	0.005	>0.00001
KMO	0.765	>0.5
Bartlett	$\chi2$ (55)=3385.3, p< 0.000	p<0.05

Table 3.19. Parameters of the factors of Turkish FB motives scale (II).

Factor	Eigenvalue	% of Variance	Cronbach's α
Passing Time	3.732	33.928	0.785
Relationship	2.234	20.307	0.882
Friendship	1.667	15.158	0.872

As seen in Table 3.18 and Table 3.19; sphericity, multicollinearity, sample size, and reliability assumptions were satisfied for FB motives scale.

Three factors were extracted from FB motives scale as depicted in Appendix AB: Passing Time, Relationship, and, Friendship. In the original English scale (Sheldon, 2008) there were 6 factors (p. 72). Only "Passing Time" matched with Sheldon's factors.

3.10.1.1.4. NEO FFI

Factor analysis statistics of NEO-FFI is depicted in Table 3.20, Table 3.21 and factor loadings are depicted in Appendix AC.

Table 3.20. Parameters of the factors of Turkish NEO-FFI (I).

Parameter	Value	Criterion
% of Total Variance	42.808	
Determinant	1.49E-007	>0.00001
KMO	0.851	>0.5
Bartlett	$\chi 2$ (990)=9809.8, p< 0.000	p<0.05

Table 3.21. Parameters of the factors of Turkish NEO-FFI (II).

Factor	Eigenvalue	% of Variance	Cronbach's α
Neuroticism	7.289	16.198	0.857
Conscientiousness	3.841	8.535	0.827
Extraversion	3.247	7.216	0.808
Agreeableness	2.452	5.449	0.708
Openness to Experience	2.435	5.411	0.734

As seen in Table 3.20 and Table 3.21; sphericity, multicollinearity, sample size, and reliability assumptions are satisfied for NEO-FFI.

All of the factors that were present in the original English scale were extracted from the Turkish NEO-FFI. Out of original set of 60 items, 45 items entered into the factors and 15 were dropped in order to address reliability issues.

These 45 items explained 42.808% of total variance. Cronbach's α reliabilities were calculated as 0.857, 0.827, 0.808, 0.708, and 0.734 for Neuroticism, Conscientiousness, Extraversion, Agreeableness, and Openness to Experience, respectively.

3.10.1.2. Factors extracted from English scales

Principal component analyses with varimax rotation were conducted. A total of 10 factors were extracted from English (original) scales.

3.10.1.2.1. FB attitude

Factor analysis statistics of FB attitude scale is depicted in Table 3.22 and factor loadings are depicted in Appendix AD.

Table 3.22. Parameters of English FB attitude factor.

Parameter	Value	Criterion
Eigenvalue	3.743	>1
% of Variance	62.390	
Cronbach's α	0.877	[0.7 … 0.9)
Determinant	0.047	>0.00001
KMO	0.822	>0.5
Bartlett	$\chi^2 (15)=357.0, p < 0.000$	p<0.05

As seen in Table 3.22; sphericity, multicollinearity, sample size, and reliability assumptions are satisfied for FB attitude scale.

3.10.1.2.2. FB motivation

Factor analysis statistics of FB motivation scale is depicted in Table 3.23 and factor loadings are depicted in Appendix AE.

Table 3.23. Parameters of English FB motivation factor.

Parameter	Value	Criterion
Eigenvalue	2.415	>1
% of Variance	60.382	
Cronbach's α	0.778	[0.7 … 0.9)
Determinant	0.322	>0.00001
KMO	0.758	>0.5
Bartlett	χ2 (6)=133.6, p< 0.000	p<0.05

As seen in Table 3.23; sphericity, multicollinearity, sample size, and reliability assumptions are satisfied for FB motivation scale.

3.10.1.2.3. FB motives

Factor analysis statistics of FB motives scale is depicted in Table 3.24 and Table 3.25; and factor loadings are depicted in Appendix AF.

Table 3.24. Parameters of the factors of English FB motives scale (I).

Parameter	Value	Criterion
% of Total Variance	72.634	
Determinant	0.000	>0.00001
KMO	0.843	>0.5
Bartlett	χ2 (78)=1024.7, p< 0.000	p<0.05

Table 3.25. Parameters of the factors of English FB motives scale (II).

Factor	Eigenvalue	% of Variance	Cronbach's α
Passing Time	5.596	43.044	0.877
Relationship	2.364	18.188	0.929
Friendship	1.482	11.402	0.846

As seen in Table 3.24 and Table 3.25; sphericity, multicollinearity, sample size, and reliability assumptions are satisfied for FB motives scale. Three factors were extracted from FB motives scale as depicted in Appendix AF: Passing Time, Relationship, and, Friendship. In the original English scale (Sheldon, 2008) there were 6 factors (p. 72). Only "Passing Time" matched with Sheldon's factors. Thus, according to factor analysis of FB motives scale depicted in Table 3.24, Table 3.25, and Appendix AF, results coming from both American and Turkish samples contradicted with the results reported in Sheldon's study.

3.10.1.2.4. NEO FFI

Factor analysis statistics of NEO-FFI is depicted in Table 3.26 and

Table 3.27; and factor loadings are depicted in Appendix AG. NEO FFI scale was the one which wasn't modified according to the results of the statistical analyses conducted on Turkish quantitative data. Considering that NEO FFI is an established personality scale with high reliability; it was decided to keep the inventory intact. On the other hand, personality scales are more sensitive to translation and it was developed originally in English. Thus, it was decided to give the original a chance.

As seen in Table 3.26 and Table 3.27; sphericity, multicollinearity, sample size, and reliability assumptions are satisfied for NEO-FFI.

All of the factors that were present in the original English scale were extracted from the data collected from US sample. Out of original set of 60 items, 35 items entered into the factors and 25 were dropped in order to address reliability issues. Only three items loaded in two factors. They weren't removed in order not to decrease the explained total variance. These 45 items explained 50.001% of total variance. Cronbach's α reliabilities were calculated as 0.869, 0.783, 0.799, 0.646, and 0.745 for Conscientiousness, Extraversion, Neuroticism, Agreeableness, and Openness to Experience, respectively.

Table 3.26. Parameters of the factors of English NEO-FFI (I).

Parameter	Value	Criterion
% of Total Variance	50.001	
Determinant	5.74E-008	>0.00001
KMO	0.773	>0.5
Bartlett	$\chi 2$ (595)=1792.4, p< 0.000	p<0.05

Table 3.27. Parameters of the factors of English NEO-FFI (II).

Factor	Eigenvalue	% of Variance	Cronbach's α
Conscientiousness	7.199	20.568	0.869
Extraversion	3.942	11.264	0.783
Neuroticism	2.545	7.272	0.799
Agreeableness	2.103	6.007	0.646
Openness to Experience	1.711	4.888	0.745

3.10.1.3. Comparison of the results of factor analyses

In both countries, very similar factors were extracted. In all scales and for all factors, more of the total variance was explained by the factors extracted from US data. This is contrasting with the sample sizes. Even though sample size was remarkably smaller in the US, factors were more robust in terms of total variance explained.

Regarding reliability, there was no significant difference between US and Turkish data. Neuroticism, Extraversion, Agreeableness, and Friendship factors were slightly more reliable in the USA. On the other hand, Attitude, Motivation, Passing Time, Relationship, Conscientiousness, and Openness to Experience were slightly more reliable in Turkey.

Items were very similar as well. Motivation, Passing Time, and Relationship factors loaded the same items. Openness to Experience and Attitude each loaded one more item in Turkey. Friendship loaded one more item in USA. Finally, Agreeableness, Neuroticism, and Extraversion each loaded two more items in Turkey and Conscientiousness loaded three more items in Turkey.

3.10.2. Confirmatory factor analysis

In the actual study, after extracting the factors by EFA, a CFA was conducted. CFA is a factor analysis "in which specific hypotheses about structure and relations between the latent variables that underlie the data are tested" (Field, 2009, p. 783). Thus, the theory is first generated by EFA, and then, the already generated theory is tested by CFA. Stevens (2009) argues that CFA "is more of a theory-testing procedure than is EFA" (p. 345).

Similar with EFA, there are many methods for conducting CFA. Brown (2006, p.21) states that maximum likelihood (ML) is "the most commonly used estimation method." On the advantage of ML, he argues that "it allows for a statistical evaluation of how well the factor solution is able to reproduce the relationships among the indicators in the input data." For determining the number of factors, this advantageous feature is very helpful.

There are several goodness-of-fit indices for CFA. There is no consensus among researchers for picking one over the others and the issue is "hotly debated" (Brown, 2006, p. 86). It depends on the researcher to review the literature to browse through available indices. According to Brown (2006), Chi-square is the "classic goodness-of-fit index" (p. 81) for ML. He also suggests considering Comparative Fit Index (CFI), Tucker Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA) for model estimation (pp. 85-88). Schermelleh-Engel et al. (2003) adds Goodness-of-Fit Index (GFI) to the list as well (p. 40).

Another uncertainty plagues the issue of "criteria" for interpreting those indices. Brown (2006) states that the answer of the question "what cutoff criteria should be applied to indicate good and poor model fit?" is also hotly debated (p. 86). He argues that there are "few areas of consensus in regard to recommended fit index cutoffs" in the literature. Therefore, he doesn't recommend cutoffs in his book. He emphasizes that "goodness-of-fit indices are only one aspect of model evaluation" (p. 87). On the other hand other authors recommended cutoff values. It should be noted that, these cutoff values are not definitive and if the outcomes of the CFA are not fitting these values it doesn't necessarily mean that the theory failed the CFA test.

On the cutoff values, for the Chi-square values, Schermelleh-Engel et al. (2003) argues that if chi-square values are (a) between two times and three times the degree of freedom; or (b) chi-square is significant with p value below 0.05; or (c) the ratio of

chi-square to degree of freedom is between two and three, then the model is "acceptable fit" (p. 52). They argue that if chi-square values are (a) between zero and two times the degree of freedom; or (b) chi-square is significant with p value below 0.01; or (c) the ratio of chi-square to degree of freedom is between zero and two, then the model is "good fit." For the RMSEA value, Schermelleh-Engel et al. (2003) argues that if the value is less than 0.08 then the model is "acceptable fit" (p. 52). If the value is below 0.05 it is "good fit." Browne and Cudek (1993) agree with them about their criteria (p. 144). However, MacCallum et al. (1996) argue that RMSEA values between 0.08 and 0.10 are "mediocre fit" (p. 134).

For the CFI value, Schermelleh-Engel et al. (2003) argues that if the value is between 0.95 and 0.97 then the model is "acceptable fit" (p. 52). If the value is between 0.97 and 1.0 then the model is "good fit." In parallel with them, Hu and Bentler (1999, as cited in Brown, 2006, p. 87) argue that CFI should be greater -or close to- 0.95. For the TLI value, Schermelleh-Engel et al. (2003) argues that if the value is between 0.95 and 0.97 then the model is "acceptable fit" (p. 52). If the value is between 0.97 and 1.0 then the model is "good fit." In parallel with them, Hu and Bentler (1999, as cited in Brown, 2006, p. 87) argue that TLI should be greater -or close to- 0.95.

For the GFI value, Schermelleh-Engel et al. (2003) argues that if the value is between 0.9 and 0.95 then the model is "acceptable fit" (p. 52).If the value is between 0.95 and 1.0 then the model is "good fit." In parallel with them, Stevens (2009) argues that GFI values above 0.9 fit well. A summary of the model fit criteria and their cutoff values are depicted in Table 3.28.

Table 3.28. Model fit and cutoff criteria for CFA.

Model Fit Index		Acceptable Fit	
		Moderately Fit	**Good Fit**
	χ^2	$2df < \chi^2 < 3df$	$0 < \chi^2 < 2df$
Chi-square (χ^2)	**p**	$p < 0.05$	$p < 0.01$
	χ^2/df	$2 < \chi^2/df < 3$	$0 < \chi^2/df < 2$
RMSEA		$0.05 - 0.08$	≤ 0.05
CFI		$0.95 - 0.97$	$0.97 - 1.00$
TLI		$0.95 - 0.97$	$0.97 - 1.00$
GFI		$0.90 - 0.95$	$0.95 - 1.00$

3.10.2.1. Factors extracted from Turkish scales

Confirmatory factor analyses (CFA) with Maximum Likelihood (ML) method were conducted on the Turkish data. A total of 4 analyses were conducted on 10 factors which were extracted by previous EFA process from Turkish scales. Two of the factors were analyzed separately (motivation and attitude), personality factors were analyzed once in a lump and motives factors were analyzed in a lump as well.

3.10.2.1.1. FB attitude

A CFA with ML method was conducted on FB attitude scale. There were 6 items in the factor. Initial estimation of the model was well fit: $\chi^2(6) = 23.930$, $p < 0.001$. As seen in the Table 3.29, Model fit indices of CFI, TLI and GFI indicated that model was good fit. Chi-square (χ^2) was higher than three times the degree of freedom but since the significance of the test is the actual parameter, the model was assessed good fit. RMSEA indicated a moderate fit. Output path diagram of the finalized factor model is depicted in Figure 3.2.

Table 3.29. CFA results of Turkish FB Attitude scale.

Model Fit Index		Model	
		Value	**Assessment**
Chi-square (χ^2)	χ^2	23.930	Not fit
	p	$p < 0.001$	Good fit
	χ^2/df	3.99	Good fit
RMSEA		0.068	Moderately fit
CFI		0.989	Good fit
TLI		0.973	Good fit
GFI		.0988	Good fit
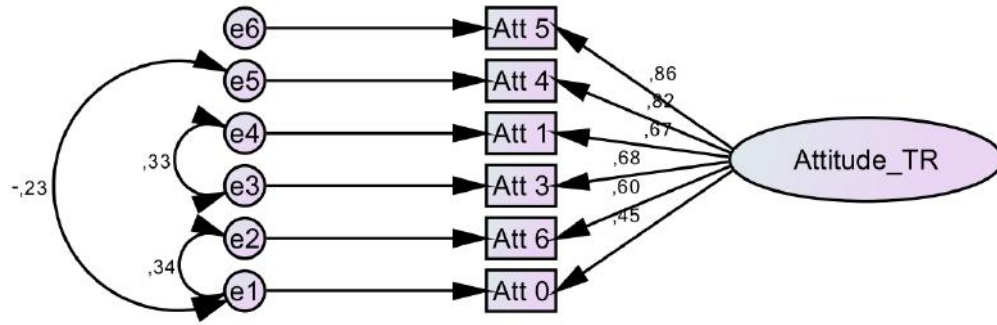
Figure 3.3. Output path diagram of Turkish FB Attitude scale.

3.10.2.1.2. FB motivation

A CFA with ML method was conducted on FB motivation scale. There were 4 items in the factor. Initial estimation of the model was not well fit: $\chi^2(1) = 1.247$, p = 0.264. As seen in the Table 3.30, Model fit indices of RMSEA, CFI, TLI and GFI indicated that model was good fit. Chi-square (χ^2) was good fit but test was insignificant. Since the other tests were all good fit, the model was assessed good fit. Output path diagram of the finalized factor model is depicted in Figure 3.4.

Table 3.30. CFA results of Turkish FB Motivation scale.

Model Fit Index		Model	
		Value	**Assessment**
Chi-square (χ^2)	χ^2	1.247	Good fit
	p	p = 0.264	Not fit
	χ^2/df	1.247	Good fit
RMSEA		0.020	Good fit
CFI		1.00	Good fit
TLI		0.998	Good fit
GFI		.0999	Good fit

89
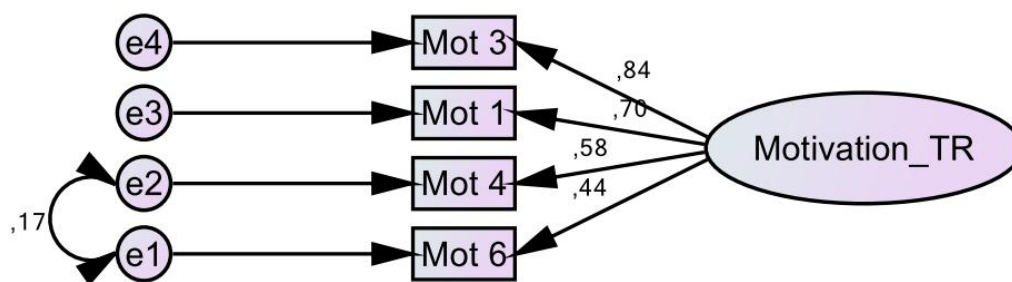
Figure 3.4. Output path diagram of Turkish FB Motivation scale.

3.10.2.1.3. FB motives

A CFA with ML method was conducted on FB motives scale. There were 11 items in the factor. Initial estimation of the model was well fit: $\chi^2(38) = 109.925$, $p < 0.001$. As seen in the Table 3.31, Model fit indices of RMSEA, CFI, TLI and GFI indicated that model was good fit. Chi-square (χ^2) and its division with degrees of freedom were moderately fit but since the model was significant and all other values were good fit, the model was assessed good fit. Output path diagram of the finalized factor model is depicted in Figure 3.5.

Table 3.31. CFA results of Turkish FB Motives scale.

Model Fit Index		Model	
		Value	**Assessment**
	χ^2	109.925	Moderately Fit
Chi-square (χ^2)	p	$p < 0.001$	Good fit
	χ^2/df	2.89	Moderately fit
RMSEA		0.054	Good fit
CFI		0.979	Good fit
TLI		0.969	Good fit
GFI		.0971	Good fit
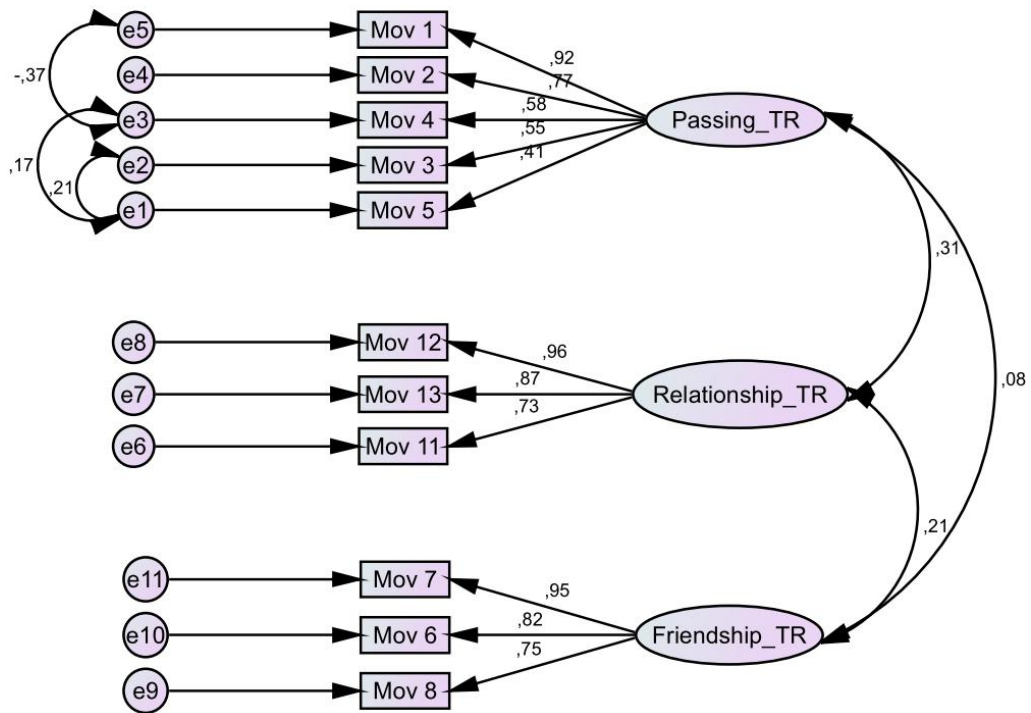
Figure 3.5. Output path diagram of Turkish FB Motives scale.

3.10.2.1.4. NEO FFI

A CFA with ML method was conducted on NEO FFI. There were 35 items in the factor. Initial estimation of the model was well fit: $\chi^2 (914) = 2344,774$, p < 0.001. As seen in the Table 3.32, Model fit indices of RMSEA, CFI, TLI and GFI indicated that model was moderately fit. Chi-square (χ^2) was higher than two times the degree of freedom but since the significance of the test is the actual parameter, the model was assessed good fit. Output path diagram of the finalized factor model is depicted in Figure 3.6.

Table 3.32. CFA results of Turkish NEO FFI.

Model Fit Index		Model	
		Value	Assessment
Chi-square (χ^2)	χ^2	2344,774	Moderately fit
	p	p < 0.001	Good fit
	χ^2/df	2.57	Good fit
RMSEA		0.068	Moderately fit
CFI		0.842	Moderately fit
TLI		0.829	Moderately fit
GFI		.0856	Moderately fit

3.10.2.2. Factors extracted from English scales

Confirmatory factor analyses (CFA) with Maximum Likelihood (ML) method were conducted on the data collected form USA. A total of 4 analyses were conducted on 10 factors which were extracted by previous EFA process from Turkish scales. Two of the factors were analyzed separately (motivation and attitude), personality factors were analyzed once in a lump and motives factors were analyzed in a lump as well.

3.10.2.2.1. FB attitude

A CFA with ML method was conducted on FB attitude scale. There were 6 items in the factor. Initial estimation of the model was not well fit: $\chi^2 (7) = 9.177$, p = 0.240. As seen in the Table 3.33, Model fit indices of RMSEA, CFI, TLI and GFI indicated that model was good fit. Chi-square (χ^2) was not significant but since all the other parameters were good fit, the model was assessed good fit. Output path diagram of the finalized factor model is depicted in Figure 3.7.
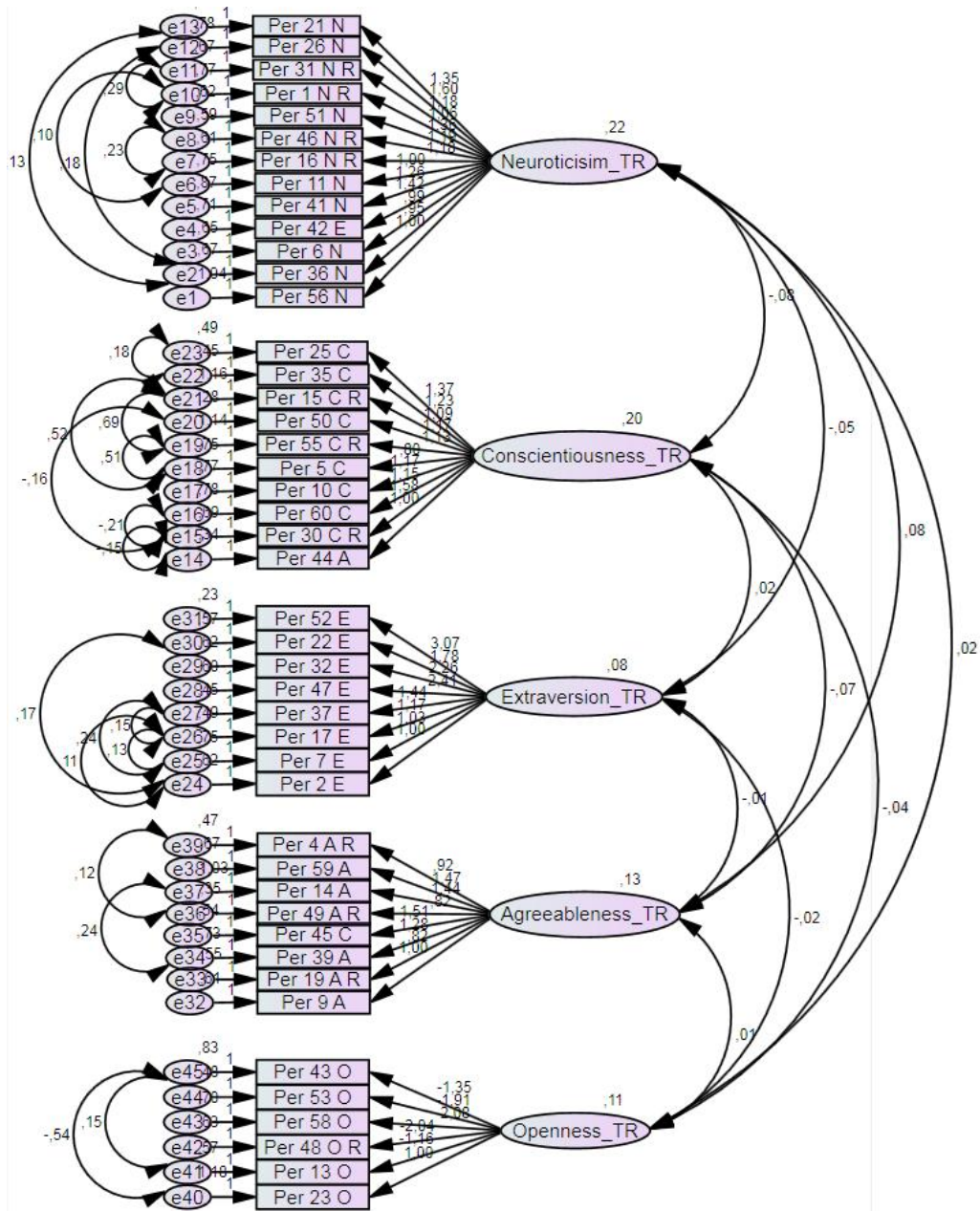
Figure 3.6. Output path diagram of Turkish NEO FFI.

Table 3.33. CFA results of English FB Attitude scale.

Model Fit Index		Model	
		Value	**Assessment**
Chi-square (χ^2)	χ^2	9.177	Good fit
	p	p = 0.240	Not fit
	χ^2/df	1.311	Good fit
RMSEA		0.051	Good fit
CFI		0.994	Good fit
TLI		0.987	Good fit
GFI		.0975	Good fit
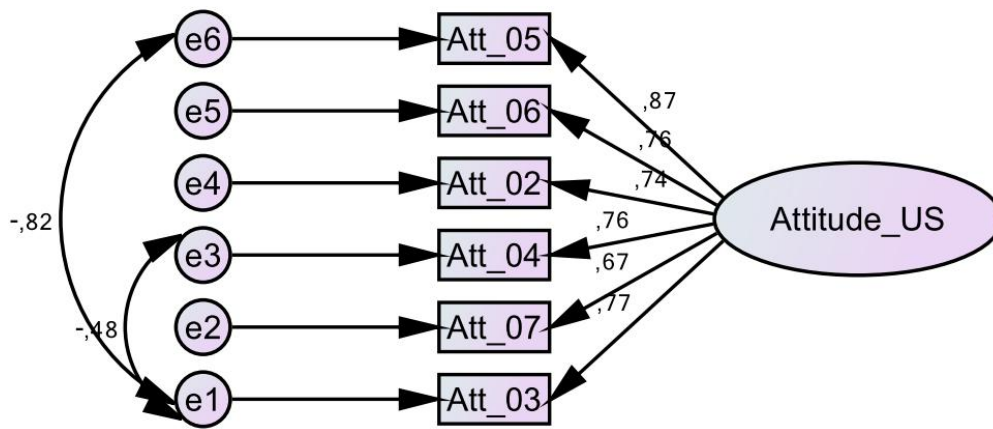
Figure 3.7. Output path diagram of English FB Attitude scale.

3.10.2.2.2. FB motivation

A CFA with ML method was conducted on FB motivation scale. There were 4 items in the factor. Initial estimation of the model was not well fit: $\chi^2(2) = 1.128$, p = 0.569. As seen in the Table 3.34, Model fit indices of RMSEA, CFI, TLI and GFI indicated that model was good fit. Chi-square ($\chi2$) was not significant but since all the other parameters were good fit, the model was assessed good fit. Output path diagram of the finalized factor model is depicted in Figure 3.8.

Table 3.34. CFA results of English FB Motivation scale.

| Model Fit Index		Model	
		Value	**Assessment**
	χ^2	1.128	Good fit
Chi-square (χ^2)	**p**	p = 0.569	Not fit
	χ^2/df	0.564	Good fit
RMSEA		0.000	Good fit
CFI		1.000	Good fit
TLI		1.020	Good fit
GFI		.0995	Good fit
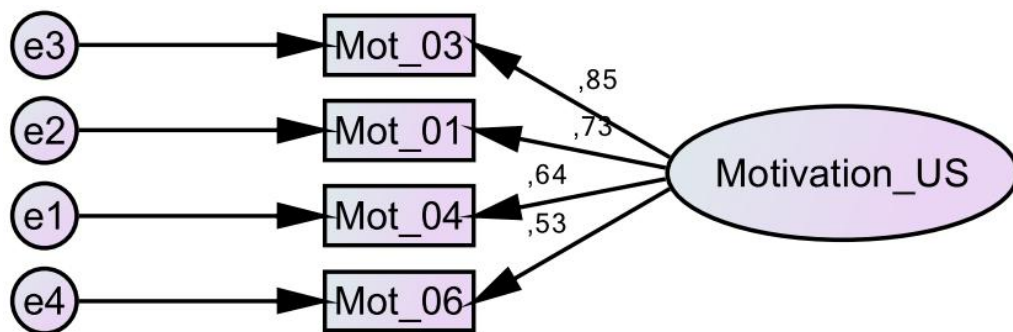
Figure 3.8. Output path diagram of English FB Motivation scale.

3.10.2.2.3. FB motives

A CFA with ML method was conducted on FB motives scale. There were 13 items in the factor. Initial estimation of the model was well fit: $\chi^2 (58) = 119.230$, $p < 0.001$. As seen in the Table 3.35, Model fit indices of RMSEA, CFI, TLI and GFI indicated that model was moderately fit. Chi-square (χ^2) was significant. Since the Chi-square test is the classic fit index, the model was assessed good fit. Output path diagram of the finalized factor model is depicted in Figure 3.9.

Table 3.35. CFA results of English FB Motives scale.

Model Fit Index		Model	
		Value	**Assessment**
	χ^2	119.230	Good fit
Chi-square (χ^2)	**p**	p < 0.001	Good fit
	χ^2/df	2.05	Good fit
RMSEA		0.094	Moderately fit
CFI		0.938	Moderately fit
TLI		0.917	Moderately fit
GFI		.0874	Moderately fit

3.10.2.2.4. NEO FFI

A CFA with ML method was conducted on NEO FFI. There were 35 items in the factor. Initial estimation of the model was well fit: $\chi2 (541) = 856.852$, $p < 0.001$. As seen in the Table 3.36, Model fit indices of CFI, TLI and GFI indicated that model was not fit. However, RMSEA indicated a moderate fit. Since the Chi-square test is the classic fit index, the model was assessed good fit. Output path diagram of the finalized factor model is depicted in Figure 3.10.
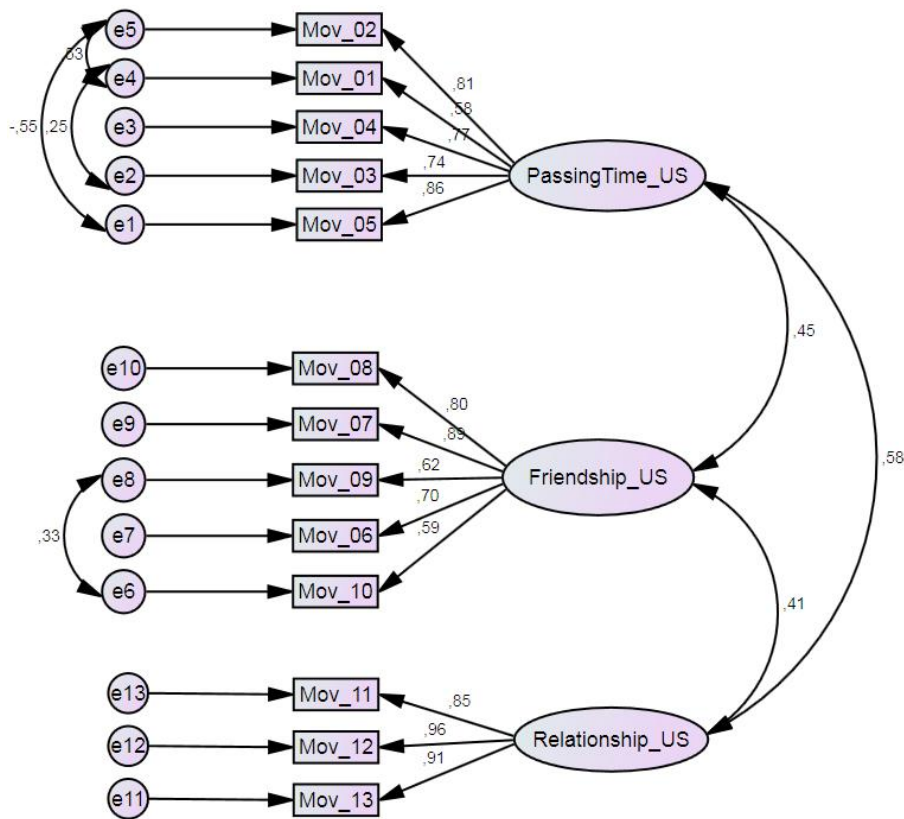
Figure 3.9. Output path diagram of English FB Motives scale.

Table 3.36. CFA results of English NEO FFI.

Model Fit Index		Model	
		Value	**Assessment**
Chi-square (χ^2)	χ^2	856.852	Good fit
	p	$p < 0.001$	Good fit
	χ^2/df	1.58	Good fit
RMSEA		0.070	Moderately fit
CFI		0.775	Not fit
TLI		0.753	Not fit
GFI		0.742	Not fit
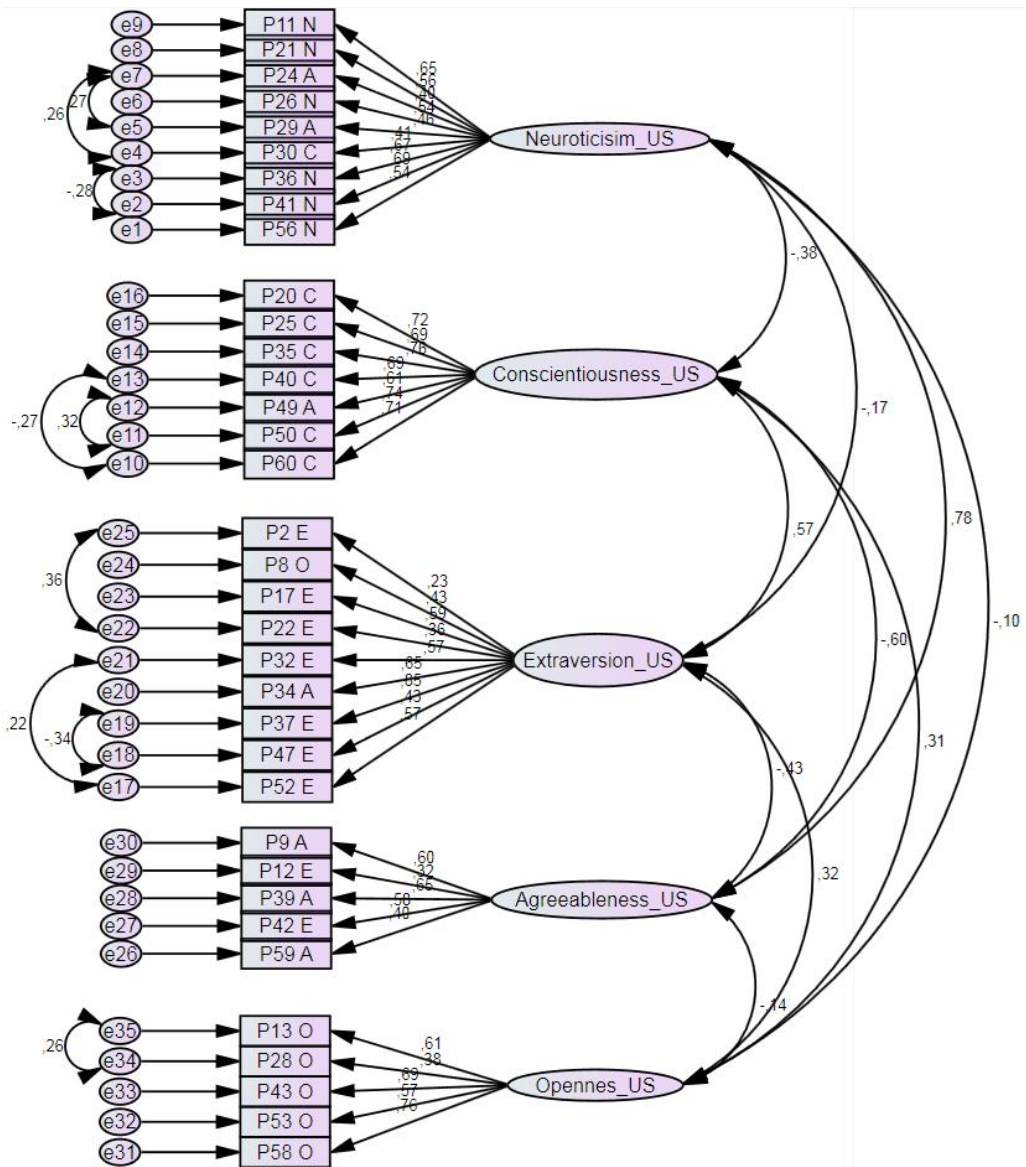
Figure 3.10. Output path diagram of English NEO FFI.

3.11. Data Collection

In this study, as part of the mixed-methods research, quantitative and qualitative data was collected. The quantitative data was collected both from Turkey and USA.

3.11.1. Collection of quantitative data

Because of relative advantages of online survey compared with paper based survey, an online survey application will be created to conduct the survey. Since the human activity on the Internet has increased the research on Internet populations increased, as well. The growth of online populations and studies on them, "have led to an increase in the use of online surveys, presenting scholars with new challenges in terms of applying traditional survey research methods to the study of online behavior and Internet use" (Wright, 2005). On the growth in online research Duffy et al. (2005) report that "growth in online research has been considerable" (p. 616) and Comley (2003) state that "20% of quantitative research in the US is now being conducted via the Internet" (p. 2). Wright (2005) delineates many advantages of online surveys. He argues that "access to unique populations", "time", and "cost" are three major advantages of online surveys. Ilieva et al. (2002) adds "better display of the questionnaire" (p. 363) as another advantage.

Regarding the "access to unique populations" he states that "it takes advantage of the ability of the Internet to provide access to groups and individuals who would be difficult, if not impossible, to reach through other channels". Ilieva et al. (2002) state that "instant access to a wide audience, irrespective of their geographical location, which makes it very appropriate for cross-sectional studies and/or international comparisons" (p. 363) is a significant advantage.

By using online surveys a researcher may collect data from thousands of people in a short period of time even though they are geographically scattered. Regarding "time", Duffy et al. (2005) state that "greater speed" is a "key advantage nearly always quoted first" (p. 617). In parallel with Duffy et al., Ilieva et al. (2002) state that, "short response time is certainly one of the greatest advantages of online surveys" (p. 365). They report that 34% of online surveys took under two weeks. Another point regarding time is that while the research is going on, researcher may work on other tasks concurrently.

Another advantage of online surveys is the "cost". Ilieva et al. (2002) report that "Online surveys have minimal financial resource implications and the scale of the survey is not associated with finances, i.e. large-scale surveys do not require greater financial resources than small surveys" (p. 366). Online surveys also export data into various file types required for statistical analysis software, hence, reducing costs and time consumption for data input. There also exist free software alternatives to paid

online surveys. Free software alternatives are free of charge for personal usage. In this research a free software distribution -Limesurvey- is used.

Limesurvey (http://www.limesurvey.org) is "an open source online survey application written in PHP based on a MySQL, PostgreSQL or MSSQL database, distributed under the GNU General Public License" (LimeSurvey, 2011). It is a web application that is installed on servers and used by multiple users who has administrator accounts. It is distributed in 50 languages including Turkish and 45 educational institutions worldwide are currently using Limesurvey (Schmitz, 2010). METU started the service in 2011.

Limesurvey application allows its users to send tokenized e-mails to call individuals participate in the study. It also allows users to send reminders. When the participation method is set to "tokenized e-mail" option; only those individuals who received an e-mail are allowed to participate in the study. After the survey is created, the list of the students of the Faculty of Education of METU will be imported into the survey application. Therefore, sending individual e-mails will be operable. Limesurvey is selected because it is "free software".

The list of the students of the Faculty of Education of METU associated with their names, last names, e-mail addresses, departments and grades was collected from the deanery. After the creation of the online survey and importing the list, the survey was be run by the author. When the survey started, every student received an invitation e-mail including information about the nature of the research, and a tokenized hyperlink to the survey. When the student clicked on the link, the web browser software took her to the survey page and she was prompted with the option of leaving the survey or consenting to participate in. The survey began after the consent button is clicked. After a week a reminder was sent to those individuals who had not participated yet. After another one week from the first reminder, a second reminder was sent. This procedure was conducted in the same fashion for the pilot study, the actual Turkish study and for the American study. On the 15th of April, 2011 the author received its administrative account from the Informatics Institute of METU (Appendix AH).

3.11.2. Collection of qualitative data

After the Turkish lap of the quantitative phase, based on the results of the statistical/correlational analysis of quantitative data, together with his advisor, the researcher has developed the questions of the interview for the qualitative phase and arranged the interviewees. He interviewed the students one-on-one and face to face in one of the meeting rooms of the building of the CEIT department of Faculty of Education of METU. The researcher recorded all of the interviews by a handycam. During the interviews, he asked the open ended questions and listened the answers. When he needed, the researcher asked additional questions to get deeper in the subject

in order to get to the patterns in the constant comparative analysis. Every interview was recorded as a separate video file in the handycam. The files, then, was exported to the computer of the researcher for the analysis in order to "ground the theory".

3.12. Data Analysis

In this study, as part of the mixed-methods research, quantitative and qualitative data was collected through sequential procedures. The quantitative data was collected both from Turkey and USA. In the quantitative phase, correlational analysis was utilized. In the qualitative phase, constant comparative analysis was utilized.

3.12.1. Analysis of quantitative data

The responses of the participants were stored electronically in the survey servers (survey.metu.edu.tr). After three weeks, the survey was be stopped by the author who is the administrator user of the Limesurvey web application for his own account. The data set, which is the whole matrix of the responses, was exported from Limesurvey web application for data analysis purposes.

The data was analyzed by means of statistical techniques to investigate the relationships among the constructs. For conducting statistical analysis a specific computer software -IBM SPSS v19.0.0 (www.spss.com)- was used. SPSS is "a computer program used for survey authoring and deployment (IBM SPSS Data Collection), data mining (IBM SPSS Modeler), text analytics, statistical analysis, and collaboration & deployment (batch & automated scoring services)" (SPSS, 2011). SPSS was selected because METU has licenses allowing METU personnel to use it.

Since the computer software for statistical analysis is SPSS, data set was exported into an SPSS file. So that it will be opened by SPSS and the author was able to conduct statistical analysis methods considered necessary according to the research design and questions. Initially a data screening was conducted to be able to test the assumptions of statistical methods. After data screening, explanatory factor analysis was conducted for each factor to extract factors representing the psychological constructs. Factor scores was produced in latent variables and these latent variables, conclusively, was used for regression analyses.

To investigate the relationships, 4 regression procedures for each country were conducted by using SPSS. Each regression received 1 dependent variable and 10 independent variables. For ordinal dependents variables, Ordinal Logistic Regression was used whereas a Multinomial Logistic Regression was used for the categorical dependent variable. The only continuous dependent variable was assessed in the Multiple Linear Regression.

3.12.2. Analysis of qualitative data

Analysis of qualitative data is a way of generating meaning from qualitative data. In constant comparative analysis, this data may be interviews, field notes, books, news articles, etc. In this research study, interview transcriptions are used as the raw data. Qualitative analysis method is outlined by Johnson and Christensen (2004) as follows (p. 501):

1. Data entry and storage
2. Segmenting coding and developing category systems
3. Identifying relationships
4. Constructing diagrams, tables, matrices and graphs
5. Corroborating and validating results

They argue that, all these processes are accomplished through "interpretation" and therefore are subjective in nature. On the other hand, for each qualitative method, there is a different analysis method even though some are different only slightly. In this study, analysis techniques described by Creswell (2012) and Corbin and Strauss (2008) are utilized. These techniques gives way to start with collecting the data and end with a "grounded theory." Creswell (2012) suggests a data analysis spiral for qualitative analyses (p. 183). Creswell's spiral is depicted in Figure 3.11.
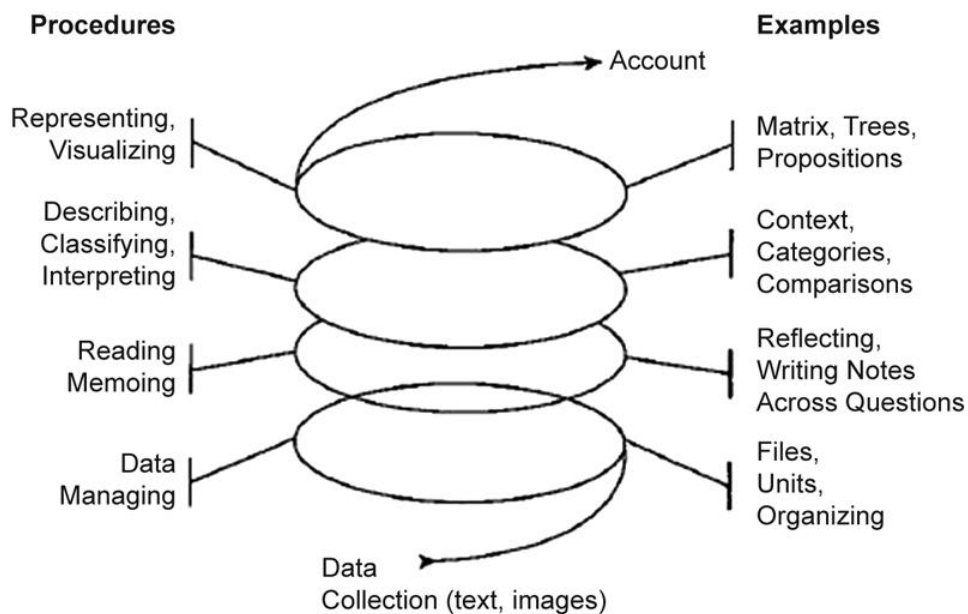
Figure 3.11. The data analysis spiral of Creswell (2012, p. 183).

3.12.2.1. Data managing

The analysis starts with organization of the data through data management. In this phase, transcript of interview videos are arranged as proper text files (MS Word files in this research). Questions, answers and other text in the files are arranged for the successive analysis steps. The text unit in this research study is "interviewee." Every interviewee had one text file and all his or her session was transcribed into that one single file.

3.12.2.2. Reading

In this phase, the researcher reads the entire text of transcripts. This phase is for getting a sense of and exploring the interview. All transcripts are read and major ideas in the transcript are identified.

3.12.2.3. Describing, classifying and interpreting

In this phase, the transcript is "coded" to form "concepts" and concepts are formed into "categories." Finally, categories are interpreted into the grounded theory. Creswell (2012) describes coding as "aggregating the text or visual data into small categories of information, seeking evidence for the code from different databases being used in a study, and then assigning a label to the code" (p. 184). In the coding phase, open, axial and selective coding is used. According to Creswell (2012, p. 195) open coding is the activity of "developing categories of information" and axial coding is "interconnecting the categories" and finally, selective coding is "building a 'story' that connects the categories."

3.12.2.4. Representing and visualizing

At the end of previous phases, the analysis results are represented in the form of tables, matrices, diagrams and graphs. In this study, computer software is used for creating visual representations of concepts, categories, and super-categories; and the relationships among them.

3.12.2.5. Computer tools for analysis

In the qualitative analysis, Creswell and Plano Clark (2011) suggest that qualitative computer software programs are practical in almost all phases of the analysis. In this research study, Atlas.ti 6.2 (http://www.atlasti.com) software was used. Atlas.ti is computer software developed for various purposes including but not limited to qualitative data analysis (Atlas.ti, 2013). It was developed by Thomas Muhr at Technical University in Berlin.

3.13. Validity and Reliability

Validity and reliability are criteria that are used to judge a research for its quality and soundness. Fraenkel and Wallen (2010) define validity as "appropriateness, meaningfulness, and usefulness of the inferences a researcher makes" (p. 169). They define reliability as "consistency of scores or answers from one administration of an instrument to another, and from one set of items to another" (p. 169). Validity is necessary for being able to draw correct conclusions and to make correct inferences. Reliability is checked to be sure of the consistency of scores that will be obtained in a research.

3.13.1. Validity and reliability in the quantitative phase of the study

To be able to reach validity in the quantitative phase, external and internal validity threats are taken into account. External validity is defined as "the extent to which the results of a study can be generalized" (Fraenkel & Wallen, 2010, p.119).

To secure a sound level of external validity, first, a more than satisfactory sample size was ensured in the research (in Turkey, more than half of the accessible population). Then, all the demographics of the samples are provided to the audiences in order to let them make correct generalizations based on this research.

To secure a prodigious level of internal validity, threats to the internal validity of a correlational research are taken into account. Fraenkel and Wallen (2010) define internal validity as (p.190):

> When a study has [sic] **internal validity,** *it means that any*
> *relationship observed between two or more variables should*
> *be unambiguous as to what it means rather than being due*
> *to "something else".*

Thus, internal validity is about controlling extraneous variables such as subject characteristics, mortality, location, instrumentation, testing, history, maturation, subject attitude, regression, and implementation. In a correlational research, some of the threats (extraneous variables) to internal validity such as implementation, history, maturation, and attitude of subjects do not apply (Fraenkel & Wallen, 2010, p.371). However, Fraenkel and Wallen (2010) argue that subject characteristics, location, instrumentation, testing, and mortality apply (pp. 371-375).

To deal with those threats, initially, quality scales are used and modified through measures suggested in the scientific literature. Then, only one instrument (online survey) was used to administer the questionnaires.

Moreover, pilot study ensured the soundness of the procedures at the very beginning. Another advantage of the study was that, the survey was a one-shot instrument and took less than 20 minutes to complete and submit. Finally, correlations are calculated separately for each location to deal with the location threat.

On the other hand, reliability of the research was reached through internal consistency of the questionnaires used in the survey. At the very beginning, the questionnaires were selected by keeping in mind the need for reliable scales. Internal consistencies of the questionnaires are calculated by Cronbach's α. The scales used in this study had already high Cronbach's α values and selected partly because of that. Moreover, in the pilot study reliability analyses were conducted to reach even more reliable scales. Finally, in both actual studies, the researcher conducted factor analyses and reliability analyses for addressing reliability.

3.13.2. Quality of the qualitative phase of the study

Fraenkel and Wallen argue that (2010) "honesty, believability, expertise, and integrity of the researcher" is more important than quantitative understanding of reliability and validity (p.183). On the other hand, instead of validity and reliability, in qualitative studies, "quality of research" or "credibility of research" is sought for. Corbin and Strauss (2008) define "quality qualitative research" as follows (p. 302):

> *In other words, quality qualitative research resonates with readers' and participants' life experiences. It is research that is interesting, clear, logical, and makes the reader think and want to read more. It is research that has substance, gives insight, shows sensitivity, and is not just a repeat of the "same old stuff" or something that might be read in a newspaper. It is research that blends conceptualization with sufficient descriptive detail to allow the reader to reach his or her own conclusions about the data and to judge the credibility of the researcher's data and analysis. It is research that is creative in its conceptualizations but grounded in data.*

They argue that credibility indicates "that findings are trustworthy and believable in that they reflect participants', researchers', and readers' experiences with a phenomenon but at the same time the explanation is only one of many possible "plausible" interpretations possible from data" (p. 302). Moreover, it should be kept in mind that, especially regarding grounded theory, there is no one single set of criteria to judge a research and every research will need its own evaluation criteria.

In order to reach credibility, a trust needs to be founded between the researcher and the participant. In this research study, the researcher attends the classes of the students and interview participants already know him. Moreover, a certain amount of time is spent together with the interviewees to settle things before going on. Interviewees are informed and they were ensured that nothing would be carried out without their consent. They were welcomed in a warm environment in the security of their school building. They were informed about their rights before the interview.

Purposive sampling was another measure to reach to a quality qualitative research. Undergraduate students who are in their at least 3rd year of study and who have satisfactory GPAs were selected. Another criterion was to reach to knowledgeable and insightful students. They were carefully selected by the help of the advisor of the researcher.

Finally, all the interviews, managed transcripts, coding processes, coding tables, concepts, categories, super-categories, themes, "the story", and all the techniques and process involved during the course of the study was peer reviewed by the colleague of the researcher.

3.14. Summary

In order to investigate the implementability of the SNSs for educational purposes a cross-cultural mixed-method research was designed as part of the PhD study of the researcher. The mixed-method utilized was an explanatory sequential one.

The research consisted of quantitative and qualitative phases of which the former was carried out in Turkey and USA. The qualitative phase was a correlational study and carried out by utilizing an online survey in both Turkey and USA. The results of the quantitative phase were analyzed by statistical measures.

The qualitative phase followed the Turkish lap of the quantitative phase and carried out only in Turkey with Turkish interviewees. It was analyzed by constant comparative method to create a "grounded theory."

In the quantitative phase convenience sampling was used to get to maximum number of available individuals. The sample consisted of pre-service teachers enrolled in the teacher training programs of METU and UH. In Turkey an initial pilot study was utilized with 136 participants and after the conclusion of the pilot study, actual Turkish study begun with 641 participants. In the USA, 121 pre-service teachers participated in the study.

After the pilot study, EFA and CFA techniques were used to generate the latent variables and test the already generated variables. Results of the factor analyses conducted after the actual Turkish study and actual American study are presented. In

both analyses, highly reliable 10 factors were extracted. Attitude (towards using FB) and Motivation (to use FB) were extracted from FB Attitude Scale and FB Motivation scale respectively. Out of FB Motives Scale, three factors were extracted: Passing Time, Relationship, and Friendship. Out of NEO-FFI, five factors were extracted: Neuroticism, Extraversion, Conscientiousness, Agreeableness, and Openness to Experience. CFA analyses also reported good fit for all factors.

The qualitative phase was utilized after sampling Turkish undergraduate pre-service teachers who are in their at least 3rd year of study purposively to reach to an informative and representative sample. 16 students participated in the study. The interviews were recorded by a handycam as video files.

All the research was subjected to the ethical examination committees of METU and UH and received approval at the outset of the study. Finally, various measures were utilized to address reliability and validity issues in the quantitative phase and credibility and quality issues in the qualitative phase.

CHAPTER IV

FINDINGS

This chapter of the dissertation is for providing the audiences with the results of the research. The chapter is organized into quantitative and qualitative part. Both quantitative and qualitative parts are organized into successive sections of research questions. In the quantitative part, demographics and preliminary analyses are provided before research questions. In the qualitative part, demographics precede the results of the constant comparative analyses of the interviews.

4.1. Preliminary Findings of the Quantitative Phase of the Study

Quantitative data were collected from both Turkish and American undergraduate pre-service teachers. After data collection, various statistical measures were used as part of the correlational research. Initially, demographics and factor and reliability analyses of the scales are provided. Then, findings of the statistical analyses in relation to research questions are provided in each section.

4.1.1. Demographics

In the quantitative phase of the study, 762 undergraduate pre-service teachers participated in the study. Of these 762 participants, 121 (15.87%) were American and 641 (84.12%) were Turkish. Distribution of the countries of the participants is depicted in Table 4.1.

Table 4.1. Distribution of the countries of the participants.

Group	Frequency	Percentage
USA (N_{US})	121	15.88
Turkey (N_{TR})	641	84.12
Total (N)	762	100

Most of the participants were female. In Turkey, participants included 518 females (80.81%) and 123 males (19.19%).In the USA, 111 females (91.74%) and 10 males (8.26%) participated in the study. In total, participants included 629 females (82.55%) and 133 males (17.45). Table 4.2 depicts the distribution of the gender of participants.

Table 4.2. Gender of the participants.

Country	Gender	Frequency	Country Percentage	Total Percentage
Turkey				
	Female	518	80.81	67.98
	Male	123	19.19	16.14
USA				
	Female	111	91.74	14.57
	Male	10	8.26	1.31
Total				
	Female	629	-	82.55
	Male	133	-	17.45

Participants formed a relatively young population by nature. Descriptive results pertaining to the ages of participants are depicted in Table 4.3. Remarkably, even 56 years old individuals were in the sample as well as 17 years old ones.

Table 4.3. Age of Participants.

Country	Minimum	Maximum	Mean	Median
Turkey	17	32	21.29	21.00
USA	18	56	23.83	22.00
Total	17	56	21.69	21.00

Participants were undergraduate pre-service teachers enrolled in the teacher training programs of METU and UH. Departments of Turkish and American participants are depicted in Table 4.4. Remarkably, Turkish FLE students constituted most of the sample (292 participants, 38.32% of total sample).

Table 4.4. Department of participants.

Country	Department	Frequency	% in Country	% in Total
Turkey				
	FLE	292	45.55	38.32
	SUNY	21	3.28	2.76
	SPE	45	7.02	5.91
	SCE	40	6.24	5.25
	EME	98	15.29	12.86
	ESE	78	12.17	10.24
	ECE	67	10.45	8.79
USA				
	EC6G	60	49.59	7.87
	EC6BG	27	22.31	3.54
	EC6GSE	8	6.61	1.05
	Math48	4	3.31	0.52
	Spe48	3	2.48	0.39
	Soc48	2	1.65	0.26
	Lang48	1	0.83	0.13
	CHES	6	4.96	0.79
	HDFS	10	8.26	1.31

The participants were undergraduate students but had varying years of study. Participants' years of study are depicted in Table 4.5.

Table 4.5. Participants' years of study.

Country	Minimum	Maximum	Mean	Median
Turkey	1	7	2.62	3
USA	1	8	2.33	2
Total	1	8	2.59	3

4.1.2. Descriptive results

In the FB use scale, four questions collected information regarding participants' use of FB. Information collected by these four questions was treated as dependent variables in the correlational analyses. Table 4.6 depicts those questions, variable names associated with them and their level of measurement (type).

Table 4.6. Variables measuring FB use.

Question	Variable	Type
Approximately how many friends are on your Facebook Friends List?	FriendCount	Continuous
Approximately how long have you had your Facebook account? (6 months of interval)	Duration	Ordinal
On average, approximately how many minutes per day do you spend on Facebook?	Intensity	Ordinal
Who can see your Facebook profile?	ProfileSee	Categorical

Descriptive statistics are depicted in Table 4.7, Table 4.8, Table 4.9, and Table 4.10.

Table 4.7. Descriptive statistics of FriendCount.

Country	Mean	Median	SD
Turkey	280.01	250	156.472
USA	320.48	246	273.64

Table 4.8. Descriptive statistics of ProfileSee.

Categories	Turkey		USA	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Only my friends	548	85.5	110	90.9
All Networks and Friends	35	5.5	3	2.5
Some networks/all friends	41	6.4	3	2.5
Don't know	17	2.7	5	4.1

Table 4.9. Descriptive statistics of Duration.

Categories	Turkey		USA	
	Frequency	**Percentage**	**Frequency**	**Percentage**
6 months	25	3.9	6	5
1 year	30	4.7	4	3.3
1.5 years	50	7.8	6	5
2 years	99	15.4	9	7.4
2.5 years	171	26.7	12	9.9
More than 3 years	266	41.5	84	69.4

Table 4.10. Descriptive statistics of Intensity.

Categories	Turkey		USA	
	Frequency	**Percentage**	**Frequency**	**Percentage**
10 or less	48	7.5	28	23.1
10-30	131	20.4	25	20.7
31-60	116	18.1	29	24
1 – 2 hours	167	26.1	21	17.4
2 – 3 hours	106	16.5	9	7.4
More than 3 hours	73	11.4	9	7.4

4.2. Findings of the Quantitative Phase of the Study

In order to investigate quantitative research questions four regression analyses were conducted on 14 variables. 10 of these variables were latent variables constructed by factor analyses and these latent variables entered into regression as Independent Variables (IV). Following is a list of the 10 latent variables (extracted as factors from scales) that were used in the regression analyses as IVs:

1. Attitude
2. Motivation
3. Passing Time
4. Relationship
5. Friendship
6. Conscientiousness
7. Extraversion
8. Neuroticism
9. Agreeableness
10. Openness to Experience

Remaining 4 variables were the ones scaling the use of FB by pre-service teachers. These variables were put into regression analyses as Dependent Variables (DV).

Regression analyses were different in type because of the level of measurement (type) of dependent variables. Decision was made according to the decision tree that

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Tabachnick and Fidell (2007) delineated (pp. 28-31). Table 4.11 depicts the regression methods conducted according to the level of measurement of the DV.

Table 4.11. Regression method according to the type of dependent variable.

DV	Level of Measurement	Regression Type
FriendCount	Continuous	Multiple Linear Regression
Duration	Ordinal	Ordinal Logistic Regression
Intensity	Ordinal	Ordinal Logistic Regression
ProfileSee	Categorical	Binomial Logistic Regression

4.2.1. RQ1 Number of friends on FB

For Turkish and US data, two multiple linear regression analyses were conducted between FriendCount and the IVs. FriendCount means "number of friends on FB." Respondents gave numerical answers to the question. Before conducting the regression analyses, assumptions were tested by various measures.

In the English data set there were no missing values. But DV had high Kurtosis and Skewness values so FriendCount was transformed by SQRT function of SPSS (square root transformation). It was named SQRT_FriendCount. SQRT_FriendCount became the new DV of the regression model. After doing square root transformation, skewness and kurtosis values fell between the normal ranges.

Since Cook's Distance value was between -1 and +1 there were no outliers in the IVs. But one outlier in DV was listed by casewise diagnostics: case number 32. Case 32 was deleted and the regression was iterated. After deletion, Cook's distance stabilized. Standard residual was between -3 and +3, as well. Thus, outlier assumption was satisfied.

There were no correlations (greater than 0.80) between IVs so that there is no multicollinearity. Durbin-Watson value of the model was 2.077, hence, below 5, thus, errors were not correlated. All condition index values were below 30, thus there was no collinearity problem. All Tolerance values were close to 1. Additionally the VIF values were so very below 10.

In the English data set, all IVs entered in the regression. Two of the IVs were significant for the regression equation. In summary, results indicated that the model was statistically significant at the "0.001" significance level, $R^2 = 0.284$, $F(10, 109) = 4.333$, $p \leq 0.001$. Level of strength of the correlation between IVs and DV is quite high. The strength of the association is 0.284. Therefore, 28.4% of variance on DV is accounted for IVs. The results of the regression analysis are depicted in Table 4.12

Table 4.12. Results of the regression on FriendCount in the American data.

	B	SE	Beta	t
(Constant)	16,249	,551		29,497
US Attitude towards using FB	,673	,901	,099	,747
US Motivation to use FB	-,571	,750	-,084	-,761
US Passing Time	2,783	,872	,408	3,191*
US Friendship	,228	,634	,034	,360
US Relationship	,646	,672	,095	,960
US Conscientiousness	-,216	,594	-,032	-,364
US Extraversion	1,351	,600	,199	2,254**
US Neuroticism	-,889	,617	-,131	-1,440
US Agreeableness	-,652	,577	-,096	-1,131
US Openness to Experience	-,328	,630	-,048	-,522

Note: $R^2 = 0.284$, * $p < 0.01$, ** $p < 0.05$.

Consequently, a multiple linear regression analysis was conducted to evaluate how well Attitude, Motivation, Passing Time, Relationship, Friendship, Conscientiousness, Extraversion, Neuroticism, Agreeableness, and Openness to Experience predicted FriendCount (number of friends on FB). The IVs were significantly related to the DV, $F(10, 109) = 4.333$, $p \leq 0.001$. Since the t value is significant, we can reject the null

hypothesis of the regression model and say that the IVs significant for the regression model are accounted for the variations in the DV.

According to the results of this regression analysis, motive of Passing Time and Extraversion trait of personality are correlated with number of friends on FB. Thus, extravert American pre-service teachers have significantly more friends on FB. In parallel with Amichai-Hamburger and Vinitzky's (2010, pp. 1291-1294) study, extraverts have more friends and Agreeableness is not correlated with number of FB friends.

On the other hand, in contrast with Amichai-Hamburger and Vinitzky's study, Conscientiousness does not correlate with the number of FB friends. Another point is that those individuals who use FB for friendship doesn't have significantly more friends compared to the ones who do not. Those individuals who use FB for passing time have more FB friends.

The second multiple linear regression analysis was to be conducted on the data collected from Turkey. In the Turkish data set, there were no missing values. But DV had a high Kurtosis value, thus, FriendCount was transformed by SQRT function of SPSS. It was named SQRT_FriendCount. From that point on, SQRT_FriendCount became the new DV of the regression. After doing square root transformation, kurtosis values fell between the normal ranges.

Since Cook's Distance value was between -1 and +1 there were no outliers in the IVs. But 8 outliers in DV were listed by casewise diagnostics: 30, 264, 449, 610, 619; 532, 191, and 299. Outlying cases were deleted according to the standard residual value and the regression was iterated. After deletion, Cook's distance stabilized. Standard residual was between -3 and +3, as well. Thus, outlier assumption was satisfied.

There were no correlations (greater than 0.80) between IVs so that there is no multicollinearity. Durbin-Watson value of the model was 2.0001, hence, well below 5, thus, errors were not correlated. All condition index values were below 30, thus there was no collinearity problem. All Tolerance values were close to 1. Additionally the VIF values were so very below 10.

In the Turkish data set, all IVs entered in the regression. Two of the IVs were significant for the regression equation. In summary, the model was statistically significant at the "0.001" significance level: $R^2 = 0.183$, $F(10, 622) = 13.910$, $p \leq 0.001$. Level of strength of the correlation between IVs and DV was quite high. The strength of the association was 0.183. Therefore, 18.3% of variance on DV was accounted for IVs. The results of the regression analysis are depicted in Table 4.13.

Table 4.13. Results of the regression on FriendCount in the Turkish data.

	B	SE	Beta	t
(Constant)	16,014	,150		106,870
TR Extraversion	,927	,157	,223	5,918*
TR Neuroticism	-,406	,153	-,098	-2,643**
TR Conscientiousness	-,137	,152	-,033	-,898
TR Agreeableness	-,185	,154	-,045	-1,207
TR Openness to Experience	,444	,151	,107	2,948**
TR Attitude	,819	,199	,197	4,126*
TR Motivation	-,112	,180	-,027	-,623
TR Passing Time	,411	,186	,099	2,211***
TR Relationship	,426	,168	,102	2,534***
TR Friendship	-,018	,161	-,004	-,114

Note: R^2= 0.183, * p < 0.001, ** p < 0.01, *** p < 0.05

Consequently, a multiple linear regression analysis was conducted to evaluate how well Attitude, Motivation, Passing Time, Relationship, Friendship, Conscientiousness, Extraversion, Neuroticism, Agreeableness, and Openness to Experience predicted FriendCount (number of friends on FB). The IVs were significantly related to the DV, $F(10, 622) = 13.910$, $p \leq 0.001$. Since the t value was significant, we can reject the null hypothesis of the regression model and say that the IVs significant for the regression model are accounted for the variations in the DV.

According to the results of this regression analysis, Extraversion, Neuroticism, Agreeableness, Openness to Experience, Passing Time, and Relationship were correlated with the number of friends on FB. Thus, Neurotic Turkish pre-service teachers have significantly more friends on FB compared to all others.

Agreeable ones, the ones open to experience, and the ones who have the motive of passing time and maintaining/founding relationship are also having more friends behind Neurotics.

In parallel with Amichai-Hamburger and Vinitzky's (2010, pp. 1291-1294) study, extraverts have more friends. On the other hand, in contrast with Amichai-Hamburger and Vinitzky's study, Conscientiousness and Agreeableness did not correlate with the number of FB friends. Another point is that those individuals who use FB for friendship doesn't have significantly more friends compared to the ones who do not. Those individuals who use FB for passing time have more FB friends.

4.2.1.1. RQ1.1 Comparison of Turkish and American results

While Turkish pre-service teachers' numbers of friends on FB were predicted by Extraversion, Neuroticism, Agreeableness, Openness to Experience, Passing Time, and Relationship, American pre-service teachers' numbers of friends on FB were predicted only by Passing Time and Extraversion.

According to these results, American and Turkish individuals were on the same page regarding Passing Time and Extraversion but Turkish ones differentiated with Neuroticism, Agreeableness, Openness to Experience, and Relationship. These results indicate that among Americans, only extraverts or the ones who are using FB to pass time have significantly more friends compared to the others.

In Turkey, More characteristics contribute to the number of friends. One remarkable predictor is Neuroticism. Also considering the Turkish ones who are open to experience and who are using FB for maintaining/founding relationship it might be said that, Turkish individuals are using FB to make friends significantly more, compared to Americans.

Thus, Americans are more likely to carry the traditional offline to online direction while Turkish people are more ready to make friends on FB. This difference may be a result of the individualistic / collectivistic nature of the dichotomy between Turkish and American culture.

4.2.2. RQ2 Duration of FB membership

"Duration" refers to the age of individual's membership to FB. More "Duration" means that the individual has a longer history on FB. Since Duration is an ordinal variable, two ordinal logistic regressions were conducted. The question and choices (ordinal categories) of Duration were as follows:

- Approximately how long have you had your Facebook account?

    a. 6 months
    b. 1 year
    c. 1.5 years
    d. 2 years
    e. 2.5 years
    f. More than 3 years

Before conducting the regression analyses, assumptions were tested by various measures. In the American data, initially, all variables were screened by descriptive statistics. There was no missing data in IVs and Duration. All IVs distribute normally. Duration was not distributed normally but normality in DV is not assumed for ordinal logistic regression. The DV of this ordinal logistic regression –Duration- is not continuous but ordinal hence categorical variable, anyway.

Second, a multiple linear regression was conducted before ordinal logistic regression to check for assumptions related to multicollinearity, collinearity, and outliers. IVs and DVs meant for ordinal logistic regression all entered in the multiple linear regression analysis. There were no Pearson correlations with values greater than 0.80. Thus, there is no multicollinearity among variables.

All Condition Index values were below 30. Thus, collinearity assumption was successfully tested. Cook's Distance values in the Residual table were between -1 and +1. Therefore, there were no outliers in the IVs. But standard residual was below -3 in minimum. Thus, there were outliers in DV as listed in casewise diagnostics: case 120, 14, and 67. After deletion of those three outlying cases, Cook's Distance stabilized. Standard residual values were between -3 and +3 as well. Thus, outlier assumption was finally satisfied. Chi-square tells you that the model gives better predictions than if you just guessed based on the marginal probabilities for the outcome categories. The model was fit. Moreover, goodness-of-fit statistics were not significant, χ^2 (575) =514.254, p=0.967. Since p>0.05 null hypothesis that the "fit is good" was not rejected. The observed data were consistent with the fitted model. Data and the model predictions were similar. A final test was calculated for the assumption of "Proportional Odds", χ^2 (40) =78.504, p≤0.00. Since chi-square was significant (p≤0.001), proportional odds assumption was not satisfied, thus, validity of this regression model is uncertain.

In the US data set, all IVs entered in the regression. One of the IVs was significant for the regression equation. Ordinal logistic regression was conducted after assumption testing. All pseudo R^2 values were calculated. In summary, the model was statistically significant at the "0.001" significance level, $R^2 = 0.263$ (Nagelkerke), 0.229 (Cox and

Snell), 0.176 (Hosmer and Lameshow), χ2 (10) =30.731, p<0,001. The results of the regression analysis are depicted in Table 4.14.

Table 4.14. Results of the regression on Duration in the American data.

	Estimate	SE	95% CI for Odds Ratio		
			Lower	Odds Ratio	Upper
Attitude	-,661	,387	-1,419		,097
Motivation	,196	,300	-,392		,784
Passing Time	1,180*	,365	,465	3.254	1,895
Friendship	-,398	,248	-,883		,087
Relationship	,407	,259	-,100		,914
Conscientiousness	-,336	,251	-,828		,155
Extraversion	,376	,235	-,085		,838
Neuroticism	,183	,255	-,316		,682
Agreeableness	-,304	,229	-,752		,144
Openness to Experience	,364	,281	-,186		,914

Note: R^2 = 0.263 (Nagelkerke), 0.229 (Cox and Snell), 0.176(Hosmer and Lameshow), Model χ^2 (10) =30.731, p<0,001, * p < 0.001.

Consequently, an ordinal logistic regression analysis was conducted to predict Duration (age of FB membership) using IVs as predictors. A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between membership times (χ^2(10)=30.731, p<0,001). Nagelkerke's R^2 of 0.263 indicated a moderately relationship between prediction and grouping. The Wald criterion demonstrated that only Passing Time made a significant contribution to prediction. The other IVs were not significant predictors.

As the effect size of the analysis, exp(1.18) value (3.254) indicated that when IV is raised by one unit (one person) the odds ratio is 3.254 times larger. But the validity of this this explanation is uncertain. This successful threat to validity may be due to the fact that 71.2% of participants have FB account more than 3 years and an additional 10.2% of participants have it for 2.5 years. Thus, most of the participants fell into "more than 2.5 years" category and this is due to subject characteristics (early adoption) rather than psychological constructs.

The second ordinal logistic regression was conducted on the data collected from Turkey. In Turkish data, initially, all variables were screened by descriptive statistics as was done in the American data. There was no missing data in IVs and Duration. All IVs distribute normally. Duration was not distributed normally but normality in DV is not assumed for ordinal logistic regression. The DV of this ordinal logistic regression –Duration- is not continuous but ordinal hence categorical variable, anyway.

Second, a multiple linear regression was conducted before ordinal logistic regression to check for assumptions related to multicollinearity, collinearity, and outliers. IVs and DVs meant for ordinal logistic regression all entered in the multiple linear regression analysis. There were no Pearson correlations with values greater than 0.80. Thus, there is no multicollinearity among variables. All Condition Index values were below 30. Thus, collinearity assumption was successfully tested. Cook's Distance values in the Residual table were between -1 and +1. Therefore, there were no outliers in the IVs. Thus, outlier assumption was finally satisfied.

Chi-square tells you that the model gives better predictions than if you just guessed based on the marginal probabilities for the outcome categories. The model was fit. Moreover, goodness-of-fit statistics were not significant, $\chi^2(3190) =313.997$, p=0.737. Since p>0.05 null hypothesis that the "fit is good" was not rejected. The observed data were consistent with the fitted model. Data and the model predictions were similar. A final test was calculated for the assumption of "Proportional Odds", $\chi^2 (40) =52.831$, p=0.084. Since chi-square was not significant (p≤0.01), proportional odds assumption was satisfied, as well.

In the US data set, all IVs entered in the regression Passing Time, Openness to Experience, Attitude, Motivation, and Neuroticism were significant for the regression equation. Ordinal logistic regression was conducted after assumption testing. All pseudo R^2 values were calculated. In summary, the model was statistically significant at the "0.001" significance level $R^2 = 0.122$ (Nagelkerke), 0.116 (Cox and Snell), 0.042 (Hosmer and Lameshow), $\chi^2 (10) =78.680$, p<0,001. The results of the regression analysis are depicted in Table 4.15.

Table 4.15. Results of the regression on Duration in the Turkish data.

	Estimate	SE	95% CI for Odds Ratio		
			Lower	Odds Ratio	Upper
Extraversion	-.026	.077	-.176		.124
Neuroticism	-.150**	.075	-.297	1.16	-.002
Conscientiousness	-.121	.075	-.267		.026
Agreeableness	.078	.075	-.070		.226
Openness to Experience	.214*	.074	.070	0.214	.359
Attitude	.275*	.097	.085	1.32	.464
Motivation	.213**	.088	.039	1.24	.386
Passing Time	.280*	.090	.104	1.32	.456
Relationship	.102	.081	-.057		.261
Friendship	-.050	.080	-.206		.107

Note: R^2 = 0.122 (Nagelkerke), 0.116 (Cox and Snell), 0.042 (Hosmer and Lameshow), χ^2 (10) =78.680, p<0,001, * p < 0.01, ** p < 0.05.

Consequently, an ordinal logistic regression analysis was conducted on Turkish data to predict Duration (age of FB membership) using IVs as predictors. A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between membership times (χ^2 (10) =78.680, p<0,001). Nagelkerke's R^2 of 0.122 indicated a moderately relationship between prediction and grouping. The Wald criterion demonstrated that Passing Time, Openness, Attitude, Motivation, and Neuroticism made significant contributions to prediction. The other IVs were not significant predictors. As the effect size of the analysis, "exp (estimate)" values indicated that when Passing Time is raised by one unit (one person) the odds ratio is 1.32 times larger. When Openness to Experience is raised by one unit (one person) the odds ratio is 1.24 times larger. When Attitude is raised by one unit (one person) the odds ratio is 1.32 times larger. When Motivation is raised by one unit (one person) the odds ratio is 1.24 times larger. When Neuroticism is raised by one unit (one person) the odds ratio is 1.16 times larger.

These results indicate that first subscribers of FB were those individuals who wanted to pass time online. The ones who are open to experience were fast in getting on the train as early adopters of "diffusion of innovation". The ones who already have a positive attitude towards CMC media were the third to subscribe early. The highly motivated one followed the suit. Who or what motivated them? Most probably other variables with significant predictions were the source of the motivation such as a motive to pass time online, being open to experience, having a positive attitude towards CMC and SNSs (online social interaction software). Neurotics were among early adopters as well.

4.2.2.1. RQ2.1 Comparison of Turkish and American results

Results indicate that, first; Americans were early adopters of FB. This may be due to the fact that FB is an American "invention" and maybe because Americans started to experience "online" culture earlier again due to the fact that Internet is mostly an American "invention." Thus, personality traits failed since most of the people adopted FB early in similar times. As a cultural difference compared to Americans, Turkish individuals didn't adopt FB as fast as Americans and it wasn't a "phenomenal" event as it was in the USA. Thus, a meaningful distribution of subscription times is evident. This may reflect that, Turkish individuals are not so "ready" and "enthusiastic" about adopting online technologies or inventions.

4.2.3. RQ3 Time spent on FB during a day

"Intensity" refers to the amount of time an individual spent on FB during a day. More "Intensity" means that the individual spends more time on FB. Since Intensity is an ordinal variable, two ordinal logistic regressions were conducted. The question and choices (ordinal categories) of Intensity were as follows:

- On average, approximately how many minutes per day do you spend on Facebook?
    a. 10 or less
    b. 10-30
    c. 31-60
    d. 1 – 2 hours
    e. 2 – 3 hours
    f. More than 3 hours

Before conducting an ordinal logistic regression, descriptive analyses and multiple linear regression analysis were carried out. The results revealed that both in Turkish and American data, individuals who responded to the question with "2 – 3 hours" and "More than 3 hours" were very few. Therefore, they were merged into "More than 2 hours answer. Thus, new version of the (question and) answers are as follows:

- On average, approximately how many minutes per day do you spend on Facebook?
  a. 10 or less
  b. 10-30
  c. 31-60
  d. 1 – 2 hours
  e. More than 2 hours

In the US data, initially, all variables were screened by descriptive statistics. There was no missing data in IVs and Intensity. All IVs distributed normally. Intensity was distributed normally, as well.

Second, a multiple linear regression was conducted before ordinal logistic regression to check for assumptions related to multicollinearity, collinearity, and outliers. IVs and DVs meant for ordinal logistic regression all entered in the multiple linear regression analysis. There were no Pearson correlations with values greater than 0.80. Thus, there is no multicollinearity among variables. All Condition Index values were well below 30. Thus, collinearity assumption was successfully tested.

Cook's Distance values in the Residual table were between -1 and +1. Therefore, there were no outliers in the IVs. Standard residual values were between -3 and +3 as well. Thus, there were no outliers in DV, as well. Hence, outlier assumption was finally satisfied. Chi-square tells you that the model gives better predictions than if you just guessed based on the marginal probabilities for the outcome categories. The model was fit. Moreover, goodness-of-fit statistics were not significant, $\chi^2 (470) = 434.846$, p=0.876. Since p=0.876, hence insignificant, null hypothesis that the "fit is good" was not rejected. The observed data were consistent with the fitted model. Data and the model predictions were similar. A final test was calculated for the assumption of "Proportional Odds", $\chi^2 (30) = 18.002$, p=0.959. Since chi-square was not insignificant (p=0.959), proportional odds assumption was satisfied.

In the US data set, all IVs entered in the regression. Attitude, Passing Time, and Conscientiousness were significant for the regression equation. Ordinal logistic regression was conducted after assumption testing. All pseudo R^2 values were calculated. In summary, the model was statistically significant at the "0.001" significance level $R^2 = 0.514$ (Nagelkerke), 0.493 (Cox and Snell), 0.213 (McFadden), $\chi^2 (10) = 82.100$, p<0,001. The results of the regression analysis are depicted in Table 4.16.

Table 4.16. Results of the regression on Intensity in the American data.

| | Estimate | SE | 95% CI for Odds Ratio | | |
			Lower	Odds Ratio	Upper
Attitude	1.007*	.303	.414	2.73	1.601
Motivation	-.001	.238	-.468		.465
Passing Time	.942*	.293	.367	2.57	1.517
Friendship	-.194	.197	-.580		.192
Relationship	.374	.216	-.050		.798
Conscientiousness	-.393**	.188	-.762	1.49	-.024
Extraversion	.056	.188	-.314		.425
Neuroticism	-.242	.196	-.626		.142
Agreeableness	-.026	.182	-.383		.331
Openness to Experience	-.216	.197	-.602		.170

Note: $R^2 = 0.514$ (Nagelkerke), 0.493 (Cox and Snell), 0.213 (McFadden), χ^2 (10) =82.100, p<0,001, * p < 0.001, ** p < 0.05.

Consequently, an ordinal logistic regression analysis was conducted to predict Intensity (time spent on FB during a day) using IVs as predictors. A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between membership times (χ^2 (10) = 82.100, p<0,001). Nagelkerke's R^2 of 0.514 indicated a high relationship between prediction and grouping. The Wald criterion demonstrated that Attitude, Passing Time, and Conscientiousness made significant contributions to prediction. The other IVs were not significant predictors.

As the effect size of the analysis, "exp (estimate)" values indicated that when Attitude is raised by one unit (one person) the odds ratio is 2.73 times larger. When Passing Time is raised by one unit (one person) the odds ratio is 2.57 times larger. When

Conscientiousness is raised by one unit (one person) the odds ratio is 1.49 times larger.

The results indicate that, in the USA, a positive attitude towards FB is necessary to spent significantly more time on FB. A motive to pass time and after that, a personality trait of Conscientiousness also associated with increased time spent on FB. It is natural to see a motive of passing time is associated with significantly increased "on" time regarding FB since they are already seeking to pass some time. Conscientiousness may be due to conscientious individuals' endeavors for trying to help people online. On the other hand attitude towards FB is interesting in the USA. American pre-service teachers do not want to spend longer times on FB if they already do not have a positive attitude towards FB.

The second ordinal logistic regression was conducted on the data collected from Turkey. In Turkish data, initially, all variables were screened by descriptive statistics as was done in the American data. There was no missing data in IVs and Intensity. All IVs distribute normally. Intensity was distributed normally as well.

Second, a multiple linear regression was conducted before ordinal logistic regression to check for assumptions related to multicollinearity, collinearity, and for outliers. IVs and DVs meant for ordinal logistic regression all entered in the multiple linear regression analysis. There were no Pearson correlations with values greater than 0.80. Thus, there is no multicollinearity among variables. All Condition Index values were below 30. Thus, collinearity assumption was successfully tested. Cook's Distance values in the Residual table were between -1 and +1. Therefore, there were no outliers in the IVs. Thus, outlier assumption was finally satisfied.

Chi-square tells you that the model gives better predictions than if you just guessed based on the marginal probabilities for the outcome categories. The model was fit. Moreover, goodness-of-fit statistics were not significant, χ^2 (2546) =2256.540, p=1.000. Since p>0.05 null hypothesis that the "fit is good" was not rejected. The observed data were consistent with the fitted model. Data and the model predictions were similar. A final test was calculated for the assumption of "Proportional Odds", χ^2 (30) =43.227, p=0.056. Since chi-square was not significant (p=0.295), proportional odds assumption was satisfied, as well.

In the Turkish data set, all IVs entered in the regression. Attitude, Passing Time, Openness to Experience, Motivation, Extraversion, and Neuroticism were significant for the regression equation. Ordinal logistic regression was conducted after assumption testing. All pseudo R^2 values were calculated. In summary, the model was statistically significant at the "0.001" significance level $R^2 = 0.429$ (Nagelkerke), 0.49 (Cox and Snell), 0.171 (McFadden), χ^2 (10) =336.115, p<0,001. The results of the regression analysis are depicted in Table 4.17.

Table 4.17. Results of the regression on Intensity in the Turkish data.

	Estimate	SE	95% CI for Odds Ratio		
			Lower	Odds Ratio	Upper
Extraversion	,179***	,078	,027	1.20	,332
Neuroticism	-,178***	,077	-,329	1.20	-,027
Conscientiousness	-,042	,076	-,191		,107
Agreeableness	-,120	,076	-,269		,030
Openness to Experience	-,234**	,076	-,383	1.26	-,086
Attitude	,863*	,103	,662	2.37	1,065
Motivation	,263**	,090	,087	1.30	,440
Passing Time	,703*	,096	,515	2.02	,890
Relationship	,077	,083	-,086		,240
Friendship	-,041	,081	-,201		,118

Note: R^2 = 0.429 (Nagelkerke), 0.49 (Cox and Snell), 0.171 (McFadden), χ^2 (10) =336.115, p<0,001, * p < 0.001, ** p < 0.01. *** p < 0.05.

Consequently, an ordinal logistic regression analysis was conducted on Turkish data to predict Intensity (age of FB membership) using IVs as predictors. A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between membership times (χ^2 (10) =336.115, p<0,001). Nagelkerke's R^2 of 0.429 indicated a moderately relationship between prediction and grouping. The Wald criterion demonstrated that Attitude, Passing Time, Openness to Experience, Motivation, Extraversion, and Neuroticism made significant contributions to prediction. The other IVs were not significant predictors.

As the effect size of the analysis, "exp(estimate)" values indicated that when Attitude is raised by one unit (one person) the odds ratio is 2.37 times larger. When Passing Time is raised by one unit (one person) the odds ratio is 2.02 times larger. When Openness to Experience is raised by one unit (one person) the odds ratio is 1.26 times larger. When Motivation is raised by one unit (one person) the odds ratio is 1.30 times

larger. When Extraversion is raised by one unit (one person) the odds ratio is 1.20 times larger. When Neuroticism is raised by one unit (one person) the odds ratio is 1.20 times larger.

Those results indicate that, in Turkey, attitude towards FB use is the most influential predictor of time spent on FB during a day, just like it is in the USA. Second predictor –almost as effective as the attitude- is Passing Time, again same as the results coming from US data. In contradictory to US results, Conscientiousness does not appear among predictors but motivation and two personality factors do: Extraversion and Neuroticism.

Extraverts and Neurotics are among the ones who use FB more often or who are significantly more online compared to individuals associated with other personality traits. Consistent with Ross et al. (2009, p. 581), Motivation is also among Turkish results regarding Intensity. Motivation which is not as predictive as attitude passing time and openness to experience is over two personality traits. This may mean that, regarding "on" time personality is not the most influential predictor considering attitude, motivation and motive to pass time.

4.2.3.1. RQ3.1 Comparison of Turkish and American results

Regarding the time spent on FB, American and Turkish pre-service teachers share the characteristic that attitude towards using FB and motive to pass time are the most powerful predictors compared to others. In both American and Turkish analyses, it seems that, personality are not as important as other factors regarding time spent on FB during a day.

In the USA, only conscientiousness appeared as a personality variable among two other more powerful variables and in Turkey, three personality traits with relatively weaker effect sizes appeared among other more powerful predictors. Thus, In both countries, not personality but attitude and motives determine the time spent on FB during a day –significantly more.

On the other hand, in both countries, even weaker than other factors, personality still was among predictor variables. But this time, variables were compared to the similarity of attitude and passing time. In the US, conscientiousness and in Turkey openness to experience, extraversion, and neuroticism were predicting the group membership. This may be due to the fact that individuals in the US associated with traits such as openness to experience and extraversion has left FB since they do not perceive it as an "adventure" any more.

4.2.4. RQ4 Level of privacy of FB profile

"ProfileSee" refers to the level of privacy a user has preferred regarding his or her personal FB profile. It is measured by the group individual allowed to see his or her profile. ProfileSee is a categorical variable and has more than two categories, thus, multinomial logistic regression was selected to conduct analysis on ProfileSee as the DV. The question and choices (categories) of ProfileSee were as follows:

- Who can see your Facebook profile?

  a. Only my friends.
  b. All Networks and Friends
  c. Some networks/all friends
  d. Don't know

Before conducting a multinomial logistic regression, descriptive analyses and multiple linear regression analysis are required to test some of the assumptions of multinomial logistic regression. Preliminary results as depicted in XX indicated that "Some networks/All friends", "All networks and Friends", and "Don't know" categories had marginal response rates. All three of these categories had only 3 cases. Thus, sample size assumption couldn't be satisfied and no regression analysis was conducted.

Table 4.18. Cases summary of the ProfileSee in American data.

		N	Marginal Percentage
	Only my friends	110	90,9%
Who can see your Facebook profile?	All Networks and Friends	3	2,5%
	Some networks/all friends	3	2,5%
	Don't know	5	4,1%
Valid		121	100,0%
Missing		0	
Total		121	

In the Turkish data, initially, case processing summary was checked to be sure that sample size assumption was satisfied, unlike the American data. As seen in Table 4.19, cell sizes were low. Therefore it was decided to merge (b) "Tüm ağlar ve arkadaşlarım" (All Networks and Friends), (c) "Bazı ağlar ve tüm arkadaşlarım" (Some networks/all friends), and (d) "Bilmiyorum" (Don't know) into a single category as (b) "Arkadaşlarımla sınırlı değil" (Not limited with my friends).

Table 4.19. Case processing summary of the regression on ProfileSee in Turkish data.

		N	Marginal Percentage
	Yalnızca arkadaşlarım	548	85,5%
	Tüm ağlar ve arkadaşlarım	35	5,5%
Facebook profilinizi kim görebilir?	Bazı ağlar ve tüm arkadaşlarım	41	6,4%
	Bilmiyorum	17	2,7%
Valid		641	100,0%
Missing		0	
Total		641	

After merging, (the question and) the answers as follows:

- Facebook profilinizi kim görebilir (Who can see your Facebook profile)?

    a. Yalnızca arkadaşlarım (Only my friends)
    b. Arkadaşlarımla sınırlı değil (Not limited with my friends)

After merging the categories, SPSS tabulated the new and acceptable variable as depicted in Table 4.20.

Table 4.20. Cell sizes of Modified ProfileSee in Turkish data.

	Frequency	%
Yalnızca arkadaşlarım (Only my friends)	548	85,5
Arkadaşlarımla sınırlı değil (Not limited with my friends)	93	14,5
Total	641	100,0

Since the cell size of "Arkadaşlarımla sınırlı değil" (Not limited with my friends) reached to an acceptable value, it was appropriate for conducting a regression analysis but this time, binomial logistic regression was the new regression technique to be used since there were only two categories in the DV.

After modifying the DV, all variables were screened by descriptive statistics. There was no missing data in IVs and ProfileSee. All IVs distribute normally. ProfileSee was distributed normally, as well. Thus, normality assumption was satisfied. Second, a multiple linear regression was conducted before multinomial logistic regression to check for assumptions related to multicollinearity, collinearity, and outliers. IVs and DVs meant for multinomial logistic regression all entered in the multiple linear regression analysis. There were no Pearson correlations with values greater than 0.80. Thus, there were no multicollinearity issues among variables. All Condition Index values were well below 30. Thus, collinearity assumption was successfully tested.

Cook's Distance values in the Residual table were between -1 and +1. Therefore, there were no outliers in the IVs. Maximum standard residual value was greater than +3 indicating outliers in DV, but, outliers in DV are not assumed for multinomial logistic regression. Therefore standard residual is dismissed. Hence, outlier assumption was finally satisfied.

Binomial logistic regression was conducted after assumption testing. All IVs entered in the regression. Passing Time and Friendship made a significant contribution to the prediction. The other IVs were not significant predictors. All pseudo R^2 values were calculated. In summary, the model was statistically significant at the "0.001" significance level $R^2 = 0.063$ (Nagelkerke), 0.035 (Cox and Snell), $\chi^2(10)=22.995$, p<0.5. The results of the regression analysis are depicted in Table 4.21. Nagelkerke R^2 indicates that %6 of the variance in the outcome variable (ProfileSee) is explained by the explanatory variables. Additionally, the model may classify 85.5% (overall) of the predicted values.

Moreover, Hosmer and Lameshow Test was not significant, $\chi^2(8)=4.419$, p=818. Since p>0.05 null hypothesis that the "fit is good" was not rejected. The observed data were consistent with the fitted model. Data and the model predictions were similar.

Table 4.21. Results of the regression on ProfileSee in the Turkish data.

	B	SE	95% C.I. for Odds Ratio		
			Lower	Odds Ratio	Upper
Extraversion	-,020	,118	,777	,980	1,235
Neuroticism	-,197	,119	,650	,822	1,038
Conscientiousness	,145	,116	,921	1,156	1,449
Agreeableness	,030	,117	,819	1,030	1,297
Openness to Experience	-,072	,116	,741	,930	1,169
Attitude	-,059	,153	,698	,942	1,273
Motivation	,105	,140	,844	1,111	1,461
Passing Time	,330**	,139	1,059	1,391	1,827
Relationship	,179	,127	,933	1,195	1,533
Friendship	-,339*	,109	,575	1,404	,883
Constant	1,874***	,122		6,512	

Note: $R^2 = 0.063$ (Nagelkerke), 0.035 (Cox and Snell), $\chi^2(10) =22.995$, p < 0.05, * p < 0.01, ** p < 0.05, *** p < 0.001.

Consequently, a binomial logistic regression analysis was conducted on Turkish data to predict ProfileSee (level of privacy regarding FB profile) using IVs as predictors. A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between membership times ($\chi^2(10)=22.995$, p<0.5). Nagelkerke's R^2 of 0.063 indicated a weak to moderate relationship between prediction and grouping. The Wald criterion demonstrated that Passing Time and Friendship made a significant contribution to the prediction. The other IVs were not significant predictors.

As the effect size of the analysis, exp(estimate) values indicate that when Passing Time is raised by one unit (one person) the odds ratio is 1.391 times larger. When Friendship is raised by one unit (one person) the odds ratio is 1.404 times larger. Results indicate that a motive of Friendship is the most influential predictor of level of privacy regarding FB profile (ProfileSee).

4.2.4.1. RQ4.1 Comparison of Turkish and American results

A significant difference emerged between USA and Turkey regarding ProfileSee (level of privacy regarding FB profile). American pre-service teachers who use FB seem to be more deliberate about whom to allow seeing his or her profile. In contrast, Motivated Turkish pre-service teachers didn't have a significant association with privacy level. This may be result of the difference of online digital media literacy between Turkish and American pre-service teachers.

On the other hand, there is a group of Turkish pre-service teachers with motives to found and/or maintain relationships that keep their privacy settings higher and seem to not let anyone see their profile. This is a considerable difference between Turkey and USA. In the USA, even the ones who are seeking for relationship are not significantly more likely to compromise their privacy but in Turkey, confidentiality is easily jeopardized.

4.3. Findings of the Qualitative Phase of the Study

In order to investigate qualitative research questions, a constant comparative was conducted on the transcripts of the interviews. Interviews were carried out in a one-on-one, face to face fashion by the researcher and all the sessions were recorded by handycam as separate video files. 16 pre-service teachers (N_{QL}) were interviewed. None of the interviewees were in their first or second year of study. They were all student of METU Faculty of Education and all of the participants were Turkish citizens.

The interviews were held in Turkish language in a secure, calm, and warm room of the department of CEIT of METU Faculty of Education. Interviews took approximately 20 minutes. Interviews were held after informing the interviewees about the nature of the interview and the study in general and after receiving consent of the interviewee. Demographics of interviewees are depicted in Table 4.22.

After transcribing the interviews from the video files, each transcript was arranged as an MS Word document. MS Word documents were opened by Atlas.ti 6.2 in order to conduct the "coding" phase of the constant comparative analysis. After the analysis, codes were interpreted by the researcher to merge into concepts and concepts merged into categories. Visual representations were created by the help of Atlas.ti and tables were created by using MS Excel.

Table 4.22. Demographics of interviewees.

Sequence	Name	Age	Gender	Department	Year of Study
1	Başak	22	F	EME	4
2	Nermin	21	F	EME	4
3	Emine	22	F	EME	4
4	Merve	22	F	EME	4
5	Gülşah	22	F	FLE	4
6	Remziye	23	F	BÖTE	4
7	Baran	21	F	ESE	3
8	Saliha	20	F	FLE	3
9	Ümmühan	20	F	FLE	3
10	Gözde	19	F	FLE	3
11	Bayram	23	M	FLE	4
12	Cuma	21	M	FLE	4
13	Betül	21	F	FLE	4
14	Gökhan	21	M	FLE	4
15	Şeyda	22	F	EME	4
16	Haydar	23	M	EME	4

Notation: "F" refers to Female and "M" refers to Male.

During the qualitative phase of this research study, qualitative data coming from 16 Turkish pre-service teachers were investigated to shed light on the following research questions:

- RQ5 : What are the pre-service teachers' perceptions of FB?
  - RQ5.1 : What do pre-service teachers like or dislike about FB?
- RQ6 : Are pre-service teachers motivated to use FB?
  - RQ6.1 : What are the factors motivating the pre-service teachers to use FB?
- RQ7 : How do pre-service teachers associate FB with teaching profession?
- RQ8 : How should FB be used according to pre-service teachers if it is to be used in education for educational purposes?

Eight open ended questions were asked. Three of the questions had sub-questions so that through a set of 11 open ended questions, the researcher conducted the interviews. During the course of the interviews, when he needed, the researcher asked additional questions not present in the original interview question set in order to get a clearer picture of the issue that the interviewee is talking about. Remaining of the chapter is organized according to the research questions. Each research question has its chapter and visual representations are provided together with the narrative. In the narrative; "Categories" are bolded, "Concepts" are italicized, and Codes are underlined. Quotations are given first in English then in Turkish.

4.3.1. RQ5 Pre-service teachers' perceptions of FB

The analysis of the transcripts exposed the fact that FB is perceived mostly in a positive manner except some of the problems that newly emerged with the invention of Internet and SNSs (n=12). Critical thoughts were also reflected on the necessity (n=8) and competence (n=11) of FB. But most promising outcome of this analysis was that FB is strongly associated with learning and it is one of the categories that emerged out of almost all of the respondents (n=15). Consequently, 8 categories were grounded on the data:

a. Relationship (15, 220)
b. Learning (15, 101)
c. Communication (15, 118)
d. Self-Expression (15, 117)
e. Functionality (13, 77)
f. Existential Concerns (12, 147)
g. Lameness (12, 67)
h. Recreation (11, 43)

The visual representation of Pre-service teachers' perceptions of FB is depicted in Figure 4.1.

Relationship (15, 220)

Relationship was the strongest category grounded on the data (15, 220). It wasn't only the most shared but also the most voiced category. Most of the pre-service teachers reflected their perception that FB is a "social" service or technology. One of the most echoed associations was *Companionship* (13, 100). Pre-service teachers associate FB with friends, friendship, friend list, FB events and FB groups. Pre-service teachers use FB for making friends, finding old friends, keeping up with friends, meeting online. Within companionship, FB is also associated with sexual relationship. One of the respondents stated:

> … it is said social network, all people come into this and you can find your friends, find your primary school friends and people get happy like "oh! I found my friend." You found but what happened after finding? Have you seen him face to face? Looks at the photos! In which phase of his life? Found a job? Married? This and that…

> … toplu sosyal ağ deniyor, bunda bütün insanlar toplanıyor işte arkadaşlarını buluyorsun, ilkokul arkadaşlarını buluyorsun, ama hani insanlar seviniyor aaa ilkokul arkadaşımı buldum, buldun ne oldu hani gördün mü yüz yüze, yok işte resimlerini görüyor, işte hayatının hangi aşamasında, iş bulmuş mu evlenmiş mi şudur budur hani…

Social Interaction (13, 38) is another major concept stresses by the majority of the respondents. Respondents stress that FB is one of the most used media for social interaction and they also use FB intensively for social interaction. They state that one of the first things that come to their mind when speaking of FB is that it is a *social* (13, 32) thing and it is for and place of social interaction. An interviewee argued:

> They added games and stuff anymore. Then, they started organizing events and stuff. In this way "people" are the ones who have social life on FB! I mean they don't do anything. Just logging in FB. For playing games. For talking. For meeting with each other.

> Artık oyunlar falan eklediler. Daha sonra artık etkinlikler düzenlemeye başladılar. Böyle olunca insanları nerdeyse Facebook üzerinde sosyal yaşamı olanlar oluşturuyor. Yani hiçbir şey

yapmıyorlar. Sadece Facebook'a giriyorlar. Oyun oynamak için
olsun. Muhabbet için olsun. Birbirleriyle tanışmak için olsun.

Half of the respondents think of Finding Old Friends (8, 14) when it comes to talk about FB. FB became the place to search for old friends, the ones that we have forgotten their phone numbers, addresses, etc. FB is not just a technology for spending time for nothing; it is a replacement of and an enhancement for old technologies like phonebooks. It is even a replacement for calling someone for asking the contact information of a third person. One of the pre-service teachers said:

> … for example my teachers from primary school, I was in boarding school. I found my teachers and friends from there.

> …mesela öğretmenlerimi ilkokuldan falan, yatılıdan ben, yatılıda okudum. Oradan öğretmenlerimi arkadaşlarımı buldum.

Another respondent stated:

> Because of this, I was worried about not talking to my old friends. Not being able to see them. FB provides this opportunity and I can associate it in this way. Or, knowing the situation they are in, their social standing, or are they fine or bad… It's nice to know that.

> Bu yüzden eski arkadaşlarımla konuşamamak beni üzüyordu. Onlarla görüşememek. Facebook'ta bu imkânı sağladığı için o şekilde ilişkilendirebilirim… Veyahut da onların ne halde olduğunu, durumlarını, iyiler mi, kötüler mi, bunu bilmek güzel bir şey.

FB is Ubiquitous (7, 13). It is everywhere and everywhere is in it! Everyone has it and it has everyone! Everyone is on FB! Even our old friends that we have lost contact with… Our beloved ones are on FB for asking a recipe, our favorite rock band is giving the news for the new concert on FB, schools are posting the exam dates on FB, instructors are on FB, and lecture notes are on FB. FB is the place to access others and all our technologies for accessing others have FB! Our mobile phones even the ones not considered as smartphones have it!

People are Following Others (7, 11) on FB. Because FB is not just a communication tool like a cellphone, it is the "thing" that we use when we need to satisfy our curiosity about others, because, Others (4, 7) are on FB too! But FB is not just for "receiving" but also for Addressing Society (4, 5). When it is wanted to reach out, FB is there.

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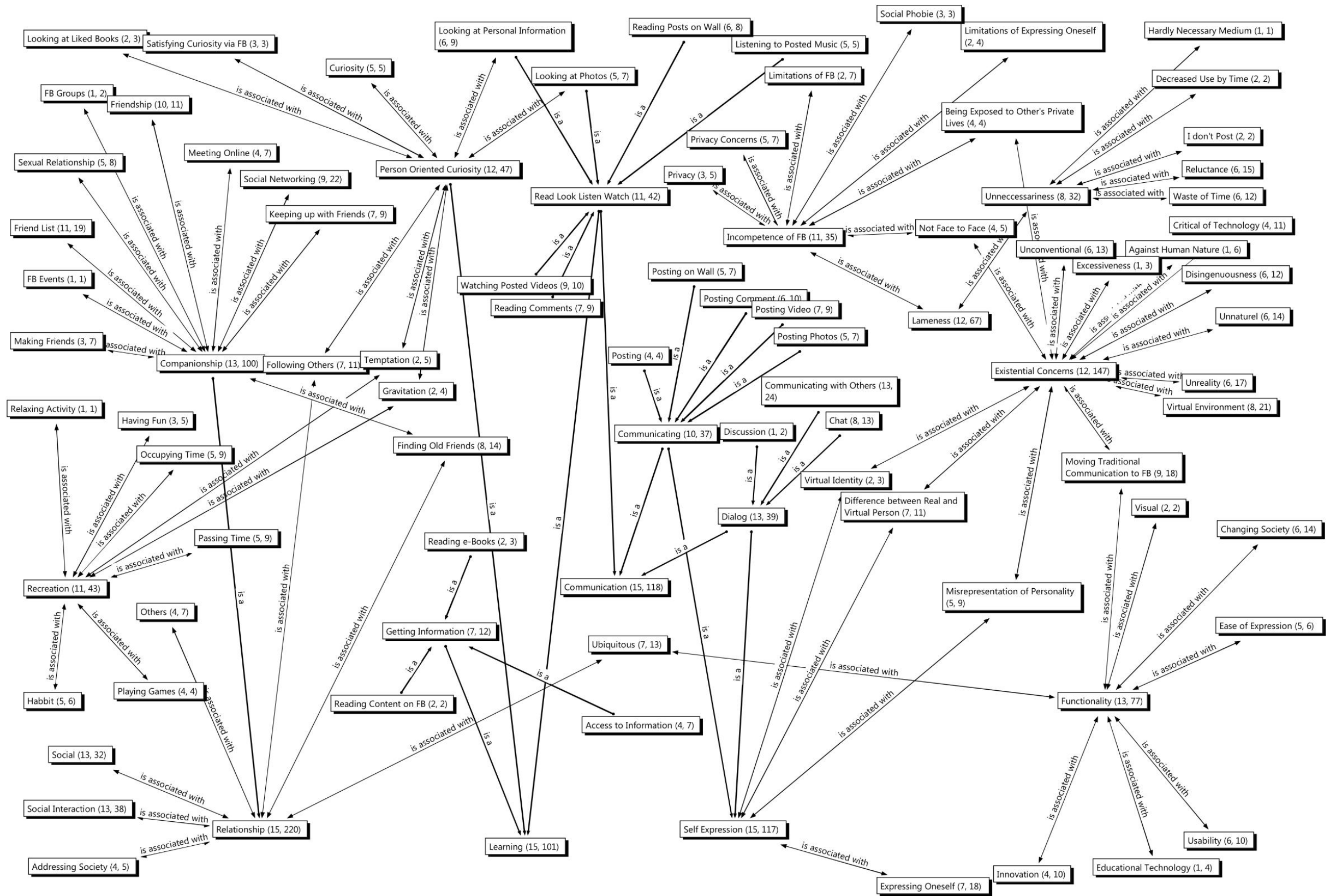
Figure 4.1. Visual representation of pre-service teachers' perceptions of FB.

Learning (15, 101)

One of the most important finding in this study was that **Learning** comes to the minds of most of the pre-service teachers when speaking of FB (n=15). This may mean many things. It may mean that, it is already acknowledged that FB may be implemented as an educational tool. It may mean that, pre-service teachers expect FB to be implemented for education or they might think it is at least "appropriate" and "suitable" for implementation.

But when talking about **Learning** it is not only about schools and books, etc. Remarkably, *Person Oriented Curiosity* (12, 47) is the most echoed concept regarding the category of **Learning**. So even pre-service teachers are curious of others! And when speaking of a communication or social interaction technology such as FB, pre-service teachers are curious about the ways it can be used to find out information about others just like the need for *Following Others* and *Finding Old Friends*. One of the respondents said:

> … we wonder what are friends are doing Somehow, we want to follow some people.
>
> …arkadaşlarımızın neler yaptığını merak ediyoruz. Hani bir şekilde birilerini takip etmek istiyoruz.

Another pre-service teacher stated:

> Actually, people, some people interest me. What kinds of things they like? It's already written there, such as, things he likes, movies he likes, music he likes. These really interest me, I mean, if the person interest me. If I'm interested I just look at those things wondering like what kind of things he like. I mean I can infer what kind of a person he is by these.
>
> Aslında insanlar evet bazı insanlar böyle ilgimi çeker hani. Ne tür şeylerden hoşlanıyormuş. Orda da zaten yazıyor, hoşlandığı şeyler, hoşlandığı filmler, hoşlandığı müzikler falan mesela. Onlar gerçekten dikkatimi çekiyor, bazen hani eğer kişi dikkatimi çekiyorsa yani. İlgimi çektiyse onlara direk bakarım, nelerden hoşlanıyormuş diye. Mesela arkadaş sayısına da bakarım. Hani oradan nasıl bir insan olduğunu çıkarabiliyorum.

Fortunately, FB is still perceived as a tool or medium to *Read Look Listen Watch* (11, 42). Pre-service teachers think of using FB for *Getting Information* (7, 12) about almost everything. Even authors are being followed on FB about their upcoming books. New documentaries on Jupiter –together with the latest music video of Maroon

5- is waited, watched, commented and discussed on FB. One of the pre-service teachers said:

> I mean, we can find many things, that we look for, over there. When we want to get information, phone number or address or any prediction, I mean, think that we'll enroll in a new school. Let's say we'll start teaching there. It's one of few places that I will look to for getting information.

> Hani aradığımız pek çok şeyi bulabiliyoruz orda. Ya bi şey bilgi edinmek istediğimizde telefon numarasından adrese ya da herhangi bir öngörüye, yani bir okulda başlıcaz diyelim, (eeee) öğretmenliğe başlıcaz diyelim. Ya okula dair bilgi almak istediğimde başvuracağım bir kaç yerden birisi.

Another interviewee stated:

> … I like seeing about literature. When I like the pages of interesting authors I can follow their books very easefully. Interesting information, I like following them.

> … ben edebiyatla ilgilenmeyi seviyorum. Böyle değişik yazarların sayfalarını beğendiğimde onların kitaplarını takip edebiliyorum daha rahat bir şekilde. İlginç bilgiler, onları takip etmeyi seviyorum.

Communication (15, 118)

Another major idea associated to FB by pre-service teachers is **Communication** (n=15). Of course, as expected, a technology so related with relationship, social interaction, learning, and companionship would be stressed by pre-service teachers, by nature. Pre-service teachers speak of *Dialog* (13, 39) when they want to reflect on FB. Remarkably and in accordance with other ideas mentioned so far, Communicating with Others (13, 24) is the major issue regarding *Dialog* on FB. Of course they want to Chat (8, 13) as well. One of the interviewees stated:

> There are groups that we have founded on FB. FLE groups and stuff. We have the opportunity for discussing some of things. For example, there is an online exam, immediately a group is opened by the students from our group. Everyone asks each other. This is a great easiness for us.

> Facebook'ta kurduğumuz gruplar var. FLE grubu falan. Orda bir şeyler tartışma imkânımız oluyor. Mesela online bir sınav yapılıyor

direk Facebook'ta onun bir grubu açılır, bizim grubun öğrencileri arasında. Herkes birbirine soru sorar. Bu büyük bir kolaylık bizim açımızdan.

Another one stated:

When speaking of FB, the first thing coming to my mind… I can communicate with my friends quite easily.

Facebook denilince aklıma ilk gelen şey … kolaylıkla arkadaşlarımla iletişim kurabiliyorum.

As they *Read Look Listen Watch* (11, 42) on FB, pre-service teachers want to commit *Communicating* (10, 37) as well. Pre-service teachers highlight <u>Posting</u> (4, 4), <u>Posting Comment</u> (6, 10), <u>Posting on Wall</u> (5, 7), <u>Posting Photos</u> (5, 7), and <u>Posting Video</u> (7, 9) when they reflect on FB. This is in accordance with their perceptions regarding relationship and learning on FB. One of the pre-service teachers stated:

Because, my aim for logging in FB is sharing videos and watching videos. Looking at photos…

Çünkü benim Facebook'a giriş amacım videoları paylaşmak, videoları görmek. Fotoğraflara bakmak...

Another one stated:

… posts, video or music and stuff maybe and communication in particular…

…paylaşımlar, video ya da müzik falan olabilir ve iletişim özellikle…

Self-Expression (15, 117)

Together with relationship, learning and communication, **Self-Expression** is one of the most (n=15) mentioned themes regarding pre-service teachers' perceptions of FB. They perceive FB as a tool to for expressing themselves through *Dialog* (13, 39). Pre-service teachers highlight <u>Chat</u> (8, 13), <u>Discussion</u> (1, 2), and <u>Communicating with Others</u> (13, 24) as major ways of getting into *Dialog* with *Others* on FB.

Through *Communicating* (10, 37) their thoughts, feelings, perceptions, and interpretations by "<u>posting</u>", FB is associated with **Self Expression**. Pre-service teachers stress that FB is a tool to reach out to others and express themselves by posting comments, videos. This may be an important point about the educational implementability of FB. If education would be a place where students may express

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themselves and communicate their thoughts and feelings, pre-service teachers' voices should be heard. Because *Communicating* is what hey find in FB. One of the respondents stated:

> … wish for sharing my thoughts with the society, and since it's online I think they can express themselves more conveniently. More social sharing, I can say for FB, it is sharing some of things, their mental states, and photos, whatever they are thinking…

> … düşündüklerini toplumla paylaşma isteği, bir de bu online ortamda olduğu için daha rahat ifade ediyorlar sanırım kendilerini, daha çok sosyal paylaşım, bir şeyleri paylaşmak insanlarla kendi ruh hallerini, fotoğraflarını, ne düşünüyorsa onları paylaşma diyebilirim Facebook için…

Expressing Oneself (7, 18) is another perception of pre-service teachers regarding FB. As a place of **Communication**, **Relationship**, *Communicating* and <u>Social Interaction</u>, self-expression is one of the strong concepts highlighted and favored by interviewees. One of them stated:

> … maybe we can express ourselves there. I mean, we can express things, that we can't maybe express in society, more easily on the Internet.

> … kendimizi belki orda ifade edebiliyoruz. Yani sosyal hani dış çevrede belki ifade edemediğimiz şeyleri internette daha kolay ifade ediyoruzdur.

Another one said:

> … it seems to me that it is the way of somewhat expressing themselves. Desire to share their thoughts with society. And since it is online, I think they can express themselves more conveniently. More social sharing, I can say for FB, it is sharing some of things, their mental states, and photos, whatever they are thinking.

> … insanların bir şekilde kendilerini ifade etme çabası gibi geliyor bana. Hani düşündüklerini toplumla paylaşma isteği, bir de bu online ortamda olduğu için daha rahat ifade ediyorlar sanırım kendilerini, daha çok sosyal paylaşım, bir şeyleri paylaşmak insanlarla kendi ruh hallerini, fotoğraflarını, ne düşünüyorsa onları paylaşma diyebilirim Facebook için.

But pros come with cons. Pre-service teachers state that there is a *Difference between Real and Virtual Person* (7, 11) and when thought together with **Learning** this perception should be addressed by stakeholders. One of the respondents stated:

> People describe explain themselves differently. They show themselves differently.

> İnsanlar hani kendini farklı şekilde anlatıyorlar. Farklı şekilde gösteriyorlar.

Many students -even teachers- may get away from their "more true" personalities they "wear" in classrooms? If so, does that enhance or deteriorate learning and/or teaching? *Misrepresentation of Personality* (5, 9) is mentioned by pre-service teachers as a problem regarding **Self Expression**. One of the interviewees reflected:

> Personality in other words virtual personalities of people, their secondary personalities, their lie (false) personalities…

> Kişilik yani insanların sanal kişilikleri, ikinci kişilikleri, yalan kişilikleri….

Functionality (13, 77)

Since FB is an Internet technology, **Functionality** of it is a highly mentioned issue. Pre-service teachers think of FB together with or through its functionalities. Most stressed functionality associated with FB is that FB is *Moving Traditional Communication to FB* (9, 18). Pre-service teachers highlight the fact that, people are using FB not only for looking at profile photos but also for chatting, e-mailing, discussing, talking on phone, and even for talking face to face via video talk and video chat features of FB. Thus, cable phones and even cell phones are losing ground against FB. One of the pre-service teachers argued:

> … before FB, it wasn't like that. We used to call and stuff, meet and somethings used to happen. It's like everything is on FB. Since people are busy, they just meet there. Or, I don't know, instead of calling someone they just send mail from there, they send a mail and stuff. FB is used frequently for this, as well.

> … önceden mesela Facebook'tan önce böyle değildi hani. Arardık falan, hani buluşurduk, bir şeyler olurdu. Artık her şey Facebook'tan gibi hani insanlar da biraz yoğun olduğu için direk oradan mesela görüşüyorlar. Ya da ne biliyim işte birini artık arayıp sormak yerine oradan mail atıyorlar, bir mesaj atıyorlar falan Facebook bunun için de çok kullanılıyor.

Another one argued:

> … because I don't use my e-mail. I didn't have everyone on my e-mail as well. I wonder if someone said something? Or you want to say something to a friend. You don't have units in your phone at that time. You won't be able to access. Not emergency, either. You go write on FB.

> … çünkü benim mailimi kullanmıyorum. Hani herkes de mailimde yoktu. Acaba birisi bir şey demiş mi, ya da bir arkadaşa bir şey söylemek istiyosun. O an için cep telefonunda kontör yok. Ulaşamıcan. Acil de bir şey değil. Gidiyosun Face'den yazıyosun.

Therefore, as a *Ubiquitous* (7, 13) technology, as mentioned above, FB is *Changing Society* (6, 14) by its technologies provided without charge –so far. One of the respondents said:

> … people started to do activities -that they do on social environments- do on the Internet. Even those people who have coffeehouse habits meet on FB anymore.

> … insanlar boş vakitlerinde normalde sosyal alanlarda geçirdiği faaliyeti internet üzerinde geçirmeye başladılar. Önceden kahvehane alışkanlığı olanlar insanlar bile artık sadece Facebook üzerinden görüşüyorlar.

Pre-service teachers argue that its *Usability* (6, 10) and the *Ease of Expression* (5, 6) it provides are also influential regarding the change it causes on society. One of the respondents stated:

> First thing coming to my mind … I can quite easily communicate with my friends. I can play games. A great tool for entertainment for me. Sometime you reach quite very easily by FB to people you can't access by phone or e-mail.

> Facebook denilince aklıma ilk gelen şey … kolaylıkla arkadaşlarımla iletişim kurabiliyorum. Oyun oynayabiliyorum. Eğlence için büyük bir araç benim için. Bazen gerçekten ulaşamadığınız hani telefon yoluyla ya da başka e-mail yoluyla ulaşamadığın insanlara bile Facebook'tan çok daha kolay ulaşıyorsunuz.

Another one argued:

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You practically benefit from it. You can see who is where. Or as I said this may be the thing that was shared on the group of our department. I look at them and you can see even tiniest update.

Pratik olarak yararını görüyosunuz. Kimin nerde olduğunu görebiliyosunuz. Ya da dediğim gibi işte bu bizim bölümün grubundan paylaşılan şeyler oluyor. onlara bakıyorum hani en ufak bir değişikliği görebiliyorsunuz.

Regarding *Ease of Expression* it provides a pre-service teacher argued:

… maybe we express the things, that we can't express outside, quite very easily on the Internet

… dış çevrede belki ifade edemediğimiz şeyleri internette daha kolay ifade ediyoruzdur.

Another one argued:

… since I'm an intrinsic person, and since it's not too much face to face I can directly address people. I like talking but since I'm not comfortable before people, but I can do this better on FB.

… içe dönük bir insan olduğum için, hani çok daha çok yüz yüze olmadığı için Facebook'ta öyle insanlara direk hitap edebiliyorum yani. Hani konuşmayı seviyorum ama insanlar önünde daha çok rahat olmadığım için, ama Facebook'ta bunu daha iyi yapabiliyorum.

As an *Innovation* (4, 10), a *Visual* (2, 2), FB is fortunately thought as an *Educational Technology* (1, 4), as well, when thinking of its functionalities. A tool already perceived as a **Learning** technology and *Educational Technology* by pre-service teachers should be taken more and more into account. N interviewee argued:

A great deal of information exchange is in question and we are using this in an educational manner too. There are groups that we have founded on FB. FLE groups and stuff. We have the opportunity for discussing some of things. For example, there is an online exam, immediately a group is opened by the students from our group. Everyone asks each other. This is a great easiness for us.

Büyük bir bilgi paylaşımı söz konusu ve çoğu zaman biz bunu eğitimsel açıdan da kullanıyoruz. Facebook'ta kurduğumuz gruplar

var. FLE grubu falan. Orda bir şeyler tartışma imkânımız oluyor. Mesela online bir sınav yapılıyor direk Facebook'ta onun bir grubu açılır, bizim grubun öğrencileri arasında. Herkes birbirine soru sorar. Bu büyük bir kolaylık bizim açımızdan.

Existential Concerns (12, 147)

Of course, together with all those positive thoughts, pre-service teachers highlight their concerns about FB, as well. Most of the pre-service teachers (n=9) concern about *Moving Traditional Communication to FB* (9, 18). While they acknowledge that this is an innovation and brings benefits to everyone, they are concerned as well. One of the respondents state that:

> …contrarian, how contrarian? For example as people we are there is a debate nowadays, would you like to read your book online from the Internet e-book and stuff or do you want to buy it? You know many bibliophiles say that touching you know is most of the joy of reading. In the same manner, you write some of things, put lolicons and stuff, maybe, I saw my friends writing reluctantly strainedly, adding a lolicon at the end, and this is a little bit unreal. You get the feelings when you look face to face, share his sorrow clearly you know, for that reason, I think it is against human nature.

> … aykırı, nasıl aykırı? Mesela biz insan olarak hani nasıl bir şimdi bir tartışma var mesela kitap online olarak internetten mi okumak istersin e-book'lardan falan, yoksa satın mı almak istersin? Hani birçok kitapseverler hani dokunmayı daha çok hani (eee) onun hazzını verdiğini hani daha çok okumanın zevk verdiğini söyler. Aynı şekilde bu da bence hani sen bir şeyler yazıyorsun mimik koyuyorsun, belki de ben çok arkadaşımı gördüm hani hiç istemeyip de zoraki yazıp da sonunda gülücük ekleyip, hani bu biraz gerçek dışı hani insan doğasında, yüz yüze baktığında gerçek hislerini anlarsın, acısını o zaman daha net paylaşabilirsin, hani ya o yüzden insan doğasına aykırı diye düşünüyorum.

As a *Virtual Environment* (8, 21), FB is perceived as a place where things and events *Against Human Nature* (1, 6) occurs. One of the respondents stated:

> When speaking of FB, socializing in a virtual environment comes to my mind. Partly because of reality, and it's something against human nature.

Facebook denilince benim aklıma hani sanal bir ortamda sosyalleşme geliyor. Biraz gerçeklikten, ve insan doğasına aykırı bir şey.

Difference between Real and Virtual Person (7, 11) and *Misrepresentation of Personality* (5, 9) are major concerns as mentioned before. Together with *Unreality* (6, 17), *Virtual Identity* is at the focus of pre-service teachers' concerns. One of the respondents stated:

… their second personalities… absolutely unreal! But its reality is exaggerated by changing the definition of reality. I mean it's said virtual reality. People commit suicide virtually!

… ikinci kişilikleri … kesinlikle [gerçek] değil. Ama gerçekliği, gerçekliğin tanımını değiştirilerek abartılıyor. Yani sanal gerçeklik deniyor, insanlar intihar ediyor sanal olarak!

Another one said:

… we talked about the fact that when people talk to each other by changing their names, they change their personalities.

… eğer ki insanlar birbirlerini tanımadan sanal ortamda konuşsalar çoğu insanın kişiliğinin değiştiğinden bahsettik.

The world in FB is described as *Unnatural* (6, 14) and *Unconventional* (6, 13). Respondents are concerned about the nature of things and events on FB. They are concerned how people do things on FB even though they wouldn't do it in real world. They state that, some of the "humanly" parts of things are getting lost when they are done online and a kitsch imitation of human behaviors are common on places such as FB. One of the respondents argued:

… for example as people we are there is a debate nowadays, would you like to read your book online from the Internet e-book and stuff or do you want to buy it? You know many bibliophile say that touching you know is most of the joy of reading. In the same manner, you write some of things, put lolicons and stuff, maybe, I saw my friends writing reluctantly strainedly, adding a lolicon at the end, this is a little bit unreal. You get the feelings when you look face to face, share his sorrow clearly you know, for that reason, I think it is against human nature.

… şimdi bir tartışma var mesela kitap online olarak internetten mi okumak istersin e-booklardan falan, yoksa satın mı almak istersin?

Hani birçok kitap severler hani dokunmayı daha çok hani onun hazzını verdiğini hani daha çok okumanın zevk verdiğini söylerler. Aynı şekilde bu da bence hani sen bir şeyler yazıyorsun mimik koyuyorsun, belki de ben çok arkadaşımı gördüm hani hiç istemeyip de zoraki yazıp da sonunda gülücük ekleyip, hani bu biraz gerçek dışı hani insan doğasında, yüz yüze baktığında gerçek hislerini anlarsın, acısını o zaman daha net paylaşabilirsin, hani ya o yüzden insan doğasına aykırı diye düşünüyorum.

Another one reflected:

When as, before FB, it wasn't like that. We used to call and stuff, meet and somethings used to happen. It's like everything is on FB. Since people are busy, they just meet there. Or, I don't know, instead of calling someone they just send mail from there, they send a mail and stuff. FB is used frequently for this, as well. Because everybody logs in FB several times a day, it may be not good because of that.

Halbuki önceden mesela Facebook'tan önce böyle değildi hani. Arardık falan, hani buluşurduk, bir şeyler olurdu. Artık her şey Facebook'tan gibi hani insanlar da biraz yoğun olduğu için direk ordan mesela görüşüyorlar. Ya da ne biliyim işte birini artık arayıp sormak yerine ordan mail atıyorlar, bir mesaj atıyorlar falan Facebook bunun için de çok kullanılıyor. Çünkü herkes giriyor yani günde birkaç defa Facebook'a bu yönden güzel olmayabilir.

Disingenuousness (6, 12) is another major concern especially regarding *Virtual Identity* on *Not Face to Face* (4, 5) social environments such as FB. Pre-service teachers state that, people are not sincere and genuine or candid about their personalities on environments such as FB. One of the pre-service teachers argued:

…beforehand, in high school and stuff you know there were those websites. We wouldn't care while creating profile on those websites. You know click we would check, even me and my friends we had msn accounts. We were adding to websites and stuff. You know we had such things. But you know FB changed the situation and things. Even you know I talk this issue one of my pals very often. I watch "Social Network" as well. You know the movie of FB. You know actually Explorer company made a statement and stuff then together with Google company. You know like who come people can share their confidentials in such a way thrusting a website. You know they really settled this. Thus, I

wrote whatever I felt there as it is. I mean there is nothing wrong I wrote on my profile. Maybe there are missing parts. But I don't write it. But this is not what I feel like. Actually, FB is forcing us. Because whoever I look, everybody writes the same thing. Of course there are fake accounts, can't say there isn't. But most of it, 90%, one of its greatest successes is that worldwide everybody has true profile stuff, and information.

… önceden lisedeyken falan o zamanlar hep böyle bizim farklı siteler vardı. O sitelerde profil oluştururken fazla önemsemezdik. İşte tık tık işaretler hatta ben ve arkadaşlarım vardı üçümüzün ayrı bir msn adresimiz vardı. İşte ordan siteyi ekliyorduk falan filan. Hani öyle şeylerimiz vardı. Ama işte Facebook biraz farklılaştırdı durumu. Yani hatta bir arkadaşla çok konuşuyoruz bu konuyu. Ben social network'ü de izledim. Hani Facebook'un filmi var ya. Hani hakikaten explorer açıklama yaptı sonra Google şirketi beraber. Yani insanlar bu kadar kendi mahremiyetlerini nasıl bir siteye güvenerek paylaşabiliyorlar falan diye. Hani hakikaten bunu oturtmuşlar. Dolayısıyla ben de içimden ne geliyorsa onu oraya öyle yazdım. Yani benim profilimde ne yazdığımda yanlış olan hiçbir şey yoktur. Ha eksik vardır belki de. Ama hani ben onu yazmam. Ama bu benim içimden gelen bir şey değil. Aslında Facebook bizi zorluyor. Çünkü ben kime baksam herkeste aynı şey yazıyor. Tabi fake hesaplar oluyor, olmuyor değil. Ama hani çoğunda %90'ında bence büyük bir başarısında şu anda dünya çapında herkesin gerçek profil şeyleri var. Bilgileri vardır.

Regarding *Disingenuousness,* another one stated:

… virtual environment, I mean, if people want to meet they should meet somewhere too by going you know. Celebrated birthday and that's that, OK accessing is very good you know celebrating is important too but, but, as humans what we could do is predicting, calling by phone you know that's it. From the chair (on keyboard) it looks it's very disingenuous.

… sanal ortamın artık yani insanlar görüşmek istiyorsa yani oturup bir yerde de buluşmalı hani kalkıp da mesela, işte doğum gününü kutladı ne kadar, tamam ulaşmak çok güzel hani, kutlamak da önemli ama, ama bizim yapacağımız insan olarak öngörmek telefonla aramak budur hani. Oturduğun yerden hani çok samimiyetsiz geliyor.

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Some of the respondents are *Critical of Technology* (4, 11) especially regarding *Excessiveness* (1, 3) going on FB. Some of the respondents state that *Being Exposed to Other's Private Lives* (4, 4) is a major setback for SNSs.

> I don't want to see whatever they're doing either. This is my thought. Or if someone says something to me about someone, I'm kind of person like "it's not our business, ok let's just close the subject" and stuff. Thus, I felt bad you know. I was feeling the need for clicking to look at his page, this scared me.

> Görmek de istemiyorum napıyorlarsa, hani benim düşüncem öyle. Ya da hani birisi bana birisi hakkında bir şey söyleyince şöyle diyen bir insanım "bizi ilgilendirmez ya, üf tamam kapatalım falan." O yüzden kötü hissettim hani. Tıklayıp onun sayfasına bakma gereksinimini hissediyordum, bu beni korkuttu.

Lameness (12, 67)

Majority of the interviewees reflected their thoughts about *Incompetence of FB* (11, 35). Apart from *Being Exposed to Other's Private Lives* and being *Not Face to Face*, other Limitations of FB are highlighted especially regarding Privacy. Privacy Concerns are reflected by one of the pre-service teachers by stating:

> … but then, it made me feel uncomfortable everybody continuously seeing my everything.

> … ama sonra böyle herkesin sürekli her şeyimi görmesi biraz rahatsız edici geldi bana.

Another one argued:

> … some families may not want their children log into FB. You know because everybody posts everything. You can't control things everybody posting, kid may see everything. There are things you won't want him to read but they post the/ photos. I mean they post various things or I don't know you know there may be people who want to do that thing to kids. I mean you know it's a place where it's hard to control and may be bad.

> … bazı aileler çocuklarının Facebook'a girmesini istemeyebilir. Yani çünkü herkes her şeyi paylaşabiliyor. Yani sen herkesin paylaştığı şeyi kontrol edemezsin, çocuk her şeyi görebilir. Okumasını istemediğin şeyler olabilir ki, fotoğraflar koyuyorlar, yani çeşitli şeyler koyuyorlar ya da ne biliyim hani çocukları şey

yapmak isteyen kişiler de olabilir. Hani aslında kontrol etmenin zor olduğu biraz da kötü de olabilecek bir yer yani.

Limitations of Expressing Oneself is another limitation. Some of the respondents state that while using the functions of FB, unwanted interactions may occur. One of the respondents stated:

If a boy adds a girl, that girl may make up things in her mind. Or if a girl adds a boy… I mean because of that to some extent I don't add people I don't very well know. I mean for them to not misunderstand me.

Bir erkek bir kızı eklerse, o kız kafasında farklı düşünebiliyor. Veyahut da bir kız bir erkeği eklerse... Yani iyice tanımadığım kişileri o yüzden eklemiyorum bir yerde de. Yani beni yanlış anlamasınlar diye.

Half of the respondents think that, FB is unnecessary. *Unnecessariness* (8, 32) causes Reluctance among some of the respondents about using FB. They state that FB is Waste of Time (6, 12). One of the interviewees stated:

… actually I see FB as a waste of time. It's not a very much necessary medium but we all have it, somehow using it, probably we have time to waste.

… ben aslında Facebook'u zaman kaybı olarak görüyorum, öyle çok gerekli bir ortam değil ama hepimizin var, bir şekilde kullanıyoruz, herhalde kaybedecek zamanımız da var.

Another one argued:

I say it's waste of time, in general. There are places where it's useful, too. Instead of mail you can just send a message and immediately get response. But you start seeing it as a waste of time, by time.

Genel olarak zaman kaybı diyorum. Faydalı olduğu yerler var. Mail yerine direk mesaj atarak anında haber alabiliyorsun. Ama zaman kaybı olarak görmeye başlıyor insan zamanla.

One of the respondents stated that FB is a "Hardly Necessary Medium". Two respondents talked about Decreased Use by Time others stated "I don't Post". One of the respondents stated:

… I mean games that require you to log in every day. After a while, I noticed its harms and gave up.

… yani sürekli her gün girmeni gerektiren oyunlar. Bir süre sonra zararını fark edip bıraktım.

Another one stated:

I say it's waste of time, in general. There are places where it's useful, too. Instead of mail you can just send a message and immediately get response. But you start seeing it as a waste of time, by time.

Genel olarak zaman kaybı diyorum. Faydalı olduğu yerler var. Mail yerine direk mesaj atarak anında haber alabiliyorsun. Ama zaman kaybı olarak görmeye başlıyor insan zamanla.

Recreation (11, 43)

Most of the pre-service teachers (n=11) reflect that FB is a great tool for **Recreation**. They –as if inevitably- talk about recreational activities when they are asked about the "first things" that come into their minds. Most of the respondents reflecting about their recreational perceptions regarding FB, talk about how good FB is for *Occupying Time* (5, 9) or *Passing Time* (5, 9) even in work places and in educational settings. They said that FB is a *Relaxing Activity* (1, 1). One of the respondents stated:

Of course, I hear it even from many workplaces. People even slack of their business for passing time. Just for passing time on FB.

Tabi ki bir sürü iş yerlerinde bile duyuyorum ben. İnsanlar zaman geçirmek için işlerini aksatabiliyorlar bile. Facebook'ta zaman geçirmek için sadece.

Another one confessed:

Zaten gündüz vakti hiç aklıma bile gelmiyor da, işte dersler bittikten sonra yurda geçtiğimizde falan öyle, bi ne olmuş ne bitmiş falan. Günde işte yaklaşık bir saatimi ayırıyorum.

Another pre-service teacher admitted:

After all, I don't even remember in daytime, you know, after classes when we get to the dormitories and stuff you know what's up and what's going on. I allocate approximately one hour daily.

Zaten gündüz vakti hiç aklıma bile gelmiyor da, işte dersler
bittikten sonra yurda geçtiğimizde falan öyle, bi ne olmuş ne bitmiş
falan. Günde işte yaklaşık bir saatimi ayırıyorum.

Another interviewee said:

… for me it is e recreational tool. It was a tool for passing time.
And still is. I mean it is. I mean let's put it in this way it's
something like filling in leisure time.

… benim için bir eğlence aracı. Vakit geçirme aracıydı. Hala da
öyle. Yani öyle. Yani şöyle söyliyim boş zamanımı değerlendirme
gibi bir şey

Some of the pre-service teachers reflect that FB or using FB is a *Habit* (5, 6). They
state that ther is a *Temptation* (2, 5) and/or *Gravitation* (2, 4) forcing them for being
on FB or using FB. One of the respondents stated:

… opening involuntarily, I'm not very uncomfortable, I love using.

… farkında olmadan açıyorum, kullanırken çok da rahatsız
değilim, seviyorum kullanmayı.

Another one admitted:

… Since communicating by FB with most of my friends. Even
though I criticize insomuch!

… Facebook'tan haberleştiğim için çoğu arkadaşımla. O kadar
eleştirmeme rağmen!

On the other hand, for some of the pre-service teachers, FB is also a great place for
Playing Games (4, 4) and *Having Fun* (3, 5). It is a place for relaxing and -after all the
messiness of the life- a place to have fun and laugh, to listen music suggested by your
friends and watch funny videos your friends posted. It is a place to play some easy and
stupid games to pass time and enjoy a piece of personal time online. One of the
respondents said:

When speaking of FB, coming to my mind, videos others posting,
music you know the funny stuff, something you can look and laugh
when you come home exhausted after the tiring hustle and bustle
of life.

Facebook dendiğinde aklıma başka insanların paylaştığı videolar,
müzikler işte eğlenceli kısmı, hayatın yorucu koşuşturmasından

eve gidip yorgun argın gittiğinde bakabileceğin, gülebileceğin bir
şey.

Another one said:

> Because my aim of logging in FB is posting vides and seeing
> videos. Looking at photos, you know, since it's in that way, it's a
> recreational tool for me.

> Çünkü Facebook'a giriş amacım videoları paylaşmak, videoları
> görmek. Fotoğraflara bakmak hani o şekilde olduğu için, benim
> için eğlence aracı.

4.3.1.1. RQ5.1 Likes or dislikes about FB?

In parallel with the results of the analyses pertaining to the first research question,
current analysis of the transcripts revealed the fact that FB is perceived mostly in a
positive manner even though there are concerns about certain issues. All of the
respondents reflected that FB is **Worrisome** (16, 162) in way. Most of the pre-service
teachers dislike the **Comfortlessness** (14, 182) that is caused by FB. Respondents
were critical of FB regarding its **Lameness** (12, 74) as well. They also voiced their
disliking by highlighting their **Existential Concerns** (5, 14) as mentioned before. But
even though they are concerned about the issues that they report as their "dislikes"
there are many things that they "like" about FB. Almost all pre-service teachers
underline how awesome FB is when it comes to **Communication** (15, 191). Same
amount of people (n=15) highlight **Learning** (15, 146) as something they associate
with FB and they like. **Relationship** (13, 148) and **Functionality** (13, 55) are the next
in the row mentioned as the things they like about FB. Finally, as referenced before,
Recreation (5, 12) is a thing associated with and liked about FB. Consequently, 9
categories –four dislikes and five likes- were grounded on the data:

- Dislikes
    a. Worrisome (16, 162)
    b. Comfortlessness (14, 182)
    c. Lameness (12, 74)
    d. Existential Concerns (5, 14)
- Likes
    a. Communication (15, 191)
    b. Learning (15, 146)
    c. Relationship (13, 148)
    d. Functionality (13, 55)
    e. Recreation (5, 12)

Visual representation of pre-service teachers' likes or dislikes about FB is depicted in Figure 4.2.

Worrisome (16, 162)

Most of the pre-service teachers dislike the *Inprivate* (15, 126) or nonconfidential nature of the FB world. Pre-service teachers are concerned with their Privacy (12, 27). These Privacy Concerns (11, 27) are not all about Confidential Things (7, 14) jeopardized by software problems. Respondents are especially concerned about Annoying Other FB Users (10, 24). One of them said:

> People I don't want are writing. I mean I open that chat page for people I want. I will speak with another person there. Others are writing. I don't want to talk.

> İstemediğim insanlar yazıyor. Ben mesela istediğim biri için açıyorum hani o chat sayfasını. Orda başka biriyle konuşcam. Başkaları yazıyor. Konuşmak istemiyorum.

On the other hand, interviewees dislike –as mentioned before- Being Exposed to Others (4, 4), as well. While they complain about –and keep doing- Giving Personal Information (3, 4) they also dislike Looking at Personal Information (9, 14). So they keep doing things that they don't like doing and they dislike more when others do it as they did. One of the respondents stated:

> And also the bad side, you know, "I ate" some people write, you know what he did, went to here and there, posting photos every day and stuff, these are disturbing. Not that much… you know doing it your private life you know in the virtual environment... a bad thing.

> Bir de kötü tarafı hani bazıları yemek yedim onu yazıyor, işte ne yapmış oraya buraya gitti, her gün resim ekliyor falan, bunlar rahatsız edici hani o kadar da özel hayatın hani sanal ortama yani şey yapmak kötü bir şey.

Some of the respondents feel Insecure (2, 9) about Privacy issues and think that Intervening in Private Life (3, 3) is so common and annoying on FB. One of the pre-service teachers said:

> You know people are constantly following each other over there, looking at their photos and statuses, maybe looking at comments, you know maybe a little bit criticizing each other, I don't know, a little bit too much intervention in private life, it seems to me.

… insanların orda sürekli birbirlerini hani takip ediyorlar,
fotoğraflarına, durumlarına bakıyorlar belki yorumlarına
bakıyorlar, yani ordan belki biraz birbirlerini eleştiriyorlar,
bilmiyorum ya, birazcık özel hayata fazla müdahale gibi geliyor
bana.

Most of the respondents also reflected on the *Unsecure* (11, 34) environment that FB provides. Most voiced security issue is <u>Cyber Crime</u> (5, 9). These crimes elevate <u>Security Concerns</u> (4, 6) of some of the interviewees and cause them to feel <u>Insecure</u> (2, 9). One of them said:

It has such a bad characteristic as well. Because some sick psycho
people are using kids for other purposes (in other ways).

Öyle bir kötü özelliği de var. Çünkü çocukları başka yönlerde
kullanabiliyorlar bazı sapık ruhlu insanlar.

Another **Worrisome** issue highlighted by some of the interviewees is the people who are fond of <u>Criticizing Others</u> (4, 4). One of the respondents said:

… for example I don't write my everything on FB. I don't report
my everything on FB. I don't like the responses of people, very
much.

… her şeyimi Facebook'a yazmam mesela. Onu karşılık olarak
görebiliriz. Her şeyimi Facebook'ta bildirmem. Çok insanların
tepkisinden hoşlaşmıyorum.

Finally, by nature, *Indecent Proposal* (2, 2) is also voiced by some pre-service teachers as a **Worrisome** issue associated with FB. One of the respondents said:

These are male in general. You know a person you never know
sends you a friendship offer you know send message and stuff. I'm
annoyed of this. I just ban him. Needless to deal with.

Genelde bunlar erkek oluyor. Hani hiç tanımadığınız bir insan size
arkadaşlık teklifi gönderiyor, işte mesaj gönderiyor filan. Mesaj
gönderiyor filan. Bundan rahatsız oluyorum. Direk engelliyorum
yani hiç uğraşmaya gerek yok.
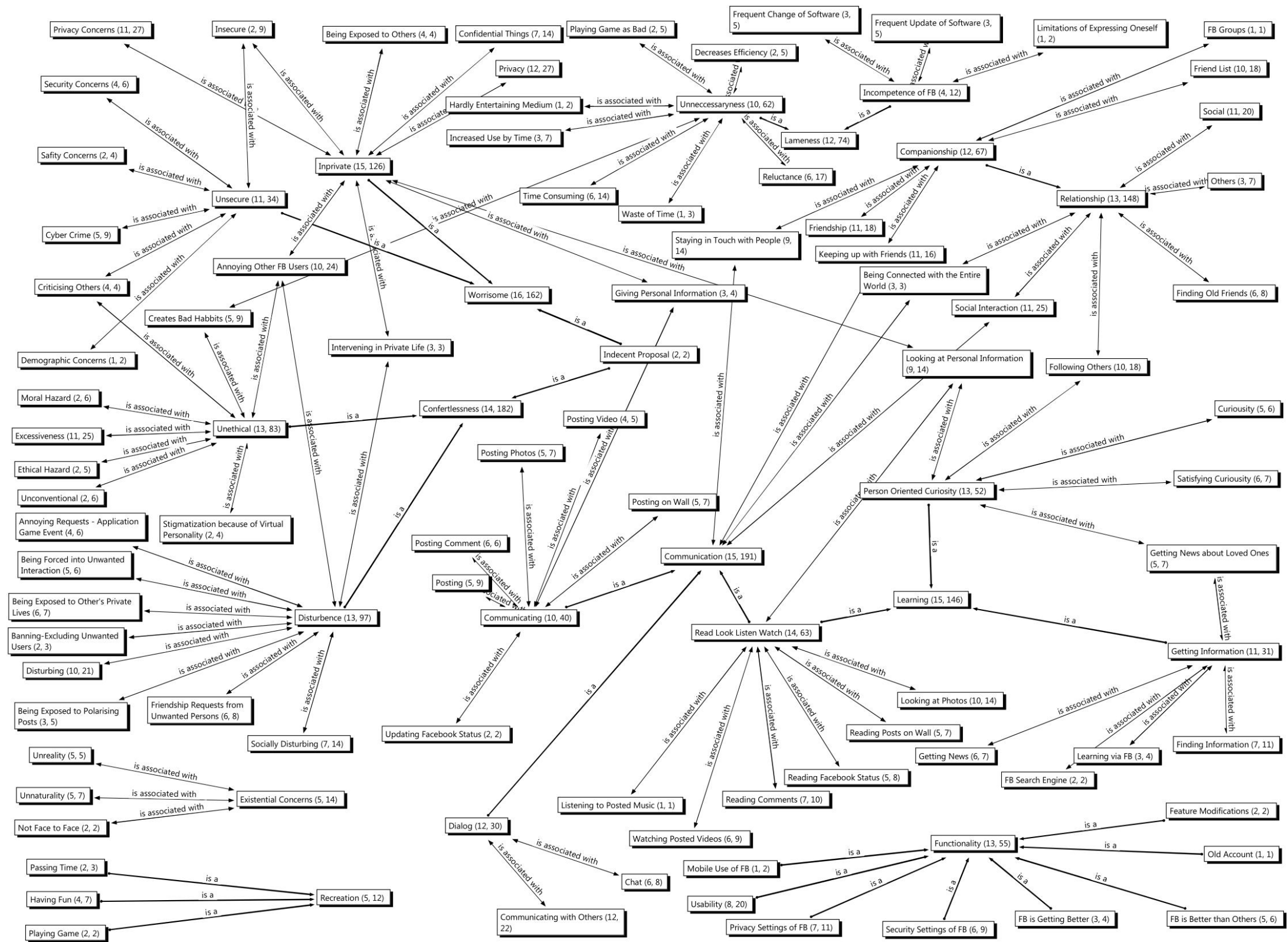
Figure 4.2. Visual representation of pre-service teachers' likes or dislikes about FB.

Comfortlessness (14, 182)

Most of the pre-service teachers dislike the *Disturbance* (13, 97) that FB causes. *Disturbance* is especially associated with <u>Annoying Other FB Users</u> (10, 24) and their <u>Disturbing</u> (10, 21) or <u>Socially Disturbing</u> (7, 14) behaviors. One of the respondents said:

> While saying tommyrot, for example, they are abusing religion and stuff, constantly posting things related with religion… I loathe it.

> Saçma sapan derken mesela dini alet ediyorlar falan sürekli işte dinle ilgili bir şeyler paylaşıyorlar... O hiç hoşuma gitmiyor.

Among these <u>Disturbing</u> behaviors, <u>Friendship Requests from Unwanted Persons</u> (6, 8) or <u>Being Forced into Unwanted Interaction</u> (5, 6) are especially highlighted. <u>Banning-Excluding Unwanted Users</u> (2, 3) doesn't solve the problem of people <u>Intervening in Private Life</u> (3, 3). One of the respondents said:

> …people we don't want to add, nevertheless, you know since he is acquaintance, you don't want to add but if not it will be bad.

> … eklemek istemediğimiz insanları, yine de hani mesela tanıdık diye, eklemek istemiyorsun ama eklemezsen de kötü olacak

While some of the interviewees dislike <u>Being Exposed to Other's Private Lives</u> (6, 7), <u>Annoying Requests - Application Game Event</u> (4, 6) makes the situation worse. And <u>Being Exposed to Polarising Posts </u>(3, 5) makes it gives way to major **Comfortlessness** among pre-service teachers. One of the respondents said:

> I can't know there are bawdy things. You know those kinds of things. You know shameful things. Those kinds of things, some people post/share it. I see them. I loathe it. Furthermore, for example, religious things. Or political things for example, I pay attention not to share.

> Ne biliyim çok açık saçık şeyler olur. O tarz şeyler hani. Böyle ayıp şeyler olur. Öyle şeyler mesela, bazıları ekliyor. Görüyorum. Hiç hoşuma gitmiyor. Sonra dini şeyler mesela. Ya da siyasal şeyler mesela eklememeye dikkat ediyorum.

According to the most of the pre-service teachers, not only <u>Disturbing</u> but also *Unethical* (13, 83) things are going on FB. <u>Excessiveness</u> (11, 25) and already mentioned <u>Annoying Other FB Users</u> (10, 24) are blamed as the main source of the problem. One for the respondents said:

… "I ate" some people write, you know what he did, went to here
and there, posting photos every day and stuff, these are disturbing.
Not that much… you know doing it your private life you know in
the virtual environment... a bad thing.

… bazıları yemek yedim onu yazıyor, işte ne yapmış oraya buraya
gitti, her gün resim ekliyor falan, bunlar rahatsız edici hani o kadar
da özel hayatın hani sanal ortama yani şey yapmak kötü bir şey

Moreover, FB is creates **Comfortlessness** and disliked because it <u>Creates Bad Habits</u>
(5, 9). One of the interviewees said:

… you should log in and out like checking e-mail. I look at the
photos of a friend who just added new photos. Yet, I do this even
they are people I never care about.

… normalde mail kontrol eder gibi girip çıkmak gerekiyorken, yeni
fotoğraflar eklemiş bir arkadaşın fotoğraflarına bakıyorum. Oysa ki
hiç ilgilenmediğim insanlar dahi olsa bunu yapıyorum.

There is a great deal of <u>Ethical Hazard</u> (2, 5) or <u>Moral Hazard</u> (2, 6) -one of them
being <u>Stigmatization because of Virtual Personality</u> (2, 4)- on FB. Another being
Indecent Proposal (2, 2). One of the pre-service teachers said:

… people are stigmatized anymore. Beforehand, it was behaviors
or talks, now, "hmmm if he shared this video he is this kind of
man" and stuff, "this man is arabesque" and stuff. People attempt
to stigmatize.

…insanlar artık yaftalanıyor. Eskiden hani davranışlarına göre ya
da konuşmasına göre bir değer bulurdu, şimdi Facebook'ta hımmm
bu videoyu paylaşmışsa bu adamdır falan, bu biraz arabesk
takılıyor. Hani insanları hani yaftalama hani girişiminde
bulunuyorlar.

Lameness (12, 74)

Most of the pre-service teachers think that FB is lame. *Unnecessariness* (10, 62) is a
highly disliked characteristic of FB. <u>Reluctance</u> (6, 17) to be on FB is easily felt on
respondents. Some of the interviewees think that FB is <u>Time Consuming</u> (6, 14) –even
<u>Waste of Time</u> (1, 3). One of the respondents said:

… there are times I open even without noticing I have opened. I mean when I open the computer and the Internet, initially, I open that page because of that, before finishing my job.

… açtığımı fark etmeden bile açabiliyorum. Yani bilgisayarı interneti açtığımda direk öncelikle o sayfayı açıyorum o yüzden, kendi işlerimi halletmeden.

On the other hand FB Creates Bad Habits (5, 9) and causes Increased Use by Time (3, 7), thus, Decreases Efficiency (2, 5). Even though FB is associated with **Recreation,** some disagree and state that FB is Hardly Entertaining Medium (1, 2). Some even go as far as labeling Playing Game as Bad (2, 5). One of the interviewees said:

I was motivated then. But you know I noticed that I'm overusing it, playing games even I don't used to play. You know, even people I don't meet are in my Friend List. After noticing this I was alienated. I don't use it much anymore.

O zaman motive olmuştum, ama işte baktım fazla kullanıyorum, oyun oynamadığım halde oyun oynuyorum. İşte çok görüşmediğim insanlar bile gelmiş bakıyorum arkadaş listeme, hani bunları fark ettikten sonra soğudum gibi. Çok fazla kullanmıyorum artık.

Incompetence of FB (4, 12) is another idea that had already voiced when the respondents were first asked about the first things that comes to their minds when speaking of FB. But this time, they go deeper. Remarkably, pre-service teachers complain about Frequent Change of Software (3, 5) and/or Frequent Update of Software (3, 5). Thus, according to some of the interviewees FB is instable and incompetent. One of the respondents said:

… thing I don't like on FB is the change of those settings. They are constantly changing on it, privacy settings of people and stuff are changing.

… Facebook'ta hoşuma gitmeyen bu ayaların değiştirilmesi, sürekli yenilik yapıyorlar onun üstünde, ya hani insanların gizlilik ayarları falan değişiyor.

Existential Concerns (5, 14)

As a *Not Face to Face* (2, 2) medium, FB is accused of being unconventional and unreal. *Unnaturally* (5, 7) is a highly reflected issue about FB. One of the respondents said:

Talking with someone face to face, seems like not the same as talking there, in the end, it's a virtual environment. I very much prefer to be side to side while talking to someone.

Biriyle oturup konuşmak ya orda konuşmakla aynı değil gibi sanki, sanal ortam sonuçta yani. Hani ben biriyle konuşurken yan yana olmayı daha çok tercih ederim.

As *Unnaturality, Unreality* (5, 5) concerns the pre-service teachers as well. One of the respondents said:

… you start perceiving virtual money as real money. If it gives 100 Liras, if it gives 100 gold, you start to like it. This shows that it's harmful. It makes addicted.

… sanal parayı artık gerçek gibi düşünmeye başlıyorsun. Ordan 100 lira veriyorsa 100 altın veriyorsa bu artık senin hoşuna gitmeye başlıyor. Bu zararlı olduğunu gösteriyor. Bağımlı kılıyor.

Communication (15, 191)

Even though respondents complain about many things, FB has many characteristics that pre-service teachers like. Regarding FB, pre-service teachers like *Being Connected with the Entire World* (3, 3). They like how easy and reach **Communication** is with FB. Pre-service teachers like to *Read Look Listen Watch* (14, 63) on FB. One of the respondents said:

… I watch video and stuff I like it or I like seeing things that a friend I love posts. For example, he is away, not with me. I know the things he does. What he does and so on and on or if he has a problem or stuff I can see. I like those stuff.

… video filan izliyorum onlar hoşuma gidiyor ya da sevdiğim bir arkadaşımın paylaştığı şeyleri görmek hoşuma gidiyor. Uzaktadır, mesela yanımda değildir ama, ben onun yaptığı şeyleri biliyorum. Neler yaptığını falan ya da bir sıkıntısı filan varsa görebiliyorum. Bunlar hoşuma gidiyor.

Most of the pre-service teachers focus on the opportunity of *Social Interaction* (11, 25) that FB provides. One of the respondents said:

… for example in somewhere he see me and likes me. Enough for him to just learn my name for make contact with me. He just adds, sends mail, and does things. Otherwise, I mean it would take much

longer for these kinds of business. For example I met with my boyfriend in this day. He had first learned my name and add. Thus, it's beautiful.

… mesela hani bir yerde biri beni görüyor, beğeniyor. Sadece ismimi öğrenmesi yeterli oluyor iletişim kurmak için. Hemen ordan ekliyor, mail atıyor, bir şeyler yapıyor. Yoksa hani öyle bir ortam olmasa çok daha uzun işler bunlar. Erkek arkadaşımla da öyle tanıştım mesela. İlk olarak ismimi öğrenip feceden eklemişti. O yönden güzel.

Respondents like the *Dialog* (12, 30) that they can access on FB. <u>Communicating with Others</u> (12, 22) or by <u>Chat</u> (6, 8) or by other means, FB gives chance to *Dialog*. One of the respondents said:

… it's good people stay in contact, it's good they follow each other in some way.

… insanların iletişimde kalmaları güzel, birbirlerini bir şekilde takip etmeleri de güzel.

Most of the pre-service teachers think that *Keeping up with Friends* (11, 16) is best done on FB. <u>Finding Old Friends</u>, getting the latest news about loved ones, being up to date about latest events are on FB. One of the respondents said:

It's a good thing celebrating him when I can't access one of my friends, making him happy and stuff.

Bir arkadaşıma ulaşamadığımda numarası olmadığında doğum gününü kutlamak güzel bir şey hani onu mutlu etmek falan

Communicating (10, 40) via FB is one of the most preferred forms of interaction according to most of the pre-service teachers. Not only <u>Giving Personal Information</u> (3, 4); but also <u>Posting Comment</u> (6, 6) on a fresh political event, <u>Posting</u> (5, 9) anything you want, <u>Posting Photos</u> (5, 7), <u>Posting Video</u> (4, 5), <u>Posting on Wall</u> (5, 7), <u>Updating Facebook Status</u> (2, 2) and all other means found on FB provide a great opportunity for *Communicating*. One of the respondents said:

Things I like, you can immediately comment. You almost start using while searching things. You quite easily access your entourage, family, and friends.

> Hoşuma giden şeyler anında yorum yapabiliyorsun. Bir şey hani search yaparken bile kullanmaya başlıyorsun nerdeyse. Çevrene, ailene, arkadaşlarına çok rahat ulaşıyorsun.

According to most of the interviewees, FB is a tool for *Staying in Touch with People* (9, 14). Not only *Keeping up with Friends* but also reaching to all people around the world is awesome! One of the respondents argued:

> … I like seeing things that a friend I love posts. For example, he is away, not with me. I know the things he does.

> … bir arkadaşımın paylaştığı şeyleri görmek hoşuma gidiyor. Uzaktadır, mesela yanımda değildir ama, ben onun yaptığı şeyleri biliyorum.

Learning (15, 146)

One of the promising categories grounded on the data was that Almost all interviewed pre-service teachers (n=15) associate FB with **Learning** and **Learning** as a perceived characteristic of FB is on of the things that interviewees like about it. Pre-service teachers think that –as mentioned before- FB is a place to *Read Look Listen Watch* (14, 63). Interviewees like Looking at Photos (10, 14), Looking at Personal Information (9, 14), Reading Comments (7, 10), Watching Posted Videos (6, 9), Reading Facebook Status (5, 8), Reading Posts on Wall (5, 7), and Listening to Posted Music (1, 1). Respondents think that FB is rich of "content." Full of information and a very good place for **Learning** about anything by any means, verbal, visual, etc. One of the respondents said:

> … most of the things are shared only on FB, video and others. It may be educational and for learning, sometimes in the context of general knowledge.

> … çoğu şey sadece Facebook'ta paylaşılıyor hani video olsun. Eğitici öğretici de olabiliyor, arada genel kültür açısından.

Most of the respondents state that *Person Oriented Curiosity* (13, 52) drives them for Following Others (10, 18) and Looking at Personal Information (9, 14). They do things even they don't like doing for Satisfying Curiosity (6, 7). One of the respondents said:

> … maybe we like communicating with others. We wonder what our friends are doing. Somehow, we want to follow some people.

… başkalarıyla iletişim kurmak belki hoşumuza gidiyor, arkadaşlarımızın neler yaptığını merak ediyoruz. Hani bir şekilde birilerini takip etmek istiyoruz.

Curiosity (5, 6) is a key concept pertaining to FB. Some of the respondents are concerned about it and they both like and dislike the things that they do on FB regarding privacy issues. But it is not all that bad. Because **Learning** is not only associated with gossiping. There is substantial appraisal of FB because of the means it provides for Getting News about Loved Ones (5, 7). One of the respondents said:

What's going on, a wedding, an engagement, you know something. It's nice to participate some of things from far away. Seeing photos. I have cousins, younger than me, growing. I can't see them grow by but I wonder, they say he said this word, you can see it on a video.

Neler olmuş, bir düğün olur, bir nişan olur, bir şey hani. Uzaktan bazı şeylere katılabilmek güzel oluyor. Fotoğraflarını görmek. Mesela benden küçük yeni büyüyen kuzenlerim var. Hani onların büyüyüşünü yakından göremiyorum ama merak ediyorum, aaaa bugün işte şu kelimeyi söyledi diyolar, bir videoyla görebiliyorsun.

Getting Information (11, 31) is a characteristic of FB that is voiced by most of the pre-service teachers regarding **Learning** and they state that they like **Learning** via FB. Because FB provides easy to use and easy to access tools for *Getting Information*. Finding Information (7, 11) is reflected on by some of the respondents. They state that Learning via FB (3, 4) is one of the things that they like. They mention –for example FB Search Engine (2, 2) as a utility embedded in FB and used for **Learning**. On the other hand, Getting News (6, 7) is awesome on FB. Getting News about Loved Ones (5, 7) is one of the most liked characteristics of FB. Learning that they graduate or receive their PhD degrees through wall posts is a liked feature, learning that a new baby is born or a beloved one published his or her new novel is a praised **Learning** feature of FB. One of the respondents stated:

… for example we have a group for METU Faculty of Education. I have benefitted a lot from there. There were a lot of questions regarding optional courses. I mean they exchange books and stuff. I mean it's good I can get information from my friends. I can access them.

… mesela bizim ODTÜ eğitim fakültesi grubu var. Ordan çok faydalandım. Seçmeli derslerde hocalarla ilgili bir sürü soru oldu. Yani kitapları falan değişiyorlar. Güzel yani bilgiler alabiliyorum arkadaşlarımdan. Onlara ulaşabiliyorum.

Relationship (13, 148)

Since it is an SNS, **Relationship** is a fundamental characteristic of FB and most of the pre-service teachers like **Relationship** features of FB. *Companionship* (12, 67) is a highly praised perceived characteristic of FB. Friendship (11, 18) is the core of *Companionship*. Making New Friends, Finding Old Friends, Keeping up with Friends (11, 16), maintaining **Relationship** with loved individuals on Friend List (10, 18), and Staying in Touch with People (9, 14) in general are loved perceived characteristics of FB. One of the respondents said:

> It's a good thing celebrating him when I can't access one of my friends, making him happy and stuff.

> Bir arkadaşıma ulaşamadığımda numarası olmadığında doğum gününü kutlamak güzel bir şey hani onu mutlu etmek…

FB is a *Social* (11, 20) media. *Social Interaction* (11, 25) is the main theme of FB. And most of the pre-service teachers like entering into rich and "contentful" *Social Interaction* on FB via innovative ways. One of the respondents said:

> Things I like, as I said, I like following some of things. I like being constantly in contact with them.

> Hoşuma giden dediğim gibi bir şeyleri takip etmeyi seviyorum. Onlarla devamlı iletişim halinde olmayı seviyorum.

Most of the respondents agree that *Following Others* (10, 18) on FB is a liked perceived characteristic. Using FB gives way to being informed about *Others* (3, 7). It is a way of connecting with the world actually using FB is *Being Connected with the Entire World* (3, 3). One of the interviewees said:

> Actually, people, some people interest me. What kinds of things they like? It's already written there, such as, things he likes, movies he likes, music he likes. These really interest me, I mean, if the person interest me. If I'm interested I just look at those things wondering like what kind of things he like. For example I look at number of friends too.

> bazı insanlar böyle ilgimi çeker hani. Ne tür şeylerden hoşlanıyormuş. Orda da zaten yazıyor, hoşlandığı şeyler, hoşlandığı filmler, hoşlandığı müzikler falan mesela. Onlar gerçekten dikkatimi çekiyor, bazen hani eğer kişi dikkatimi çekiyorsa yani. İlgimi çektiyse onlara direk bakarım, nelerden hoşlanıyormuş diye. Mesela arkadaş sayısına da bakarım.

Moreover, *Finding Old Friends* (6, 8) is another liked perceived characteristic of FB pertaining to **Relationship**. Some of the respondents reflect on the fact that, humans – lonely in the modern world- seek for **Relationship**. And the old ones are precious *Companionship*s that we can afford loosing. In contrast with telephone, e-mail, mail and other Internet technologies, FB provides the opportunity to reach to beloved individuals such as family members and old friends that we have lost the contact with. One of the respondents said:

> … it creates a bound with my old friend for me. All in all, telephone communication cuts off after a certain point. You know when you see on FB and stuff you can talk with them.

> … eski arkadaşlarımla bir bağ oluşturuyor bende hani. Sonuçta bazı arkadaşlarınızla hani telefon muhabbetiniz bir yerden sonra kesilebiliyor. Hani Facebook'ta falan görünce hani konuşabiliyorsunuz onlarla.

Functionality (13, 55)

Even though criticized, functionalities of FB are mostly liked by the interviewed pre-service teachers. They especially highlight *Usability* (8, 20) of FB. They argue how it is easy to communicate and found **Relationship**, with others via FB. One of them said:

> The first thing coming to my mind when speaking of FB… I can quite easily make contact and communicate with my friends.

> Facebook denilince aklıma ilk gelen şey… kolaylıkla arkadaşlarımla iletişim kurabiliyorum.

Even though <u>Privacy Concerns</u> plague the discussion on SNSs, *Privacy Settings of FB* (7, 11) and *Security Settings of FB* (6, 9) are praised by pre-service teachers. One of them said:

> I wonder if it was like that FB is more secure, it has more security settings and stuff, I don't share things I don't want with people I don't want. I can ban them from my friend group as well. In this way, I started using more comfortably.

> Facebook daha mı güvenli geldi acaba, daha çok güvenlik ayarları falan var, istemediğim insanlarla istemediğim şeyleri paylaşmayabiliyorum. İşte kendi arkadaş grubumdan da onları engelleyebiliyorum falan. Öyle olunca daha rahat kullanmaya başladım.

Remarkably, some of the respondents state that *FB is Better than Others* (5, 6) and it even *FB is Getting Better* (3, 4). As a compensation of the concerns regarding <u>Frequent Change of Software</u> and <u>Frequent Update of Software</u> FB users think that *FB is Getting Better*. One of the respondents said:

> … it would be something I would definitely use if I was in a private school. Of course when all students have access to that. Because right now, it seems to me that it's the place where we can communicate most easily. Thinking of future, blogs, twitter, whatever, and stuff are all the go. But according to me FB is number one.

> … bir özel okulda çalışıyor olsam kesinlikle kullanacağım bir şey olurdu. Tabi öğrencilerimin hepsinin buna erişimi olması durumunda. Çünkü birbirinizle en kolay iletişim sağlayabileceğiniz yer gibi geliyor bana şu anda. İlersinde de düşündüğümde hani blog olsun, ya da ne biliyim işte Twitter falan filan çok moda oldu. Ama bence hala Facebook bir numara.

As it is getting better, *Feature Modifications* (2, 2) are praised by some of the respondents such as *Mobile Use of FB* (1, 2). One of the respondents said:

> ... since I log in mostly from my cellphone it's quite easy everywhere. I mean there is no Internet everywhere. For example, I just got to my home, my own home, since there is no Internet, I log in from my cellphone.

> … daha çok cepten girdiğim için o her yerde daha kolay oluyor. Yani her yerde internet olmuyor. Mesela şu an ben eve yeni geçtiğim, kendi evime ama internet olmadığı için, yani cebimden giriyorum.

Recreation (5, 12)

By nature, there is no FB without **Recreation** and some of the pre-service teachers like it. They like *Having Fun* (4, 7) on FB. They like *Passing Time* (2, 3) with online companions and they like *Playing Game* (2, 2) on FB Together with old friends that you can't access otherwise. One of the respondents said:

> … what did my friends do, you know which photos, did he look good on that photo, I mean these are fun.

> … arkadaşların ne yapmış, işte hangi fotoları, bu fotoğrafta güzel mi çıkmış, yani bunlar eğlenceli

4.3.2. RQ6 Motivation to use FB?

In parallel with the results of the quantitative part of the study, current analysis of the transcripts showed that most of the pre-service teachers are motivated to use FB. Even though they raise questions about FB and they are concerned about certain issues, most of the pre-service teachers are **Motivated**. Even in minority, **Not Motivated** pre-service teachers' **Concerns and Issues** are shared by **Motivated** ones, as well. Consequently, 3 categories were grounded on the data:

a. Motivated (14, 17)
b. Not Motivated (2, 5)
c. Concerns and Issues (10, 19)

Visual representation of motivation to use FB is depicted in Figure 4.3.

Motivated (14, 17)

Most of the respondents (n=14) are **Motivated** to use FB. They acknowledge the problems and concerning issues but admit that they are motivated to use FB. Most of the Motivated pre-service teachers are clear about their feelings and they clearly state that they are *Motivated* (11, 14). On the other hand, there is a "critical" group among the motivated respondents, as well. They state that that they are **Motivated** but *Not Very Motivated* (3, 3). One of the respondents said:

> … FB, Hotmail, e-mail, Gmail, and stuff… I mean I am not very motivated.

> …Facebook'tur, Hotmail'dir, e-mail'dir, Gmail'dir falan. Yani çok motive değilimdir.

Not Motivated (2, 5)

Even though in minority, 2 respondents clearly indicated that they are not "Not Motivated." A remarkable point was that they defined their feeling by stating that they are Not Motivated Anymore (2, 4). As an expression or outcome of disappointment, they stated that they lost their interest on FB and are Not Motivated anymore.

> … when I was using I had wanted to, but then, I felt irritating everybody constantly seeing all of my stuff you know. And I closed it off, and never used again.

> … kullandığım zamanlarda hani istiyodum, ama sonra böyle herkesin sürekli her şeyimi görmesi biraz rahatsız edici geldi bana. Ve kapattım, bir daha da kullanmadım.
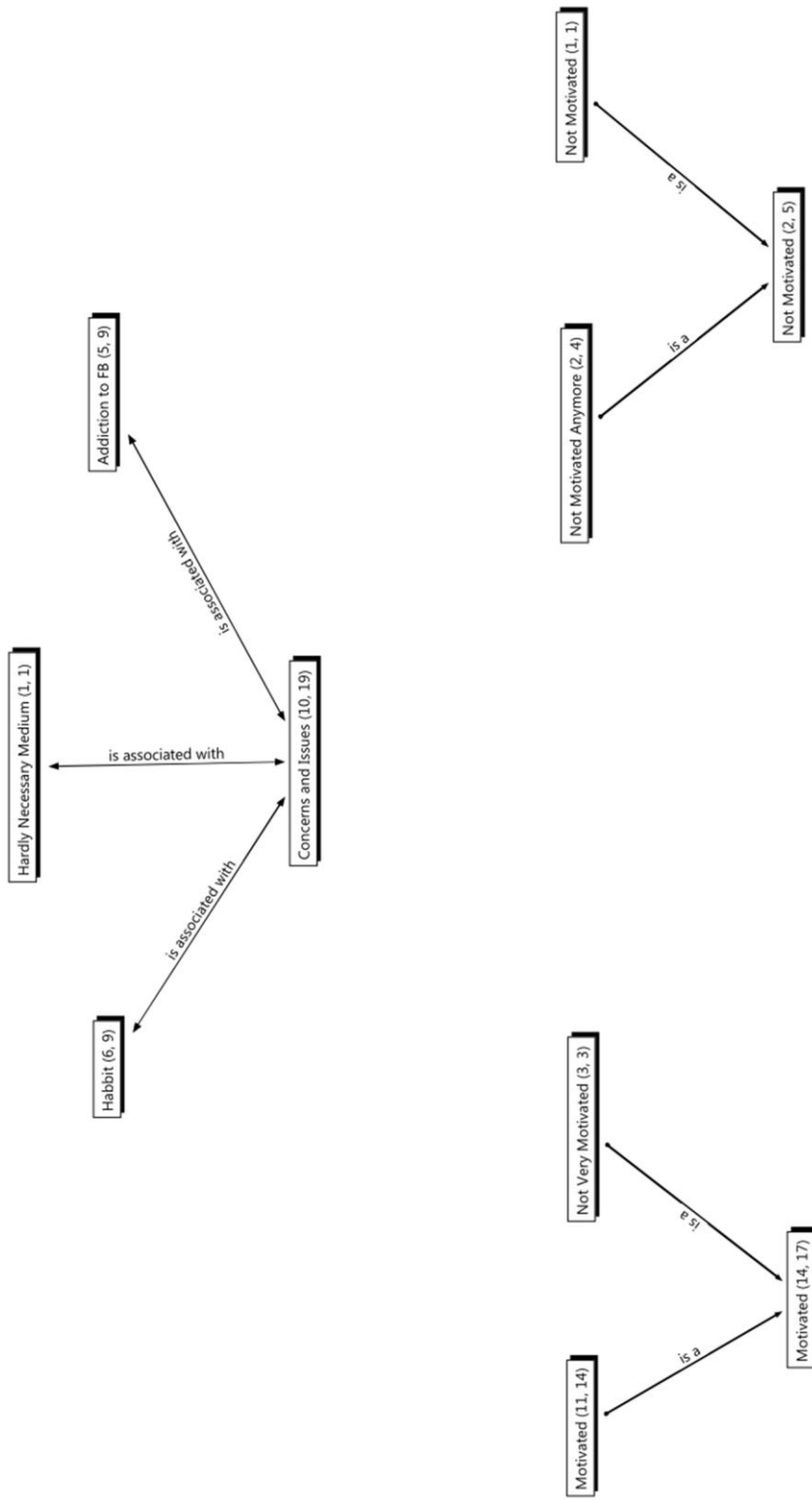
Figure 4.3. Visual representation of motivation to use FB.

Concerns and Issues (10, 19)

Most of the respondents –even **Motivated**- voiced their concerns about certain issues which breaks the motivation to use FB. But remarkably, these issues were not the ones such as **Existential Concerns**, ethical hazards, incompetence of FB or *Privacy Concerns*. The critical voice highlighted unexpected issues. Most of the critical ones stated that FB turned into an unnecessarily <u>Time Consuming</u> *Habit* (6, 9). Some of them mentioned *Addiction to FB* (5, 9). One of them went even further to define FB as a *Hardly Necessary Medium* (1, 1). So the unmotivational concerns were related to "Time." One of the critical pre-service teachers stated:

> FB, actually, rather than a wish, it turned into an addiction for me some.

> Facebook aslında biraz bende istekten çok biraz bağımlılığa dönüştü.

4.3.2.1. RQ6.1 Motivational factors for using FB

In this part of the constant comparative analysis, interviewees' answers to the sub-question of the second question were investigated. Factors that are motivating pre-service teachers to use FB were grounded on the transcripts of the interview. Six categories were grounded through patterns among clustering and converging concepts:

- **a.** Relationship (16, 308)
- **b.** Recreation (16, 116)
- **c.** Learning (15, 352)
- **d.** Communication (15, 267)
- **e.** Functionality (11, 38)
- **f.** Addiction (10, 37)

Visual representation of motivational factors for using FB is depicted in Figure 4.4.

Relationship (16, 308)

In accordance with the results of the previous analyses, all pre-service teachers strongly highlighted **Relationship** (16, 308) as the most important and influential motivational factor. Several concepts merged into the category of **Relationship**. But the main concept was *Social Interaction* (15, 44). Most of the pre-service teachers think that FB provides its users with such tools and environments for *Social Interaction* that this in turn motivates them to use FB. One of the pre-service teachers said:

... when I remember one of my friends I just open and look at him
for example, checking if I can find him and stuff.

... bir arkadaşım aklıma geldiği zaman ona hemen açıp bakarım
mesela bulabilir miyim falan diye.

On the other hand, as mentioned as a positive perception regarding FB and as a thing
that pre-service teachers like about FB, Keeping up with Friends (15, 30) is a major
motivational factor for pre-service teachers for using FB. One of the respondents said:

I can learn what happened and when, from there. Thus,
continuously I want to you know look, see, learn.

...ne zaman ne oldu hemen öğrenebiliyorum ordan. O yüzden
devamlı böyle bakıyım, göriyim, öğreniyim istiyorum.

As a Social (13, 29) media phenomenon, FB is praised pertaining to Companionship
(14, 87) and for how it enables its users for Staying in Touch with People (14, 33).
One of the respondents stated:

... when we are online you know, with other people, I think we
like being one message away.

... online olduğumuz vakit hani diğer insanlarla çok rahat hani bir
mesaj kadar uzakta olmak herhalde hoşumuza gidiyor.

FB users like Following Others (13, 45) and Others (3, 4) are always a major wonder
for individuals who are Seeking for Connection (2, 4). One of the respondents said:

... has someone called? Will someone give me news I mean, will
that fill my void? And in my brain, is there a new thing? Lif is all
the same. May a new thing come from FB?

... birisi çağırmış mı? Birisi bana bir haber verecek mi yani o
benim boşluğumu doldurur mu ve o beynimdeki yani yeni bir şey
var mı? Hayat zaten hep aynı. Facebook'tan yeni bir şey gelir mi?

Moreover, *Being Accessible via FB* (9, 18) is a major motivational factor for most of
the interviewees because *Everybody is on FB* (7, 10) and FB is overwhelmingly
Ubiquitous (3, 4). One of the pre-service teachers argued:

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Figure 4.4. Visual representation of motivational factors for using FB.

… if you send e-mail to students, you know maybe he may not check his e-mail account but, everybody is on FB every day, almost once in every hour, thus, there cannot be such a thing as "not seeing."

… öğrencilere e-mail atarsan, hani belki e-mail sayfasına bakmayabilir ama, herkes Facebook'a her gün giriyor, nerdeyse her saat başı, o yüzden görememe gibi bir durum olamaz.

Another one said:

… I guess we like it, when we are online you know, with other people, I think we like being one message away.

… herhalde hoşumuza gidiyor böyle online olduğumuz vakit hani diğer insanlarla çok rahat hani bir mesaj kadar uzakta olmak herhalde hoşumuza gidiyor.

Recreation (16, 116)

Similar with **Relationship**, **Recreation** (16, 116) is viewed by all of the pre-service teachers as a motivational factor. **Recreation** was among the positively perceived characteristic of FB but it wasn't among the top leading group of perceptions. But in the "motivational" factors, Together with **Relationship**, its influence is voiced by all of the pre-service teachers. As a recreational tool, using FB is described as a *Habit* (10, 23) by most of the interviewees. One of the respondents said:

… without fail, every day I log in FB and check it out I mean in the evening or twice for both is possible too.

… her gün mutlaka bir Facebook'u açar bakarım yani akşam ya da her iki kere de yaptığım olur bunu.

In parallel with the results of the quantitative analyses *Having Fun* (9, 19) and *Passing Time* (8, 14) are important recreational motivational factors. FB provides tools for recreational activities such as *Playing Game* (4, 9). One of the pre-service teachers said:

I both have fun and give a break, by this way…

Hem eğleniyodum, hem de bir ara vermiş oluyorum…

Some of the interviewed FB users are motivated to use FB for *Seeing Interesting Things* (7, 13). FB is described as *More Interesting than in Real Life* (3, 4) by some of the respondents. One of the interviewees said:

> For example, there are some friends who are medical students and stuff sharing, how a Caesarean section is done and stuff. And more other different stuff. Things that we wouldn't think of or come into our minds, medical students, sharing and stuff. They are good.

> Mesela bazı bu tıpçı arkadaşlar falan paylaşıyor, bu işte sezaryen nasıl oluyor falan. Ondan sonra başka başka şeyler de mesela. Hiç bizim aklımıza gelmeyecek hani hiç düşünmediğimiz, tıpçılardan mesela paylaşılıyor falan. Onlar güzel oluyor

Relieving Boredom (7, 7) is another recreational activity motivational for some of the respondents. Using FB is described as a *Relaxing Activity* (2, 4).

> As I said, you know I relieve tiredness stemming from daily life, like watching a movie.

> Dediğim gibi işte gündelik hayatın yorgunluğunu atıyorum hani, film izlemek gibi bir şey hani

Some of the respondents think that there is a great deal of *Gravitation* (6, 11) and/or *Temptation* (5, 8) for using FB and they count it as motivational. One of the respondents said:

> I was kinda carried away by that, constantly, who did what, who took what, let's follow, let's share something for my account, I was carried away by that situation I mean.

> Ben de biraz hani galiba şeye kapıldım artık sürekli kim ne yapmış, kim ne etmiş takip ediyim, kendim bir şeyler paylaşıyım, o duruma biraz kapıldım ben de,

Learning (15, 352)

Fortunately, *Learning* (15, 352) per se, is mentioned as a strong motivational factor by most of the pre-service teachers. But this "**Learning**" encompasses all kinds of learning not just "educational" one. Remarkably, and in accordance with the category of **Recreation**, *Person Oriented Curiosity* (14, 146) leads the **Learning** related motivational factors. Pre-service teachers are Curious of Others' Private Lives (9, 21) and this Curiosity (13, 27) motivates them for Following Others (13, 45). It is a Temptation (5, 8) for sneaking into Private Life (4, 9) of *Others* for to Satisfying

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Curiosity via FB (12, 24). And this "*Others*" are not limited with loved ones. Following Idols (3, 12) is a motivational factor as well.

> … in general, I'm using it for learning things related to people I know and related to their lives.

> … genelde tanıdığım bildiğim kişilerle ilgili hani onların hayatıyla ilgili şeyleri öğrenmek için kullanıyorum.

On the other hand, FB is used as a "receiving" tool for to *Read Look Listen Watch* (12, 101). There is a constant flow of content on FB and most of the pre-service teachers are motivated by these "free flowing" content. Some of the users like Looking at Personal Information (9, 15), some motivated by Reading Posts on Wall (8, 30), another group is motivated by Reading Comments (8, 21) or Looking at Photos (6, 9), or Watching Posted Videos (5, 12).One of the respondents said:

> You know, posts, thoughts, photos of my friends. You know I'm motivated by that I want to learn these kinds of stuff.

> İşte arkadaşlarımın paylaştıkları, düşünceleri, fotoğrafları. Hani bu tarz şeyleri öğrenmek istediğim için motive oluyorum.

FB users are tempted to use FB for *Getting Information* (11, 92), as well. Not just *Read Look Listen Watch* but also "being informed" is an expectation. Most of the pre-service teachers are motivated to us FB by Getting News (11, 29) or Getting Up-to-Date Information about Happenings (8, 28) via FB. Respondents state that they are logging in FB for Finding Information (7, 14) and Learning via FB (3, 4). It is different from others even Better from Others considering the fact that FB is a proper place for Getting Different Points of View (2, 5). One of the respondents said:

> So different thing are posted and shared you know, oh "that's here too!" gives you a different point of view, actually this is the most important one, according to me.

> Çok değişik şeyler paylaşılıyor çünkü hani, ha bu da varmış değişik bir bakış açısı kazandırıyor yani, aslında en önemlisi bu bence, benim açımdan.

Moreover, some of the pre-service teachers are motivated to use FB by *Seeing Interesting Things* (7, 13). FB is a recreational place where you can "**Find more interesting people than in real life**" as appeared as a highly loading item in the FB motives scale. FB is a tool for escapism. One of the respondents said:

Instead of very interesting videos on YouTube or writing funny comments, some friends are sharing… for example, that motivates me you know.

… Youtube'a işte çok ilginç videolar ya da komik yazmak yerine, bazı arkadaşlar paylaşıyor … o beni motive ediyor mesela hani.

Communication (15, 267)

Most of the pre-service teachers are motivated to use FB for **Communication** (15, 267) opportunities it provides with high *Usability*. Major communicational motivation comes from *Dialog* (15, 74) opportunities. FB is a place for Keeping up with Friends (15, 30) and for Communicating with Others (15, 27). You can Chat (10, 16), or send e-mail or video talk with your friends. One of the pre-service teachers said:

… I was worried about not talking to my old friends. Not being able to see them. FB provides this opportunity and I can associate it in this way. Or, knowing the situation they are in, their social standing, or are they fine or bad… It's nice to know that.

… eski arkadaşlarımla konuşamamak beni üzüyordu. Onlarla görüşememek. Facebook'ta bu imkânı sağladığı için o şekilde ilişkilendirebilirim. Veyahut da onların ne halde olduğunu, durumlarını, iyiler mi, kötüler mi, bunu bilmek güzel bir şey.

As a medium for *Dialog*, most of the pre-service teachers are motivated to use FB for *Staying in Touch with People* (14, 33). You can learn what's going on by Getting Up-to-Date Information about Happenings on FB. You can keep up with your friends, find old ones, and get news about your beloved ones. One of the respondents said:

About other nations, or about other governments, or an explosion somewhere, somethings happen, and your friends post on it you know without watching the news you can understand.

Başka devletle ilgili ya da ya hükümetle ilgili ya da bir yerde patlama oluyor bir şey oluyor, onu da arkadaşların paylaşıyor hani haberlere bakmadan da anlayabiliyorsun

As you can *Read Look Listen Watch* (12, 101) for receiving information you can also express your thoughts and feelings by FB by *Communicating* (8, 59) them via the tools and the medium that FB provides. It is a place for **Self Expression**.

Functionality (11, 38)

According to most of the pre-service teachers **Functionality** (11, 38) is a major motivational factor for using FB. The most highlighted advantage of using FB is *Being Accessible via FB* (9, 18). FB is *Ubiquitous* (3, 4). It's everywhere and everyone is on FB. Thus, when you create an account and connect with your old and new friends and leave your digital fingerprints on FB, you are now accessible, hence, connected with the world. One of the respondents said:

> … when we are online you know, with other people, I think we like being one message away.

> … online olduğumuz vakit hani diğer insanlarla çok rahat hani bir mesaj kadar uzakta olmak herhalde hoşumuza gidiyor.

On the other hand, according to some of the respondents, *FB is Better than Others* (5, 11). Not only compared to other SNSs but also compared to other communicational strategies such as mail, e-mail, telephone and cell phone, FB is superior in terms of accessibility and the richness of content that can be transacted between nodes. One of the respondents stated:

> … I didn't have everyone on my e-mail as well... You don't have units in your phone at that time. You won't be able to access. Not emergency, either. You go write on FB.

> … herkes de mailimde yoktu… O an için cep telefonunda kontör yok. Ulaşamıcan. Acil de bir şey değil. Gidiyosun Face'den yazıyosun.

Addiction (10, 37)

As a partly critical position, **Addiction** (10, 37) is also mentioned in the interview. Most of the respondents think that, motivation to use FB is –at least- partly an **Addiction** issue. *Addiction to FB* (7, 16) is a kind of *Escapism* (5, 6). Like movies or fairy tales, life on FB is somewhat and somehow *More Interesting than in Real Life* (3, 4).

> A quest you know, some things, has someone called? Will someone give me news I mean, will that fill my void? And in my brain, is there a new thing? Life is all the same. May a new thing come from FB?

> Arayış yani bir şeyi birisi çağırmış mı? Birisi bana bir haber verecek mi yani o benim boşluğumu doldurur mu ve o beynimdeki

yani yeni bir şey var mı? Hayat zaten hep aynı. Facebook'tan yeni
bir şey gelir mi?

Excessiveness (3, 3) plagues FB. One of the respondents state that it's kind of *Filling one's Void* (1, 2) giving way to *Increased Use by Time* (1, 2) deceived by *Virtual Money* (1, 2) and *Game Points* (1, 1).

> Games you maybe know for making addicted. I mean games that
> require you to log in every day. After a while, I noticed its harms
> and gave up.

> Bağımlı yapmak için genelde oyunlar belki biliyorsunuzdur. Yani
> sürekli her gün girmeni gerektiren oyunlar. Bir süre sonra zararını
> fark edip bıraktım.

4.3.3. RQ7 Association of FB with teaching profession

Pre-service teachers were interviewed about the relationship of FB with their future professions. A total of six categories, in parallel with previous findings, were grounded:

- **a.** Advantages of FB (16, 109)
- **b.** Educational Communication (14, 245)
- **c.** Possible Actions (14, 138)
- **d.** Possible Educational FB Features (13, 30)
- **e.** Anti-Educational Issues (11, 186)
- **f.** Technophobia (10, 89)

Visual representation of association of FB with teaching profession is depicted in Figure 4.5.

Advantages of FB (16, 109)

When interviewed about the association of FB with teaching profession, all pre-service teachers, initially, reflected on **Advantages of FB** (16, 109). Pre-service teachers highlighted twelve **Advantages of FB**:

- **1.** *Access to Educational Content* (11, 15)
- **2.** *Facilitation of Teacher's Access to Students* (9, 20)
- **3.** *Everybody is on FB* (9, 13)
- **4.** *FB Provides Accessibility* (9, 13)
- **5.** *Facilitation of Students' Access to Teacher* (8, 15)
- **6.** *FB is Better than Others* (5, 7)
- **7.** *Turns to Good Advantage* (4, 8)
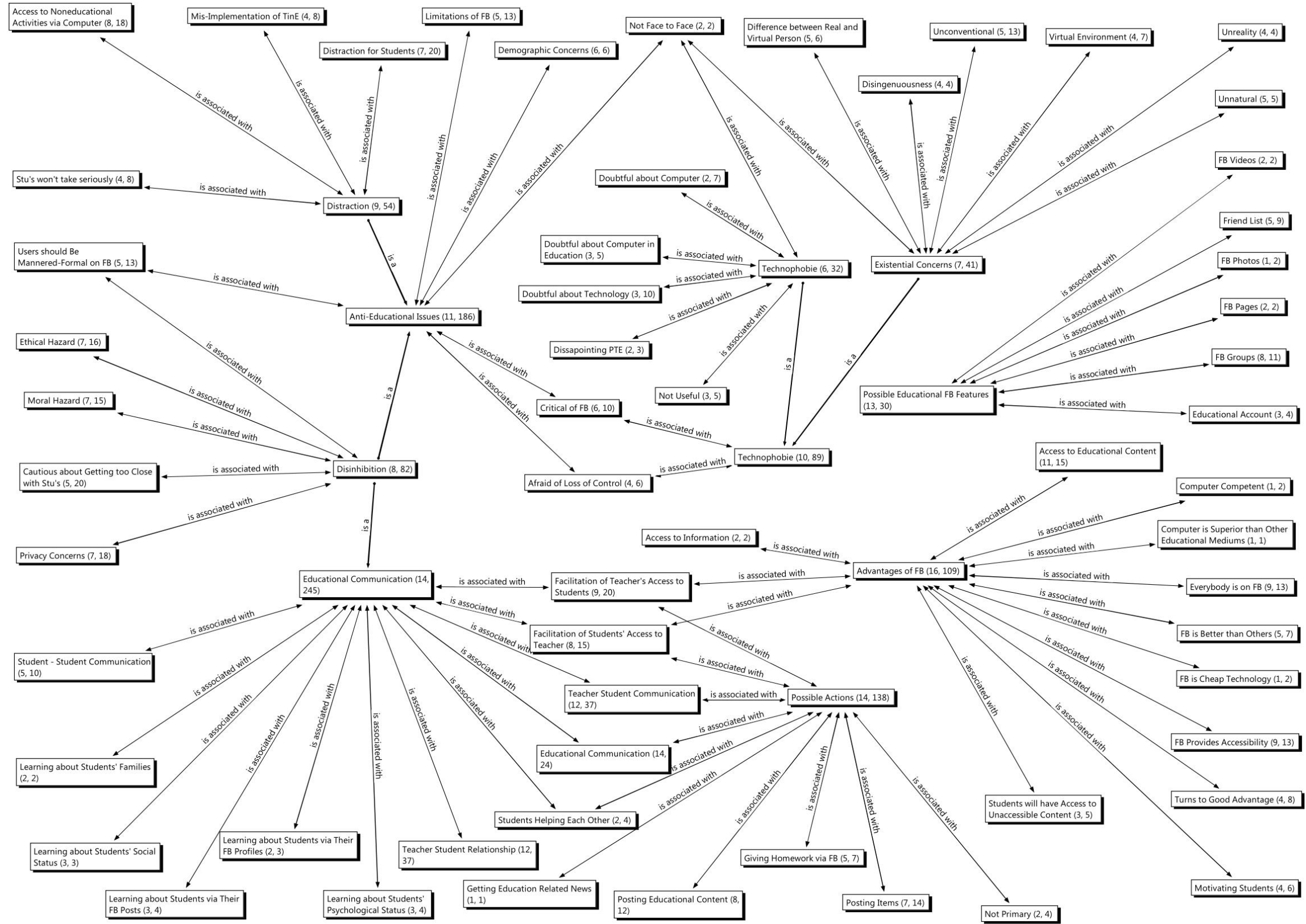
Figure 4.5. Visual representation of association of FB with teaching profession.

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8. *Motivating Students* (4, 6)
9. *Students will have Access to Inaccessible Content* (3, 5)
10. *Access to Information* (2, 2)
11. *FB is Cheap Technology* (1, 2)
12. *Computer is Superior than Other Educational Mediums* (1, 1)

Educational Communication (14, 245)

Most of the pre-service teachers reflected on how FB is associated with Educational Communication. Educational Communication (14, 24) refers to any kind of communication that takes place between students, between teacher and student, and between student and teacher. Teacher Student Communication (12, 37) and Student - Student Communication (5, 10) are said to be associated with FB. One of the interviewees said:

> Maybe I can talk to students there. Maybe a meeting or stuff, for example class is canceled, you know all students use it, maybe it will be more widespread in the future. I can use it like that. I mean I can access students quickest from there. Because almost everyone logs in every day. I mean videos, instructional videos, I can make it more interesting in this way I mean, they can access there more quickly.

> Belki öğrencilerimle ordan konuşabilirim. Yani bir toplantı filan mesela ders iptal oldu, çünkü bütün öğrenciler kullanıyor, belki ilerde daha çok yaygınlaşacak. Öyle kullanabilirim. Yani öğrencilere en çabuk ordan ulaşabilirim. Çünkü nerdeyse herkes her gün giriyordur. Öyle videoları, ders videolarını belki ilgi çekici hale getirebilirim orda yani, orda yine daha çabuk ulaşabilirler.

Another point is that pre-service teachers see FB as a tool with capabilities beyond mare communication. Pre-service teachers associate *Teacher Student Relationship* (12, 37) with FB. Most of the pre-service teachers imagine FB as a tool that can be used for *Facilitation of Teacher's Access to Students* (9, 20) and *Facilitation of Students' Access to Teacher* (8, 15). Pre-service teachers state that FB can be used by teachers for *Learning about Students' Psychological Status* (3, 4), *Learning about Students via Their FB Posts* (3, 4), *Learning about Students' Social Status* (3, 3), *Learning about Students via Their FB Profiles* (2, 3), and *Learning about Students' Families* (2, 2). One of the respondents stated:

> Maybe I can learn about my students from their profiles or from their posts and shares. Of course, I can learn as much as they show but you know maybe about their mental states, I can learn some of

things about their families and maybe FB facilitates for me to get close to them.

Belki öğrencilerimin hani profillerinden ya da paylaştıkları şeyden az çok onlarla ilgili bir bilgi edinebilirim. Tabi onların da gösterdiği kadarını bilebilirim ama hani belki ruh halleri hakkında ya da aile durumları hakkında belki bir şeyler öğrenebilirim ve onlara yaklaşmamda bu belki kolaylık sağlayabilir bana Facebook'ta.

Half of the pre-service teachers reflected on *Disinhibition* (8, 82). One of the respondents stated:

… being friends with a student on FB seem to me removing the distance in-between. According to me there should be a distance. You know because, when I got my FB account I mostly shared things mostly regarding my family, my friends and stuff and you know according to me there should be a hierarchy between student and teacher.

… öğrenciyle Facebook'ta arkadaş olmak biraz aradaki mesafeyi kaldırıyor gibi geliyor… Arada belli bir mesafe olması gerek bence. Hani çünkü bu Facebook hesabı aldığım zaman ben daha çok arkadaşlarımla ailemle falan paylaştığım şeyler ve hani bence öğrenciyle öğretmen arasında bir hiyerarşi olması gerekiyor hani.

A minority of pre-service teachers stated that regarding FB, they can imagine *Students Helping Each Other* (2, 4). One of the respondents said:

For example as I said, we have our FLE group. In add-drop period everybody talks about how is this course, what's the content of that you know. Like is there anyone who wants to drop for that I want to add. We can help each other on this issue.

Mesela FLE grubumuz var dediğim gibi. Ders ekleme bırakma döneminde mesela işte herkes şu ders nasıldır, işte şunun içeriği nedir. Şurda bırakıcak olan var mı, ben almak istiyorum tarzında. Birbirimize bu konuda yardımcı olabiliyoruz.

Possible Actions (14, 138)

Most of the pre-service teachers formulated **Possible Actions** that can take place on FB pertaining to teaching profession. Pre-service teachers formulated 8 possible actions:

1. *Educational Communication* (14, 24)
2. *Teacher Student Communication* (12, 37)
3. *Facilitation of Teacher's Access to Students* (9, 20)
4. *Facilitation of Students' Access to Teacher* (8, 15)
5. *Posting Educational Content* (8, 12)
6. *Posting Items* (7, 14)
7. *Giving Homework via FB* (5, 7)
8. *Students Helping Each Other* (2, 4)

Apart from those, a minority of pre-service teachers stated that they do no associate FB with education as a "primary" tool, medium, or strategy. They strongly opposed using FB as a primary tool for teaching and described it as a *Not Primary* (2, 4) possibility.

Possible Educational FB Features (13, 30)

Most of the pre-service teachers associated one or some of the features of FB with teaching as **Possible Educational FB Features**. Half of the pre-service teachers indicated *FB Groups* (8, 11), *Friend List* (5, 9), and *FB Pages* (2, 2) as "already educational" features of FB. Respondents described it as good opportunities for forming discussion forums as employed in LMSs. One of the interviewees said:

> There are groups that we have founded on FB. FLE groups and stuff. We have the opportunity for discussing some of things. For example, there is an online exam, immediately a group is opened by the students from our group. Everyone asks each other. This is a great easiness for us.

> Facebook'ta kurduğumuz gruplar var. FLE grubu falan. Orda bir şeyler tartışma imkânımız oluyor. Mesela online bir sınav yapılıyor direk Facebook'ta onun bir grubu açılır, bizim grubun öğrencileri arasında. Herkes birbirine soru sorar. Bu büyük bir kolaylık bizim açımızdan.

Some of the pre-service teachers reflected on *Educational Account* (3, 4). They think that, teachers but also students should have separate FB accounts for educational purposes. One of the respondents said:

> You know if use this for that purpose I create another account for my students and I communicate with my students only over there.

Hani bunu bu amaçla kullanırsam öğrencilerim için ayrı bir
Facebook hesabı açarım ve sadece orda öğrencilerimle iletişim
kurarım hani.

Anti-Educational Issues (11, 186)

On the other hand, most of the respondents voiced their concerns about characteristics
of FB. Some of the respondents are *Critical of FB* (6, 10). Major concern is the
Distraction (9, 54). Half of the pre-service teachers are concerned about possible
Access to Noneducational Activities via Computer (8, 18) on FB. Pre-service teachers
think that these activities are Distraction for Students (7, 20) and a good example of
Mis-Implementation of Technology in Education (4, 8). Some of the pre-service
teachers think that Students won't take seriously (4, 8): the course, the lesson, the
teacher. One of the pre-service teachers said:

> … they are distracter, to other directions, they are completely
> million miles away… I don't know I mean in those lab hours, in
> the courses we take and stuff I think that 10% mostly is giving
> attention to the class. Because, when you put the computer in front
> of the student there are many so different things he can do there.
> It's hard for him to focus on the lesson.

> … ilgileri dağılıyor, dikkatleri başka yöne kayıyor, akılları
> tamamen başka şeylerde oluyor…. Bilmiyorum yani o lab'larda
> işlediğimiz derslerde falan mesela düşünüyorum en fazla sınıfın
> %10'u gerçekten dersle ilgileniyordur... Çünkü bilgisayarı
> öğrencinin önüne koyduğunuzda onun yapabileceği çok farklı
> şeyler var orda. Derse odaklanması çok zor.

Another issue is the *Disinhibition* (8, 82). Half of the respondents think that FB may
be a threat to the "distance" between the teacher and the student. Thus, FB may
undermine the authority of the teacher. Almost half of the pre-service teachers think
that the removal of the "codes" from educational institutions or processes poses an
Ethical Hazard (7, 16). Especially considering Privacy Concerns (7, 18), Moral
Hazard (7, 15) is seriously reflected on by interviewees. One of the interviewee said:

> … my student need not to know all of my posts and shares… you
> know because, when I got my FB account I mostly shared things
> mostly regarding my family, my friends and stuff and you know
> according to me there should be a hierarchy between student and
> teacher. Student doesn't need to know everything regarding the
> teacher.

… paylaştığım her şeyi öğrencimin de bilmesine gerek yok
…çünkü ben daha çok arkadaşlarımla ailemle falan paylaştığım
şeyler ve hani bence öğrenciyle öğretmen arasında bir hiyerarşi
olması gerekiyor hani. Öğrenci öğretmenin her şeyini bilmesine
gerek yok diye düşünüyorum.

Some of the pre-service teachers are <u>Cautious about Getting too Close with Stu's</u> (5, 20). They think that <u>Users should Be Mannered-Formal on FB</u> (5, 13). One of the pre-service teachers said:

I think of a question like "if I was a teacher would I add my
students?" Would I want my students to add me, I think of. How
about the "distance" over there?

Öğretmen olsam öğrencilerimi ekler miyim diye bir soru aklıma
geliyor. Öğrencilerimin beni eklemesini ister miyim gibi bir şey
aklıma geliyor. Ordaki mesafe orda nasıl olur?

Some of the respondents have *Demographic Concerns* (6, 6) especially regarding minors. One of the respondents said:

… since they are minors in the secondary school level, how correct
is it for them to use FB anyway. This is debatable.

… yaşları küçük olacağı için ortaokul düzeyinde zaten onların
Facebook kullanması ne kadar doğru tabi o da tartışılır.

Some of the respondents think that *Users should Be Mannered-Formal on FB* (5, 13) and are <u>Afraid of Loss of Control</u> (4, 6) in FB included classroom settings. One of the respondents said:

If I add those students on FB maybe when they turn it into rather
than educational purposes, into recreational purposes, this is
harmful to me. I'm scared I can't manage it.

Ben bir de Facebook'a eklersem o öğrencileri belki onlar ders
amaçlı değil de eğlenme amaçlıya çevirdikleri an bu benim için
zararlı olur. Hani toparlayamam diye korkum da var.

Another concern regarding this *Not Face to Face* (2, 2) environment is the *Limitations of FB* (5, 13).

Technophobia (10, 89)

Most of the pre-service teachers are critical of technology. Primarily, they have *Existential Concerns* (7, 41) regarding technology and FB in particular. Some of them think that technological tools or environments are <u>Unconventional</u> (5, 13) and <u>Unnatural</u> (5, 5). They argue that in a FB like <u>Virtual Environment</u> (4, 7) there is strong <u>Difference between Real and Virtual Person</u> (5, 6). In this unconventional and unnatural environment there is a strong sense of <u>Unreality</u> (4, 4). Some of the respondents describe it as <u>Disingenuousness</u> (4, 4). Some blame all <u>Not Face to Face</u> (2, 2) environments with <u>Unreality</u> or <u>Disingenuousness</u>. One of the respondents said:

> … we talked about the fact that when people talk to each other by changing their names, they change their personalities.

> … eğer ki insanlar birbirlerini tanımadan sanal ortamda konuşsalar çoğu insanın kişiliğinin değiştiğinden bahsettik.

On the other hand, *Technophobia* (6, 32) is voiced by other pre-service teachers as well. Some of them are <u>Doubtful about Technology</u> (3, 10), some are <u>Doubtful about Computer in Education</u> (3, 5), and others are <u>Doubtful about Computer</u> (2, 7). One of the pre-service teachers argued:

> I don't think FB will be useful in education. I don't think students will take it seriously, I mean about this technology issue, actually, I have got doubts. I mean when technology is in, the level of seriousness of the student regarding taking the course into account decreases, it seems to me.

> Ben Facebook'un eğitimde bir yararı olacağını düşünmüyorum öğrencilerin hani çok ciddiye alacaklarını düşünmüyorum, yani bu teknoloji konusunda birazcık, aslında şüphelerim var, yani teknoloji işin içine girdiği zaman öğrencinin ciddiye alma seviyesi birazcık daha düşüyor gibi geliyor bana.

Some of the pre-service teachers who are critical of technology have had <u>Dissapointing Personal Technology Experience</u> (2, 3). One of the interviewees said:

> … I'm telling this as a student myself, I can so much or less in the technology courses I take. … I don't know I mean in those lab hours, in the courses we take and stuff I think that 10% mostly is giving attention to the class.

> … kendim de öğrenci olarak söylüyorum, kendi aldığım teknoloji derslerinde de az çok görüyorum. Bilmiyorum yani o lablarda

işlediğimiz derslerde falan mesela düşünüyorum en fazla sınıfın %10'u gerçekten dersle ilgileniyordur.

Being <u>Not Face to Face</u> (2, 2) is always mentioned by a minority of pre-service teachers as a problem. Some even go further to say these tools and environments are <u>Not Useful</u> (3, 5) in general. On the other hand, those pre-service teachers who are *Critical of FB* (6, 10) are *Afraid of Loss of Control* (4, 6).

4.3.4. RQ8 How should FB be used?

Finally, pre-service teachers reflected on the following question:

- If Facebook is to be used as an educational application how should it be used?

In this final question, suggestions, recommendations, and ideas of pre-service teachers regarding the implementation of FB for educational purposes were acquired. In this final analysis of the ideas of pre-service teachers, following categories were grounded on the transcripts:

a. Employment (15, 169)
b. Educationally Implementable FB Features (15, 60)
c. Advantages (14, 85)
d. Implementability (14, 51)
e. Strategies (11, 64)

Visual representation of "How should FB be used?" is depicted in Figure 4.6.

Employment (15, 169)

Most of the pre-service teachers reflected on the **Employment** (15, 169) of FB. Most of the interviewees focused on *Possible Educational Tactics* (14, 75). Fourteen respondents stated that FB can be used for <u>Posting Educational Content</u> (14, 26). Half of the interviewees suggested <u>Motivating Students</u> (8, 17) via FB as a "funny" tool. Almost half of the pre-service teachers stated that <u>Giving Helpful Information</u> (7, 13) is possible via FB.

Some of the future teachers suggested <u>Assessment by FB</u> (7, 9). Other interviewees recommended <u>Giving Homework via FB</u> (4, 5). Another remarkable ide was <u>Getting Educational Help via FB</u> (4, 4).

Another category was *Interaction* (12, 44). Most of the pre-service teachers argued that FB as a Relationship oriented technology would be very useful for *Interaction*. Most of the pre-service teachers highlighted <u>Social Interaction</u> (10, 17) in general. They mentioned <u>Student - Student Communication</u> (10, 13) and <u>Teacher - Student Communication</u> (10, 14) in particular.

Educational Communication (11, 19) was a highly underlined issue as mentioned before. As a tool for *Communicating*, or for **Communication** in general, according to most of the interviewees, FB may be implemented also for the purpose of *Educational Communication*.

Moreover, *Socializing via FB* (9, 11) was voiced upon by most of the respondents. One of the respondents said:

> … I found a group with my students, at the same time, I make sure students communicate with each other, maybe make sure socialize with each other.

> … kendi öğrencilerimle ilgili bir grup kurarım aynı zamanda öğrencilerin ordan iletişim kurmasını sağlayıp belki kendi aralarında sosyalleşmesini sağlayabilirim.

Some of the interviewees suggested some *Possible FB Enhancements* (5, 16). Following 9 enhancements were suggested for FB:

1. Portal for Educational Content (2, 4)
2. Personal Storage for Educational Content (2, 4)
3. Search Engine (2, 2)
4. Anonymity for Students (1, 1)
5. Avatar for Student (1, 1)
6. Blog on FB (1, 1)
7. Conference on FB (1, 1)
8. Educational Account (1, 1)
9. Role Playing (1, 1)

Finally, a minority of the respondents suggested employing FB for creating an environment for *Students Helping Each Other* (3, 4). One of the respondents said:

> If it was to be used for educational purposes, a group for the class may be opened. Get help from friends, help when there are group activities.

> Eğitimsel amaçlar için kullanılacak olsa sınıf adına bir grup açılabilir. Arkadaşlarından yardım alır, grup çalışmaları yapılırken yardımcı olur.
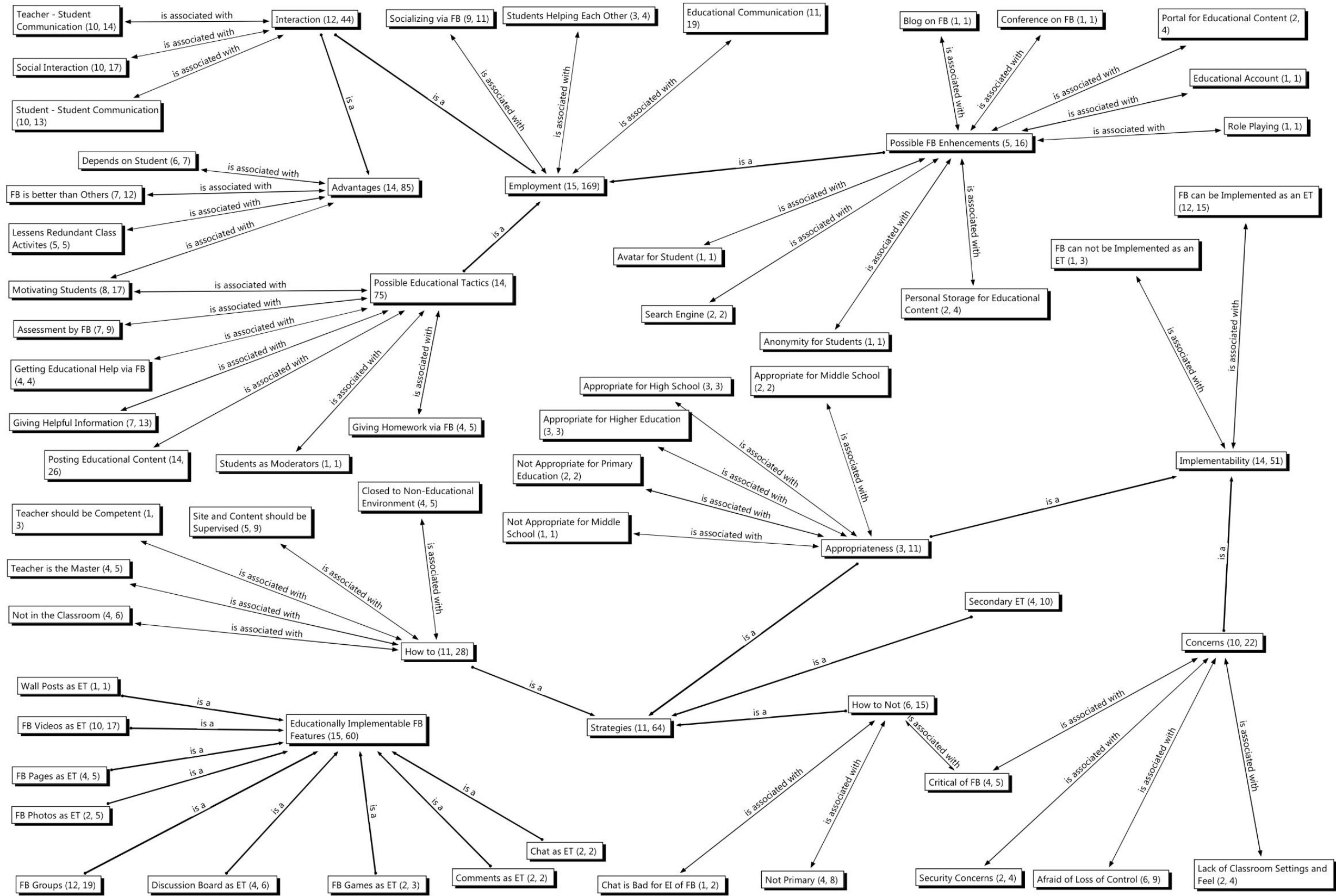
Figure 4.6. Visual representation of "How should FB be used?"

Educationally Implementable FB Features (15, 60)

Most of the respondents reflected on **Educationally Implementable FB Features** already in hand. Following 9 existing FB features were highlighted as "already in hand" and educationally implementable:

1. *FB Groups* (12, 19)
2. *FB Videos as ET* (10, 17)
3. *Discussion Board as ET* (4, 6)
4. *FB Pages as ET* (4, 5)
5. *FB Photos as ET* (2, 5)
6. *FB Games as ET* (2, 3)
7. *Chat as ET* (2, 2)
8. *Comments as ET* (2, 2)
9. *Wall Posts as ET* (1, 1)

As seen in the list, Pre-service teachers underlined "social" aspects of FB such as *FB Groups*, *Discussion Board*, and *FB Pages*. Another remarkable cluster was *Communicating*. "Posting" was seen as "an educational activity that students can do on FB." Moreover, *FB Videos* and *FB Games* were innovative and modern educational mediums that are seen as implementable "with" FB.

Advantages (14, 85)

Most of the pre-service teachers reflected that FB has **Advantages** over other mediums as a possible educational tool. Most mentioned issue was *Interaction* (12, 44) which was highly voiced during the course of most of the interviews. Most of the pre-service teachers argued that <u>Social Interaction</u> (10, 17) can be fostered and maintained better on FB compared to other information technologies such LMSs, etc. <u>Student - Student Communication</u> (10, 13) and <u>Teacher - Student Communication</u> (10, 14) were addressed as issues where FB has an advantage with its massive social networking technology and infrastructure.

Half of the pre-service teachers stated that FB is already *Motivating Students* (8, 17) for **Learning**, *Getting Information*, *Helping Each Other*, *Accessing Educational Content*, and each other. As a **Recreational** tool which is used by students for *Having Time*, FB may be implemented as a tool for *Motivating Students* for the educational activities. One of the interviewees said:

> For example there may be games; you know getting the attention
> of the students and at the same time teach some of things.

Mesela oyunlar olabilir, işte farklı yazılar veya videolar olabilir. Hani öğrencilerin ilgisini çekecek aynı zamanda da bir şeyler öğretecek.

As highlighted before as a perceived positive characteristic of FB, some of the interviewees argued that *FB is better than Others* (7, 12). Another group of pre-service teachers argued that while using FB for educational pruposes, the course *Depends on Student* (6, 7). Another remarkable idea was that FB *Lessens Redundant Class Activities* (5, 5). One of the respondents stated:

.. they are doing role play and stuff, students, they you know, Together, telling the students living close to each other take it to home and do it, we may not have time in the class, you can tell them to upload there.

… role play falan mesela yapıyorlar ya öğrenciler, onların mesela, bir arada, birbirlerine yakın yaşayan öğrencilere evde yapmalarını söyleyip, sınıfta vaktiniz olmayabilir, ordan yüklemesini söyleyebilirsiniz.

Implementability (14, 51)

Most of the pre-service teachers argued that *FB can be Implemented as an ET* (12, 15). Only one interviewee stated that *FB cannot be Implemented as an ET* (1, 3).

Even the ones who think that *FB can be Implemented as an ET* (12, 15) have Concerns (10, 22) about implementing it. Half of the concerned respondents were Afraid of Loss of Control (6, 9). One of the respondents said:

You can't control everything everybody shares… I mean you know it's a place where it's hard to control and may be bad.

… herkesin paylaştığı şeyi kontrol edemezsin… aslında kontrol etmenin zor olduğu biraz da kötü de olabilecek bir yer…

Some of the concerned ones were Critical of FB (4, 5). They argued that there is an inherent Lack of Classroom Settings and Feel (2, 4) on FB. A minority of the interviewees reflected on Security Concerns (2, 4).

Appropriateness (3, 11) of FB for various educational situations was reflected on. Following distribution of positions emerged:

1. Appropriate for High School (3, 3)
2. Appropriate for Higher Education (3, 3)

3. <u>Appropriate for Middle School</u> (2, 2)
4. <u>Not Appropriate for Middle School</u> (1, 1)
5. <u>Not Appropriate for Primary Education</u> (2, 2)

According to the list above, most of the pre-service teachers think that SNSs or FB in particular is appropriate for universities and adult education. Between university and primary school, there is uncertainty. When it comes to primary education, 2 pre-service teachers were courage enough to oppose the implementation.

Strategies (11, 64)

Finally, most of the pre-service teachers reflected on the **Strategies** that should be followed if FB is to be used as an educational application. Most of the respondents reflected on *How to* (11, 28) use FB for educational purposes. Some of the respondents argued that <u>Site and Content should be Supervised</u> (5, 9). Some of the respondents stated that FB should be used for educational purposes but <u>Not in the Classroom</u> (4, 6). Others argued that educational application of FB that will be used should be <u>Closed to Non-Educational Environment</u> (4, 5). One of the respondents said:

> … it may be opened as a page. Groups may be opened as well. A closed group special for only us, only we can see.

> … bir sayfa açarak olabilir. Ha grup da açılabiliyor. Sadece bize özel olarak kapalı grup, sadece bizim görebileceğimiz.

A second discussion was about the role of the teacher. All of the ones who reflected on this issue indicated that <u>Teacher is the Master</u> (4, 5) on possible future FB application. One of the respondents stated:

> .. teacher himself opens this, founds the group, calls the students into the group, I mean in (between) very certain hours.

> … bunu hoca kendisi açar, bu grubu kurar, öğrencilerini çağırır bu grupta, yani çok belli saatler içerisinde

More than half of the ones who reflected on the strategies talked about *How to Not* (6, 15) use FB for education. Most of the ones who commented about how not to use FB were <u>Critical of FB</u> (4, 5). These pre-service teachers stated that FB should be <u>Not Primary</u> (4, 8).

Another group of pre-service teachers argued that FB should be implemented as a *Secondary ET* (4, 10). One of the respondents argued:

Not as a primary element but as a tool you know maybe now and then catches the students' eyes, looks at some of things and learn.

Birincil unsur olarak değil ama bir araç olarak hani belki öğrenciler arada bir gözü takılır, bakar bir şeyler öğrenir.

4.4. Summary

This chapter presented the findings of the quantitative and qualitative phases of the study. In the quantitative findings phase, association of those 10 psychological constructs or latent variables with FB use were investigated. FB use was measured by FriendCount (number of friends on FB), Duration (Duration of FB membership), Intensity (Time spent on FB during a day), and ProfileSee (Level of privacy of FB profile). For investigating those associations, 8 regression analyses were conducted on Turkish and American data. For the association of FriendCount and latent variables, multiple linear regression analysis was conducted. For the association of Duration and Intensity and latent variables, ordinal logistic regression was conducted for each. For the association of ProfileSee and latent variables, multinomial logistic regression was conducted. All except one regression models were significant and valid. One regression was reported as "uncertain on validity" by SPSS. The results indicated that there are many cultural differences in the association of Attitude, Motivation, Passing Time, Relationship, Friendship, Neuroticism, Extraversion, Conscientiousness, Agreeableness, Openness to Experience and FB use.

In the qualitative phase, a constant comparative analysis was conducted on the transcripts of the interviews. Results revealed that pre-service teachers have q quite positive perception of FB and associate it with Relationship, Learning, Communication, and Recreation. Even though there were certain concerns and issues, FB was praised by most of the pre-service teachers with positive associations. Most of the pre-service teachers were motivated to use FB and Relationship, Learning, Communication, Recreation, Functionality, and Addiction were grounded on the data as motivational factors.

Most of the pre-service teachers associated FB with teaching profession and reflected on the advantages of FB when speaking of implementing it for educational purposes. Pre-service teachers highlighted educational communication that FB may provide, certain FB features such as FB Groups and FB Pages as ready to implement for educational purposes. On the other hand, most of the pre-service teachers were scared of losing control and getting too close with friends on FB. Highlighted that FB is implementable for educational purposes but they were also critical of certain issues such as privacy, security, distraction, and disinhibition.

CHAPTER V

DISCUSSION AND CONCLUSION

This chapter of the thesis is for presenting a discussion of the findings of the study. Initially, the purpose of the research and research questions are restated and the research design utilized for the study is reviewed. After the review of the methodology, findings of the study are discussed. Findings of this study are compared and contrasted with the findings of the previous studies. Finally, limitations and delimitations of the study are provided.

5.1. Overview of the Study

This study was intended to shed light on the implementability of SNSs for educational purposes. As new phenomena, SNSs are websites that individuals spent a considerable amount of their time socializing and networking on it. Individuals create personal profiles on that website and communicate, network, and learn on SNSs. To some extent, they replaced e-mail, instant messaging applications, and online discussion forums. They provide substitutions even for telephone interview, such as video talk. Students and teachers are already using it for learning and other educational purposes such as informing, accessing, and discussing. But individuals tend to use SNSs such as FB differently –to some extent- in their own way. Even though they are overwhelmingly popular, there are concerns regarding their use. FB is the most popular SNS.

To investigate the implementability of SNSs for educational purposes, this study has three aims: first (a) to unfold how individuals tend to use FB compared to each other in the context of their personal differences, second (b) to reveal how these differences are affected by culture –if there are differences, and third (c) to shed light on pre-service teachers' perceptions, interpretations, feelings, and thoughts of FB.

To attain the aims of the thesis, a cross-cultural mixed-method design was utilized. The mixed-method model was explanatory sequential design. Quantitative phase was followed by a qualitative phase and that second phase was constructed according to the results of the first phase. Quantitative phase, was twofold and conducted both in Turkey and then in the USA. It was designed as a correlational study. Qualitative

phase was administered only in Turkey and followed the analyses of the data collected in the Turkish lap of the quantitative phase. It was a constant comparative research.

In order to reach the goal of the thesis, 8 research questions were asked. In the quantitative phase, following research questions were posed for this study:

1. To what extent personality traits, motivation to use FB, attitude towards FB, and motives to use FB is related to the number of friends on FB?
   1.1. If there is a relationship, do cultural differences between Turkey and the USA affect that relationship?
2. To what extent personality traits, motivation to use FB, attitude towards FB, and motives to use FB is related to the duration of FB membership?
   2.1. If there is a relationship, do cultural differences between Turkey and the USA affect that relationship?
3. To what extent personality traits, motivation to use FB, attitude towards FB, and motives to use FB is related to the time spent on FB during a day?
   3.1. If there is a relationship, do cultural differences between Turkey and the USA affect that relationship?
4. To what extent personality traits, motivation to use FB, attitude towards FB, and motives to use FB is related to the level of privacy of FB profile?
   4.1. If there is a relationship, do cultural differences between Turkey and the USA affect that relationship?

In the qualitative phase, following research questions were asked:

5. What are the pre-service teachers' perceptions of FB?
   5.1. What do pre-service teachers like or dislike about FB?
6. Are pre-service teachers motivated to use FB?
   6.1. What are the factors motivating the pre-service teachers to use FB?
7. How do pre-service teachers associate FB with teaching profession?
8. How should FB be used according to pre-service teachers if it is to be used in education for educational purposes?

In the quantitative phase, in order to unfold how individuals tend to use FB compared to each other considering their personal differences; association between psychological constructs and FB use is investigated. FB use is measured by FriendCount (number of friends on FB), Duration (Duration of FB membership), Intensity (Time spent on FB during a day), and ProfileSee (Level of privacy of FB profile).

Psychological constructs measuring personal differences were personality traits (Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience), motives to use FB (Passing Time, Relationship, Friendship), motivation to use FB (Motivation), and attitudes towards FB use (Attitude). In Turkey, 641 pre-

service teachers (N_{TR}) participated in the study. In the USA, 121 pre-service teachers (N_{US}) participated in the study. The data were collected by two online surveys (Turkish and English) and were statistically analyzed by regression analyses by using SPSS. FB use variables were held as DVs and psychological constructs were held as IVs.

In the qualitative phase, 16 pre-service teachers (N_{QL}) were interviewed by the researcher. A set of 8 open ended questions guided the interview. The interviews were video recorded and the videos were transcribed by the researcher. The transcripts were analyzed by constant comparative method. Pre-service teachers' perceptions of FB, their likes and dislikes about FB, their interpretations regarding the association of FB with teaching profession, and their thoughts about how FB should be utilized if it is to be implemented were grounded on the transcripts.

5.2. Major Findings of the Study

This section of the chapter is for presenting the major findings of the study and for making sense of them in the context of the implementability of SNSs for educational purposes. Section is organized according to the research questions. Initially, quantitative findings are discussed. A fact sheet of the associations between personal differences and FB use is presented in Table 5.1. Then, qualitative findings grounded on the transcripts are discussed.

Regarding the quantitative findings; association of personal differences with (a) number of friends on FB, (b) duration of FB membership, (c) time spent on FB during a day, and (d) level of privacy of FB profile are discussed. Cultural differences between pre-service teachers from Turkey and the USA are highlighted in each section. Then, regarding the qualitative findings, (e) pre-service teachers' perceptions of FB, (e.a) their likes and dislikes about FB, (f) are pre-service teachers motivated to use FB, (f.a) motivational factors for using FB, (g) association of FB with teaching profession, and (h) pre-service teachers' thought on how FB should be used are discussed.

5.2.1. Number of friends on FB (RQ1)

In the Turkish study, all in all, Extraversion, Agreeableness, Relationship, Openness to Experience, Passing Time, and Neuroticism were significantly associated with FriendCount (number of Friends on FB). Extravert Turkish pre-service teachers were the ones most associated with number of friends on FB. Extraversion is defined as "the act, state, or habit of being predominantly concerned with and obtaining gratification from what is outside the self" (Extraversion, n. d.). Therefore this strong relationship is in parallel with the definition of extraversion. An increase in extraversion results in a significant increase in the number of friends. This relationship is a great indication of the personality on FB use.

This is in parallel with the discussion of Butt and Phillips (2008, p. 356) on extraverts arguing that they are recognized for having extensive social network. They also state that "people feel more comfortable calling extraverts because their optimistic and talkative character seems to reassure many individuals." Therefore not only extraverts may be adding more friends, others may tend to add them significantly more compared to the others.

Table 5.1. Fact sheet of the associations between personal differences and FB use.

Independent Variables	Dependent Variables							
	FriendCount		Duration		Intensity		ProfileSee	
	TR	US	TR	US	TR	US	TR	US*
Neuroticism	<0.01		<0.05		<0.05			
Conscientiousness						<0.05		
Extraversion	<0.001	<0.05			<0.05			
Agreeableness	<0.001							
Openness to Experience	<0.01		<0.01		<0.01			
Passing Time	<0.05	<0.01	<0.01	<0.001	<0.001	<0.001	<0.05	
Friendship								
Relationship	<0.05						<0.05	
Motivation			<0.05		<0.01			
Attitude	<0.001		<0.01		<0.001	<0.001		

Notation: Expressions in the cells indicate significance levels of the associations. If the cell is empty, there is no significant relationship. (*****) A regression analysis on ProfileSee in the American data couldn't be conducted.

On the other hand, findings of the Turkish study is in contrast with Ross et al. (2008, p.582) who report no association between Extraversion and number of FB friends even though association is found with the number of FB groups joined in.

Remarkably, Landers and Lounsbury (2006, p. 288) argue that extraverts are associated with lover levels of Internet usage. They discuss their findings by stating that "[m]ore extraverted students may be spending their discretionary time in more social activities that do not involve computer or Internet usage." Thus, it may be stated that more extraverted pre-service teachers who spend their more of their time in more social activities then computer and Internet usage, are significantly have more friends on FB indicating that extraverts draw a distinction between FB time and other "non-social" computer and Internet time.

Agreeableness is also associated highly with number of FB friends in Turkey. This may be due to the ease of getting along with agreeable individuals. This finding is again in contrast with Ross et al. (2008, p.582) who report no significant association between agreeableness and number of contacts. Remarkably, Butt and Phillips (2008, p. 356) report no association between mobile phone usage and agreeableness and in contrast they state that disagreeableness is associated with more incoming phones. They define agreeable individuals as "concerned with interpersonal relationships that are based on the equal and honest exchange of information" and argue that disagreeable people scored higher in association with mobile phone usage due to their tendency for "not to care what others think" (p. 357).They also noted:

> *Disagreeable people would possibly choose not to adhere to the mobile phone standards of etiquette, answering their phones during a face-to-face conversation, making and taking calls in inappropriate places such as during meetings, lectures or movies… It is possible that people would rather phone a disagreeable person than be in the same room with them… Alternatively, people might phone a disagreeable person to argue or remind them of their interpersonal obligations.*

In relation to Butt and Phillips, Landers and Lounsbury (2006) report negative relationship between agreeableness and Internet usage (288). They argue that this negative association may reflect "students who do not get along well with other students choosing to spend more time on the Internet rather than in interpersonal settings, or they may be less frequently sought out for group activities by other students and, thus, have more time available for Internet usage compared to students scoring higher on Agreeableness." Therefore, agreeable ones who are low on mobile phone use and Internet use are high on the number of FB friends. This is in parallel with the findings regarding extraverts. Even the ones such as agreeable ones who do not prefer to talk relatively on mobile phone and do not prefer to use relatively computer and Internet are more active on FB. This may reflect that individuals even the ones who are not frequent users of technological devices and mediums perceive FB differently compared to mobile phone, computer, and the Internet.

Openness to Experience was the last personality trait associated with number of friends in the study conducted in Turkey. Costa and McCrae (1992) argue that openness to experience indicate "an active imagination, aesthetic sensitivity, attending to inner feelings, preference for variety, intellectual curiosity and independence of judgment." In parallel with them, Ross et al. (2008, p.582) report that higher levels of Openness to Experience were "associated with a greater tendency to be sociable through Facebook." In parallel with the findings of Ross et al. (2008), pre-service teachers who are more open to experience had more friends compared to the ones less open to experience. These results may reflect that pre-service teachers who are open to experience may be less prejudiced, opinionated, and discriminatory against the individuals on FB asking for friendship and they may be preferring for variety in terms of kinds of people in their friends list. On the other, keeping their tendency for intellectual curiosity in mind, they may be seeking for intellectual friendships on FB as well.

Relationship and Passing Time were two motives associated with the number of friends on FB. Sheldon (2008, p. 50) reports that most of the students use FB for maintaining relationship with people they know. She also reports that larger proportion of students use FB for passing time and entertainment purposes. Therefore, in parallel with Sheldon's findings, it is found that Turkish pre-service teachers who are using FB with with motives of Relationship and Passing Time have more friends on FB. This may indicated that those who have the motives of Relationship and Passing Time have more socially networked on FB and like to use it for entertainment and relationship maintenance purposes.

In the Turkish study on FriendCount, Neuroticism was the last one to associate with the number of friends on FB. Butt and Phillips (2008, p. 357) report high SMSing on mobile phones associated with higher levels of Neuroticism. On the other hand, Ross et al. (2008, p.582) argue that "[t]hose high on the trait of Neuroticism reported that the [FB] Wall was their favorite Facebook component, whereas those low on Neuroticism preferred photos" and "are more likely to control what information is shared." Therefore, it might be interpreted that relatively more Neurotic Turkish pre-service teachers like to have more friends compared to less Neurotic ones and they might be trying to increase their chance for written communication by having more friends since some of their friends might find written communication less appealing.

In contrast with the Turkish study, in the American one, only Passing Time and Extraversion predicted high number of friends on FB. This might reflect the fact that while Turkish pre-service teachers are more likely to move most of their offline social network to FB and more likely to make new friends online, American pre-service teachers are more deliberate in keep their network limited except the ones who are extraverted and the ones who are using FB with the motive of Passing Time. This in turn gives way to the interpretation that, SNSs may be more useful in Turkey than in

America considering students' networking characteristics and ease of networking on SNSs.

5.2.2. Duration of FB membership (RQ2)

In the Turkish study, all in all, Passing Time, Openness to Experience, Attitude, Motivation, and Neuroticism were associated with the duration of FB membership. The individuals who are using FB with the motive of Passing Time were high in number of friends on FB compared to the others both in Turkey and the USA. Therefore it might be said that, Turkish individuals who were first in creating a FB account were more likely the ones who were seeking a place for Passing Time. They were already searching the Internet for places where they can have new opportunities of entertainment and found FB earlier than others.

The ones high on the trait of Openness to Experience were similar with the entertainment seekers in the search of new places for new experiences. They might have imagined the possibility of finding friends for satisfying their intellectual curiosity and might have found FB a new variety among other earlier SNSs.

Those high on Attitude and Motivation were earlier in creating a FB account as well. Positive attitude towards using FB and high motivation to use FB may indicate that these individuals had high levels of online digital media literacy and were already familiar with the concept of FB. They might be already motivated to use CMC and SNS platforms so that they didn't have a problem with a new one. These results indicate that online digital media literacy influences the adoption of new online media tools.

Finally, Neuroticism was a predictor of duration of FB membership. In parallel with their associating with number of FB friends, they are seekers for new friends for the purpose of written communication. They might have thought that they could have more friends for communicating in black and white on FB. These results indicate that, neurotic pre-service teachers tend to adopt new online communication environments such as SNSs for reaching a higher chance for written communication.

In contrast with the Turkish study, in the American one, a valid regression model couldn't be constructed for predicting the duration of FB membership. This may be due to the fact that the origin of FB is the USA and it was highly publicized in its homeland early in the launch period. Another explanation may be the higher levels of online digital media literacy in the USA. Thus, American pre-service teachers rushed to FB unanimously and most of the Americans (81.4%) created their account in the first four years of the FB service. This finding indicate that, it is easier in the USA to implement an SNS in terms of adoption of the service even though maintaining may be harder compared to Turkey considering the socialization and networking of the individuals who adopted the service.

5.2.3. Time spent on FB during a day (RQ3)

In the Turkish study, all in all, Attitude, Passing Time, Openness to Experience, Motivation, Extraversion, and Neuroticism were associated with the time spent on FB (Intensity). Variables predicting Intensity are the same as the ones predicting Duration except Extraversion which was not predicting Duration. In a nutshell, these results indicate that those who created their accounts early kept using them intensively.

On the other hand, between the duration of FB membership and time spent on FB there was another remarkable difference. Alignment of the variables in the line of predictors has changed. From most influential to the least the ones predicting Duration was: Passing Time, Openness to Experience, Attitude, Motivation, and Neuroticism. The line is Attitude, Passing Time, and Openness to Experience, Motivation, Extraversion, and Neuroticism for Intensity. In this contrast, it seems that Attitude has moved to the top. This may be due to the fact that those who have a positive attitude towards using FB are more satisfied and pleased with what they have found after creating account compared to the other ones. This may give way to interpretation that the ones who are using FB with the motive of Passing Time and the ones who are associated with the trait of Openness to Experience were expecting more than what they have found even though they are not currently malcontent completely.

Thus, those with high levels of Attitude are most pleased with SNSs and use it more often compared to the ones who are associated with lower levels of Attitude. This means that, Attitude is the most influential attribute affecting the time spent on FB. For keeping individuals on SNS, issues regarding their attitude should be addressed, first. Then, Passing Time is the second predictor. Those individuals who use FB with the motive of Passing Time are second most frequent users of FB been online for longer periods of time during a day. This finding is in parallel with the findings of Sheldon (2008, p. 50) who reports that the ones who have the motive of Passing Time are the second most users of FB who log in FB "when they are bored or after they receive an e-mail suggesting them that someone had posted on their Facebook site." Smock et al. (2011) argue that "motive of habitual pass time" is predicts number of Wall posts (p. 2327). They state that birthday greetings on friends'' Wall are routine (habitual) part of FB experience and they associate it with relationship maintenance. Moreover, Flaherty et al. (1998) argue that compared to face-to-face motives, motives for using Internet communication tools seemed to be "entertainment needs" and "the novelty of the Internet makes it more like a toy than a tool" (p. 264). Therefore, there is a tendency to see Internet tools as "toys" and FB is no exception according to the results of this study.

Openness to Experience was the third predictor of the time spent on FB during a day. Ross et al. (2008, p.582) associate high levels of Openness to Experience with online sociability and CMC knowledge. They are curious and open to communication with

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new friends and open for trying new tools of SNSs for satisfying intellectual curiosity and seek for variety. The results may indicate that the ones who are open to experience –found to have more FB friends- spent more time searching for new friends, making new friends, talking with them, and trying the tools and functions of FB which are frequently updated, hence, spending a considerable time on FB during a day.

Motivation is another factor correlated with the amount of time spent on FB during a day. Spitzberg (2006) indicate that "motivation represents the initial energizing process of knowledge search and application" (p. 649). He states that motivation plays and important role "in predicting the use and success in using CMC technologies" (p. 640). Ross et al. (2008, p.582) report that Motivation "was associated with the amount of time an individual spent on Facebook each day." Thus, the findings of this study regarding Motivation are in parallel with the findings of Spitzberg (2006) and Ross et al. (2008). This finding indicates that users may be kept on SNS by increasing their motivation to use it. Taking Attitude into consideration, it could be said that since Attitude and Motivation may be developed and increased by "good design", individuals may be prepared for spending more time on SNS.

Extraversion was another predictor of time spent on FB during a day. Extraversion was also correlated with FriendCount but not associated with duration of FB membership. Butt and Phillips (2008, p. 356) define extraverts as "sensation seekers and risk takers." This may be thought hand in hand with Passing Time and it can be said that Extraverts may be late on creating accounts on Internet websites when they spare some time for non-real-world activities, they use it often and socialize strongly as they do in the real world. This indicates that, extraverts need to be informed, encouraged, and motivated for creating accounts and beginning their online socializations. Online social activities of extraverts need to increase the online social activities of others since extraverts network with all individuals not only the extraverts like themselves.

Neuroticism was also a predictor of time spent on FB during a day. Butt and Phillips (2008, p. 357) report that Neuroticism "explain time spent SMSing." In parallel with the findings of this study and the findings of Butt and Phillips's study, Ross et al. (2008, p.582) report high levels of Wall posting associated with Neuroticism. Neurotic Turkish pre-service teachers have created their FB accounts earlier, made more friends on FB, and were using their account frequently. These results indicate that, SNSs are great tools for reaching Neurotic individuals and connecting them with the rest of the crowd.

In contrast with the Turkish study, in the American one; Attitude, Passing Time, and Conscientiousness were associated with the time spent on FB (Intensity). Two cultures were the same regarding the first two predictors of Intensity: Attitude, Passing Time. But the rest of the associations differed. The cultural difference first appears in

Openness to Experience, Motivation, Extraversion, and Neuroticism which do not predict time spent on FB during a day in the USA. This difference may stem from the time FB became popular in the USA which is also its original country.

This finding –taking Duration in the account- indicate that, the ones open to experience satisfied their curiosity regarding the new tools of FB and "exhausted" friend search in the USA. In the same manner, in the USA, motivation may have faded a certain amount of time after initial rush. Same explanation may be applied to Extraverts. Extraverts may be bored with the "online" offshoot of their already existing active real world social network after using it for a certain amount of time. They were not early adopters anyway. But in between their rich social network resulted with a long Friend list which is not being used often anymore.

Neurotics were not a significant group, at first place in the context of Duration and FriendCount in the USA. This result indicate that, written communication is less prevalent in the USA since neurotics who are using CMC and SNS mediums for written communication fall of the map in the USA.

On the other hand, in contrast with the study of Ross et al. (2008, p.582) who report no association of Conscientiousness and FB use, Conscientiousness was found to be associated with Intensity in the USA, in this study. They define Conscientiousness as a dimension which "reflects the degree to which an individual is organized, diligent and scrupulous" (p. 579) and it is characterized by competence, achievement, self-discipline and dutifulness" (Butt & Phillips, 2008, p. 348). Ross et al. (2008) argue that "Conscientiousness are more likely to avoid CMC tools which may serve as procrastination or distraction tools from their daily tasks" (p. 579) and therefore avoid spending too much time on FB which they might fight procrastination or distraction. But current findings indicate that conscientious American pre-service teachers are spending quite a lot time on FB during a day. This may stem from the fact that pre-service teachers –who are undergraduate students- are more likely to procrastinate or more open to distractions for Passing Time when they are bored or they might be spending time helping others on FB.

These results indicate that even the ones who are open to experience and/or extraverts may get away from "new" toys since every "new" toy gets old by time. On the other hand, written communication still makes difference in terms of founding and maintaining relationships and communicating with others in some countries such as Turkey. But they may not be so in countries with higher levels of online digital media literacy –such as the USA.

5.2.4. Level of privacy of FB profile (RQ4)

In the Turkish study, all in all, "Only my friends" category was predicted by Neuroticism, Conscientiousness, and Passing Time; "All networks and Friends"

category was predicted by Relationship variable; and finally, "Some networks/All friends" category was predicted by again Passing Time. Research on the privacy settings is limited regarding SNSs, FB in particular. Smock et al. (2011) asks for future research considering privacy setting as variable (p. 2327).

These findings indicate that, neurotic individuals are neurotic about their privacy as well. Even though they are relatively early adopters, even though they have relatively more friends, and even though they spend relatively more time on FB, they do not open themselves to "others" and keep their personal information special for their closed ones. This indicates that, neurotic individuals should be satisfied regarding security levels for privacy for any implementation of SNSs for educational purposes for not to lose their trust.

On the other hand, conscientious individuals were keeping their profiles in higher security as well. This is in parallel with the definition of Conscientiousness which is defined as a dimension which "reflects the degree to which an individual is organized, diligent and scrupulous" (Ross et al., 2008, p. 579). Conscientious individuals are similar in nature with neurotics regarding their privacy: deliberate and scrupulous.

Moreover, Passing Time was predicting "Only my friends" category as well. This may stem from their need for recreation and relaxation which gives way to avoiding possibly boring and possibly disturbing encounters. Individuals who want to pass time keep their security firm and want to have a problem-free FB experience for having fun.

"All networks and Friends" category was predicted by only Relationship. By nature, those who are using FB for founding and maintaining Relationship need to be open to be able to make new friends on FB. This also indicates that, the ones who are most vulnerable to cyber-crime and moral hazards are the ones who are using FB with the motive of Relationship.

In contrast with the Turkish study, in the American one; only one security level was predicted by only one variable. "All networks and Friends" category was predicted by Motivation alone. This due to the fact that 90.9% of Americans allow only their friends to see their profile. This finding indicates that Americans are keen on their security and they go as further as sacrificing social networking for security on a social networking service.

The motivated American pre-service teachers who are the only ones letting their networks see their profile are most probably the ones with higher online digital media literacy and who are very good at using the Internet and aware of the true risks and threats to their privacy. In parallel with Spitzberg's model (2006), motivation and knowledge are highly related and influential on Internet related skills and competence (p. 649).

Consequently, American and Turkish pre-service teachers are different in terms of their privacy setting on their FB profile. While Americans are more security minded, Turkish ones are more open to relationship and social interaction.

5.2.5. Pre-service teachers' perceptions of FB (RQ5)

Overall, findings indicate that pre-service teachers were exceedingly mindful regarding FB. Relationship, learning, communication, and self-expression are perceptions of FB shared by most of the pre-service teachers. They also perceive FB as a tool with functionalities and an environment or tool for recreation. While some of the pre-service teachers were critical of FB regarding its competence and necessity, more of them had existential concerns regarding FB.

Relationship is the first perception uttered by pre-service teachers when they reflect on FB. They associate FB with companionship, social interaction, finding old friends, and a place for following others. This is in parallel with the quantitative part of this study which outputted associations between FB use and relationship and friendship. Findings were also parallel with the study of Pempek et al. (2009, p. 236) in which it is reported that college students use FB for facilitating relationship with existing friends, making new friends, keeping up with them. Similarly; Cheung et al. (2010) report that most of the people use FB for connecting with friends (p. 1340). They report that "[s]ocial factors are more important in determining intentional social action." Moreover; Mazman and Usluel (2010) report that FB is used for social relations such as staying in touch with existing friends, keeping up with the old ones, and making new friends (p. 451). Finally, other previous studies reported that socialization and relationship are key factors associated with the use of FB (Roblyer et al., 2010, p. 138; Grosseck et al., 2011, p. 1428; Kabilan et al., 2010, p. 185; Hew, 2011, p. 667). Thus, by nature, relationship is the most perceived characteristic of FB which is a social networking service (SNS).

Fortunately, learning was second most reflected perceptions of FB. This perception has a counterbalance in the previous studies. Pempek et al. (2009, p. 236), Mazman and Usluel (2010, p. 451), and Wang et al. (2012, p. 435) report that FB is being used for and could be used for educational communication. Grosseck et al. (2011, p. 1428) report that FB is used for researching and discovering. Kabilan et al. (2010, p. 185) argue that learning of English in FB is feasible "even though their initial intention of joining FB is to socialize." They state that FB is both a learning and socialization platform. Thus, pre-service teachers perceive FB as a tool in which they can socialize, network, maintain relationships and learn at the same time. This is a great advantage for the ones in the field of ET considering the fact that FB is already used with a considerable satisfaction for socialization and learning at the same time giving way to possible opportunities for successful collaborative online learning.

Another strong perception shared by most of the pre-service teachers was communication. In parallel with the findings of this study, Cheung et al. (2010, p. 1340), Pempek et al. (2009, p. 236), Mazman and Usluel (2010, p. 451), Roblyer et al. (2010, p. 138), Kabilan et al. (2010, p. 185), Grosseck et al. (2011, p. 1428), and Wang et al. (2012, p. 435) report that FB is a tool used for communication -mostly by young individuals and more boy college students. This is another grate advantage for ET professionals and teachers and learners, keeping in mind the importance of communication in learning and teaching. In a Habermasian perspective, education is a communicative action and could be understood in a paradigm of communicative rationality. Han (2002, p. 150) argue that "education is a kind of communication designed for a particular group of people to interact with each other in a specific way, to make changes to what they currently are or what they currently know, with the prospect of improvement." Han suggests conceptualizing education in a Habermasian understanding. Well, Turkish pre-service teachers already did it. They perceive FB as a tool for relationship, socialization, learning and –communication.

Self-expression is another major perception of pre-service teachers regarding FB. Grosseck et al. (2011, p. 1428), Cheung et al. (2010, p. 1340), Pempek et al. (2009, p. 236), and Hew (2011, p. 667) define SNSs –FB in particular- as tools, mediums or environments which more of the people use for self-expression. This is a great advantage for FB in a constructivist understanding of learning and teaching. In an environment and by utilizing a set of tools –which FB comprises all of them- relationship, socialization, learning, communication, and self-expression are blended, collated and intermingled in each other resulting with a successful outcome –FB- a socially constructive learning and teaching experience is more plausible. Pre-service teachers' perceptions of FB after using it for a while indicates that, SNSs –FB in particular- may be this "outcome."

Pre-service teachers also reflect on functionalities and software features of FB and perceive it as a tool with high usability and a tool in which very self-expression is experienced like a charm. They perceive it as a highly innovative ET. Mazman and Usluel (2010, p. 451) and Grosseck et al. (2011, p. 1428) in parallel with the findings of this study report usefulness, usability, and ease of use of FB. High usability is crucial in increasing the levels of attitude towards and motivation for using FB.

Moreover, Pre service teachers perceive FB also as a medium for recreation. This is in parallel with the findings from the quantitative part of the study which resulted with pervasive significant associations of FB use with "Passing Time."

Finally; pre-service teachers were highly concerned with some of certain issues such as moving traditional communication to FB, difference between real and virtual person, misrepresentation of personality, disingenuousness, being not face to face, unnaturality, unreality, being against human nature etc. While they were concerned

with all of these technophobia and diffusion of innovation related issues, they were still quite busy using FB according to their words. Some of the pre-service teachers who currently use FB expressed their fear and reluctance by stating that FB is completely unnecessary. Thus, FB is still very new –like all other SNSs and creates a certain level of anxiety but even though it creates anxiety, individuals, especially younger ones and especially college students extensively use FB and socialize, communicate, learn, and enjoy by using it. They use it for expressing themselves. Hew (2011, p. 667) report that–of the 358 FB users- even though "20% reported that they were stalked on Facebook about once or twice per year, and 10% about every month" FB doesn't caused a moral panic. Thus, concerns of students and teachers may be addressed while they are still using it. People tolerate the errors of FB.

5.2.5.1. Likes and dislikes about FB (RQ5.1)

Overall, most of the pre-service teachers like communication, learning, relationship, functionality, and recreation aspects of FB. On the other hand, they dislike some of its characteristics which make them feel worrisome and comfortless. They again reflected on existential concerns regarding FB.

What pre-service teachers like about FB are the same as their perceptions of FB. This may indicate that FB is perceived profoundly in a positive manner since perceptions of FB doesn't include any disliked characteristic except existential concerns. This reveals that FB is accepted and acknowledged among Turkish pre-service teachers as a successful, effective, and satisfactory tool. Recognized with its high usability, FB is seen as a pleasing environment for relationship maintenance, socialization, interaction, networking, communication, learning and self-expression. It's understood from the sameness of perceptions with likes that it's not "how to reform FB" but "what to do with FB" regarding its educational implementation.

Pre-service teachers like finding old friends, making new ones, keeping up with all friends and staying in touch with people friend or not, on FB. They like communicating with them. They like looking at their personal information –such as their personal profiles- and posted photos, posted videos, reading comments on Wall or other items, learning about their personalities –such as which books or movies they like. Pre-service teachers also like communicating their thoughts and feelings by posting. They perceive FB as a very useful and usable place for self-expression. They may think that it's the most appropriate place for self-expression because they think that the appropriate audience –their friends- is the major audience. Mazman and Usluel (2010, p. 451) argue that people use SNSs to "communicate with the like-minded people." In parallel with Mazman and Usluel, Joinson (2008) argues that FB is used for "joining of groups, organization of events and meeting of like-minded people" (p. 1030) and defines that behavior as "social browsing." Thus, FB is found likable regarding ease of self-expression, communication, and relationship to some

extent because of the fact that the audience is en extension of the offline social network such as the ones "constrained to people from the same offline, academic community" (Lampe et al., 2006, p. 167). On the importance of offline social networks and its connection with self-expression, Lampe et al. (2006, p. 169) argue that individuals also use SNSs to "increase their awareness of those in their offline community" and to "increase knowledge about people in an offline social network" - which they define as "social searching." Thus, SNSs are safe haven for individuals to know each other better and to introduce, promote, and identify themselves for others better. This indicates that SNSs have an advantage over LMSs or OLEs or other Internet based environments and even over face-to-face classroom settings in the domain of self-expression.

On the other hand; privacy concerns, annoying other FB users, being exposed to private lives of others, intervention in their private lives, indecent proposals, being forced into unwanted interaction, friendship requests from unwanted people, stigmatization, and cyber-crime are issues that pre-service teachers most dislikes about FB. These are privacy and security concerns are associated unanimously with SNSs and other CMC environments. It would be a mistake to limit those concerns to FB or SNSs in general even though privacy is more at risk on SNSs like FB since true identity is disclosed in the profile. As mentioned before a considerable proportion of SNS users are bullied on SNSs according to Hew (2011, p. 667). Therefore, SNSs should be treated very carefully regarding safety and security of its users. Otherwise, motivation and attitude would be critically jeopardized.

5.2.6. Motivation to use FB (RQ6)

Most of the pre-service teachers are highly motivated to use FB. In the quantitative phase of the study, motivation was found to correlate with the amount of time spent on FB during a day. Therefore, this is a promising finding of the study giving way to expect successful implementation of FB for educational purposes in terms of motivation since "motivation represents the initial energizing process of knowledge search and application" (Spitzberg, 2006, p. 649). Spitzberg (2006) argues that motivation plays and important role "in predicting the use and success in using CMC technologies" (p. 640). In parallel with the findings of that study and the discussion of Spitzberg (2006, pp. 640, 649), Ross et al. (2008, p.582) indicate that motivation is "associated with the amount of time an individual spent on Facebook" during a day.

On the other hand, existential, privacy, and security concerns are constantly threatening motivation to use SNSs. To ensure students to create their accounts, start using it, socialize and network on it, and keep using during the course of a class, motivation should be addressed by responsible individuals if SNSs are to be implemented for educational purposes. To ensure those, according to the findings of this study, privacy and security concerns seem to be the upmost issues to address.

Responsible individuals should keep in mind that personal profiles of SNS users are made of true information and users are at true risk considering bullying, stigmatization, discrimination, stalking, and other cyber-crimes. Existential concerns regarding the "virtuality" of the SNSs should be considered as a problem as well.

5.2.6.1. Motivational factors for using FB (RQ6.1)

Broadly, in this study, motivational factors for using FB are found to be relationship, recreation, learning, communication, functionality and –remarkably, addiction. When compared with previous findings, again, motivational factors were same as the things pre-service teachers like about FB and their perceptions of FB. On the other hand, curiously, the allocation in line has again changed, and addiction appeared as a "blamed" reason for using FB. When we look at the allocation of motivational factors we see that, relationship, recreation and learning passed communication and top leading relationship factor precedes recreation and then learning. Mazman and Usluel (2010, p. 451) argue that "users' purposes in using Facebook have a significant positive relationship with Facebook adoption." And motives to use FB are found to be highly significant in correlation with FB use. Thus, if SNS implementation is at stake, purposes matter. So, why do pre-service teachers most like communicational aspects of FB but go to it for relationship, recreation, and learning more than communication?

This interesting question is crucial in understanding the implementability of SNSs for educational purposes since SNS use is highly contingent upon motivation to use SNS and attitude towards using SNS. Well, it seems that, even though people like to communicate and communicate especially with "like minded" ones, the point is not to communicate at first place at all. What is important is to "have" and "maintain" a relationship rather than communicating through it. Mazman and Usluel (2010, p. 451) argue that "purpose of maintaining social relations is related with utilization for communication." The findings of this study contradict their argument regarding the "direction" of the relationship between relationship and communication. In this study, findings seem to indicate that communication is a straw tool for relationship.

In parallel with the findings of this study, Cheung et al. (2010, p. 1340) indicate that "social presence" has the strongest impact on "we-intention" to use Facebook. They describe we-intention with Tuomela's definition as "commitment of an individual to engage in joint action and involves an implicit or explicit agreement between the participants to engage in that joint action." (1995, p. 9). Social presence is defined by Short, Williams, and Christie (1976, p. 65) as "the degree of salience of the other person in the interaction and the consequent salience of interpersonal relationships." Thus, the greatest motivational factor for using FB is for social presence. In parallel with the foregoing, Ellison et al. (2007, p. 1161) reported strong relationship between "maintenance and creation of social capital" and FB use and described social capital as "the resources accumulated through the relationships among people" (p. 1145).

Lenhart and Madden (2007) report that most of the teens are using SNSs for "stay[ing] in touch with people they already know" (p. 31) and for making new friends. Thus, at the heart of the SNSs lie relationship rather than communication, recreation or other factors. Thus, it might be said that, using an existing SNS is more reasonable then creating a new one, since all of the relationships can't be recreated on the new one.

The second strongest motivational factor for using FB is recreation. This qualitative finding is in accordance with the findings from the quantitative phase of the study in which Passing Time was the most associated motive for using FB. In parallel with the findings of quantitative and qualitative phases of this study, Sheldon (2008, p. 50) report that larger proportion of students use FB for entertainment and passing time. Lenhart and Madden (2007) report that teens use SNSs for "entertainment activities that [they] know and love" (p. 1). Moreover, Cheung et al. (2010, p. 1340) indicate that entertainment value is "important in determining We-Intention to use social networking sites." Thus, recreation –similar with relationship- is crucial for an SNS environment and should be considered for increasing the possible users of any SNS. It seems that even though distraction is considered a demotivational factor by some of the pre-service teachers, nevertheless, they don't give up recreation on SNS.

Another motivational factor was learning –which already was a "liked" aspect of FB. But this learning encompasses all kinds of learning from learning the date and time of the closest exam to learning where the next best friend went for vacation. As mentioned above, educational communication is a highly appreciated resource of FB. Mazman and Usluel (2010, p. 451), Pempek et al. (2009, p. 236), Roblyer et al. (2010, p. 138), and Wang et al. (2012, p. 435) report that FB is being used for educational communication. Grosseck et al. (2011, p. 1428) report that FB is used by students for researching and discovering. They state that "Facebook is an environment in which they feel comfortable and motivated to research, discover, create and fulfill school assignments." Kabilan et al. (2010) argue that learning foreign language in FB is feasible "even though their initial intention of joining FB is to socialize" (p. 185).

On the other hand, pre-service teachers want to learn about others as well as fundamental interactions of universe. In this study, it was found that person oriented curiosity, following others, looking at personal information, looking at photos were among the strongest motivational factors. In parallel with these findings, Pempek et al. (2009, p. 236) report that "lurking and observing others' actions, such as reading the news feed about what friends are doing or looking at others' profiles or pictures, were far more common than posting information or even updating profiles." Thus, in parallel with previous studies, this study reports extensive motivation for learning more about private lives of others. This should be considered Together with the motivation to disclose personal information for generating social capital and maintaining relationship.

Thus, individuals tend to exchange personal information with people whom they know. If the searcher is an unknown individual or a friend who was added to list unwillingly, then he or she is perceived as an "annoying other FB user" and he or she is seen as a threat to privacy. Thus, privacy settings of FB –and all SNSs in general– are essential part of learning aspect of it and should be considered in high priority when it comes to implement FB or another SNS for educational purposes.

Moreover, regarding learning, pre-service teachers were motivated to use FB for seeing interesting things and getting different points of view. Mazman and Usluel (2010, p. 451) report that FB users "exchange information, share ideas and views" during communication processes. This is related with not only learning but also communication and recreation. This finding indicates that SNSs need to be intriguing and evocatory. As a matter of fact, developers need to feed the SNS with surprising, interesting, and compelling "rich" content in order to keep motivation alive when the users are exhausted and satisfied with their already existing relationships. It should be remembered that those extraverted individuals and individuals who are open to experience were found to be demotivated after a motivated period.

Additionally, functionality is seen as a motivational factor as well. Ubiquitousness, usefulness, usability, innovativeness, being accessible via FB, and the overall quality of FB compared to other SNSs were uttered to be motivational. In parallel with this finding, Lenhart and Madden (2007) report that teens use SNSs "in part, because they encompass so many of the online tools [they] that teens know and love" (p. 1). Thus, however implemented, the implementation needs to meet higher criteria of qualities pertaining to online applications, communication and recreation tools, etc.

Finally, some pre-service teachers stated that they are using FB because it is an addiction. This finding contradicted with the findings from quantitative phase which revealed that motivation to use FB fades even on the highly motivated individuals. Even though FB use is reported to be associated with habit by Grosseck et al. (2011, p. 1428) and Sheldon (2008, p. 50), the "habit" factor of motives scale couldn't have been constructed at the pilot study of this research.

5.2.7. Association of FB with teaching profession (RQ7)

Broadly, all of the pre-service teachers strongly associated FB with teaching –their future profession. They highlighted the advantages of FB as an educational tool, educational communication, possible actions that could take place on FB while teaching, and possible educational FB features that they associate strongly with FB. They also reflected on some "anti-educational" issues and some of the reflections of some pre-service teachers were –to some extent- related with technophobia.

Pre-service teachers highlight advantages of FB over other SNSs and other Internet technologies when they associate it with teaching profession. Thus, it seems that –as

mentioned before- pre-service teachers are motivated to not only use FB but also use it for educational purposes. They acknowledge it, accept it, embrace it and expect it by uttering numerous advantages of FB associated with teaching profession. Thus, taking the perception, thoughts, and ideas of pre-service teachers in the account, it might be said that educational implementation of FB is highly scrutable and plausible. On the other hand, pre-service teachers are deliberate enough to report a minute of dissent regarding certain aspects of SNSs –FB in particular- such as privacy issues, distractive nature of SNSs, moral and ethical hazards, danger of loss of control, and disinhibition issues. They also note some technology related fear such as unreality, unnaturality, unconventionality, virtuality, and disingenuousness. Moreover, a minority of pre-service teachers couldn't help casting doubt on computer, computer in education, or technology in general. In contradistinction to concerns related to privacy issues, distractive nature of SNSs, moral and ethical hazards, danger of loss of control, and disinhibition issues; these doubts were recorded and reported but –all in all- were out of the scope of this research study.

As advantages of FB associated with teaching profession, pre-service teachers highlighted access to educational content and information, facilitation of relationship and communication between teachers and students, widespreadness and usability and quality of FB compared to others, motivating nature of FB for participation. Remarkably one of the pre-service teachers underlined that FB is cheap technology (in a positive manner).

Advantages of FB associated with teaching profession are related with the widely expressed perceptions of FB which were also liked aspects of it and which were seen as motivational factors for using FB. Thus, there is a consistency in the discussion of pre-service teachers regarding the implementability of FB for educational purposes.

Most of those advantages are related with "access." Access to teacher, access to student, access to information, access to content, and access to the environment and its tools are expressed strongly as aspects of FB sturdily associated with teaching profession. Mazman and Usluel (2010, p. 451), Pempek et al. (2009, p. 236), Roblyer et al. (2010, p. 138), and Wang et al. (2012, p. 435) report that FB is already being used for educational communication. In addition to educational communication; Mazman and Usluel (2010, p. 451) report that educational use of FB has a significantly positive relationship with "its use for communication, collaboration and resource or material sharing." They also report exchanging practical and academic information as educational uses of FB.

Moreover; Cheung et al. (2010, p. 1340) indicate collaboration among students. Grosseck et al. (2011, p. 1428) highlight access to information by researching and discovering as educational use of FB. Wang et al. (2012, p. 435) argue that FB allows "making announcements, sharing resources, taking part in online discussions and

participating in weekly activities" and they state that FB undertakes major tasks of LMSs. Therefore, in parallel with the findings of previous studies, in this study, it was revealed that pre-service teachers strongly associate access to information, content, and peers via FB with teaching profession. This finding indicates that, "access" is another key factor just like relationship, recreation, communication, and motivation regarding using FB and using it for educational purposes.

Pre-service teachers also associate usefulness, quality, ease of expression, usability with teaching profession. They want to use quality technology when they teachers. Rather than technologies developed for educational purposes which fall short of technology, pre-service teachers want to use quality technology such as FB. They want to spend their time teaching rather than fixing.

On the other hand, one of the pre-service teachers stated that FB is a cheap technology and asked "why not use it?" It is already there and generates revenues by advertisements rather than unit charge or subscription fees. It doesn't need to be installed on anywhere like obsolete school computers. You don't need to teach "them" how to use it and more importantly "you" don't need to learn how to use it! Their reflections are not unique. Grosseck et al. (2011, p. 1429) argue that "Facebook is indeed a 'cheap' tool for promoting knowledge" and she reports that "70% of the students believe it is." Thus, as mentioned earlier, using already existing SNSs – especially high quality ones such as FB- is preferred and expected by pre-service teachers rather than the ones what would be developed for educational purposes. This is reasonable and fair demand. Who would use a word processor developed specifically for education while we have Microsoft Word at hand?

Pre-service teachers also associated some possible actions that could take place on FB with their future profession. They highlighted educational communication, facilitation of relationship between student and teacher, posting educational content, giving homework via FB, and students helping each other on FB. These are actions grounded on the core perceived and "liked" features of FB which were found to be motivational. Major concepts were relationship, access, collaboration and communication –as appeared before. Pre-serviced teachers underlined FB Groups, Friend List, and FB Pages as educational features which can be used for the possible actions.

Finally, three of the pre-service teachers reflected on "educational account" as a means to overcome some of the concerns shared by most of them such as privacy issues, security issues, and distraction. Pempek et al. (2009, p. 237) suggested the utilization of "academically-focused networking site" for students and their professors. They describe their suggested website as follows:

> *Profiles could include favorite courses and career goals.*
> *Alumnae could visit these sites to help current students find*

appropriate internships, job placements, and information about postgraduate academic and job experiences. These kinds of experiences might be engaging for students and open new ways of academically-oriented interactions where professors and alumnae could discover more about the students' interests, and students, in turn, might express and develop more intellectual facets of their lives.

Thus, a "closed" environment is suggested in previous studies in parallel with the findings of this study. On the other hand while Pempek et al. (2009, p. 237) were suggesting a separate website developed for this business, in contrary, findings from this study revealed that pre-service teachers do not want other specifically developed websites. Rather, they want the "closed" environment "within" FB.

Moreover, pre-service teachers associate some "anti-educational" issues related with FB with teaching profession. Privacy issues, distractive nature of SNSs, moral and ethical hazards, danger of loss of control, and disinhibition issues were underlined as anti-educational. They also noted unreality, unnaturality, unconventionality, virtuality, and disingenuousness as problems need to be addressed. Most of these concerns were already reflected on when they discussed disliked and demotivational aspects of FB. Thus, pre-service teachers tend to disassociate certain aspects of FB with teaching profession if they don't like it. They highlight those issues in teacher's shoes. Therefore, this finding indicates that these kinds of problems are not only concerned by students but also by teachers as well. Thus, students and teachers both want to be assured of privacy and security threats before the bell rings. In addition to privacy and security measures they want a warmer, genuine and friendly environment compared to –to some extent- hyper real nature of FB.

Finally, third of the pre-service teachers were cautious about getting too close with students and were concerned about disinhibition. They want to have an edge with their students. This may be a reserve for moral and ethical hazards as well as privacy issues. Wang et al. (2012, p. 435) state that "teachers do not have to be students' friends on Facebook." In parallel with the findings of this study and the ones of Wang et al. (2012, p. 435); Madge et al. (2009, p. 150) and Mazer et al. (2007, p. 14) indicate that especially students are concerned regarding seeing their professors in their friend list. Thus, educational account seems reasonable in that, students and teachers may stay "unfriend" but keep an educational relationship within a closed environment free form annoying other FB users, bullies, distractions, and other possible threats to the educationality of the environment.

5.2.8. How should FB be used? (RQ8)

Final analysis was conducted on the pre-service teachers' thoughts about how the FB should be used for educational purposes -if it was to be implemented. Pre-service teachers voiced remarkable thoughts, ideas, and suggestions for the implementability of SNSs for educational purposes. Initially, most of the interviewees advocated for the implementability of FB –or SNSs in general- for educational purposes. Only one respondent voiced opposing view that SNSs were not educationally implementable.

Those pre-service teachers, who expressed that SNSs –FB in particular- are implementable for educational purposes, articulated a great deal of issues regarding its implementation. Most of the pre-service teachers expressed their thoughts about the employment of FB. Educationally implementable features of FB, advantages of FB as an educational tool and environment, and strategies for using FB were other categories of interpretation.

Regarding the employment of SNSs for educational purposes, pre-service teachers indicated issues in parallel with the previous findings. In parallel with the findings from this study and findings from previous studies, most of the pre-service teachers argue that SNSs should be implemented for educational communication, socialization, social interaction, and for communication between students and teachers. They also noted that SNS may be employed for students to help each other. Remarkably; relationship, collaboration, communication and educational communication were main options for employment. Thus, it seems that, teachers know what SNSs are all about and they know what they can expect from them.

Additionally, all of the pre-service teachers who advocated for implementing SNSs for educational purposes argued that some tactics may be relatively beneficial when they are employed. Remarkably, some of the interviewees suggested assessment by FB. Others suggested getting educational help via FB for students, and giving helpful information via FB for teachers. Half of the interviewees suggested employing FB for motivating students. All of them suggested posting educational content on FB even though it is not currently all possible. One pre-service teacher suggested that students should be moderators on the FB class. These suggestions indicate that, pre-service teachers are knowledgeable about SNSs regarding their functionalities.

Employing FB as a help central both for teachers and students is an innovative idea about using SNSs out of their intended context. This suggestion indicates that pre-service teachers are already creative about conceiving an SNS in an educational setting. Grosseck et al. (2011, p. 1429) argue that "the teacher needs to find ways to initiate and manage an efficient, creative, interactive and relevant communication with them." Therefore, it might be said that we should lend an ear to students and teachers

before starting to develop an educational SNS application, since they have the potential to creatively and innovatively find ways for employing them.

Another remarkable suggestion for employment was assessment via FB. Shih (2011) reports that using FB for peer assessment is quite very fruitful in terms of learning (p. 841). He reports that in addition to reaching their learning objectives students "became more attentive and willing to express their own ideas in writing and more willing to interact with other people. Thus, the students' friendships, communication, and sense of trust were enhanced." He also notes that "[w]ithout the convenience and popularity of the Facebook platform, the students would not have been so motivated to participate in the study or have enjoyed the learning process as much." Thus, aspects of FB regarding relationship, communication, popularity, and quality are influential and beneficial for employing it for assessment as well. As help central, assessment tool is also a bold idea regarding the employment of FB or other SNSs for educational purposes since SNSs had been highly criticized for security and privacy issues by pre-service teachers at the initial parts of the discussion. Therefore, once again, it seems that, even though individuals are deliberate regarding certain aspects of FB, they are willing to employ it even for assessment and previous studies indicate that this is plausible.

Moreover, some pre-service teachers offered some enhancements for FB in order to reach a more beneficial and satisfactory level as an educational tool and/or environment. They suggested that FB would be even better with following features:

1. Portal for Educational Content
2. Personal Storage for Educational Content
3. Search Engine
4. Anonymity for Students
5. Avatar for Student
6. Blog on FB
7. Conference on FB
8. Educational Account
9. Role Playing

Strikingly, these enhancements can be accomplished by embedding FB applications. This finding is in accordance with previous findings indicating a strong advocacy for implementing FB itself rather than other SNSs –even the specifically developed ones-for educational purposes and creating –hence embedding- the educational environment on or within FB. Thus, we might infer that, pre-service teachers are inclined to suggest that a FB application or equivalent software is the right choice for the implementation. They want the application to let students and teachers be on FB and join the class at the same time both keeping their motivation and continuing their educational activities on a "closed" embedded environment. Finally, these suggestions for enhancement are

in parallel with previous findings regarding posting educational content, accessing information, and keeping privacy.

As well as suggesting feature enhancements, pre-service teachers acknowledge that some of the features of FB are already educational by nature. They argue that FB Groups, FB Videos, discussion boards, FB Pages, photo tools, FB Games, and FB Chat are already educational and may be used for educational purposes. Some interviewees even considered comments and FB Wall posts as educational tools. This group of features constitutes most of the tools of FB. Thus, considering enhancements and this finding Together, we might infer that pre-service teachers see FB as "already educational" but they don't help ask for even more from that service recognized by interviewees with its usability, usefulness and quality.

Pre-service teachers remind us about the advantages of FB compared to other SNSs and other Internet based ETs. They argue that interaction that is reachable in FB is the key advantage of FB –in parallel with previous findings regarding relationship. They also note educational communication and accessing to information as key advantages of FB compared to the others. But they expect more functionalities regarding accessing information such as a better search engine and means for exchanging educational content. They do not hesitate to highlight their perception that FB is better than the others regarding quality, usability, and usefulness. They see FB as a tool in which self-expression is experiences better than real world. Third of the pre-service teachers think that FB is so useful and usable to the extent that it even may lessen redundant classroom activities. Thus, quality, usefulness and usability are once again reminded by pre-service teachers as key factors regarding the implementation of an SNS for educational purposes.

Pre-service teachers also discussed the appropriateness of FB in different levels of education. Even though they implied that it is appropriate for higher education (three of them explicitly stated) a majority couldn't be reached in any level of education and pre-service teachers preferred no to make a statement about appropriate level. This indicates that they are concerned with the implementation of SNSs in primary and secondary schools. Only 2 of the interviewees could advocate for primary school implementation and 1 interviewee expresses support for middle school. Even though other levels were in minority as well as primary and secondary schools, it seems that major concern stems from minors. Moral and ethical hazards and cybercrime should be considered when it comes to think about minors and SNSs. Further research is needed for deepening the understanding of perceptions of individuals regarding children and FB especially in the context of education.

Finally, some pre-service teachers suggested some strategies for implementing SNSs for educational purposes. Most of the strategies were related with the administration of the SNS after implementing it. Some argued that the site and content should be

supervised and closed to non-educational environment. It was also suggested to give a considerable amount of authority to teacher for supervising the day-by-day operations of the environment such as founding groups, calling students, etc. Some of the pre-service teachers also suggested not using FB in the classroom and using it as a "secondary but not primary" tool for education. These restrictive suggestions came mostly from the ones who were relatively more critical of FB but others also participated in the restrainment of the new medium. This finding indicates that, pre-service teachers are highly scared regarding losing control when they are in the role o the teacher. Restrictive suggestions imply that, some of the pre-service teachers want to limit the new medium on the basis of privacy, security, morals and control issues.

5.3. Implications for the Practitioners

The study has a number of implications for practitioners (and also researchers) in the field of educational technology. The implications are categorized as amalgamated and specific ones. Within each section, amalgamated or synthesized implications are provided first, and then, specific implications regarding personal and cultural differences are considered.

Initially, the findings of this study indicate that cultural differences affect the use of SNSs. All cross-cultural comparisons yielded differences in FB use between American and Turkish users. Therefore, any possible implementation of FB should be carefully planned, developed, and administered by taking culture of the population in the account. Culturally biased applications of SNSs may not yield the results reported in the studies conducted on people who share other cultures than the target country. Researchers and practitioners should be aware of the populations they are working on.

SNSs –FB in particular- is implementable according to pre-service teachers and previous studies especially in Northern America, Europe, and East Asia. Its implementability doesn't convey the meaning of universal implementability. There are many issues to be addressed before thinking on implementing an SNS for educational purposes.

The most important issue to consider for implementing and SNS for educational purposes is concerns related to privacy, security, and peace/comfort of its possible users. Any implementation should start with designing a safe, secure and peaceful environment by any means to protect the rights and well-being of its users. Users should be informed and be able to reach more information when they need about their well-being. On the other hand, the environment should carefully be design to provide a warm, familiar and friendly place for its users rather than a technology showground. The users should be kept away from feelings of unreality, unnaturality, unconventionality, and virtuality as far as possible. Additionally, in accordance with

those criteria, the environment should try to ensure that the information on the personal profiles is as real as possible.

Especially the qualitative findings indicate that usability is a key factor for success of any SNS in education. According to most of the pre-service teachers interviewed, the environment should be a high usability website and require minimum effort for trying to learn how to use the software. Based on that, it could easily be stated that the implementation should not kickstart in the beta phase of any hypermedia application. Major and minor problems should be fixed to inhibit demotivation, dissatisfaction, and negative attitude development. Developers should apply reputed usability guidelines for reaching this goal.

Again, qualitative data showed that usefulness is another key factor for keeping the users motivated just like usability. The environment should be constructed on the principles of practicality, convenience, and satisfactoriness. According to the accounts of the interviewees, the environment should provide necessary and high usability tools for its users for handling reported functionalities. On the other hand, a higher quality should be aimed at for reaching an overall premium experience and user satisfaction. If there is a higher quality competitor or alternative, then, it should not be implemented.

Considering the concerns regarding usability and usefulness, rather than developing an SNS from scratch, the environment may be developed as "embedded" software like a "FB App" and run on the main platform, thus provide the user with the tools of the already adopted SNS. The SNS may be chosen by considering the fact that, individuals are already networked on some of the SNSs and widespreadness will be a key factor in the perception of the environment. Rather than expecting and waiting for users to carry their –some part of- networks to the new environment, developers should benefit from the already existing online social networks created by the users during the course of their membership.

According to both quantitative and qualitative findings, relationship is the main motivational factor for using SNSs. Thus, the environment should run on the concept of relationship rather than attaching it to the environment. The users should be provided with relationship maintenance tools for keeping them motivated. All SNSs already have a set of relationship maintenance tools. Rather than redeveloping, existing tools should be considered first.

Recreation is the second major factor for the motivation of the users. Thus, without filing the environment with distractive and redundant items, users should be provided with tools for passing time and having fun. Feeding the users with information, photos, and videos is plausible by the condition of keeping the content interesting, compelling, and relevant.

Communication should be a major functionality of the environment. Communication tools of the underlying SNS platform may be used such as FB messages, FB Wall, FB Groups, commenting, posting etc. Additionally, reaching to communication tools should be secure but easy. For instance, a student should be able to use his or her mobile to send a message to his or her professor by using his or her mobile phone as they do it while using FB.

An SNS is a medium for self-expression, so the educational environment should be. All SNSs already have tools for self-expression. In addition to existing ones, blogs or microblogs might be considered for further investment in self-expression. Communication tools should be designed accordingly so that the users can easily express themselves by communicating in a variety of ways easily without encountering software problems. Rather than restricting, self-expression should be encouraged but the privacy, safety, security, and peace of other users should be protected.

Especially the qualitative findings show that the environment should be a place for learning. Not only learning as in learning science but also as in learning personal information regarding others or as in learning interesting and rummy things. Search tools should be powerful and should not be limited with searching content on the environment. A high usability and quality search engine such as Google might be embedded, as well.

Accounts of the interviewed pre-service teachers showed that the implemented environment needs to have the option to close itself to "foreigners." The content might be hidden from the rest if needed. Additionally, an administrative mechanism should be implemented to perform day to day jobs. Students may be moderators but security and wellbeing of the users should be overseen by professionals such as the professor. Moreover, interaction of the professors and students should be well designed. There may be advanced options for administrators for setting the environment in a way that students may not feel the need for adding their professors as friends. This applies to professors as well.

Qualitative data shows that the students need place –a lot of place- for storing content. Considering technological trend regarding the transition from local storage to cloud computing, cloud computing options or other options might be considered to embed in the design so that both students and teachers may reach to personal and public storages. Storage means once again privacy settings. Thus, storage tools should be well designed just like the rest of the environment.

The environment should include assessment tools for teachers who want to assess their students on the platform that the class is taking place. Another resource might be a help central for both students and teachers where volunteers may take responsibility.

Even though volunteering might be allowed and encouraged, implementers and developers should consider well-structured strategies and resources for helping students and teachers. The environment should not seem and feel like running on autopilot.

5.3.1. Implications for teacher training programs

Students in the teacher training programs never see the utilization of FB or other SNSs in their classes. There are few "good" examples of SNS implementation and only "few" students have experienced it while the masses of student teachers were unaware. Most of the students who see an implementation see it because there is a research is going on in the campus but the implemented software or system is never integrated into the curriculum. SNSs are not integrated in the educational system and pre-service teachers are confused about the future of such technologies because apart from their ad hoc, spontaneous, and informal use of FB they do only experience research projects. Teacher training programs do not promote the implementation of FB for educational purposes and student teachers do not have good role models among their professors in teacher training programs. In most institutions in both Turkey and the USA, FB is banned and prohibited in the campus computers.

Thus, the implementation should be implemented. Students in the teacher training programs should get rid of the "research project experience" regarding the educational implementation of FB or other SNSs. The institutions should remove the ban on SNSs in campus computers. A developed application should be integrated into the greater educational system and professor should use it not for their classes but for being a role model for the future teachers.

5.3.2. Implications regarding personality

Personality is correlated with the way individuals use SNSs. Therefore, the design should embrace all traits of personalities such as providing neurotics with written communication tools and opportunities while providing conscientious individuals with opportunities to help others. Extensive research should be conducted for addressing motivational and demotivation aspects for different personalities. It should be remembered that even though some groups adopt the environment earlier their motivation may fade away such as the ones open to experience. Additionally, agreeable individuals may be easy to communicate but they tend to not use SNSs as intense as the others. Thus, encouraging strategies are needed to motivate all individuals during the course of the classes.

Even the ones who do not like to use phones and the Internet uses FB and they like it. Thus, many personality-related obstacles are not in effect for the FB. This is a promising fact for the practitioners because personality does not predict the adoption and the use of FB in general. But there are nuances.

One of the findings of this study is that FB is not so much new or interesting for highly digitally literate individuals like the open to experience and extraverted ones. Thus, as mentioned earlier, the FB implementation should be changing platform in itself. It should be updated "regularly" and feed the literate and intellectual brains with interesting and charming content on a regular basis to keep them motivated.

Conscientious individuals are too busy with helping others and they are staying behind while trying to answer the questions of others. There should be mechanisms for helping the users. A help desk full of "practical" information is vital for keeping the conscientious ones in the game. A moderator is needed for running the day to day jobs and helping others. Even though student moderators may help, a non-student moderator is needed.

Neurotic individuals are too occupied with written communication and they are not as willing as the others when it comes to face-to-face interaction and real world tasks. Thus, while providing them with satisfactory opportunities for written communication teachers should assign neurotic individuals to face-to-face tasks and real world activities maybe more than the others to close the gap.

Extraverted students may not be early adopters as much as the others. They are occupied with real world activities more than the others. Practitioners should be aware of their extraverted students and give them time and some room and wait for them to finish their real world activates. They will use the system intensely but they seem to need more time for the initiation. Thus, a self-paced and flexible adoption period should be provided.

5.3.3. Implications regarding attitude, motivation, and motives

Attitude and motivation are the strongest predictors of early adoption and frequent use. Practitioners should try to develop positive attitude towards and motivation to use of the implementation before beginning to use it or even instructing about it. A perception management is required for the initial part of the implementation in general and in particular. The developed system should be renowned with its good design, high usability, ease of use, and familiarity. All individuals should find something charming for them when they google the application. This could be achieved by developing a good application and a good integration road map (instructional design) before initiating the implementation.

An Internet portal should be provided with verbal and audiovisual content for informing and "charming" the students. Practical answers for possible questions should be provided. Students should perceive the implemented design as something which is useful and helpful for them. The application should be developed in a way that students should be able to pass some good time on the system. Interesting, informative, up to date, and new content should be prepared to feed the system before

it is initiated. So that highly digitally literate individuals keep being motivated to use the system.

Professors and administrators should be well informed and instructed with rich and satisfactory content about how to teach "within" the implementation. The developers should acknowledge that professors are not IT specialists. Just like the students, professors should be provided with a useful and usable interface. So that not only students but also professors and teachers will develop positive attitude towards the implementation they will hopefully be motivated to use it for educational purposes. In turn, they will be role models for the teachers of the future.

Results indicate that friendship doesn't correlate with any of the variables of FB use in both countries, but, relationship does. Thus, "social networking" should be understood as mere "adding friends." The application, classes and the utilization procedures should be developed keeping in mind the centrality of the "relationship." Thus, it should:

1. Stand on the existing relationships (from the "mother" SNS –such as FB)
    a. Using existing friend list and block lists, etc.
2. Provide students with relationship maintenance tools
    a. Tools for removing or adding friends, for labeling and grouping them, or for banning unwanted users etc.
3. Provide students with mediums and tools for interacting with each other
    a. Communication tools of the FB such as Wall, messaging, and chat, etc.
4. Provide students with entertainment tools that can be "socially" used
    a. Games to play Together, commenting, and sending gifts etc.
5. Provide students with tools that help students to come Together in real world
    a. Such as FB Groups, FB Events or curricular activities to assemble the online communities off the class but in the real life, etc.
6. Be used in a way to encourage students to found new relationships
    a. Detailed profile pages with privacy settings, photos, videos, curricular activities for matching students, curricular activities requiring students to invite online students from other classes, etc.
7. Be used in a way to encourage students be talkative, open minded, and positive.
    a. Incentives for polite language, helping, and collaboration; instructing students about impolite and aggressive behaviors; banning certain words, expressions in written communication; observing posted photos and videos; a fair but strong policy on sexual, religious, and political posts; assessing "positive" and "negative" language and posts; etc.

5.3.4. Implications regarding cultural differences

There are remarkable differences between Turkey and the USA in terms of the use of FB and its association with personal differences. The most striking difference is that no variable correlates with the duration of FB membership and only motivation correlates with the level of privacy in the USA. Society is more digitally literate in the USA compared to the society in Turkey. Computer, Internet, and FB are USA based technologies mostly invented and developed in there. Individualism and collectivism dichotomy is reflected in the management of level of privacy. The difference may also stem from the longer history of experience of American individuals with SNSs and other "social" Internet mediums, so that; they are more exposed to and more knowledgeable about online threats such as cyber bullying. Thus, in this study, cultural differences are observed through FB use.

The results indicate that privacy concerns are extremely important. Privacy and safety issues may lead people to stay in closed circles. Thus, as mentioned earlier, the applications, related curricular structures, and utilization procedure should be developed on the centrality of the idea of privacy and security. The actual use of the system should be very sensitive to the issue, as well. The professors and teachers should be well aware of the concerns of individuals regarding privacy. Privacy concerns may lead individuals to develop negative attitude towards and be demotivated to use FB and the related educational application. Privacy and security related bad experiences may prevent individuals from engaging in social activates and from developing new relationships.

In this context:

1. Software with strong security and privacy mechanisms is required
   a. Application should be developed on well tested and reputed platforms such as FB rather than developing standalone applications.
2. High usability interfaces for managing security and privacy settings is required.
   a. An easily accessible privacy setting for any piece of personal information should be provided.
3. The students, teachers, professors, and administrators should be well informed about the centrality of the issue.
   a. The Internet portal for the application should inform practitioners with the concerns of students and these concerns should be integrated into the curriculums of training programs of the related professionals such as professors, computer engineers, educational administrators, etc.
4. Stalking, bullying, hacking into embowered personal information, disturbing with unwanted language and behaviors should be legally sanctioned.

      a. Any activity on the system should be logged, the logs should be accessible to certain individuals upon legal procedures, and institutions should be in contact with law professionals, etc.

5. All individuals should be informed about the consequences of related language and other behavior at the outset of the classes.

      a. Internet portal of the application should provide the students with verbal and audiovisual contents; course materials should have references to certain laws and regulations regarding cyber bullying, etc.

6. Professors, teachers, and moderators should refrain from getting too close to the students.

      a. Students should have the option to not add their professors, teachers, etc. as friends.

      b. Professors, teachers, administrators, and moderators should have separate accounts for their educational activities.

Moreover, cultural differences may emerge at the digital media literacy domain. Highly digitally literate populations adopt earlier and may exhaust the "new toy" earlier. On the other hand, less digitally literate populations may adopt later and enjoy for a longer period of time. Thus, at least for the early adoption, developers need to have an international perspective to inform populations around the world. The system should have infrastructure for the translation, adaptation, and customization. Practitioners in the world should be networked to communicate on the topic. The application shouldn't be culturally biased. It should be translatable. It shouldn't take certain technology clichés for granted, keeping in mind clichés are culturally biased.

Another remarkable difference between Turkey and the USA is that Turkish pre-service teachers are more likely to make new friends online. Pre-service teachers in the USA tend to be more deliberate in in keeping their network limited except the extroverted ones and the ones who are using FB with the motive to pass time.

Developers should be more sensitive to those cultural differences while they are designing the application and other practitioners such as professors and teachers should work more on encouraging students to found new relationships, especially in countries like the USA. Different strategies and tactics might be better for benefiting from the relationship aspect of SNSs to increase the motivation of students to use FB and the related educational application working on top of it. On the other hand, practitioners might consider respecting the individualistic characteristics of the target population. The expectations should be "customized" as well as the application.

Regarding the cultural differences:

1. The application should have an underlying software infrastructure which enables the practitioners of different cultures to "customize" the app according to the local culture.
2. The application should be designed as a "layered" and "modularized" structure so that customization should be applied on related levels by not destroying the upper layers.
3. The application should have a "deeper" level of linguistic customizability so that even the "error messages" can be translated.
4. Customization procedures should be well documented and easy to handle for end users so that any teacher or moderator –even the students- may contribute without needing higher levels of computer science competence.
5. The application should provide optional "modules" for different cultures. Implementers should be able to choose modules more relevant to their cultures.
6. The application should be open sourced so that professors, teachers, moderators, and students may develop modules for themselves.
7. A portal for modules is required to procure reusability.
8. Educational technology is too important a matter to be left to the engineers. Educational technologists and cultural-difference-sensitive professionals are needed to be invited in the design team so that the implementation is less culturally biased from the design.
9. Designers and developers should know that there are different levels of digital media literacy. Therefore, the interfaces and procedures should be literally "easy" to use and a flatter learning curve is required. Design language should borrow from "already learned" almost universal examples.
10. The application should be designed keeping classroom in mind. Time consuming tasks and procedures should be avoided, if possible.

5.4. Recommendations for Further Research Studies

Even though FB is the overwhelmingly popular SNS, individuals use other SNSs extensively as well –such as YouTube. Future research may be needed to conduct research on the users of more than one SNS for comparing their uses. Moreover, further research may be conducted on individuals who use more than one SNS and compare the differences of the same individuals' use of different SNSs.

This research study collected the data in a relatively shorter period of time and could be defined as a "one shot" study. However, individuals might use SNSs differently in the course of their membership and change the ways they are using the SNSs. Thus, future longitudinal research may be needed to see how individuals use SNSs in longer periods of time.

For reaching a higher generalizability, a broader demographic might be sampled in the future researches. Private and state institutions might be compared or different age groups, students of different educational levels or students of different types of schools such as vocational schools and science oriented schools might be compared. More comparisons might be made between sex and socioeconomic status groups. Future research may also be needed for investigating non-North American and non-European and non-Asian individuals.

Positions of individuals who are highly critical of computer, internet, or technology might need further investigation. The findings of this study indicate that even the ones who think computers are useful and necessary are using SNSs. Thus, future researches might compare their positions, perceptions, and SNS uses with the others and might deepen our understanding of those individuals' characteristics, positions, perceptions and the ways they use SNSs.

Many institutions prohibit the use of SNSs in campus computers. Researchers should investigate if there is a prejudice against SNSs or other CMC tools. Why are students being stonewalled from communication? Research designs should have room for investigating the liberties of students and teachers regarding communication and new technologies. Are administrators thinking differently than rest of the individuals in the educational world? If so, why are they not in the same page with others?

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APPENDIX A

ETHICAL APPROVAL (TURKEY)

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

DUMLUPINAR BULVARI 06800
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ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

Sayı: 28620816/ 247 - 670

23 Ağustos 2013

Gönderilen: Prof.Dr. Soner Yıldırım
Bilgisayar ve Öğretim Teknolojileri Eğitimi

Gönderen : Prof. Dr. Canan Sümer
IAK Başkan Vekili

İlgi   : Etik Onayı

Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümü Doktora öğrencisi Oğuzhan Atabek'in "Pre-service teachers' personality, competency, and attitudes associated with Facebook use" isimli araştırması "İnsan Araştırmaları Komitesi" tarafından uygun görülerek gerekli onay verilmiştir.

Bilgilerinize saygılarımla sunarım.

Etik Komite Onayı

Uygundur

23/08/2013

Prof.Dr. Canan Sümer
Uygulamalı Etik Araştırma Merkezi
(UEAM) Başkan Vekili
ODTÜ 06531 ANKARA

APPENDIX B

ETHICAL APPROVAL (USA)

UNIVERSITY of **HOUSTON**

DIVISION OF RESEARCH

March 21, 2012

Dr. Bernard R. Robin
Curriculum and Instruction

Dear Dr. Bernard R. Robin,

Based upon your request for exempt status, an administrative review of your research proposal entitled "Preservice Teachers Personality, Motives, Motivation, and Attitudes Associated with the Use of Social Network Services: Facebook Case" was conducted on January 4, 2012.

At that time, your request for exemption under **Category 1B** was approved pending modification of your proposed procedures/documents.

The changes you have made adequately respond to the identified contingencies. As long as you continue using procedures described in this project, you do not have to reapply for review. * Any modification of this approved protocol will require review and further approval. Please contact me to ascertain the appropriate mechanism.

If you have any questions, please contact Alicia Vargas at (713) 743-9215.

Sincerely yours,

Kirstin M. Rochford, MPH, CIP, CPIA
Director, Research Compliance

*Approvals for exempt protocols will be valid for 5 years beyond the approval date. Approval for this project will expire **December 1, 2016**. If the project is completed prior to this date, a final report should be filed to close the protocol. If the project will continue after this date, you will need to reapply for approval if you wish to avoid an interruption of your data collection.

Protocol Number: 12216-EX

316 E. Cullen Building   Houston, TX 77204-2015   (713) 743-9204   Fax: (713) 743-9577
COMMITTEES FOR THE PROTECTION OF HUMAN SUBJECTS

APPENDIX C

FIRST PAGE OF SURVEY (PILOT)

Facebook Kullanım Araştırması

Hoşgeldiniz!

Bu çalışma, Oğuzhan Atabek tarafından yürütülen bir çalışmadır. Çalışmanın amacı, katılımcıların Facebook kullanımları, Facebook kullanım güdüleri, kişilik özellikleri ve bilgisayar aracılı iletişim yetkinlikleriyle ilgili bilgi toplamaktır. Çalışmaya katılım tamamiyle gönüllülük koşuluyla olmalıdır. Ankette, sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Anket, 10-15 dakikalık bir sürede yanıtlanabilmektedir. Yanıtlarınız bütünüyle gizli tutulacak ve yalnızca araştırmacılar tarafından değerlendirilecektir; elde edilecek bilgiler bilimsel yayımlarda kullanılacaktır.

Anket, genel olarak kişisel rahatsızlık verecek soruları içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz yanıtlama işini yarıda bırakmakta özgürsünüz. Anket sonunda, bu çalışmayla ilgili sorularınız yanıtlanacaktır. Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz. Çalışmayla ilgili olarak daha çok bilgi edinmek için Ortadoğu Teknik Üniversitesi Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümü'nde araştırma görevlisi olarak çalışan Oğuzhan Atabek ile iletişim kurabilirsiniz (Tel: 210 41 83; E-posta: atabek@metu.edu.tr).

Oğuzhan Atabek
Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümü
Eğitim Fakültesi
Ortadoğu Teknik Üniversitesi
Ankara
Bu ankette 44 soru var.

| Kaydedilmiş Anketi Yükle | Sonraki >> | Çık ve Anketi Temizle |

APPENDIX D

FIRST PAGE OF SURVEY (TURKEY)

Facebook ve Eğitim

Hoşgeldiniz!

Bu çalışma, Oğuzhan Atabek tarafından yürütülen bir çalışmadır. Çalışmanın amacı, katılımcıların Facebook kullanımları, Facebook kullanım güdüleri, kişilik özellikleri ve bilgisayar aracılı iletişim yetkinlikleriyle ilgili bilgi toplamaktır. Çalışmaya katılım tamamiyle gönüllülük koşuluyla olmalıdır. Ankette, sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Anket, 10-15 dakikalık bir sürede yanıtlanabilmektedir. Yanıtlarınız bütünüyle gizli tutulacak ve yalnızca araştırmacılar tarafından değerlendirilecektir; elde edilecek bilgiler bilimsel yayımlarda kullanılacaktır.

Anket, genel olarak kişisel rahatsızlık verecek soruları içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz yanıtlama işini yarıda bırakmakta özgürsünüz. Anket sonunda, bu çalışmayla ilgili sorularınız yanıtlanacaktır. Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz. Çalışmayla ilgili olarak daha çok bilgi edinmek için Ortadoğu Teknik Üniversitesi Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümü'nde araştırma görevlisi olarak çalışan Oğuzhan Atabek ile iletişim kurabilirsiniz (Tel: 210 41 83; E-posta: atabek@metu.edu.tr).

Oğuzhan Atabek
Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümü
Eğitim Fakültesi
Ortadoğu Teknik Üniversitesi
Ankara
Bu ankette 16 soru var.

| Sonraki >> | | Çık ve Anketi Temizle |

APPENDIX E

FIRST PAGE OF SURVEY (USA)

Facebook and Education

Preservice Teachers' Personality, Motives, Motivation, and Attitudes Associated with the Use of Social Network Services: Facebook Case
Welcome!
You are being invited to participate in a research project conducted by Dr. Bernard Robin, faculty member in the Instructional Technology program area in the Department of Curriculum and Instruction at the University of Houston and Oguzhan Atabek, a doctoral student at the Middle Eastern Technical University, Ankara, Turkey. The research is part of the doctoral thesis study of Oguzhan Atabek.

NON-PARTICIPATION STATEMENT
Your participation is voluntary and you may refuse to participate or withdraw at any time without penalty. You may also refuse to answer any questions.

PURPOSE OF THE STUDY
The purpose of this study is to better understand how personality, motives, attitudes and motivation are associated with the use of social network sites. Participants will be asked to respond to the questions contained in the online survey. This should take approximately **20 minutes to complete.** Duration of the entire study is 3 months.

PROCEDURES
Approximately 500 undergraduate students from College of Education of University of Houston will participate in this study. You are being asked to respond to a questionnaire that contains a personal information sheet and questions related to the use of social network sites, personality, motives, attitude and motivation.

ANONYMITY
Every effort will be made to maintain the anonymity of your participation in this project. Data from all submitted surveys will go to a secure database where access will be restricted to the researchers.

RISKS/DISCOMFORTS
There are no foreseeable risks, discomforts or inconveniences resulting from participation in this study.

BENEFITS
While you will not directly benefit from participation, your participation may help investigators better understand the educational practices and strategies concerning creating and using social network sites in educational settings.

INCENTIVES
A $100 Amazon.com gift card will be awarded to one of the participants who complete the online survey. A drawing to select the winner of the gift card will be held at the conclusion of the survey period and the winner will be contacted via e-mail. The participants must complete the survey by April.

PUBLICATION STATEMENT
The results of this study may be published in professional and/or scientific journals and online. Results may also be used for educational purposes or for professional presentations. However, no individual subjects or names of educational institutions will be identified. If you have any questions concerning this research project, please contact the individuals listed below. ANY QUESTIONS REGARDING YOUR RIGHTS AS A RESEARCH SUBJECT MAY BE ADDRESSED TO THE UNIVERSITY OF HOUSTON COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS (713-743-9204). ALL RESEARCH PROJECTS THAT ARE CARRIED OUT BY INVESTIGATORS AT THE UNIVERSITY OF HOUSTON ARE GOVERNED BY REQUIREMENTS OF THE UNIVERSITY AND THE FEDERAL GOVERNMENT. PLEASE PRINT A COPY OF THIS FORM FOR YOUR RECORDS AND FUTURE REFERENCE.

Project Contacts:

Dr. Bernard Robin (Principal Investigator)	**Oguzhan Atabek**
Associate Professor	Research Assistant
University of Houston	Middle East Technical University
Houston, Texas, USA	Ankara, TURKEY
Office Phone: 713-743-4952	Visiting Scholar @ UH College of Education
E-mail: brobin@uh.edu	E-mail: atabek@metu.edu.tr

Load unfinished survey   Next >>   Exit and clear survey

APPENDIX F

WRITEN MINUTE FOR THE DRAWING FOR THE GIFT CARD

WRITEN MINUTE FOR THE DRAWING TO SELECT THE WINNER OF THE GIFT CARD

Preservice Teachers' Personality, Motives, Motivation, and Attitudes Associated with the Use of Social Network Services: Facebook Case

A 100$ Amazon.com gift card had been employed as an incentive for the survey titled "Preservice Teachers' Personality, Motives, Motivation, and Attitudes Associated with the Use of Social Network Services: Facebook Case."

A drawing to select the winner of the gift card was held at the conclusion of the survey period on June 6th, 2012 in the room 315 of College of Education building of the University of Houston. The random number is generated by the "RANDBETWEEN" function of the Microsoft Excel application. The interval was inputted as [1, 143] for the function.

The number was "37" and the name associated with this number in the database of the survey is "Paola Hernandez". Therefore Paola Hernandez won the 100$ Amazon.com gift card. The e-mail address of the winner is "pihernandez@uh.edu".

Dr. Ruqqayya Maudoodi and Dr. Bernard Robin attested the draw. Oguzhan Atabek will contact the winner via e-mail and Dr. Ruqqayya Maudoodi will deliver the gift card to the winner.

Dr. Bernard Robin
Associate Professor
University of Houston
Houston, Texas, USA
Office Phone: 713-743-4952
E-mail: brobin@uh.edu

June 6th, 2012

Dr. Ruqqayya Maudoodi
Lecturer
University of Houston
Houston, Texas, USA
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E-mail: ruqqayya@gmail.com

June 6th, 2012

Oguzhan Atabek
Research Assistant
Middle East Technical University
Ankara, TURKEY
Visiting Scholar @ UH College of Education
E-mail: atabek@metu.edu.tr
June 6th, 2012

NEO FFI

Choices:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

Items:

1. I am not a worrier.
2. I like to have a lot of people around me.
3. I don't like to waste my time daydreaming.
4. I try to be courteous to everyone I meet.
5. I keep my belongings clean and neat.
6. I often feel to inferior to others.
7. I laugh easily.
8. Once I find the right way to do something, I stick to it.
9. I often get into arguments with my family and friends.
10. I'm pretty good about pacing myself so as to get things done on time.
11. When I am under a great deal of stress, sometimes I feel like I'm going to pieces.
12. I don't consider myself especially "light-hearted."
13. I am intrigued by the patterns I find in art and nature.
14. Some people think I'm selfish and egotistical.
15. I am not a very methodical person.
16. I rarely feel lonely or blue.
17. I really enjoy talking to people.
18. I believe letting students hear controversial speakers can only confuse and mislead them.
19. I would rather co-operate with others than compete with them.
20. I try to perform all the tasks assigned to me conscientiously.
21. I often feel tense and jittery.
22. I like to be where the action is.

23. Poetry has little or no effect on me.
24. I tend to be cynical and skeptical of others' intentions.
25. I have a clear set of goals and work toward them in an orderly fashion.
26. Sometimes I feel completely worthless.
27. I usually prefer to do things alone.
28. I often try new and foreign foods.
29. I believe that most people will take advantage of you if you let them.
30. I waste a lot of time before settling down to work.
31. I rarely feel fearful or anxious.
32. I often feel as if I'm bursting with energy.
33. I seldom notice the moods or feelings that different environments produce.
34. Most people I know like me.
35. I work hard to accomplish my goals.
36. I often get angry at the way people treat me.
37. I am a cheerful, high-spirited person.
38. I believe we should look to our religious authorities for moral decisions.
39. Some people think of me as cold and calculating.
40. When I make a commitment, I can always be counted on to follow through.
41. Too often, when things go wrong, I get discouraged and feel like giving up.
42. I am not a cheerful optimist.
43. Sometimes when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement.
44. I'm hard-headed and though-minded in my attitudes.
45. Sometimes I'm not as dependable or reliable as I should be.
46. I am seldom sad and depressed.
47. My life is fast-paced.
48. I have little interest in speculating on the nature of the universe or the human condition.
49. I generally try to be thoughtful and considerate.
50. I am a productive person who always gets the job done.
51. I often feel helpless and want someone else to solve my problems.
52. I am a very active person.
53. I have a lot of intellectual curiosity.
54. If I don't like people, I let them know it.
55. I never seem to be able to get organized.
56. At times I have been so ashamed I just wanted to hide.
57. I would rather go my own way than to be leader of others.
58. I often enjoy playing with theories or abstract ideas.
59. If necessary, I am willing to manipulate people to get what I want.
60. I strive for excellence in everything I do.

NEO FFI TR

Choices:

1. Kesinlikle katılmıyorum
2. Katılmıyorum
3. Kararsızım
4. Katılıyorum
5. Kesinlikle katılıyorum

Items:

1. Endişeli biri değilimdir.
2. Yanımda birçok insanın olmasından hoşlanırım.
3. Zamanımı hayal kurarak harcamaktan hoşlanmam.
4. Karşılaştığım herkese karşı nazik olmaya çalışırım.
5. Eşyalarımı temiz ve düzenli tutarım.
6. Çoğu kez kendimi başkalarından daha aşağı hissederim.
7. Kolay gülerim.
8. Bir işi yapmanın doğru yolunu bir kez bulduğumda, artık o yoldan şaşmam.
9. Ailemdeki insanlarla ve okul arkadaşlarımla sık sık tartışırım.
10. İşleri zamanında bitirmek için hızımı ayarlamakta oldukça iyiyimdir.
11. Büyük bir baskı altında kaldığım zamanlarda, bazen kendimi darmadağın olmuş gibi hissederim.
12. "Gamsız" biri olduğumu söyleyemem.
13. Sanat eserlerinde ve doğada rastladığım şekiller bende hayranlık uyandırır.
14. Bazı insanlar benim bencil ve kendini beğenmiş olduğumu düşünür.
15. Çok düzenli bir insan değilim.
16. Kendimi yalnız ya da hüzünlü hissettiğim zamanlar çok nadirdir.
17. İnsanlarla konuşmaktan gerçekten çok hoşlanırım.
18. Öğrencilerin tartışmalı görüşleri savunan konuşmacıları dinlemelerine izin vermenin onların yalnızca kafalarını karıştırıp yanlış yönlenmelerine neden olabileceğine inanıyorum.
19. Diğer insanlarla yarışmak yerine, yardımlaşmayı yeğlerim.

20. Bana verilen tüm işleri vicdani sorumluluk hissederek yerine getirmeye çabalarım.
21. Kendimi çoğu kez gergin ve sinirli hissederim.
22. Nerede hareket varsa, orada olmak isterim.
23. Şiirin benim üzerimde hemen hemen hiçbir etkisi yoktur.
24. Diğer insanların niyetleri konusunda kötümser ve kuşkucu olma eğilimindeyimdir.
25. Belirli hedeflerim vardır ve bunlara ulaşmak için düzenli bir biçimde çalışırım.
26. Kimi zaman kendimi tümüyle değersiz hissederim.
27. Genellikle yalnız başıma bir şeyler yapmayı yeğlerim.
28. Sık sık yeni ve farklı ülkelerin yemeklerini denerim.
29. İzin verdiğiniz takdirde, çoğu insanın sizi kullanacağına inanıyorum.
30. Çalışmaya başlamadan önce bir sürü zamanı boşa harcarım.
31. Kendimi evhamlı ya da endişeli hissettiğim zamanlar çok nadirdir.
32. Çoğu kez, kendimi sanki enerjiden patlayacakmış gibi hissederim.
33. Farklı ortamların yarattığı ruhsal durumların ya da duyguların nadiren farkına varırım.
34. Tanıdığım çoğu insan benden hoşlanır.
35. Amaçlarıma ulaşmak için çok çalışırım.
36. Çoğu kez, insanların bana karşı gösterdiği davranış biçimine sinirlenirim.
37. Neşeli, keyif dolu bir insanımdır.
38. Ahlaki konulardaki kararlar için dini yetkililerimize danışmak gerektiğine inanıyorum.
39. Bazı insanlar benim soğuk ve içten pazarlıklı olduğumu düşünür.
40. Bir söz verdiğim zaman, bunu sonuna kadar götüreceğime güvenilebilir.
41. İşler kötüye gittiği zaman, çoğu kez hevesimi kaybeder ve her şeyi orada bırakıvermeyi isterim.
42. Çok iyimser biri değilimdir.
43. Bir şiir okurken ya da bir sanat eserine bakarken, kimi zaman içimde bir ürperme, bir heyecan dalgası hissederim.
44. Tutumlarımda gerçekçi ve kararlayımdır.
45. Kimi zaman, olmam gerektiği kadar güvenilir ya da inanılır biri değilimdir.
46. Üzgün ya da kederli olduğum zamanlar çok nadirdir.
47. Hızlı bir yaşantım vardır.
48. Evrenin yapısı ya da insanlığın durumu gibi konular üzerinde konuşmaya pek ilgim yoktur.
49. Genellikle düşünceli ve saygılı biri olmaya çalışırım.
50. Her zaman işini yerine getiren üretken bir insanımdır.
51. Sık sık kendimi çaresiz hisseder ve sorunlarımı çözmesi için birilerine ihtiyaç duyarım.
52. Çok hareketli bir insanımdır.

53. Entelektüel merak sahibi bir insanım.

54. Eğer birinden hoşlanmazsam, bunu onun da bilmesini sağlarım.

55. Asla düzenli biri olamayacakmışım gibime geliyor.

56. Hemen kaçıp saklanmak isteyecek kadar utandığım zamanlar olmuştur.

57. Başkalarına önderlik yapmaktansa, kendi başıma olmayı yeğlerim.

58. Teorilerle ya da soyut fikirlerle uğraşmaktan çoğu kez zevk alırım.

59. Gerekirse, istediğimi elde etmek için insanları kullanmaktan çekinmem.

60. Yaptığım her şeyde kusursuzluğa ulaşmaya çabalarım.

APPENDIX J

CMC MOTIVATION SCALE (ENGLISH)

Choices:

1. Not at all true of me
2. Mostly not true of me
3. Neither true nor untrue of me; undecided
4. Mostly true of me
5. Very true of me

Items:

1. I enjoy communicating using computer media.
2. I am nervous about using the computer to communicate with others.
3. I am very motivated to use computers to communicate with others.
4. I look forward to sitting down at my computer to write to others.
5. Communicating through a computer makes me anxious.
6. I am very knowledgeable about how to communicate through computers.
7. I am never at a loss for something to say in CMC.
8. I am very familiar with how to communicate through email and the internet.
9. I always seem to know how to say things the way I mean them using CMC.
10. When communicating with someone through a computer, I know how to adapt my messages to the medium.
11. I don't feel very competent in learning and using communication media technology.
12. I feel completely capable of using almost all currently available CMCs.
13. I am confident I will learn how to use any new CMCs that are due to come out.
14. I'm nervous when I have to learn how to use a new communication technology.
15. I find changes in technologies very frustrating.
16. I quickly figure out how to use new CMC technologies.
17. I know I can learn to use new CMC technologies when they come out.
18. If a CMC isn't user friendly, I'm likely not to use it.

FB MOTIVES SCALE (ORIGINAL ENGLISH)

Question: How often do you use Facebook for the following reasons?

Choices:

1. Not at all
2.
3.
4.
5. Exactly

Items:

1. To interact with others through Facebook groups
2. To send a message to a friend
3. To post a message on my friend's wall
4. To advertise my party
5. To join a group that fits my interests
6. To meet new people
7. To pass time when bored
8. It is one of the routine things I do when online
9. To occupy my time
10. To check my wall after I receive an e-mail from Facebook
11. To see other people's pictures
12. To communicate with my friends
13. It is free
14. To stay in touch with friends
15. It is entertaining
16. To read other people's profiles
17. I enjoy it
18. It makes me cool among my peers
19. It relaxes me
20. To get away from what I am doing

21. To see which of the people I know that joined the Facebook
22. The only way to stay in touch with my friends
23. To feel less lonely
24. Develop a romantic relationship
25. Find more interesting people than in real life
26. Find companionship
27. Meet new friends
28. Feel like I belong to a group
29. Have fun
30. It is cool
31. Get in touch with people I know
32. Get through to someone who is hard to reach
33. Nothing better to do
34. No one to talk to or be with
35. Learn things about others
36. So I won't be alone
37. To see who is in class with me
38. Because I am already online

FB USE AND ATTITUDE SCALE (ENGLISH)

A. Do you currently have a Facebook account?
    a.   Yes
    b.   No

B. If no, why not?
    a.   Do not have regular computer access
    b.   Do not have time
    c.   Not interested
    d.   Have never heard of Facebook before
    e.   Other

If you answered ''Yes" to question A, please continue to item #1. If No, thank you for your time.

The first part of this questionnaire is to assess your basic use and attitudes towards Facebook

1. On average, approximately how many minutes per day do you spend on Facebook?
    a.   10 or less
    b.   10–30
    c.   31–60
    d.   1–2 h
    e.   2–3 h
    f.   3+ h

2. Facebook is part of my everyday activity
    a.   Strongly Disagree
    b.   Disagree
    c.   Neutral
    d.   Agree
    e.   Strongly Agree

3. I am proud to tell people I'm on Facebook
[Responses are the same as item 2]

4. I dedicate a part of my daily schedule to Facebook
[Responses are the same as item 2]

5. I feel out of touch when I haven't logged on to Facebook for awhile
[Responses are the same as item 2]

6. I feel I am part of the Facebook community
[Responses are the same as item 2]

7. I would be sad if Facebook shut down
[Responses are the same as item 2]

This section of the questionnaire is to assess your settings for specific security functions of Facebook.

8. Who can see your Facebook profile?
   a. Only my friends
   b. All Networks and Friends
   c. Some networks/all friends
   d. Don't know

8. b. Who can see your Facebook profile with respect to the following profile pictures?

Status Updates:
[Responses are the same as item 8]

Videos tagged of you:
[Responses are the same as item 8]

Photos tagged of you:
[Responses are the same as item 8]

Online Status:
[Responses are the same as item 8]

Wall:
[Responses are the same as item 8]

9. What level of security do you have with respect to who can search for you on Facebook?
[Responses are the same as item 8]

10. Do you use the Block List to prevent certain people from searching for you?

    a. Yes

    b. No

    c. Don't Know

10. b. If yes, how many?

[Numeric input]

10. c. If yes, why?

    a. To avoid certain people whom I do not want to communicate with

    b. To prevent certain people from ''stalking'' me

    c. Other

11. Do you use the Limited Profile List to prevent certain people from seeing certain aspects of your profile?

[Responses are the same as item 10]

11. b. If yes, how many people are on your Limited Profile List?

[Numeric input]

11. c. If yes, why?

    a. To prevent certain people from seeing more private information

    b. To prevent certain people from ''stalking'' me

    c. Other (please describe)

12. Do you provide your mailing address on your Facebook profile?

[Responses are the same as item A]

13. Do you provide a phone number on your Facebook profile?

[Responses are the same as item A]

This section of the questionnaire is to assess your use of the basic Facebook functions and applications.

14. Approximately how many friends are on your Facebook Friends List?

[Numeric input]

15. How many Networks do you belong to?

[Numeric input]

16. Approximately how many Photo Albums do you presently have on Facebook?

[Numeric input]

16. b. What do you post pictures of?

Family:
[Responses are the same as item A]

Significant Other:
[Responses are the same as item A]

Friends:
[Responses are the same as item A]

Pets:
[Responses are the same as item A]

Parties:
[Responses are the same as item A]

Myself:
[Responses are the same as item A]

Scenery:
[Responses are the same as item A]

Sporting Events:
[Responses are the same as item A]
Art:
[Responses are the same as item A]

Other:
[Responses are the same as item A]

16. c. How frequently do you post pictures of:

Family:
- a. More than once daily
- b. Once daily
- c. 2 or more times weekly
- d. Once weekly
- e. Twice monthly
- f. Once monthly

g. Less than once monthly
h. A few times per year
i. Less than once per year

Significant Other:
[Responses are the same as item "Family"]

Friends:
[Responses are the same as item "Family"]

Pets:
[Responses are the same as item "Family"]

Parties:
[Responses are the same as item "Family"]

Myself:
[Responses are the same as item "Family"]

Scenery:
[Responses are the same as item "Family"]

Sporting Events:
[Responses are the same as item "Family"]

Art:
[Responses are the same as item "Family"]

Other:
[Responses are the same as item "Family"]

16. d. How often do you comment on other people's photos?
[Responses are the same as item "16.c"]
17. Which function do you prefer more:
      a. Facebook Wall
      b. Facebook Messages

17. b. Why?
[User input for open ended question]

18. How often do you post on other people's Walls?
[Responses are the same as item "16.c"]

18. b. Whose Walls do you post most frequently on?

    a. People from your friends list

    b. people who belong to the same groups you do

    c. random people

18. c. How often do you check your own Wall?

[Responses are the same as item "16.c"]

19. How often do you send private Facebook messages?

[Responses are the same as item "16.c"]

19. b. To whom do you send private Facebook messages to most frequently?

[Responses are the same as item "18.b"]

20. How often do you ''Poke" people on Facebook?

[Responses are the same as item "16.c"]

20. b. Whom do you ''Poke" most frequently?

[Responses are the same as item "18.b"]

21. How many Facebook Groups do you belong to?

[Numeric input]

21. b. How many of these groups are ''hidden"?

[Numeric input]

21. c. How many Facebook Groups have you created?

[Numeric input]

22. How many events have you attended that were coordinated on Facebook?

[Numeric input]

22. b. How many Facebook events have you created?

[Numeric input]

23. How often do you change your Facebook status?

[Responses are the same as item "16.c"]

24. Do you use email notifications to alert you to whether someone has contacted you via Facebook?

[Responses are the same as item 10]

24. b. For which functions?

When someone sends me a message
[Responses are the same as item A]

When someone adds me as a friend
[Responses are the same as item A]

When someone writes on my wall
[Responses are the same as item A]

When someone ''pokes'' me
[Responses are the same as item A]

When someone tags me in a photo
[Responses are the same as item A]

When someone tags me in a note
[Responses are the same as item A]

When someone tags one of my photos
[Responses are the same as item A]

When someone invites me to join a group
[Responses are the same as item A]

When someone invites me to join an event
[Responses are the same as item A]

When someone requests to join a group of which I am an admin
[Responses are the same as item A]

When someone request to join an event of which I am an admin
[Responses are the same as item A]

When someone comments on my notes
[Responses are the same as item A]

When someone comments on my photos
[Responses are the same as item A]

When someone comments on a photo of me
[Responses are the same as item A]

When someone comments after me in a photo
[Responses are the same as item A]

When someone comments after me in a note
[Responses are the same as item A]

When someone comments after me in a posted item
[Responses are the same as item A]

When someone tags me in a video
[Responses are the same as item A]

When someone comments on my video
[Responses are the same as item A]

When someone comments on a video of me
[Responses are the same as item A]

When someone replies to my discussion board post
[Responses are the same as item A]

When someone posts on the wall of an event I admin
[Responses are the same as item A]

25. What is your most preferred function/application of Facebook?
      a. Photos
      b. Notes
      c. Groups
      d. Events
      e. Posted Items
      f. Marketplace
      g. Wall
      h. Messages
      i. Other

This section of the questionnaire is to assess more general attitudes of Facebook

26. Approximately how long have you had your Facebook profile?
      a. 6 months

b. 1 year
c. 1.5 years
d. 2 years
e. 2.5 years
f. 3+ years

27. How satisfied are you with Facebook, overall?
    a. Not satisfied at all
    b. Barely satisfied
    c. Neutral
    d. Satisfied
    e. Very satisfied

28. Why do you like Facebook?
    a. It is how I communicate with my current friends
    b. It provides a distraction from my schoolwork
    c. It allows me to communicate with people from my past
    d. It allows me to collect information on people I am interested in
    e. It provides me with information (e.g., in groups)
    f. Other

INTERVIEW GUIDE (TURKISH)

1. "Facebook" dendiğinde aklına ilk gelen şeyler nelerdir?
    a. Facebook kullanmakla ilgili hoşuna giden ve gitmeyen unsurlar nelerdir?
2. Facebook kullanmaya motive misindir?
    a. Seni Facebook kullanmaya motive eden unsurlar nelerdir? (örneğin, arkadaşlarının orada olması)
3. Kendini nasıl tanımlarsın? Örneğin;
    a. "Sıcakkanlı", "konuşmayı seven", "eğlenmeyi seven"?
    b. "Mesafeli", "duygusal", "düşünceli", "incelikli"?
4. Kişiliğinin hangi yönlerini Facebook'un hangi yönleriyle eşleştirirsin?
5. Bir öğretmen adayı olarak, Facebook'un gelecekteki mesleğinle ilişkisini nasıl görüyorsun?
6. Facebook'un öğretimde kullanıldığı örnekleri biliyor musun?
7. Facebook kullanan hocaların oldu mu/var mı?
    a. Facebook'u nasıl kullanıyorlar?
8. Eğitimsel amaçlar için kullanılacak olsa, Facebook, sence nasıl kullanılmalı?

INTERVIEW GUIDE (ENGLISH)

1. What are the first things that come to your mind when speaking of "Facebook"?
   a. What things you like or dislike about using Facebook?
2. Are you motivated to use Facebook?
   a. What are the factor motivating you to use Facebook? (i.e., your friends are there)
3. How do you define yourself? I.e.;
   a. "Warm blooded", "chatty", "fun loving"?
   b. "Distant", "sentimental", "thoughtful", "courteous"?
4. Which aspects of your personality would you associate with which aspects of Facebook?
5. As a teacher candidate, how do you see the relationship of Facebook with your future profession?
6. Do you know the examples of the educational uses of Facebook?
7. Did /Do you have professors or instructors who use Facebook?
   a. How did/do they use Facebook?
8. If Facebook is to be used as an educational application how should it be used?

APPENDIX O

FACTOR LOADINGS OF FB ATTITUDE SCALE IN THE PILOT STUDY

Item No	Item	Loading
5	Kendimi Facebook topluluğunun bir parçası gibi hissediyorum	0.799
3	Günlük programımın bir parçasını Facebook'a ayırırım	0.774
1	Facebook günlük etkinliklerimin bir parçasıdır	0.753
4	Bir süre Facebook'a girmezsem kendimi insanlardan kopmuş hissederim	0.740
2	Facebook'ta olduğumu insanlara söylemekten gurur duyuyorum	0.735
6	Facebook kapanırsa üzülürüm	0.725
0	Genel olarak, Facebook'tan ne denli memnun kaldınız?	0.626

FB ATTITUDE SCALE (TURKISH)

Choices:

1. Kesinlikle katılmıyorum
2. Katılmıyorum
3. Kararsızım
4. Katılıyorum
5. Kesinlikle katılmıyorum

Items:

1. Facebook günlük etkinliklerimin bir parçasıdır.
2. Facebook'ta olduğumu insanlara söylemekten gurur duyuyorum.
3. Günlük programımın bir parçasını Facebook'a ayırırım.
4. Bir süre Facebook'a girmezsem kendimi insanlardan kopmuş hissederim.
5. Kendimi Facebook topluluğunun bir parçası gibi hissediyorum.
6. Facebook kapanırsa üzülürüm.

One last question:

7. Genel olarak, Facebook'tan ne denli memnun kaldınız?
   a. Hiç memnun kalmadım
   b. Memnun kaldım sayılmaz
   c. Kararsızım
   d. Memnun kaldım
   e. Çok memnun kaldım

APPENDIX Q

FB ATTITUDE SCALE (ENGLISH)

Choices:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

Items:

1. Facebook is part of my everyday activities.
2. I am proud to tell people I'm on Facebook.
3. I dedicate a part of my daily schedule to Facebook.
4. I feel out of touch when I haven't logged on to Facebook for a while.
5. I feel I am part of the Facebook community.
6. I would be sad if Facebook shut down.

One last question:

7. How satisfied are you with Facebook, overall?
   a. Not satisfied at all
   b. Somewhat satisfied
   c. Neutral
   d. Satisfied
   e. Very satisfied

FB USE SCALE (TURKISH)

1. Cinsiyetiniz?
   a) Kadın
   b) Erkek

2. Yaşınız?
[Sayı Giriniz]

3. Okumakta olduğunuz bölümde kaçıncı yılınız?
   a) 1
   b) 2
   c) 3
   d) 4
   e) 5
   f) 6
   g) Diğer

4. Şu anda bir Facebook hesabınız var mı?
   a) Evet
   b) Hayır

A. Yoksa neden?
   a) Bilgisayara düzenli erişimim yok
   b) Zamanım yok
   c) İlgilenmiyorum
   d) Daha önce Facebook'u hiç duymadım
   e) Diğer

5. Yaklaşık olarak ne kadar zamandır Facebook profiliniz var?
   c) 6 ay
   d) 1 yıl
   e) 1,5 yıl
   f) 2 yıl
   g) 2,5 yıl
   h) 3 yıldan çok

6. Ortalama olarak, günde yaklaşık kaç dakikayı Facebook'ta harcıyorsunuz?

a) 10 ya da daha az
b) 10-30
c) 31-60
d) 1 – 2 saat
e) 2 – 3 saat
f) 3'ten daha çok saat

7. Facebook profilinizi kim görebilir?
   a) Yalnızca arkadaşlarım
   b) Tüm ağlar ve arkadaşlarım
   c) Bazı ağlar ve tüm arkadaşlarım
   d) Bilmiyorum

8. Facebook arkadaşlar listenizde yaklaşık olarak kaç arkadaşınız var?
[Sayı Giriniz]

9. Facebook dışında başka hangi toplumsal ağ sitelerini kullanıyorsunuz?

   a) Twitter
   b) MySpace
   c) Last.fm
   d) deviantART
   e) Flickr
   f) LinkedIn
   g) Friendster
   h) Orkut
   i) Tumblr
   j) Diğer
   k) Başka Yok

APPENDIX S

FB USE SCALE (ENGLISH)

1. Do you currently have a Facebook account?
   a. Yes
   b. No

A. If no, why not? [Appears if answer for 1 is "No"]

   a. Do not have regular computer access
   b. Do not have time
   c. Not interested
   d. Have never heard of Facebook before
   e. Other

2. Approximately how long have you had your Facebook account?
   a. 6 months
   b. 1 year
   c. 1.5 years
   d. 2 years
   e. 2.5 years
   f. More than 3 years

3. On average, approximately how many minutes per day do you spend on Facebook?
   a. 10 or less
   b. 10-30
   c. 31-60
   d. 1 – 2 hours
   e. 2 – 3 hours
   f. More than 3 hours

4. Who can see your Facebook profile?
   a. Only my friends
   b. All Networks and Friends
   c. Some networks/all friends
   d. Don't know

5. Approximately how many friends are on your Facebook Friends List?

[Input number]

6. Which social network sites –other than Facebook- do you use?
   a. Twitter
   b. MySpace
   c. Last.fm
   d. deviantART
   e. Flickr
   f. LinkedIn
   g. Friendster
   h. Orkut
   i. Tumblr
   j. AIM
   k. Other
   l. Don't use others.

7. What functions of Facebook do you use most often?
   a. Uploading photos and photo album
   b. Uploading and watching videos
   c. Status updates
   d. Wall posts
   e. Posted items and commenting on posted items
   f. Messages
   g. Chat
   h. Events
   i. Games
   j. Applications / Games
   k. "Poke" function
   l. Groups
   m. Discussion boards

n. Notes
o. "Like" function
p. Block List
q. Other

FACTOR LOADINGS OF CMC MOTIVATION SCALE IN THE PILOT STUDY

Item No	Item	Loading
1	Bilgisayar ortamlarını kullanarak iletişim kurmayı severim	0.813
3	Başkalarıyla iletişim kurmak için bilgisayar kullanmaya motiveyimdir	0.784
-2	Başkalarıyla iletişim kurmak için bilgisayar kullanmak gerilmeme neden olur	0.661
7	Bilgisayar aracılı iletişimde her zaman söyleyecek bir şey bulurum	0.635
-5	Bilgisayar aracılığıyla iletişim kurmak beni kaygılandırır	0.560
4	Başkalarına yazmak için bilgisayarın başına oturmaya can atıyorum	0.506

APPENDIX U

FB MOTIVATION SCALE (TURKISH)

Choices:

1. Kesinlikle katılmıyorum
2. Katılmıyorum
3. Kararsızım
4. Katılıyorum
5. Kesinlikle katılıyorum

Items:

1. Bilgisayar ortamlarını kullanarak iletişim kurmayı severim
2. Başkalarıyla iletişim kurmak için bilgisayar kullanmak gerilmeme neden olur
3. Başkalarıyla iletişim kurmak için bilgisayar kullanmaya motiveyimdir
4. Başkalarına yazmak için bilgisayarın başına oturmaya can atıyorum
5. Bilgisayar aracılığıyla iletişim kurmak beni kaygılandırır
6. Bilgisayar aracılı iletişimde her zaman söyleyecek bir şey bulurum

APPENDIX V

FB MOTIVATION SCALE (ENGLISH)

Choices:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

Items:

1. I enjoy communicating using computer media.
2. I am nervous about using the computer to communicate with others.
3. I am very motivated to use computers to communicate with others.
4. I look forward to sitting down at my computer to write to others.
5. Communicating through a computer makes me anxious.
6. I am never at a loss for something to say in Computer Mediated Communication.

FACTOR LOADINGS OF FB MOTIVES SCALE IN THE PILOT STUDY

Factor	No	Item	Loading
Friendship			
	26	Dost edinmek için	0.895
	24	Duygusal bir ilişki başlatmak için	0.868
	25	Gerçek yaşamdakilerden dahi ilginç kişiler bulmak icin	0.867
	27	Yeni arkadaşlarla tanışmak için	0.847
	28	Bir gruba ait olduğumu hissetmek için	0.777
Passing Time			
	07	Sıkıldığımda zaman geçirmek için	0.857
	09	Vakit doldurmak için	0.847
	08	Facebook'a girmek İnternette olduğumda yaptığım rutin bir sevdir	0.813
	20	Yapmakta olduğum işlerden uzaklaşmak için	0.728
	29	Eğlenmek için	0.711
Relationship			
	02	Bir arkadaşıma mesaj göndermek için	0.811
	12	Arkadaşlarımla iletişim kurmak için	0.792
	31	Tanıdığım kişilerle bağlantı kurmak için	0.734
	03	Arkadaşımın duvarına yazmak için	0.720

FB MOTIVES SCALE (TURKISH)

Question:

Aşağıdaki nedenler dolayısıyla, Facebook'u ne sıklıkla kullanırsınız?

Choices:

1. Hiçbir zaman
2. Nadiren
3. Bazen
4. Çoğu kez
5. Her zaman

Items:

1. Sıkıldığımda zaman geçirmek için
2. Vakit doldurmak için
3. Facebook'a girmek İnternette olduğumda yaptığım rutin bir şeydir
4. Yapmakta olduğum işlerden uzaklaşmak için
5. Eğlenmek için
6. Dost edinmek için
7. Yeni arkadaşlarla tanışmak için
8. Gerçek yaşamdakilerden dahi ilginç kişiler bulmak için
9. Duygusal bir ilişki başlatmak için
10. Bir gruba ait olduğumu hissetmek için
11. Bir arkadaşıma mesaj göndermek için
12. Arkadaşlarımla iletişim kurmak için
13. Tanıdığım kişilerle bağlantı kurmak için
14. Arkadaşımın duvarına yazmak için

APPENDIX Y

FB MOTIVES SCALE (ENGLISH)

Question:

How often do you use Facebook for the following reasons?

Choices:

1. Never
2. Rarely
3. Sometimes
4. Often
5. Always

Items:

1. To pass time when bored.
2. To occupy my time.
3. It is one of the routine things I do when online.
4. To get away from what I am doing.
5. Have fun.
6. Find companionship.
7. Meet new friends.
8. Find more interesting people than in real life.
9. Develop a romantic relationship.
10. Feel like I belong to a group.
11. To send a message to a friend.
12. To communicate with my friends.
13. Get in touch with people I know.
14. To post a message on my friend's wall.

FACTOR LOADINGS OF FB ATTITUDE SCALE IN THE ACTUAL STUDY (TURKISH)

Item	Loading
[FT 5] Kendimi Facebook topluluğunun bir parçası gibi hissediyorum	0.849
[FT 4] Bir süre Facebook'a girmezsem kendimi insanlardan kopmuş hissederim	0.805
[FT 1] Facebook günlük etkinliklerimin bir parçasıdır	0.789
[FT 3] Günlük programımın bir parçasını Facebook'a ayırırım	0.776
[FT 6] Facebook kapanırsa üzülürüm	0.726
[FT 0] Genel olarak, Facebook'tan ne denli memnun kaldınız?	0.564

FACTOR LOADINGS OF FB MOTIVATION SCALE IN THE ACTUAL STUDY (TURKISH)

Item	Loading
[FY 3] Başkalarıyla iletişim kurmak için bilgisayar kullanmaya motiveyimdir	0.829
[FY 1] Bilgisayar ortamlarını kullanarak iletişim kurmayı severim	0.78
[FY 4] Başkalarına yazmak için bilgisayarın başına oturmaya can atıyorum	0.749
[FY 6] Bilgisayar aracılı iletişimde her zaman söyleyecek bir şey bulurum	0.65

FACTOR LOADINGS OF FB MOTIVES SCALE IN THE ACTUAL STUDY (TURKISH)

Item	Factors		
	1	2	3
[FG 01] Sıkıldığımda zaman geçirmek için	0.837		
[FG 02] Vakit doldurmak için	0.828		
[FG 04] Yapmakta olduğum işlerden uzaklaşmak için	0.685		
[FG 03] Facebook'a girmek İnternette olduğumda yaptığım rutin bir şeydir	0.676		
[FG 05] Eğlenmek için	0.56		
[FG 12] Arkadaşlarımla iletişim kurmak için		0.916	
[FG 13] Tanıdığım kişilerle bağlantı kurmak için		0.875	
[FG 11] Bir arkadaşıma mesaj göndermek için		0.847	
[FG 07] Yeni arkadaşlarla tanışmak için			0.925
[FG 06] Dost edinmek için			0.878
[FG 08] Gerçek yaşamdakilerden dahi ilginç kişiler bulmak için			0.855

APPENDIX AC

FACTOR LOADINGS OF NEO FFI IN THE ACTUAL STUDY (TURKISH)

Item	Factors				
	1	2	3	4	5
[K 21] [N] Kendimi çoğu kez gergin ve sinirli hissederim.	0.659				
[K 26] [N] Kimi zaman kendimi tümüyle değersiz hissederim.	0.651				
[K 31] [N] Kendimi evhamlı ya da endişeli hissettiğim zamanlar çok nadirdir. [Reversed]	0.643				
[K 01] [N] Endişeli biri değilimdir. [Reversed]	0.626				
[K 51] [N] Sık sık kendimi çaresiz hisseder ve sorunlarımı çözmesi için birilerine ihtiyaç duyarım.	0.623				
[K 46] [N] Üzgün ya da kederli olduğum zamanlar çok nadirdir. [Reversed]	0.603				
[K 16] [N] Kendimi yalnız ya da hüzünlü hissettiğim zamanlar çok nadirdir. [Reversed]	0.594				
[K 11] [N] Büyük bir baskı altında kaldığım zamanlarda, bazen kendimi darmadağın olmuş gibi hissederim.	0.578				
[K 41] [N] İşler kötüye gittiği zaman, çoğu kez hevesimi kaybeder ve her şeyi orada bırakıvermeyi isterim.	0.553				
[K 42] [E] Çok iyimser biri değilimdir.	0.545				

Item	Factors				
	1	2	3	4	5
[K 06] [N] Çoğu kez kendimi başkalarından daha aşağı hissederim.	0.518				
[K 36] [N] Çoğu kez, insanların bana karşı gösterdiği davranış biçimine sinirlenirim.	0.514				
[K 56] [N] Hemen kaçıp saklanmak isteyecek kadar utandığım zamanlar olmuştur.	0.489				
[K 25] [C] Belirli hedeflerim vardır ve bunlara ulaşmak için düzenli bir biçimde çalışırım.		0.748			
[K 35] [C] Amaçlarıma ulaşmak için çok çalışırım.		0.725			
[K 15] [C] Çok düzenli bir insan değilim. [Reversed]		0.633			
[K 50] [C] Her zaman işini yerine getiren üretken bir insanımdır.		0.620			
[K 55] [C] Asla düzenli biri olamayacakmışım gibime geliyor. [Reversed]		0.603			
[K 05] [C] Eşyalarımı temiz ve düzenli tutarım.		0.588			
[K 10] [C] İşleri zamanında bitirmek için hızımı ayarlamakta oldukça iyiyimdir.		0.582			
[K 60] [C] Yaptığım her şeyde kusursuzluğa ulaşmaya çabalarım.		0.544			
[K 30] [C] Çalışmaya başlamadan önce bir sürü zamanı boşa harcarım. [Reversed]		0.539			
[K 44] [A] Tutumlarımda gerçekçi ve kararlayımdır.		0.530			

Item			Factors		
	1	2	3	4	5
[K 52] [E] Çok hareketli bir insanımdır.			0.767		
[K 22] [E] Nerede hareket varsa, orada olmak isterim.			0.693		
[K 32] [E] Çoğu kez, kendimi sanki enerjiden patlayacakmış gibi hissederim.			0.644		
[K 47] [E] Hızlı bir yaşantım vardır.			0.639		
[K 37] [E] Neşeli, keyif dolu bir insanımdır.			0.601		
[K 17] [E] İnsanlarla konuşmaktan gerçekten çok hoşlanırım.			0.577		
[K 07] [E] Kolay gülerim.			0.528		
[K 02] [E] Yanımda birçok insanın olmasından hoşlanırım.			0.527		
[K 04] [A] Karşılaştığım herkese karşı nazik olmaya çalışırım. [Reversed]				0.596	
[K 59] [A] Gerekirse, istediğimi elde etmek için insanları kullanmaktan çekinmem.				0.577	
[K 14] [A] Bazı insanlar benim bencil ve kendini beğenmiş olduğumu düşünür.				0.561	
[K 49] [A] Genellikle düşünceli ve saygılı biri olmaya çalışırım. [Reversed]				0.529	
[K 45] [C] Kimi zaman, olmam gerektiği kadar güvenilir ya da inanılır biri değilimdir.				0.504	
[K 39] [A] Bazı insanlar benim soğuk ve içten pazarlıklı olduğumu düşünür.				0.497	

Item	Factors				
	1	2	3	4	5
[K 19] [A] Diğer insanlarla yarışmak yerine, yardımlaşmayı yeğlerim. [Reversed]				0.475	
[K 09] [A] Ailemdeki insanlarla ve okul arkadaşlarımla sık sık tartışırım.				0.442	
[K 43] [O] Bir şiir okurken ya da bir sanat eserine bakarken, kimi zaman içimde bir ürperme, bir heyecan dalgası hissederim.					0.700
[K 53] [O] Entelektüel merak sahibi bir insanım.					0.665
[K 58] [O] Teorilerle ya da soyut fikirlerle uğraşmaktan çoğu kez zevk alırım.					0.657
[K 48] [O] Evrenin yapısı ya da insanlığın durumu gibi konular üzerinde konuşmaya pek ilgim yoktur. [Reversed]					0.653
[K 13] [O] Sanat eserlerinde ve doğada rastladığım şekiller bende hayranlık uyandırır.					0.601
[K 23] [O] Şiirin benim üzerimde hemen hemen hiçbir etkisi yoktur. [Reversed]					0.569

Notation: "1, 2, 3, 4, and 5" above the factor loadings refer to Neuroticism, Conscientiousness, Extraversion, Agreeableness, and Openness to Experience, respectively. English original items are presented in brackets beneath the Turkish ones.

APPENDIX AD

**FACTOR LOADINGS OF FB ATTITUDE SCALE IN THE ACTUAL STUDY
(ENGLISH)**

Item	Loading
I feel out of touch when I haven't logged on to Facebook for a while	0.846
I feel I am part of the Facebook community	0.83
Facebook is part of my everyday activities	0.798
I dedicate a part of my daily schedule to Facebook	0.782
I would be sad if Facebook shut down	0.756

FACTOR LOADINGS OF FB MOTIVATION SCALE IN THE ACTUAL STUDY (ENGLISH)

Item	Loading
I am very motivated to use computers to communicate with others	0.854
I enjoy communicating using computer media	0.797
I look forward to sitting down at my computer to write to others	0.768
I am never at a loss for something to say in Computer Mediated Communication	0.679

FACTOR LOADINGS OF FB MOTIVES SCALE IN THE ACTUAL STUDY (ENGLISH)

Item	Factors		
	1	2	3
To occupy my time	0.87		
To pass time when bored	0.815		
To get away from what I am doing	0.794		
It is one of the routine things I do when online	0.767		
Have fun	0.668		
Find more interesting people than in real life		0.845	
Meet new friends		0.813	
Develop a romantic relationship		0.802	
Find companionship		0.718	
Feel like I belong to a group		0.694	
To send a message to a friend			0.895
To communicate with my friends			0.889
Get in touch with people I know			0.855

Notation: "1, 2, and 3" above the factor loadings refer to Passing Time, Friendship, and Relationship, respectively.

FACTOR LOADINGS OF NEO FFI IN THE ACTUAL STUDY (ENGLISH)

Item	Factors				
	1	2	3	4	5
[P20 C] I try to perform all the tasks assigned to me conscientiously.	0.801				
[P25 C] I have a clear set of goals and work toward them in an orderly fashion.	0.777				
[P60 C] I strive for excellence in everything I do.	0.704				
[P35 C] I work hard to accomplish my goals.	0.703				
[P50 C] I am a productive person who always gets the job done.	0.699				
[P40 C] When I make a commitment, I can always be counted on to follow through.	0.646				
[P49 A] I generally try to be thoughtful and considerate.	0.533				
[P32 E] I often feel as if I'm bursting with energy.		0.667			
[P52 E] I am a very active person.		0.667			
[P37 E] I am a cheerful, high-spirited person.		0.644			
[P22 E] I like to be where the action is.		0.63			
[P2 E] I like to have a lot of people		0.604			

Item	Factors				
	1	2	3	4	5
around me.					
[P17 E] I really enjoy talking to people.		0.596			
[P34 A] Most people I know like me.		0.541		-0.478	
[P47 E] My life is fast-paced.		0.472			
[P24 A] I tend to be cynical and skeptical of others' intentions.			0.616		
[P41 N] Too often, when things go wrong, I get discouraged and feel like giving up.			0.609		
[P11 N] When I am under a great deal of stress, sometimes I feel like I'm going to pieces.			0.608		
[P29 A] I believe that most people will take advantage of you if you let them.			0.606		
[P30 C] I waste a lot of time before settling down to work.			0.602		
[P26 N] Sometimes I feel completely worthless.			0.58		
[P36 N] I often get angry at the way people treat me.			0.531	0.504	
[P56 N] At times I have been so ashamed I just wanted to hide.			0.433		
[P8 O] Once I find the right way to do something, I stick to it.			0.409		
[P39 A] Some people think of me as cold and calculating.				0.637	
[P9 A] I often get into arguments with my family and friends..				0.554	

Item	Factors				
	1	2	3	4	5
[P42 E] I am not a cheerful optimist.				0.538	
[P12 E] I don't consider myself especially "light-hearted."				0.509	
[P21 N] I often feel tense and jittery.			0.4	0.477	
[P59 A] If necessary, I am willing to manipulate people to get what I want.				0.403	
[P13 O] I am intrigued by the patterns I find in art and nature.					0.79
[P58 O] I often enjoy playing with theories or abstract ideas.					0.74
[P43 O] Sometimes when I am reading poetry or looking at a work of art,I feel a chill or wave of excitement.					0.713
[P28 O] I often try new and foreign foods.					0.656
[P53 O] I have a lot of intellectual curiosity.					0.499

Notation: "1, 2, 3, 4, and 5" above the factor loadings refer to Conscientiousness, Extraversion, Neuroticism, Agreeableness, and Openness to Experience, respectively.

APPENDIX AH

AUTHORIZATION OF ONLINE SURVEY ACCOUNT

From wwwsurvy@metu.edu.tr Cum Nis 15 16:53:35 2011
Return-Path: <wwwsurvy@metu.edu.tr>
X-Original-To: atabek@metu.edu.tr
Delivered-To: atabek@metu.edu.tr
Received: from mail.metu.edu.tr (likya.general.services.metu.edu.tr
[144.122.144.158])
        by arikanda.general.services.metu.edu.tr (Postfix) with ESMTP id
A41195079
        for <atabek@metu.edu.tr>; Fri, 15 Apr 2011 16:52:51 +0300 (EEST)
Received: from ege.cc.metu.edu.tr (ege.general.services.metu.edu.tr
[144.122.144.164])
        by mail.metu.edu.tr (Postfix) with ESMTP id 9404D502EF
        for <atabek@metu.edu.tr>; Fri, 15 Apr 2011 16:53:35 +0300 (EEST)
Received: by ege.cc.metu.edu.tr (Postfix, from userid 4870)
        id 81AE22E09A; Fri, 15 Apr 2011 16:53:35 +0300 (EEST)
To: atabek <atabek@metu.edu.tr>
Subject: =?utf-8?B?VXNlciByZWdpc3RyYXRpb24gYXQgJ01FVFVTdXJ2ZXkn?=
Date: Fri, 15 Apr 2011 16:53:35 +0300
From: METUSurvey <wwwsurvy@metu.edu.tr>
Reply-to: METUSurvey <wwwsurvy@metu.edu.tr>
Message-ID: <ff7c9d4c4ef4c4f1d46d0f135c58cc79@survey.metu.edu.tr>
X-Priority: 3
X-Mailer: PHPMailer 5.1 (phpmailer.sourceforge.net)
X-Surveymailer: METUSurvey Emailer (LimeSurvey.sourceforge.net)
MIME-Version: 1.0
Content-Type: multipart/alternative;
        boundary="b1_ff7c9d4c4ef4c4f1d46d0f135c58cc79"
X-Virus-Scanned: clamav-milter 0.97 at likya
X-Virus-Status: Clean
X-Spam-Status: No, score=0.0 required=5.0 tests=AWL,HTML_MESSAGE,
        UNPARSEABLE_RELAY autolearn=disabled version=3.2.5
X-Spam-Checker-Version: SpamAssassin 3.2.5 (2008-06-10) on likya

--b1_ff7c9d4c4ef4c4f1d46d0f135c58cc79
Content-Type: text/plain; charset="utf-8"
Content-Transfer-Encoding: 8bit

Hello Oguzhan Atabek,

this is an automated email to notify that a user has been created for you on
the site 'METUSurvey'.

You can use now the following credentials to log into the site:

Username: atabek

Password: 5y26ww74

Click here to log in.

If you have any questions regarding this mail please do not hesitate to contact the site administrator at wwwsurvy@metu.edu.tr. Thank you!

--b1_ff7c9d4c4ef4c4f1d46d0f135c58cc79
Content-Type: text/html; charset="utf-8"
Content-Transfer-Encoding: 8bit

Hello Oguzhan Atabek,

this is an automated email to notify that a user has been created for you on the site 'METUSurvey'.

You can use now the following credentials to log into the site:
Username: atabek
Password: 5y26ww74
Click here to log in.

If you have any questions regarding this mail please do not hesitate to contact the site administrator at wwwsurvy@metu.edu.tr. Thank you!

CURRICULUM VITAE

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EDUCATION

Degree	Institution	Year of Graduation
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High School	Antalya Anatolian Vocational High School	1997

WORK EXPERIENCE

Year	Place	Enrollment
2003 - Present	METU, Department of Computer Education. and Instructional Technology	Research Assistant
2002 - 2003	Hasan Ali Yücel Primary School, Ankara	Computer Teacher

FOREIGN LANGUAGE
English

PUBLICATIONS

1. Atabek, O. (2012). Preservice teachers' personality, motives, motivation, and attitudes associated with the use of social network services: Facebook case. In C. D. Maddux & D. Gibson (Eds.), *Research highlights in technology and teacher education 2012* (pp. 109-116). SITE.

2. Atabek, O. (2012). Preservice teachers' personality, motives, motivation, and attitudes associated with the use of social network services: Facebook case. In P. Resta (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2012* (pp. 95-102). Chesapeake, VA, USA: AACE.

3. Atabek, O. & Yıldız, I. (2010). Personal pronouns as indicators of interpersonal interaction in an online learning environment. In D. Gibson & B. Dodge (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2010* (pp. 292-298). Chesapeake, VA, USA: AACE.

4. Atabek, O. (2002). *Unix operating system*. (Unpublished bachelor's thesis). Gazi University, Ankara, Turkey.

HOBBIES
SCUBA Diving, Photography, Cinema, Linguistics.