IDENTIFYING DESIGN FACTORS FOR PERSONAL DIGITAL CALENDARS IN RELATION WITH CONSUMER TIMESTYLES

A THESIS SUBMITTED TO THE GRADUATE SCHOOL OF SOCIAL SCIENCES OF MIDDLE EAST TECHNICAL UNIVERSITY

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ABSTRACT

IDENTIFYING DESIGN FACTORS FOR PERSONAL DIGITAL CALENDARS

IN RELATION WITH CONSUMER TIMESTYLES

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Timestyle is a psychological framework that tries to model individual differences to

valuation and consumption of time. Its effect on shopping, leisure activities, and web site

usage had been studied. This study tries to reveal its effect on the consumption of time

management tools. For this purpose, first a comprehensive qualitative work is carried out

to find out practices, expectations, motivations and meanings of consumers related with

these tools. Then, the significance of these factors and their correlation with timestyle

dimensions are uncovered with a quantitative survey. The results of this thesis can be

utilized for designing and marketing better-performing and better-adapting digital

calendars.

Keywords: Time Management Tool, Datebook and Calendars, Product Design,

Consumption of Time

iv

ÖZ

KİŞİSEL SAYISAL TAKVİMLERİN TASARIM UNSURLARININ

TÜKETİCİ ZAMAN STİLLERİYLE İLİŞKİLİ OLARAK BELİRLENMESİ

Civelek, Utku

Yüksek Lisans, İşletme

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Haziran 2016, 100 sayfa

Zaman stili, zamanın kıymetlendirilmesi ve tüketilmesindeki bireysel farklılıkları

modellemeye çalışan psikolojik bir çerçevedir. Bu çerçevenin alışveriş, boş zaman

etkinlikleri ve web sitesi kullanımındaki etkisi araştırılmıştır. Bu çalışma ise zaman

stillerinin zaman yönetim araçlarının tüketimine olan etkisini ortaya koymaya

çalışmaktadır. Bu amaçla önce tüketicilerin bu araçlarla ilgili pratikleri, beklentileri,

motivasyonları ve anlamlandırmalarını ortaya çıkarmak için kapsamlı bir nitel araştırma

yürütülmüştür. Sonrasında, bu tasarım unsurlarının önemi ve zaman stili boyutlarıyla

bağlantısı nicel bir çalışma ile gösterilmiştir. Bu tezin sonuçları daha iyi çalışan ve daha

iyi uyarlanan sayısal takvimlerin tasarımı ve pazarlanması için kullanılabilecektir.

Anahtar Kelimeler: Zaman Yönetim Araçları, Ajanda ve Takvimler, Ürün Tasarımı,

Zaman Tüketimi

V

To My Parents and Aunts in İzmir

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CHAPTER 1

INTRODUCTION

The need for planning time and managing schedules has been forcing people to use various tools perceived to be vital in managing business tasks and personal lives. Notebooks, daybooks, post-its and calendars had been the common examples before the Digital Era introduced personal computers, phones and tablets with time planning apps. As our activities become more pre-scheduled -in competition with each other-, the virtue of digital time management tools scales up.

However, despite the numerous advances in electronics and communication technologies, many consumers continue to use printed daybooks, carry notebooks in their bags, leave a space to desktop calendars, buy new ones in December or January, and transfer some of entities from their previous tools to new tools. Some others make their own layouts on digital spreadsheet or text processor tools and spend a considerable amount of effort to synchronize these documents among many devices. Another group of consumers try and change mobile apps again and again while searching for the best tool fitting their needs. And most of these consumers make use of multiple tools, for different purposes. As a result, while trying to manage their time, they find themselves struggling to manage their management of time.

This last-longing status of time management field points out potential deficiencies of the current digital tools. Therefore, in order to figure out what is lacking and what is promising about the cutting edge digital assistants, the current nature of time management tools' consumption should be better understood. To that end, this thesis focus on consumers' practices, expectations, motivations, and meanings as design factors and tries to present

their relation with individual timestyles for designing and marketing products which satisfies consumers' needs.

In the first phase of this thesis study, design factors affecting consumer choice & satisfaction are revealed with a qualitative research. Participants attend a short session in which they use a digital calendar and make a quick review of it. Later on, they observe their own practices with time management tools for a week. Then a semi-structured indepth interview is made at the end of that week. After the analysis these stages' findings, in the second phase, a quantitative research is carried out to point out the relationship between consumer timestyles and design factors. For this purpose, an online survey based on Likert-scale measurement of timestyle dimensions, practices, expectations, motivations, and meanings is conducted with METU (Middle East Technical University) students.

The following chapter will summarize the theories and previous studies in related topics. Then, the methodology, data analysis and results of the first phase will be described in Chapter III and Chapter IV. Similarly, details of the second phase will be provided in Chapter V and Chapter VI. Finally a conclusion will be made in the last chapter.

CHAPTER 2

LITERATURE REVIEW

The design and marketing of a consumer good/service depends on the fit between consumer needs and product benefits. In the context of time management tools, that fit depends on three aspects: First aspect is the individual attitudes to the valuation, classification, and consumption of time; which may be called as consumers' approach to the time. The second aspect is design factors affecting consumption of current tools. Finally, the third aspect is understanding the correlation between these two aspects. Previous works on these three aspects will be narrated in this chapter.

2.1 Timestyle Concept

Although the time was taken as a linear and objective entity in early studies, researches started to analyze the perceived flow of time and its outcomes in recent decades (Usunier and Valette-Florence, 2007). Feldman & Hornik used the term "timestyle" first, and related it to the consumers' time sparing practices (1981).

In Cotte, Ratneshwar, & Mick's (2004) model, timestyles differ as consumers' approaches fall into different points on its social, temporal, planning, and polychronic orientation dimensions. The social orientation dimension reflects the balance of the primacy given to the time spent for oneself and the time spent with family or friends. The temporal orientation dimension points out the individual's locus of significance on personal timeline, which may be close to the past, to the present, or to the future. The planning orientation changes according to the frequency and extensity of the plans the individual makes. Finally, the polychronic dimension points out the multitasking capabilities and preferences. All of these four dimensions lay on a continuous axis, i.e. consumers do not

have to be on extreme edges and they may take place at any point of the axis depending on the strength of their approaches.

The relation of timestyle with the choice of leisure time activities, shopping styles, waiting time patterns (Durrande-Moreau, A., & Usunier, J. C. 1999), and web site satisfaction of consumers (Elmezni, I., & Gharbi, J. E. 2010) have been studied so far. Cotte & Ratneshwar (2001 & 2003) asserted that people do not make choices among activity alternatives, but evaluate the length and type of the time they have, first. They indicated that the timestyle affects this evaluation, thus the final decision of the consumer, by shaping "the categorical structure for leisure time" which consist of both classifying and intention-specifying attributes. The results of their exploratory work showed that women's leisure time activity preferences are strongly influenced by individual timestyles. Cotte & Ligas, (2003) presented the correlation between timestyles and shopping styles. They showed how "pre-purchase planning, variety-seeking, impulse buying, price search, market mavenism, and frequency of shopping trips" are affected according to consumers' timestyle orientations. Gavilán Bouzas, Blasco López, & Avello Iturriagagoitia (2010) included hedonism into this picture. According to their study, there is a significant reverse correlation between the hedonic satisfaction women get in shopping and planning, efficient using, and routinizing of time.

2.2 Consumption of Time Management Tools

The second aspect of consumer-tool fit is the consumers' specific practices and expectations related with these tools, and their explicit and implicit motivations for using them with various meanings.

Kelley and Chapanis (1982) made the first study that aims "to computerize" calendars in an efficient way. Although they analyzed the practices with printed calendars, results of the study were presented by indicating their potential applications in electronics devices. They found out that the calendars had a crucial necessity for carrying out tasks at work, and sometimes at home. The pride of being busy, and the status earned by a fully-written

daybook were depicted with the statements of participants. Diverse approaches to layout preferences were shown to point out the need for a dynamic one in computerized calendars. Problems in the use and coordination of multiple calendars were shown to draw attention to the benefits of a centralized database. Concerns about the completeness and privacy of contents were remarked for both printed and computerized calendars, while the expected improvements in calendar portability, event archiving, new year transitions, repeating event additions, cancelled event deletions, and searching functions are mentioned after stating deficiencies of the printed materials. A similar approach is made in our study by learning consumption practices and expectations related with paper tools and investigating corresponding improvements in digital tools.

Payne's (1993) work was one of the firsts that directly analyze "electronic calendars". Moreover, it was addressing individual usage by considering psychological structures. Although usability and portability issues were found to be significant for the preference of electronic calendars, he intentionally elaborated functional properties more. Representation of time and events is found to be main design problem; which had a large-scale interest in following decades. "Sensitivity to social and personal routines", "smart alarms" and reporting functionalities were visionary suggestions based on the need for understanding the consumer, still being developed a quarter-century after his work.

Later studies focused more on the specific usage cases of digital time management tools, mostly by dealing with technical details and layout designs, generally by considering the collaborative use in office environment. Again, most of the works (Beard et. Al., 1999), (Blandford & Green, 2001), (Crabtree, Hemmings, Rodden & Mariani, 2003), (Egger & Wagner, 1992), (Grudin & Palen, 1995) employed quantitative methods to measure efficiency and perceived competency, and to propose incremental improvements, rather than trying to reveal unmet expectancies and functionalities.

In 2000, Bellotti and Smith presented a progressive work on "information managing systems" like calendars, to-do lists, and contact pages. The work included multiple

qualitative methods (in-depth interviews, taking photos of individual tools/desks, and throw-away prototype demonstrations) in multiple phases. After analysis, they classified main subjects of these systems into "meetings, emails, phone-calls, notes, schedule/contact/to-do"s and the use of digital devices. Then they found four preliminary design principles: Accessibility, flexibility, lightweight, and simplicity. Accessibility is considered in terms of switching among applications and the need for a comprehensive application. On the other hand, flexibility (referring excessive capability of user customization), lightweight and simplicity correspond to single tool design factors studied in this thesis.

Crabtree, Hemmings, Rodden, & Mariani (2003) investigated the domestic use of calendars. They pointed out that the use of a calendar makes it "a living thing that has meaning, purpose, utility, and demonstrable sense and reference". However, they put their emphasis on technical issues such as the need for providing place and time-independent access, developing technology-based interactions, and offering ways to share and cocreate data; as their study was still focusing on collaboration. Individual use and its characteristics were not mentioned.

In 2006, Tomitsch, Grechenig, & Wascher dug deeper by observing emotional values related with private calendar use. Their ethnographic study lasted for four months, which in turn brought a highly comprehensive understanding of individuals' scheduling practices. They observed that these time management tools work as "information management tools", including extra details of entries that has nothing to do with the time of events. Portability, availability robustness, privacy, and personalization were found to be main concerns about the digital calendars. For the last one, authors remarked the emotional side of the personalization and addressed the psychological relationship between individuals and personal calendars. The use of "emoticons and contextual signs" -smileys, lines, shapes, and colors- were associated with self-reflection of moods; happy, joyful, or sad.

Sell (2008) mentioned the importance of making calendars more pervasive and less intrusive, so that individuals can have more time to deal with tasks themselves, not their management. Her study focused on the increasing number and mobility of time management tools, and proved that the perceived efficiency of mobile digital calendars changes drastically according to the mobility of the worker, while the effect of total schedule load is negligible. Moreover, the more a digital device/tool fits the image of the consumer, the more she feels that the device/tool is efficient.

Wu (2011) identified common issues like simultaneous synchronization and notifications, maintenance of conflicting programs, organization of meetings according to individuals' schedules, insertion of time-ambiguous or periodic elements and categorization of event/element types. Adaptive feature adjustments, data transfer to smart devices and providing advices were further capabilities expected. Unfortunately, the psychological anticipations and outcomes were not mentioned. This thesis study tries to address them by presenting motivations and meanings related with time management tools.

Leshed & Sengers (2011) concentrated more on the psychological side of the "consumption" by investigating personal feelings, meanings and motivations, mostly related with the trending phenomena of busyness, which was also mentioned in the early work of Kelley and Chapanis. They discovered that these tools provide "a sense of fulfillment, meaning, and identity", and the feeling of being "valuable, accomplished, and satisfied", mostly by representing their busy schedule. On the other hand, these tools also support consumers for coping with that precious busyness. People can set and track goals, prioritize or change their tasks on their calendars, to intentionally manage their time and unintentionally form their identity. Moreover, by making plans with these tools, people feel in control and establish order in their lives.

Considering these studies from different disciplines with diverse discourses, this study aims to discover functional, experiential, and symbolic benefits of time management tools at once.

2.3 Consumer-Tool Compliance

Despite the existence of valuable studies on timestyle concept and time management tools separately, there is no study connecting these two subjects. How strong a design factor or functionality affects the overall attitude to a time-planning product based on individual timestyle characteristics is unknown so far, as to the author's knowledge. As the consumption, choice, and satisfaction of these tools are possibly affected by diverse approaches to the consumption and perception of time; our study tries to present the effect of timestyles on sought benefits.

As our study aims to exhibit differing needs and perceptions of consumers, rather than proposing a single alternative; qualitative methods form the basis of the study. Since the consumers may be unaware of their tendencies and practices; participants are exposed to various visual stimuli in large amounts of time to talk about them. Then, on this basis, quantitative data are employed to learn the correlation between consumers' timestyles and their diverse approaches to time management tools.

As Leshed and Segners (2011) indicate "... being busy is an important part of their identity, and, furthermore, that they enjoy being busy. ... Engagement with productivity tools is accompanied by a sense of pride in accomplishments, personal feelings of control over one's life, and constructing and reflecting on one's identity.". Thus, the design of these tools can achieve a higher level of satisfaction if these phenomena are taken into account. Findings of this study will hopefully provide design tips for better time management tools that adapt their functionality and layout according to consumer timestyles.

CHAPTER 3

RESEARCH OVERVIEW

This study consists of 2 phases, one to reveal possible effective factors in designing digital time management tools, and one to find out respective significance and correlation of these factors with respect to timestyles.

Kelley & Chapanis (1982) and Payne (1993) suggest, even homogenous groups can comprise diverse approaches to calendars. Kelley & Chapanis also state that there are excessive number of types and uses of calendars, that need attention. As Haverila's (2012) study -in which more than half of the undergrad students are found to be using calendars on phones daily- suggests, university students frequently use digital tools to handle their complex schedules with numerous irrelevant entities. They are fast in learning, evaluating, and switching tools, thus they probably constitute the most noteworthy segment of consumers. Therefore, the scope of this research is narrowed by defining university students as the target group.

First phase of the study has aimed to form a comprehensive set of design factors related with consumers' practices and expectations, as well as their motivations and meanings. Since there exists no complete set in the literature, this phase is built upon qualitative research methods to ensure the emergence of research concepts and contextual understanding (Bryman & Bell, 2011, p. 425-426).

Accordingly, research questions of the first phase are set as follows:

What are the tools used for time management and current practices?

What are the expectations for the digital tools?

Which motivations and meanings affect consumer behavior?

In the first phase, 9 METU students (1 woman for pilot work; 5 women and 3 men for actual study) with multiple responsibilities have been the voluntary participants. In this respect, students attending practices of a student club and/or working as a part-time or full-time employee have been selected. This choice is similar to Tomitsch, Grechenig, & Wascher's (2006) work, in which participants were 8 university students (5 women, 3 men), some with part-time duties. None of our participants is habitual user of Google Calendar, as they are not checking their Google Calendar more than once a month. The phase is composed of 3 stages: First meeting with a short Google Calendar use session, active usage period, and last meeting. Details of these stages will be explained in the following subsections.

After attaining elementary answers to these questions, in the second phase, the other two questions are scrutinized:

What is the significance of each design factor for tool satisfaction?

How is the correlation between design factors and time styles?

As this phase of the study has aimed to generalize factors in a macro-scale and test the validity of prospective correlation; quantitative methods are employed (Bryman & Bell, 2011, p. 425-426). As the subject of the study is time, and we want to provide time flexibility for participation, online survey is selected as the research tool. This online survey is prepared and distributed to METU students via social media and e-mail lists. Questions and measurement scales are given in the related chapters. Replies of 200 participants are examined to find significance and correlation values.

CHAPTER 4

PHASE 1 METHODOLOGY

4.1 Research Procedure

The first meeting is carried out in an office setting. Participants are informed about the purpose and stages of the study, and the confidentiality provided. After they consent the terms, they have filled a short questionnaire about their personal information and tools. Age, gender, department, self-evaluation of internet skills, types of the phones owned, names and usage sequences of digital and paper-based tools have been the subjects of questions. Just after the questionnaire, participants have formed their semester schedule containing lecture hours, coursework deadlines, presentations, exams, club meetings and practices, voyages, holidays etc. with different type-based colors on Google Calendar the (most wide-spread digital tool). Then they have added METU Academic Calendar to their schedule on Google Calendar. They have also appended e-mail reminders to some of the events. Semi-structured interviews are made just after the short experiment to learn their impression about Google Calendar depending on the difficulties and amusements faced.

Participants are demanded to use Google Calendar and add new events/deadlines etc. throughout the following week. They are also wanted to note a brief summary of their use of personal time management tools (other calendars, alarms, daybooks, apps etc.) on Google Calendar, daily. This part of the study is used provide a better understanding of their own scheduling routines and frequent exposure to Google Calendar interface.

A long semi-structured post-usage interview (McCracken, 1988) is made at the end of the active usage period, again in the same office. In this interview, their schedules (events, customizations with colors and page view etc.), liked/disliked features and comparison with other scheduling tools are investigated along with participants' suggestions for

improvements. Furthermore a few alternative calendar designs picked from Pinterest web site to illustrate numerous customizations, different time spans and layouts, and various icons are shown to them. In this way, it is made easier for participants to picture different (existing or imaginary) improvements and modifications on digital tools.

4.2 Elements

In the first meeting, after their written consent to attend the study, a single page questionnaire (provided in Appendix) is given to participants. Then, Google Calendar use is observed while guiding participants with texts at the beginning of each subsection. These subsections consist of a few tasks, summarized below:

- 1. Open Google Chrome, enter Google account information and see Google Calendar.
- 2. Add a single activity at the given time.
- 3. Add one of the courses in a periodic manner from the beginning of the semester.
- 4. Add one of the meetings or practices attended in the social organization in a periodic manner from the beginning of the semester.
- 5. Add the "Calendar Project" activity with an e-mail notification for the following 7 days.
- 6. Add all exams, project and homework deliveries until the end of semester.
- 7. Add all previous events in the semester.
- 8. Open the academic calendar on the web site of the university.
- 9. Add the academic calendar to personal Google Calendar.
- 10. Examine all alternative layouts of Google Calendar and pick the most preferred one.

Just after the end of these tasks, participants are asked to evaluate positive/negative features and to explain the difficulties they faced and suggestions they have.

In the semi-structured interview of the last meeting, answers to the following questions are sought. These questions' validity is approved by a qualitative research expert. The order of questions is dynamically changed according to interviewees' statements.

- 1. What is your impression about Google Calendar after one-week use?
- 2. What should a good calendar have?
- 3. What is the significance of time for you?
- 4. How do you remember special days?
- 5. What happens to your former calendars? How do you switch to a new calendar?
- 6. Is there anything you do to remember past special days/memories? Please explain.
- 7. When and how do you take notes?
- 8. Where do you carry your phone? How do you use it?
- 9. (After seeing alternatives) What are your additional suggestions for a good calendar?

The alternative designs on Pinterest (provided in Appendix) are shown to participants in a random order. For some of the participants, the visual representing their prior suggestions is selected as the first. The alternative layout designed for the study is presented to participants as the final example, in order to decrease the level of biases that may be caused by moderator's proximity to design or participants' proximity to the moderator.

4.3 Limitations

The study is conducted with METU students with multiple responsibilities. Students in other universities and/or with single roles are assumed to have similar or simpler practices. An insight to workers' point of view is tried to be obtained with the existence student workers among participants. Cultural and national aspects are not considered at all.

The use of a single large-screen application for observation brought another limitation. A future study on smart devices and mobile apps is required to reveal more about the users.

The researcher was an insider for the participant group, easing cozy conversations in interviews but possibly narrowing the scope of alternatives. In order to decrease this drawback, secondary sources on Pinterest are employed to widen the scope.

4.4 Participants

Information about the participants in the first phase of the study are given on Table 1.

Table 1 - Phase 1 Participants

Name ¹ , Age:	Ali, 23	Bade, 24	Derya, 25	Ece, 23	Fatma, 23	Mert, 27	Olgun, 27	Pelin, 20
Busyness ³	Soc.Org.	Soc.Org.	Soc.Org. Part-Time	Soc.Org.	Soc.Org.	Soc.Org. Full-Time Seminar	Soc.Org. Full-Time	Soc.Org.
Studentship ²	Bachelor-4 Engineering	Master Engineering	Master Engineering	Bachelor-4 Education	Bachelor-4 Education	PhD Education	Master Applied Sci.	Bachelor-3 Education
PC Skills ⁴	Good	Good	Medium	Medium	Medium	Very Good	Very Good	Medium
Internet Daily Use	8 hrs. +	4-6 hrs.	4-6 hrs.	4-6 hrs.	2-4 hrs.	6-8 hrs.	4-6 hrs.	2-4 hrs.
# of Phones	1	2	1	1	1	1	1	1
Personal Time Plan. Tool	Using	Using	Using	Not Using	Using	Using	Using	Using
Printed Calendars	Notebook Desktop	Daybook	Daybook	Post-it	Daybook	Desktop	Post-it	None
Digital Calendars	Phone	Phone	None	None	PC	None	PC, tablet	Phone
Google Cal. Use	Never	Never	Used Before	Never	Used Before	Once in Month	Used Before	Never
Calendar Apps	SPlanlayıcı	Phone Notes	None	None	None	None	Samsung Note	None
Modified Tools	None	None	None	None	Excel	Excel	Excel	Excel

¹ Aliases are used for all participants to ensure anonymity ² Studentship entities show class and faculty information

³ Soc.Org. refers to responsibility in a non-governmental organization; Full-Time and Part-Time refer to jobs ⁴ Self-evaluated (self-perceived) competence of computer use

CHAPTER 5

PHASE 1 DATA ANALYSIS AND RESULTS

"...sometimes I sacrifice material things to gain more time... In other words, the time sometimes takes precedence over the cash." (Ali)

"[Time] is extremely precious, we need to utilize it very well. There shouldn't be any waste of time. ... Taking advantage of calendars is good, of course. You see what is happening, what you are doing, what you will have to do." (Pelin)

As Ali and Pelin indicate in the last interviews, we care about our time and want to allocate it to different tasks efficiently, depending on the definition of efficiency in our lives. We have some routines and habits to manage our schedule and follow them when using or selecting (buying) time management tools. As these tools fit our practices, meet our expectations and comply with our motivations, our satisfaction levels increase.

To present these different aspects of time planning, interview transcripts are critically analyzed. When the user practices are considered, a large set of methods and variables are found. This set is categorized by the use of code words and a vista is obtained.

5.1 Practices and Expectations

Ease of Access

Time management tools can be required in anywhere at any time in principle. In accordance, ease of access is a strong aspect in choosing the tool. However, the perceived ease depends on the habits and owned devices.

"...you know, for example you will take that months' birthdays and note them to a place.... For example, let them be in my hand. Well, I may write them down to a sheet, you know, that I can frequently carry with me, that I can transfer from one place to another..." (Ali)

"My daybook is sufficient, too. It's even more advantageous for me to be able to handwrite so that I can frequently check it during the day. ... Indeed, since I use my cellular phone more frequently, there are periods when I note things which may be of little importance, but which I have higher possibility of forgetting." (Bade)

"Since I don't have a device that I can carry with me and with which I can write on Google Calendar in an instant... I've always kept it in my mind as like 'I should better write this down when I go [home] in the evening." (Derya)

"...at that moment, I should have something by my side to take notes on.... When I don't update instantaneously, I forget what I will do anyway; thus, it becomes useless." (Olgun)

Offline Accessibility

One of the main concerns in selecting a tool for time management is tools' capabilities in offline environments. As the users' offline time periods get longer (which may be caused by not having a smart device) the effect of offline inaccessibility gets greater.

"Since I'm not a person that constantly goes online during the day -due to technological constraints- it is OK if I do not use Google Calendar." (Bade)

"...will it come, be... only when the Internet is on? Or, if you don't have Internet, if there is no Wi-Fi, then you are down." (Ece)

"Well, I've have decided that doing something via cellphone is probably the most logical thing. Because I can't always go online, anyway." (Olgun)

"Or computer, for example, something like Google Calendar, you can't track, look at it, when you don't have your computer by your side, or you can't enter via cellphone." (Pelin)

Time-orientation

People have different mental partitions of time and this difference leads to varying expectations about representation of time frames. Short-term oriented users focus on daily and weekly views while others want to see multiple months or a whole year on the layout.

Ali and Pelin express their short-term orientation not only by indicating their routine but also decrying the appearance of monthly views.

"...I'm not such a person that makes long-term plans, anyway... when I see October, November, and December, all together at once... actually it looks like a Matrix table... I don't like to see three months, five months together." (Ali)

"...well, I only write whatever I have to do that day. ... Usually I write weekly. ... Monthly view seems too condensed anyway. I didn't quite prefer in my thing, too; I preferred to look at it weekly." (Pelin)

Bade and Fatma, on the other hand, are making long-period plans and want to see or note them.

"Yes, that's it. What I want is something like this, besides. ... It is not when that day approaches or on that day, I'd rather look at a wide plan, yes. You know, like monthly; or, like annually." (Bade)

"...I had a notebook, I often took notes on it. For example, I used to write the date down, what would be done on that day... I was not able to see it in a broad sense, which caused problems." (Fatma)

Notifications

Many users feel the need of being notified by the tools, rather than just opening and looking at them by themselves.

"But, if there won't be notifications; what does it serve for me, indeed? I can see them only when I turn it on myself." (Ece)

"Oh! Also in Internet environment... well it's important that it reminds you of things, or on phone you know." (Fatma)

"Well, it used to remind the classroom 15 minutes before class. In that manner, it is good I think." (Mert)

"Well, this exists on computer, that it texts to phone, it is a good thing." (Pelin)

"Well, in the office, I can't do it like 'What do I have to remember?' by scanning this agenda just like that. At work, there is a post-it just on the computer saying 'January 21', it waits over there." (Selda)

Privacy

With the widespread use of social networks and cloud saving, users care about privacy.

"Well, all my information suddenly spreads everywhere, my photos, my phonebook etc.. I don't like that." (Ali)

"Yes, as long as it has settings that lets only me to see things, I would say it's good. I mean, not everybody needs to examine my calendar. Facebook... it's such a place; it's not clear where it starts, where it ends." (Ece)

"...Yes, we do use computer during meetings but actually my access to my private stuff can be a problem sometimes. The phone is a bit,.. well, it is so,.. I didn't want to use it. That's why when there was a notebook, I wrote directly on it." (Fatma)

"I heard that we're able to send to the phone, too. But, I didn't try to see how it works, to tell the truth. Since we give everything we have to Google, I didn't want to try that, I don't know." (Pelin)

Icons

Icon use is common among users. Spotting events quickly and having fun are the main motivations. While some prefer to have a wide variety of them, others limit the number to ease selection and remembering.

"...when it's only text, it may be more difficult to select and perceive among all. Symbols to their sides, for instance." (Ali)

"I wish I could plan my activity easily just by filling three blanks or so... Icons can do the job, for instance. I like icons very much, I would use them all the time." (Derya)

"Or happy face smiley, for example, you use it. Ooh, when you use that many different things [icons], it gets more enjoyable actually. For example, 'I should start a diet.'. Or 'I should drink more water." (Ece)

"...I use [:)] on the things of which I'm happy (She laughs). ... And also for example...

Also with my nephew too, since she is little, these kind of funny things..." (Fatma)

Ticks

Ticks are the most encountered icons in practice. It both enables the easy view of unfinished tasks and the feeling of joy due to accomplishment.

"There can be a second midterm, it is done, tick. Went to the cinema with Gizem, tick. There is this little work left to do. I can return back to it one or a few weeks after, for example. 'What is left?', 'What did I do incomplete?', 'Who did I neglect?'..." (Selda)

"When that day ends, or when I finish a thing, I put ticks. When I use an Excel file for example, when that week ends, for example, I paint them all to the yellow." (Fatma)

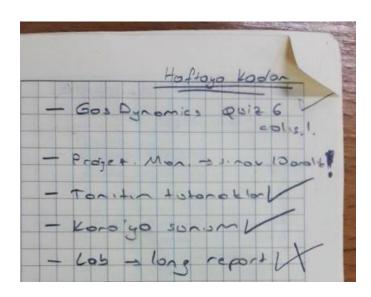


Figure 1 - Ali's to-do-list illustrating curling for quick access and use of icons

Classification

Users also employ various methods to classify events and tasks for a better organization.

- "...I used to note down an event or something that I heard of, so that I can check it later etc. And I tried to put them in order of importance." (Bade)
- "...I separated those colors or something, let the stuff related with the club be yellow, things related with courses be red, things related with the project be turquoise, whatever."

 (Derya)
- "Oh, those are really important for me. I like when everything, for instance, has a single color. Actually I cannot do it here much, but well, when I use an Excel file for example, each course has a separate color." (Fatma)
- "For example, some things may be made starry. It is a very critical thing. Definitely even to see its approaching instantly, for example you click on the star, and it only shows starry ones." (Olgun)
- "It's good this way, being colorful. Also, it's good that it shows they are different things. If the same stuff happens then you make them the same color anyway. Or me, myself I mean, I'd make them the same color." (Pelin)
- "...these, there was a chance that I wouldn't be able to finish all these on time, and I sorted them according to their priorities, according to their importance." (Selda)

Personalization

In order to ease usage, or strengthen ownership, people personalize their tools.

- "...it has a nice shape, too; it is colored etc. It's fun. Indeed, I can design something like this and get it printed, can't I? In fact, it'd be much better." (Bade)
- "For example, let me choose the typeface, too. ... Perhaps, if I choose them too, my usage frequency would increase; I can get more familiar with it. Because it would be more special for me, like something I can understand; it would be better." (Derya)

"...you download whatever you want, for free; a group of stickers. ...you can download via the phone like a free application, from Google Play. So that you would... You would have designed your calendar yourself. And this is another source of happiness." (Ece)

Tracking Art

Many participants have talked about taking notes about books, songs, plays, concerts, movies etc. In addition to scheduling of these event, post-recording of them is frequently emphasized. Furthermore, some of the participants have indicated that they want to view suggestions about upcoming events or most-liked works.

"...I sometimes forget the books I read or so. But I don't want to forget. ... Or 'Have you watched this movie?'. But I don't remember, well, I might have watched, and I might haven't watched." (Ece)

"Let's say, it is monthly, like: 'Have you gone to the cinema?' or so. Or, you know, you'll see what is the last time you went to see a movie. ... Albums. For example, for those loving album stuff... 'Have you listened to a nice album, recently?'" (Olgun)

"I don't know whether it exists for the theatre, that's why I didn't mention it. For the cinema, IMDb is really good for that. You know, you can both grade the movies you watched and keep them in an archive. ... Oh, for example, it can also be nice to keep everything together somewhere." (Olgun)

"...I am too obsessed with books, for example. I always write the date there; when I started, you know, when I finished, so and so. You know, there are things like 'Good Reads', I follow them. ... I particularly note them when we go to the theatre." (Pelin)

Keeping Database

Although artistic works is the main subject of database formation, there exist other types of entries.

"...I've wondered, well, previous year's homework dates etc. Oh, when Hülya and her friends, the junior students asked, it could have been useful if we could look up things from there." (Fatma)

"I did thingy, check!' If I have an intention to take notes and monitor in such a manner which we call 'track' [originally in English] then yes, it can be... It may work when I want to change my life standards- my lifestyle and look at the statistical data of my past." (Mert)

"Oh because, that, for example notes will have such a meaning, such an advantage... Err, when the page is over, those notes will stand there. And, well, it will be like a 'database' [originally in English], I mean actually. You won't have forgotten something you noted, it will always stay there. It will be the noted thing of that week." (Olgun)



Figure 2 - Selda's attendance list

Collective Use

When scheduling an event, collective use aspect of digital time management tools arises.

"... we're going to that play. I've planned, for this certain time.' so and so, I write and everybody sees it. Whether she is coming or not, something like that. It will be used effectively then. 'Interaction' [originally in English] is important."

"We can invite as many people as we want, they can see the events. They can anyway, you know, when you say 'form, edit', they can edit, too; I liked it very much." (Pelin)

Completeness

People care about the integrity of their events written into tools.

"...for birthdays, I'd write the ones I can think of. Well, I'd also write the ones I know by heart, thinking 'Now that I'm writing them all, let them be, what privilege do they have?" (Ali)

"For example, the ones coming to your mind when you are in front of the computer and those coming to your mind when you are not become separated from each other; I mean your calendar doesn't get integrated. There is such a problem..." (Olgun)

Space-Thriftiness

The last practice found in the study is consuming paper, money and even visual space providently.

"... I don't have something to write on every day; when I use it only for that matter, you know, it seems like I am spoiling that notebook. That's why I usually buy notebooks made of more like this tiny yellow detail papers and..." (Ali)

"But I don't want the... the event detailing part always to be open on the side, too. I feel like it stands there for nothing, takes up space for nothing when I don't use it." (Bade)

"Well this thing was... at a meeting, at a project, it was something in the hands of the project...err.. the project executive. It's a very useful, nice thing. But too much material is needed, and it needs to be continuously replenished as it is used up. And this is an extra cost I think, I didn't want it." (Mert)

Ease of Comprehension

No matter the medium is paper or digital, users want to grasp their current condition easily by glancing through their tools. They want to create and visualize entries accordingly.

"[Days in the sample visual] don't cover the same space you see; it may make you fall into error. ... it creates such a perception of time imbalance there..." (Bade)

"...well, when I use an Excel file for example, each course has a separate color. Seeing them according to a separate color ensures that I have the control over them." (Fatma)

"...colored points on the overall view are really nice. You see how many events exist there. Let me put colors only on top of events; an explanation I mean..." (Olgun)

"For the ones side-by-side, for example, the date above there is obvious. If it has an event directly down below, it is obvious. And there the event is more, himm, shown larger; it draws more attention. ...it's better like this." (Pelin)

Quick Use

In addition to quick comprehension, quick editing is also crucial for users.

"For instance, if there is anything I need to turn back to, you know, I stick a post-it in between, place a separatrix, fold the page down; I have stuff like 'Don't forget this place'."

(Ali)

"...That's because I don't want to spare time for such a thing, I just want to enter and write quickly. That should be so easy that I can make it at one stroke and such like."

(Derya)

"But since the time is precious in the professional life anyway, ...I would use those [icons] if they stood nearby and they could be used with a small mouse movement, with one click, while creating the event." (Mert)

Visual Simplicity

Visual simplicity is another property sought, sometimes related to ease of comprehension and quick use expectations.

"I don't use the feature of sending notifications, let me never see it; because the greatest such problem of Google Calendar is that, I think. Everything is suddenly in front of me like this." (Derya)

"I don't want to see such complex things on the electronic media, I guess." (Mert)

"If there exists something like 'Advanced' [originally in English] settings, you know, whoever wants can have access to those advanced settings here but for me the simplicity is more important." (Olgun)

"I mean, if it is on a computer environment, I'd need something like that since I can't draw by hand... let it be as simple [originally in English] as it can be." (Selda)

Aesthetics

Users care about the aesthetics of layouts.

"Especially those other views... None of them is aesthetic, I think. Not at all, I mean. And it doesn't make me happy when I open and look." (Derya)

"For example this is more... more like, looks clean to me. Not everywhere exists a text, it's nicer than the typeface that I don't like; this stance of Facebook." (Derya)

"I think the second photo [layout] is more elegant." (Olgun)

"Maybe I don't like that such a thing exists on the screen, I don't know. ... You see, I have only 3 icons when I use a desktop computer." (Olgun)

"But putting these kind of shaped, different things is nice; it shows that there are different stuffs. It looks pretty, too." (Pelin)

"Besides, I feel the need for writing something to the blank spaces I see on my weeks. There is such a thing. I don't like seeing it empty, for example." (Selda)

Free Space

Although the division of the layouts with lines and titles help users to manage their entries, free spaces for personalized uses are need. Since the size restrictions for default sections can pose some problems, users demand modifiable layouts, especially on digital tools.

"...for example, I couldn't see much of a place where I can take notes. ... For instance, there is no field like the one on my agenda, as far as I can see." (Bade) (Figure 3)

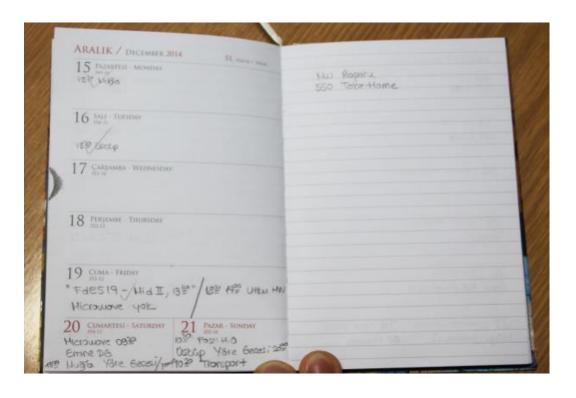


Figure 3 - Bade's daybook showing need for space on weekend, ticks, double layout

- "...it is divided 7 days-by-7 days but I wish a space useful for me to write something is reserved below for me... maybe a completely, you know, lineless space. Well, I can write all kinds of stuff." (Ali)
- "...you directly write the hour, what you want, everything of that [event] yourself I mean.
 ...for example, there is a blank space. You click, you write..." (Olgun)
- "...in fact, I used the agenda as a notebook, too. Thus, it needs such a section, too... There is a post it on [this page], because my writing, the writing didn't fit." (Selda)

Compliance to Perception of Past

Another practice worth mentioning is the deletion of past events, which are perceived to be unnecessary and insignificant, as illustrated by Pelin:

"I normally write on my phone in this way, well, as a day-by-day calendar, well, what I will do; I look at it on that day. As it passes in this way or that way, I delete it; so that it won't make a mess. ... You know, even it is passed, that clutter bothers me."

Avoiding Disturbance

The success of a tool in meeting users' need for being notified depends on the pertinence of notifications. When a user feel disturbance, she quits the use or ignores the messages.

- "Like 'Drink water once in 3 hours.', 'Drink water.'. ... Oh, in fact it may be annoying, too. ... Rather than doing it, I'd worry thinking like 'Did I mark?' so and so." (Bade)
- "...for example, it can carry out a short memory puzzle each time i open it, stuff like that. But, for example, if I want to write something immediately, the emergence of such a puzzle may annoy me." (Derya)
- "Also they [birthdays] are reminded on Facebook indeed. But, too much, as it reminds bunch of people's [birthdays], I honestly don't care much." (Fatma)
- "But as I said, I don't usually use... -what's the name?- the reminder and the clock that much. Because it alarms at a silly place. I get disturbed..." (Pelin)

5.2 Motivations and Meanings

Tidiness

One of the main motivations for using time management tools is "tidiness".

"As everything is too complicated; being tidy is nice; it makes things easier." (Bade)

"...I tried to organize my busyness last week a bit more by using Google Calendar." (Derya)

"...when I get used to not using them [the tools], then when I have a life pace getting busier bit by bit, it may fail you know. ...you see, I keep not taking notes, then it gets pushed for time: 'Ooh, yes; I do have to use agenda from now on' and so forth." (Derya)

"Because sometimes, for example, you have a close friend, you know, you forget [to show concern] her in the busy daily life, no matter how close you are to her. ... That disorder makes the occasion scant. That's why, if it is like this [by using a tool], one may be more planned and systematical." (Pelin)

Amusement

Amusement is another common motivation for having daybooks or calendars.

"When I am bored, I draw a picture, put a smile, I mean, I do something." (Ali)

"...its form is nice, too; it is colored so and so. It's fun." (Bade)

"...you know, I check the month, you see. Seeing the month is fun. ...everything we use has a piece of fun, you know. On this [Google Calendar] there is not much. Except colors." (Ece)

"Ooh, when you add that many types [icons], it becomes more fun actually." (Ece)

Nostalgia

Keeping past events, notes and tools is a common practice, also observed in the study. Some consumers like the feeling of nostalgia by reading former records of their lives. "Indeed I [use] the pin board not for taking notes, but rather to keep things together on my watch, the things which added value in the past. You know, a photograph, or a postcard, a writing..." (Ali)

"I keep my former agendas. But this keeping, in fact, is not mostly specific to agenda. In general, after all, it is due to the fact that I am such a person who likes to keep memoryesque staff..." (Bade)

"In fact, something like a diary [originally in English], it's something like a diary. ...when you look back, you can even graph your life, I mean. Happiness, sadness, the kind of personality you have, etc.; interesting." (Mert)

"Like, for example in my room, on the wall there are such sticky things. ... I saw that I once liked that concert very much, put a smile next to its name, took notes that I could remember saying it was the day of something, this-and-that. For instance, I can throw them all but I don't want to throw such things." (Selda)

"...you write highly obvious, apparent things to months, you know. I don't know, maybe it's a birthday; maybe it's the date you arrived somewhere, maybe you have gone to a trip with your friends, you write it down so that it becomes a memory." (Pelin)

Managing Relationships

As people find it more difficult to keep in touch with their friends, relatives, and even parents in so-called global world shortening the distances; organizing and scheduling conversations become a major motivation.

"But here, for example, there was also this thing till yesterday: You know, like "call uncle". You see, if I'm going to meet someone..." (Bade)

"... 'Have you called a friend today?' ... 'Remember someone you haven't seen for a long time... like... did you make them feel loved?' ... They also draw my attention; I have a mind to call. ... There was this thing, for example, 'Have you invited your neighbor to drink tea?'" (Ece)

"For example, maybe she calls her mother every day. ... I don't, for instance, not every day ... But for me, it's important that I call her weekly. Sometimes it takes 15 days; then she makes a face. ... Even... Yeees; the visits! For instance, I visited my aunt in Ankara after 5 years. ... Something to see how long you haven't gone may be embedded [to the tool]. (Olgun)

"And you forget [special days]... you forget adding it to the calendar, or to your agenda for instance; then it becomes worse. Well, it's nice if you remember, if you write something." (Pelin)

"This [the habit of keeping an agenda] started at the university. When I got busy a bit at the university, and when I had lots of people to see, lots of trainings I wanted to attend, I chose this method because I wasn't able to plan myself in other ways." (Selda)

Feeling Good

Apart from the need for temporary amusement, people also want to feel good in general, when they are using their tools.

"Especially those other views... None of them is aesthetic, I think. Not at all, I mean. And it doesn't make me happy when I open and look." (Derya)

"...you download whatever you want, for free; a group of stickers. ...you can download via the phone like a free application, from Google Play. So that you would... you would have designed your calendar yourself. And this is another source of happiness." (Ece)

Enjoying learning

Reading short texts, getting small tips and increasing cultural capital is another motivation for carrying time planners.

"There is an agenda of Metis [a well-known publisher] in fact. For instance, that agenda is a really nice agenda, I think. ... I liked this thing very much: Let's say, I was waiting

somewhere for something or so; there I enjoyed opening and reading something, some new stuff, things like that." (Derya)

"...reading them [bywords, historic events] is nice, actually. About something, you know, you can learn stuff you don't know, too. Besides, well, you remember again some things you already know know." (Fatma)

"Well, NTVSpor has the thing [tv program], "Today at Sports", you know, "Today in the Past", actually it may work if I want to have such a lifestyle." (Mert)

Self-Fostering

The motivation for motivation is an attractive aspect of the tools. People motivates themselves to write notes or create checklists to create a motivation for performing other tasks.

"Or, by taking notes, in fact you push yourself to accomplish that task... When I saw it, while I was watching a TV series, they [my dorm mates] laughed at me when I stopped watching in an instant and started doing my homework. Because it has to be finished on time, you know. But if I hadn't seen it, I wouldn't have done it. Well, it's motivating to see it, I guess." (Ece)

"...for instance, in the simplest term, the dates of the stuff related to my visa application. For example, I need to be there at quarter past ten, I write it everywhere, all the time; 'You will go, Pelin', 'You will deal with those till that time, Pelin!'." (Pelin)

Use of tools for self-fostering may be annoying, too.

"Yes, once I tried to do something like this, regarding the courses. In order to study every day, no matter how little I can. Then I tore and threw it away when I saw there aren't any check marks on it, it makes one sad to see it that way. Such a thing!" (Selda)

Being Served

Hedonistic joy of being served is an interesting phenomenon observed. Bade was "commanding" Google Calendar while Ece was comparing it with secretaries:

"...I ordered Google Calendar to send me what I would do on that day, every morning."
(Bade)

"...you know, secretaries come every day and say 'these are the things you'll do today' [in movies]. Because its notifications appear separately. ... But I thought that all shall come, at least, all at once." (Ece)

Achievement

Enjoying the accomplishment of tasks by putting ticks or crossing out entries motivates users to employ time-planning tools.

"I like it when I finish something, it gives me pleasure, you see. Let's say I've finished my homework, you know, I put a a check next to it. It gives me, well, pleasure. And, for example when all my homework is done, I'll completely crease and throw away that paper." (Ece)

"When that day ends, or when I finish a task, I put a check mark. When I use an Excel file for example, when that week ends, I paint them all yellow, let's say. It shows that there is little left to do. It's a good feeling." (Fatma)

"Let's say, I have a theatre practice on 5th of that month. When that practice is over, [I put] a check next to it -you know, meaning 'This task is done, OK'-. As this is a thing that makes you feel good, I put the check mark myself." (Selda)

Self-Reflection

The appearance of the tools may be required to represent the identity of the owner.

"... the shopping list etc. you have just shown is too pink, so so, it looks too fancy to me. For instance, this one reflects me more, much more. Like this, it's not so colorful." (Pelin)

Depending on Others as a Demotivating Factor

When individuals are informed and warned about upcoming events, they reduce their use of time management tools.

"Sometimes I count on Bade; because she remembers everything anyway. ... There were, there are times where I started to stop remembering some things since she reminded me of those." (Derya)

"...a part of the [people in] private teaching institution is at our department; they are my own friends. 'Oh we had that homework for tomorrow, what would we do?' or so. ... That's why I don't have the need for a reminder." (Ece)

"...when some people write 'Oh, happy birthday!" on her [Facebook] wall, I pretext in my own way saying 'Oh, I've forgotten to call you, you see' something." (Mert)

"There is no need, well it advertises everywhere, you see, your tax, your ÖTV [a Turkish tax], etc.... They already... Or e-mails keep coming from the banks." (Olgun)

Self-Confidence, Fear of Missing, Getting Tired and Mental Laziness as Demotivating Factors

When the users rely on their memory with self-confidence, worry about losing of forgetting, feel tired when dealing with layouts and features or perceive mental laziness as a side effect, their motivation for planning their times with tools decrease.

"Oh, for some other staff, I trust on my memory, anyway. I have the habit of keeping a bit too much unnecessary stuff [in my mind]. I mean, I don't take too many notes, indeed."

(Ali)

"You see, I, I don't forget them [daily checklists]. Because I already automatically do whatever I have to do daily. I don't need such a thing. ... I think, usually the kind of people that need such a thing is... the ones who keep trying to be an organized person, but can't manage to do so. They use these stuff a lot, I think" (Derya)

"Since I have already got used to [not using tools], I don't keep an agenda something. I know what I do every day. Entering here [Google Calendar], merely looks like a waste of time. Look, I enter, that's all." (Ece)

"That, for example, I may forget my agenda; let's say it may not always be by my side. That's why, in order to remember everything, I always have my guard up." (Derya)

"If I carry a notebook, you don't have it with you when something happens, so you forget to write on it. Now, tablet, gee... it's not with you at any moment." (Olgun)

"Because this is very... It tires me. It both tires with its display and tires when I am to add an activity. And it did tire, yes." (Derya)

"If there is something that handles some tasks for me a little bit, then I can be lazy. This agenda for instance, will possibly do it, then I won't try to remember things on my own. Then, when it [the agenda] isn't around, everything may get messy." (Derya)

CHAPTER 6

PHASE 2 METHODOLOGY

6.1 Research Procedure

At the beginning of this phase, design factors found in the first phase are listed. Time orientation and compliance to perception of past factors are omitted since they directly correspond to timestyle orientations. Privacy, and collective use are excluded to narrow the scope of the study. Factors that demotivate consumers to use digital tools are also excluded as the study focuses on improving tools, not the number of users. That's why no measurement on the levels and effects of depending on others, fear of missing, avoiding mental laziness, and getting tired is carried out. Among these, self-confidence is included to see its possible positive effect. After all, investigated factors are left as follows:

Ease of Access, Offline Accessibility, Notifications, Icons/Ticks, Classification, Personalization, Tracking Art, Keeping Database, Completeness, Space-Thriftiness, Ease of Comprehension, Quick Use, Simplicity, Aesthetics, Free Space, Avoiding Disturbance; Tidiness, Amusement, Nostalgia, Managing Relationships, Feeling Good, Enjoying Learning, Self-Fostering, Being Served, Achievement, Self-Reflection, Self-Confidence By adding the customization features shown with illustrations in phase one, hypotheses

about the correlations between timestyle orientations and design factors are generated with a logical manner, as there is no study focusing on the relation of these two sets. Figure 4 shows the positional expectations about these factors on the four timestyle dimensions.

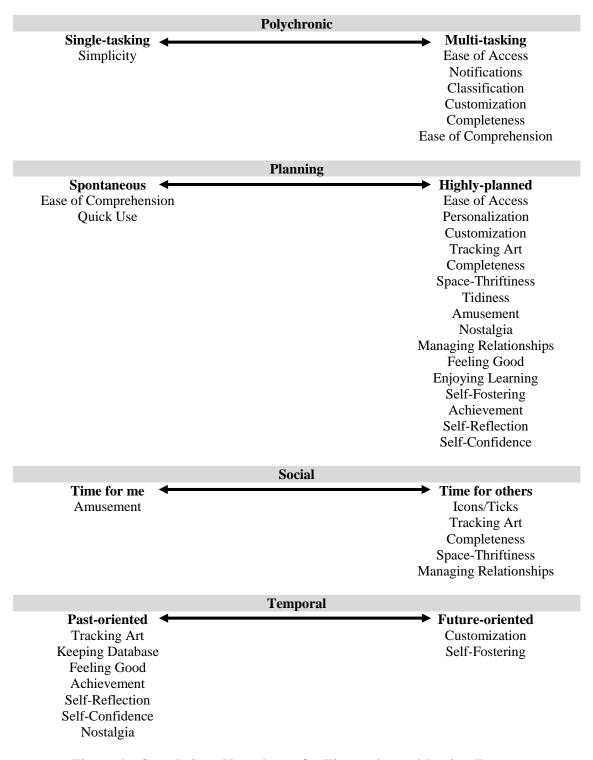


Figure 4 - Correlations Hypotheses for Timestyles and Design Factors

6.2 Elements

An online survey consist of 4 sections is prepared to measure the relative importance of design factors and their correlations with individual time styles.

The first part includes 3 questions about busyness -such as full-time or part-time working and attending a non-governmental organization- in addition to studentship, self-perceived level of computer use skill, and the types of currently used time management tools. The first question is asked to obtain possible changes in the perception of time and approaches to time management. The second question aims to reveal the dependency of digital time management tool practices and expectations on this skill. The third question is included to have a general view of current time management tool preferences. The possible need for filtering based on tool choices is also anticipated.

The second part focuses on consumer practices and expectations. The set of found factors are given and 5-point Likert scale choices are provided to participants for rating perceived importance of each factor. The set included two groups, one for factors applicable to all kinds of time management tools, one for factors only applicable to digital tools. Similarly, the third part includes 5-point Likert scale choices indicating the rate of agreement to the statements about design factors related with motivations.

The fourth part aimed to measure individuals' mental position on timestyle dimensions. Statements about the perception, valuation, and use of time are given and 5-point Likert scale choices are collected. These statements are based upon the scale items of Cotte & Ligas (2003). While keeping most of them as they are, a few are modified for the context of studentship (Table 2).

Table 2 - Statements used in the measurement of timestyle dimensions

Statement	Dimension	Type
I like doing multiple things at the same time	Polychronic	Original
People should not do more than one thing at a time	Polychronic	Original
If I reserve an evening for studying, I study a single course	Polychronic	Modified
Preparing multiple projects/hw at the same time boosts my creativity	Polychronic	New
I spare time for social activities while attending courses in a semester	Polychronic	New
What I do in each day of the week is determined	Planning	Modified
I perpetually note the timings of courses' homework, projects, presentations etc.	Planning	Modified
I decide on my weekend plans during the week	Planning	Modified
I don't like making changes my plans	Planning	Modified
I search courses' hours and difficulties before term registrations	Planning	Modified
I have difficulty in following deadlines of courses' homework, projects, presentations etc.	Planning	Modified
I prefer working in a team rather than working alone	Social	Original
I like to spend my spare time alone	Social	Original
Socializing with other people makes me happy	Social	Original
I don't like to be alone	Social	Original
Group activities come about to be pleasant	Social	New
The time spent alone are usually more entertaining than the time spent with others	Social	Modified
Crowded activities are exhaustive	Social	New
I focus on the future, rather than the past experiences	Temporal	Original
I often think about what I will do as a job in the future	Temporal	Original
I daydream about the future	Temporal	Original
It is important that a person thinks about and plan the current time	Temporal	New
Those living the moment succeed	Temporal	New
Sometimes I think about the past and what I would do differently	Temporal	New
Sometimes I remember what I achieved so far and be proud of myself	Temporal	New

6.3 Limitations

The second phase of the study is again conducted with METU students, only. As the second phase of the study is designated to be an exploratory one, design factors are not illustrated with visual/text samples for a better familiarization of participants, in order not to prolong survey time. That's why it is possible that some of the motivations and meanings found in phase 1 may not be pictured with their full associations.

6.4 Participants

The online survey is announced on various channels including departmental e-mail lists and students' Facebook groups. 206 participants have completed the survey while 166 attendees have left the survey unfinished in 20 days. One participant with irrelevant text entries and 5 participants having a low variance in their answers are taken out for the analysis.

159 participants are using a tool for time management. The information regarding the number of tools used by a single person and the total usage ratios in the participant set are given on Table 3 and Table 4.

Table 3 - Number of Time Management Tools Used by A Single Person

	Frequency	%
6 tools	1	,5
5 tools	5	2,5
4 tools	6	3,0
3 tools	49	24,5
2 tools	51	25,5
1 tool	49	24,5
No tool	39	19,5
Total	200	100,0

Table 4 - Time Management Tools Currently Used by Participants

Tools in use	Frequency	%
daybook	64	32,0
notebook	53	26,5
desktop calendar	34	17,0
wall-mounted calendar	17	8,5
phone	133	66,5
PC	43	21,5
tablet	7	3,5

63 (31,5%) of 200 participants are working full-time, while 34 (17%) works part time. 91 (45,5%) of them are an active member of a non-governmental organization. Only one participant has checked all busyness types. 18 of them both work in a job and actively attend activities of a non-governmental organization. 146 participants have a single busyness in addition to the studentship while 35 participants are sole students with no extra institutional responsibility.

Participants' self-perceived computer use skills are given on Table 5.

Table 5 - Self Perceived Computer Use Skill Levels of Participants

	Frequency	%
Very poor	1	,5
Poor	9	4,5
Medium	48	24,0
Sound	78	39,0
Very sound	64	32,0
Total	200	100,0

CHAPTER 7

PHASE 2 DATA ANALYSIS AND RESULTS

7.1 Mean Values of Design Factors

The first outcome of the results is the significance values of design factors. In a 1-5 scale mean values for importance levels are found as shown on Table 6 and Table 7.

Table 6 - Mean values for design factors related with practices & expectations

	Factor	Mean
Having it always by my side	Ease of Access	4,33
Working offline	Offline Accessibility	4,67
Reminding with notifications	Notifications	4,31
Keeping all my activities and tasks in a single calendar	Completeness	4,44
Allowing change of day's widths	Customization	3,82
Allowing change of activity colors	Classification	3,80
Allowing change of visible timespan	Customization	4,11
Allowing change of background color/pattern	Personalization	2,73
Allowing classification of items	Classification	4,00
Having all spaces utilizable (general)	Space-Thriftiness	3,96
Easy comprehension of items	Ease of Comprehension	4,45
Fast insertion of new items	Quick Use	4,54
Having empty space for free writing	Free Space	4,13
Not disturbing with notifications	No Disturbance	3,63
Having all spaces utilizable (digital)	Space-Thriftiness	3,97
Allowing addition of icons and signs	Icons/Ticks	3,97
Archiving visual arts I've seen	Tracking Art	3,21
Archiving books I've read	Tracking Art	3,00
Showing former activities and tasks	Keeping Database	3,82
Showing tasks I've finished	Keeping Database	3,84
Visual simplicity	Simplicity	4,38
Being aesthetic	Aesthetics	3,95

Table 7 - Mean values for design factors related with motivations & meanings

	Factor	Mean
provides the joy of being served	Being Served	3,95
manages my relationships	Managing Relationships	3,00
makes me tidier	Tidiness	4,00
makes me feel good	Feeling Good	3,21
fun	Amusement	4,44
provides the joy of nostalgia	Nostalgia	4,38
makes me learn new things	Enjoying Learning	3,96
provides self-fostering	Self-Fostering	3,82
makes me proud by showing tasks I've finished/achieved	Achievement	3,84
enables self-expression	Self-Reflection	4,45
provides self-confidence	Self-Confidence	4,54

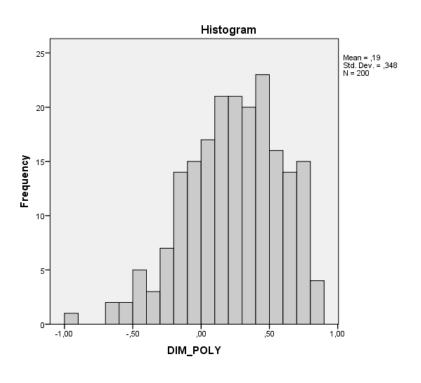
7.2 Timestyle, Busyness, and Number of Tools

The second outcome is the relation among timestyles, number of tools in use, and number of busyness categories (Table 8). As the distribution of the timestyle dimensions are not normal (Figure 5 to 8) Kendall's tau coefficient is calculated. Despite the significant dependence between Polychronic and Social dimensions, the correlation of other elements with each are investigated independently.

Table 8 - Kendall's Tau correlation coefficients for timestyle dimensions

		POLY	PLAN	SOCI	TEMP	TOOL#	BUSY
POLY	Correlation Coefficient	1,000	,050	,147**	,013	,110*	,168**
POLI	Sig. (2-tailed)		,328	,004	,812	,043	,004
PLAN	Correlation Coefficient		1,000	,037	,094	,146**	,202**
PLAN	Sig. (2-tailed)			,459	,074	,007	,001
SOCI	Correlation Coefficient			1,000	-,061	,076	,185**
3001	Sig. (2-tailed)				,242	,158	,001
TEMP	Correlation Coefficient				1,000	,006	,145*
I EIVIF	Sig. (2-tailed)					,914	,016
TOOL#	Correlation Coefficient					1,000	,153 [*]
TOOL#	Sig. (2-tailed)						,014

^{**.} Correlation is significant at the 0.01 level. *. Correlation is significant at the 0.05 level (2-tailed).



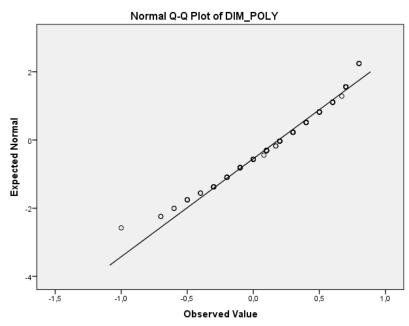
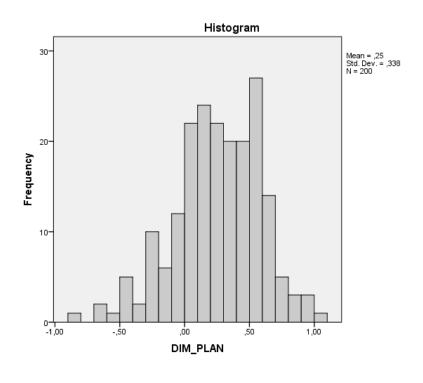


Figure 5 - Histogram and Linearity Plot of Polychronic Dimension of Participants



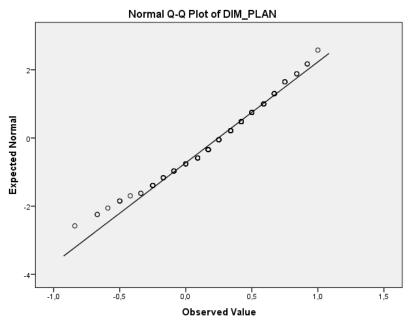
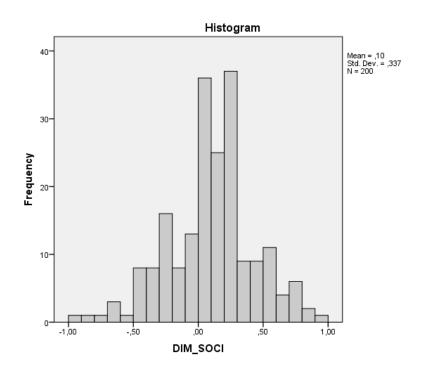


Figure 6 - Histogram and Linearity Plot of Planning Dimension of Participants



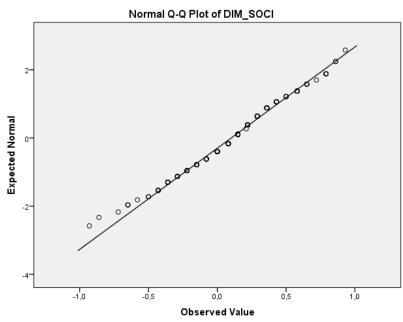


Figure 7 - Histogram and Linearity Plot of Social Dimension of Participants

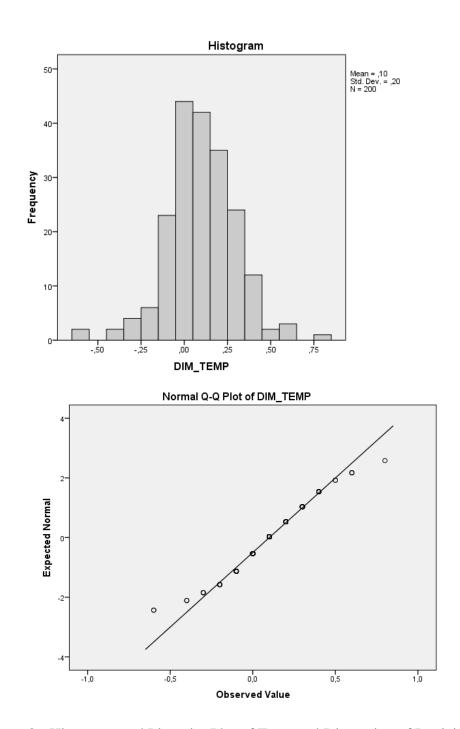


Figure 8 - Histogram and Linearity Plot of Temporal Dimension of Participants

7.3 Correlations between Timestyle Dimensions and Design Factors

The third outcome is the correlations between design factors and timestyle dimensions, which is the main focus of the second phase of the study. Again Kendall's Tau correlation coefficients are calculated for the analysis. Values are given on Table 9 and Table 10.

Table 9 - Correlation coefficients for design factors and timestyle dimensions

		All Participants			Tool Using Participants				
		POLY	PLAN	SOCI	TEMP	POLY	PLAN	SOCI	TEMP
Having it always by my side	Coef.	-,004	,055	,045	-,006	,031	,013	,086	-,033
	Sig.	,940	,342	,429	,918	,633	,842	,184	,621
Allowing addition of icons and	Coef.	,016	,094	,054	-,034	,025	,083	,096	-,046
signs	Sig.	,770	,094	,338	,555	,695	,190	,129	,476
Allowing classification of items	Coef.	,037	-,006	-,041	,038	,035	-,023	,008	,012
	Sig.	,512	,917	,469	,509	,586	,711	,900	,853
Archiving visual arts I've seen	Coef.	,099	,113*	,022	-,086	,138*	,123*	,052	-,067
	Sig.	,072	,039	,680	,129	,025	,046	,395	,288
Archiving books I've read	Coef.	,070	,128*	,028	-,029	,105	,162**	,074	-,002
	Sig.	,199	,019	,610	,602	,088	,008	,227	,979
Keeping all my activities &	Coef.	,067	,131*	,090	,047	,082	,107	,063	,009
tasks in a single calendar	Sig.	,246	,025	,118	,439	,213	,103	,334	,892
Having all spaces utilizable	Coef.	,030	,130*	,114*	,088	,070	,073	,138*	,073
(general)	Sig.	,586	,020	,041	,129	,271	,248	,028	,262
Showing former activities and	Coef.	-,004	,097	,055	-,064	,026	,082	,023	-,079
tasks	Sig.	,940	,082	,319	,266	,675	,193	,714	,223
Showing tasks I've finished	Coef.	,067	,104	,029	-,061	,128*	,097	-,009	-,070
	Sig.	,229	,062	,602	,289	,043	,125	,889	,283
Easy comprehension of items	Coef.	,188**	-,021	,077	,018	,231**	-,050	,058	,004
	Sig.	,001	,720	,185	,770	,000	,446	,373	,948
Fast insertion of new items	Coef.	,106	,060	,041	-,005	,129	,066	,056	-,010
	Sig.	,072	,308	,485	,931	,052	,317	,392	,879
Visual simplicity	Coef.	,102	,013	,106	,050	,114	-,021	,106	,065
	Sig.	,079	,822	,066	,401	,078	,742	,100	,335
Being aesthetic	Coef.	,005	,009	,008	-,024	,016	,011	-,023	,014
	Sig.	,934	,870	,886	,683	,802	,863	,714	,829
Having empty space for free	Coef.	,084	,043	-,013	-,027	,094	,060	-,026	-,031
writing	Sig.	,141	,447	,818,	,643	,143	,349	,681	,636
Working offline	Coef.	,111	,028	,014	,022	,119	,052	,009	,023
	Sig.	,061	,640	,812	,719	,072	,430	,896	,739
Reminding with notifications	Coef.	-,076	-,026	,091	-,033	-,081	-,014	,145*	-,070
	Sig.	,187	,650	,112	,574	,211	,833	,024	,297

Table 9 (continued)

		All Participants				Tool Using Participants			
		POLY	PLAN	SOCI	TEMP	POLY	PLAN	SOCI	TEMP
Not disturbing with notifications	Coef.	,037	,023	,101	-,054	,045	,039	,117	,019
	Sig.	,505	,680	,064	,337	,463	,526	,058	,769
Allowing change of day's	Coef.	,073	,134*	-,039	,131*	,128*	,130*	-,008	,136*
widths	Sig.	,192	,017	,483	,025	,043	,039	,895	,036
Allowing change of activity	Coef.	,125*	,079	,054	,035	,094	,096	,002	,076
colors	Sig.	,025	,158	,333	,547	,137	,124	,969	,240
Allowing change of visible	Coef.	,065	,146*	-,008	,042	,089	,112	-,036	,018
timespan	Sig.	,256	,010	,891	,480	,168	,081	,573	,787
Allowing change of background	Coef.	-,022	,054	,005	-,156**	-,034	,056	-,005	-,118
color/pattern	Sig.	,686	,319	,924	,006	,580	,363	,929	,064
Having all spaces utilizable	Coef.	,044	,090	,074	,081	,066	,017	,093	,092
(digital)	Sig.	,437	,107	,183	,165	,300	,786	,139	,158
makes me tidier	Coef.	,041	,230**	,026	-,015	,067	,197**	,027	,003
	Sig.	,481	,000	,650	,800	,313	,003	,683	,968
makes me feel good	Coef.	,108	,223**	,054	-,055	,125*	,180**	,013	-,012
	Sig.	,052	,000	,330	,340	,047	,004	,834	,856
manages my relationships	Coef.	,100	,225**	,173**	,027	,119	,245**	,154*	,067
	Sig.	,071	,000	,002	,640	,056	,000	,013	,297
fun	Coef.	,092	,221**	,054	-,073	,107	,226**	,054	-,054
	Sig.	,096	,000	,324	,200	,087	,000	,383	,400
makes me learn new things	Coef.	,099	,148**	,101	-,021	,107	,141*	,106	-,025
	Sig.	,076	,007	,067	,715	,088	,024	,087	,703
provides self-fostering	Coef.	,138*	,198**	,040	-,059	,162*	,176**	,036	-,041
	Sig.	,015	,001	,478	,315	,012	,006	,570	,534
makes me proud by showing	Coef.	,050	,213**	,139*	-,140*	,063	,179**	,126*	-,113
tasks I've finished / achieved	Sig.	,366	,000	,011	,014	,307	,004	,041	,078
enables self-expression	Coef.	,071	,198**	,117*	-,079	,085	,181**	,123	-,032
	Sig.	,198	,000	,033	,162	,167	,003	,045	,611
provides self-confidence	Coef.	,008	,243**	,061	-,099	-,008	,224**	,064	-,037
	Sig.	,883	,000	,266	,080,	,898,	,000	,299	,560
provides the joy of nostalgia	Coef.	,105	,106	,053	-,180**	,122*	,127*	,045	-,154*
	Sig.	,055	,050	,324	,001	,046	,037	,458	,015
provides the joy of being	Coef.	,084	,071	,115*	-,073	,088	,096	,165**	-,024
served	Sig.	,124	,196	,034	,196	,153	,117	,007	,700

All significance values are given for 2 tailed tests.

^{**.} Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 10 - Additional significant correlations for participants using multiple tools

		Multiple Tool Using Participants					
		POLY PLAN SOCI TE					
Allowing addition of icons and signs	Coef.	,036	,161*	,153*	-,027		
	Sig.	,633	,034	,043	,732		
Having empty space for free writing	Coef.	,085	,152*	,009	-,014		
	Sig.	,264	,044	,900	,858		
Not disturbing with notifications	Coef.	,038	,047	,149*	-,072		
	Sig.	,611	,528	,042	,345		
provides the joy of being served	Coef.	,153*	,047	,149*	-,077		
	Sig.	,037	,526	,041	,313		

All significance values are given for 2 tailed tests.

According to these values, results of hypothesis tests and interpretations are as follows:

Hypotheses related with polychronic dimension:

H-01: *Single-taskers care about the simplicity of tools more.*

This hypothesis is rejected as there is no significant correlation found.

H-02: *Multi-taskers care about the accessibility of tools more.*

This hypothesis is rejected as there is no significant correlation found. As the mean of "ease of access" factor is high for the whole population; this result is expectable.

H-03: *Multi-taskers care about the notifications of tools more.*

This hypothesis is rejected as there is no significant correlation found. As the mean of "notifications" factor is high for the whole population; this result is expectable.

H-04: *Multi-taskers care about the classification capabilities of tools more.*

There is a demand for the allowance to change of activity colors, possibly to distinguish concurrent tasks from each other, increasing with multi-tasking level of all participants (correlation coefficient of 0,125 with a significance at the 0.05

^{**.} Correlation is significant at the 0.01 level (2-tailed).

^{*.} Correlation is significant at the 0.05 level (2-tailed).

level). However, no significant correlation is found for the classification of items. As a result, this hypothesis is partially accepted.

H-05: Multi-taskers care about the customization of tools more.

As the multi-tasking increases for tool users the request for being able to change of days' widths increases (correlation coefficient of 0,134 with a significance at the 0.05 level). This is observed possibly due to multi-taskers' need for placing numerous tasks in certain days. On the other hand, since no significant correlation is found for the change of visible timespan, this hypothesis is partially accepted.

H-06: Multi-taskers care about the completeness of their schedule more.

This hypothesis is rejected as there is no significant correlation found. As the mean of "completeness" factor is high for the whole population; this result is expectable.

H-07: *Multi-taskers care about the ease of comprehension of tools more.*

This hypothesis is fully accepted as the importance of easily comprehending items on the tool increases in correlation with the increase in multi-tasking increases for tool users the request for being able to change of days' widths increases (correlation coefficient of 0,188 with a significance at the 0.01 level for whole population & correlation coefficient of 0,231 with a significance at the 0.01 level for tool user participants). This phenomenon possibly arises from the complexity of multi-tasking and the resulting demand for decreasing any additional burden of mental work, as predicted.

Hypotheses related with planning dimension:

H-08: Spontaneous individuals care about the ease of comprehension of tools more.

The idea behind the hypothesis is the expectation that highly planned users view and edit their calendar frequently, thus they interiorize all the items and do not need to comprehend any of them to recall. However, this hypothesis is rejected as there is no significant correlation found.

H-09: Spontaneous individuals care about the quick use of tools more.

The idea behind the hypothesis is the expectation that highly planned users edit and employ advanced features more, thus they don't care the fastness of operation as spontaneous people do. However, this hypothesis is rejected as there is no significant correlation found.

H-10: *Highly planned individuals care about the accessibility of tools more.*

This hypothesis is rejected as there is no significant correlation found. As the mean of "ease of access" factor is high for the whole population; this result is expectable.

H-11: Highly planned individuals care about the personalization capabilities of tools more.

This hypothesis is rejected as there is no significant correlation found. A larger question set for different personalization options might present another result.

H-12: *Highly planned individuals care about the customization of tools more.*

This hypothesis is mostly accepted as the excessive planning increases the demand for changing of days' widths (correlation coefficient of 0,134 with a significance at the 0.05 level for whole population & correlation coefficient of 0,130 with a significance at the 0.05 level for tool user participants) and for changing visible timespan (correlation coefficient of 0,146 with a significance at the 0.05 level for whole population).

It may be stated that as highly-planned individuals get used to plan, they plan various kind of staff and they need to place numerous tasks in certain days. Similarly, they have both condensed short-term plans and generic long-term plans.

H-13: *Highly planned individuals care about use of tools for tracking art more.*

This is accepted with all sub-elements as the archiving behavior for both visual arts and books get dominant as the user's planning behavior gets dominant (correlation coefficients 0,113 and 0,123 at the 0.05 significance for the whole population, and 0,128 and 0,162 at the 0.05 and 0.01 significance respectively for the tool users). The reason behind this correlation is thought to be the interiorized planning habits applicable to all kinds of subjects including artworks. Furthermore, they may be using this information for planning future art-related activities.

H-14: *Highly planned individuals care about the completeness of their schedule more.*

It is shown to be correct as the planning dimension is found to be related with the wish for keeping all activities and tasks (correlation coefficient of 0,131 with a significance at the 0.05 level for the whole population). This correlation probably roots in the necessity of avoiding conflicts by considering all tasks and activities. As a user makes plans for diverse responsibilities and social events, the probability of having their details on different tools increases, which causes the completeness to be a vital feature.

H-15: *Highly planned individuals care about the utilization of all spaces on tools more.*

This hypothesis is partially accepted as there is a correlation with the coefficient of 0,131 at 0.05 significance level for the whole population's demand for space-thriftiness, but no significant relation is apparent for the digital tools. This may be caused by the dynamic nature of digital apps, on which a space is less valuable than another one on a printed tool.

H-16: Highly planned individuals have higher motivation for using tools for tidiness.

As high correlations coefficients (0,230 and 0,197 with a significance at the 0.01 level) are found, it shown to be significant.

H-17: *Highly planned individuals enjoy amusing aspects of tools more.*

Probably due to high number of exposure to tools the fun of using them is significant for highly planned individuals (correlation coefficients of 0,221 and 0,226 with a significance at the 0.01 level). Thereby, the hypothesis is correct.

H-18: *Highly planned individuals enjoy the nostalgic aspects of the tools more.*

This hypothesis is accepted as the correlation coefficient 0,127 at the 0.05 significance level indicates the existing relation. The excessive amount of entries made for planning possibly creates a basis for future reviews.

H-19: *Highly planned individuals have higher motivation for using tools for managing relationships.*

High correlations coefficients (0,225 and 0,245 with a significance at the 0.01 level) indicate the hypothesis is correct. It may be speculated that highly planned individuals make use of their tools for tracking and arranging times they meet or call their friends/family member.

H-20: Highly planned individuals have a higher tendency to feel good while using tools.

This hypothesis is accepted since the agreement level to the statement "using a time management tool makes me feel good" increases as the planning level of a participant gets higher (correlation coefficients of 0,223 and 0,180 with a

H-21: Highly planned individuals are more keen on learning new things while using tools.

significance at the 0.01 level).

This hypothesis is accepted as correlation coefficients (0,148 with a significance at the 0.01 level and 0,141 with a significance at the 0.05 level) indicate. The level of relation might be higher if sample informative feature were illustrated. It is unknown whether participants mention in-tool learning or tool-leaded learning.

H-22: Highly planned individuals have higher motivation for using tools for self-fostering.

The hypothesis is accepted as the strong relation (0,198 and 0,176 with a significance at the 0.01 level) points out that the planning behavior possibly extends from schedule planning to self-planning, observed as self-fostering.

H-23: *Highly planned individuals have higher motivation for feeling achievement while using tools.*

The strong relation between planning and being proud by viewing accomplished tasks (correlation coefficient of 0,213 and 0,179 with a significance at the 0.01 level) shows that this hypothesis is accepted.

H-24: Highly planned individuals have higher motivation for using tools for self-reflection.

This hypothesis is accepted as the planning dimension has a correlation (coefficient of 0,198 and 0,181 with a significance at the 0.01 level) with how much a user agrees on that tools enable self-expression. A highly planned individual probably perceives the content on her tool as a reflection of her life and self. Considering the high mean of this design factor, it can be said that the correlation indicates a significant dependence.

H-25: Highly planned individuals have higher motivation for using tools to increase their self-confidence.

This hypothesis is also accepted based on correlation coefficients of 0,243 and 0,224 with a significance at the 0.01 level. As people plan more, they feel that they have the control over their lives, thus attain higher level of self-confidence. A strong dependence on this highly observed approach (with a population mean of 4,54) indicates the strength of the feeling of self-confidence clinging to planning.

Hypotheses related with social dimension:

H-26: *Individuals preferring the time spent alone enjoy amusing aspects of tools more.*This hypothesis is rejected as there is no significant correlation found. As the mean of "completeness" factor is high for the whole population; this result is expectable.

H-27: Social individuals care about being able to add icons and ticks on tools more.

After getting insight about how icons are referred to friends and family members, this hypothesis is generated. However, it is accepted partially since it is significant only for participants using multiple tools (

Table 10).

H-28: Social individuals have higher motivation for using tools for tracking art.

As most of the artworks involve group attendance, a relation was expected between social dimension of timestyle and use of tools for tracking art. But, as there is no significant correlation, this hypothesis is rejected.

H-29: Social individuals care about the completeness of their schedule more.

This hypothesis is rejected as there is no significant correlation found. As the mean of "completeness" factor is high for the whole population; this result is expectable.

H-30: Social individuals care about the utilization of all spaces on tools more.

This hypothesis is partially accepted as there is a correlation with the coefficient of 0,114 and 0,138 at 0.05 significance level for space-thriftiness, but no significant relation is apparent for the digital tools. It may be speculated that social individuals tend to use tools as person-books, which in turn ends up with a higher expectancy for having all spaces utilizable.

H-31: Social individuals have higher motivation for using tools for managing relationships.

This somewhat straightforward relation is shown to exist with the correlation coefficients of 0,173 (at 0.01 significance level for whole population) and 0,154 (at 0.05 significance level for tool users). Consequently, the hypothesis is accepted.

Hypotheses related with temporal dimension:

- H-32: Past-oriented individuals have higher motivation for using tools for tracking art.

 Since past-orientation results in perpetual save and recall of past events, the same is expected for artworks. Nevertheless, this hypothesis is rejected as there is no significant correlation found.
- H-33: Past-oriented individuals have higher motivation for using tools as a way of keeping database.
 - The similar relation to 32^{nd} hypothesis is tested but it is rejected as there is no significant correlation found.
- H-34: *Past-oriented individuals have a higher tendency to feel good while using tools.*This hypothesis is rejected as there is no significant correlation found.
- H-35: Past-oriented individuals have higher motivation for feeling achievement while using tools.
 - This hypothesis is accepted with the calculation of coefficients of 0,140 and 0,113 with a significance at the 0.05 level. Time management tools are employed as a way to look back and enjoy the former achievements.
- H-36: Past-oriented individuals have higher motivation for using tools for self-reflection.

 This hypothesis is rejected as there is no significant correlation found. As the mean of "self-reflection" factor is high for the whole population; this result is expectable.

H-37: Past-oriented individuals have higher motivation for using tools to increase their self-confidence.

This hypothesis is rejected as there is no significant correlation found. As the mean of "self-confidence" factor is high for the whole population; this is expectable.

H-38: Past-oriented individuals enjoy the nostalgic aspects of the tools more.

This straightforward hypothesis is accepted as the correlation coefficients are significant (0,180 with a significance at the 0.01 level for the whole population and 0,154 with a significance at the 0.05 level for tool users).

H-39: Future-oriented individuals care about the customization of tools more.

This hypothesis is partially accepted as the demand for the change of days' widths increases as a person gets more future-oriented (correlation coefficients 0,113 and 0,123 at the 0.05 significance level) but not for the change of visible timespan. This may arise from the need for squeezing close future plans.

H-40: Future-oriented people have higher motivation for using tools for self-fostering.

This hypothesis is rejected as there is no significant correlation found. The assumption that future-oriented individuals make use of tools to attain their future goals by continuously exerting themselves to accomplish pre-steps or sub-targets is not confirmed.

While carrying out the tests of these hypothesis, additional relations are found. Multi-taskers have higher motivation for using tools for self-fostering (0,138 and 0,162 with a significance at the 0.05 level) possibly since they perceive time management tools as the means for handling multiple tasks concurrently. Moreover, they care about nostalgic aspects (0,122 with a significance at the 0.05 level for tool users). Social individuals, on the other hand, are found to have higher motivation for feeling achievement (0,139 and 0,126 with a significance at the 0.05 level), self-reflection (0,117 with a significance at the 0.05 level for the whole population) and being served (0,115 with a significance at the

0.05 level for the whole population and 0,165 with a significance at the 0.01 level for tool users) while using tools. It is also found that past-oriented consumers care about personalization more (0,156 with a significance at the 0.01 level for the whole population).

7.4 Correlations among Design Factors

Finally, the fourth outcome is inter-correlations among design factors. These can be utilized to provide bunch of co-wanted features in a single pack while designing and developing time management tools. As this utilization is beyond the context of this thesis, the table of correlation coefficients is provided in the appendix part as a potential basis for further studies.

CHAPTER 8

CONCLUSION

Printed time management tools evolved with time, when the user's environment was not changing rapidly. However, for the digital tools, shifts in user needs is much faster than their evolution. A good way to catch up the user is understanding his/her practices, expectations, motivations and meanings associated with calendars, daybooks, post-its, notebooks, smartphones, tablets and computers employed for time planning.

As the first contribution to marketing, consumer behavior and human-computer interaction fields, this study revealed that practices are shaped by ease of access, offline accessibility, time orientation, notifications, privacy, icons, ticks, classification, personalization, tracking art, keeping database, collective use, completeness, and space-thriftiness. Similarly, the fundamental expectations for the tools are found to be ease of comprehension, quick use, visual simplicity, aesthetics, free space, compliance to perception of past, and avoiding disturbance. Finally, motivations and meanings can be categorized by tidiness, amusement, nostalgia, managing relationships, feeling good, enjoying learning, self-fostering, being served, achievement, self-reflection, and self-confidence, while depending on others, fear of missing, getting tired and mental laziness demotivates consumers in purchasing and using tools. Some of these factors were mentioned in previous studies, however no comprehensive set was presented.

Later on as the second contribution to same set of research fields, the timestyle concept that claims to present different approaches to valuation and consumption of time is employed to explain diverse uses and demands related with time management tools. Ease of access, offline accessibility, notifications, completeness, ease of comprehension, quick use, simplicity, amusement, nostalgia, self-reflection, and self-confidence are found to be

important design factors for all kinds of consumers, no matter they currently use a tool, multiple tools, or no tool. Moreover, it is shown that after highly-planned consumers, polychronic individuals constitute the most targetable segment for a new time planning application as their total number of tools is significantly larger.

When each timestyle dimension is considered separately, it can be stated that multitasking brings higher demand for classification and customization features and upward care about easy comprehension of items. Planning dimension is the most related one with studies tools, and not surprisingly many design factors are related with it. As an individual has a more planned lifestyle, her expectancies regarding the customization features, art tracking capabilities, completeness, and utilization of all spaces increases. Similarly, she has higher motivation for using time planning tools for tidiness, amusement, nostalgia, managing relationships, feeling good, learning new things, self-fostering, achievement, self-reflection, and self-confidence. Social people, on the other hand, have a smaller set of associated factors, namely icons and ticks, space-thriftiness, managing relationships, achievement, and self-reflection. Finally, regarding the temporal dimension, as the focus of an individual glides to the past, achievement and nostalgia become aspects; while future-oriented approach brings more concern on the customization of tools.

Participants of this study are close to the right edge of all timestyle dimensions, as METU departments have extensive curriculums while the campus life is also considerably social. Therefore, the results of the second phase represent the concerns of specific types of consumers, mostly. However, as shown in the same phase, these consumers are more likely to use (and purchase) analyzed tools. Thus, findings of this study are valuable for developing and marketing prosperous products.

Cultural and national aspects are not investigated in this study. Number and set of design factors may differ as the country and local culture change. It may be speculated that most of the factors would remain if a global research is made, but no evidence is existing at the moment. On the other hand, use of time management tools in the work environment is not

mentioned at all, in order to narrow scope. A comprehensive research with a different set of questions and possibly a differing methodology is required to clarify office context.

Further studies on the consumption of digital calendars may include experimental methods, so that a large number of anticipated consumers can be stimulated with visuals illustrating applications of different design factors. In this way, more solid results may be obtained, possibly with the detailed responses to sub-elements of these factors. On the other hand, current methodology provides more unbiased and objective outcomes since variations originating from the visuals' quality and aesthetics are prevented.

Behavioral change imposed by the usage of tools is another research aspect. Comparing practices and expectations before the purchase/download of a tool with the ones after the adaptation may provide new ways of tool marketing as well as better familiarization techniques.

Yet another issue is discovering additional dimension(s) for the timestyle concept. Although some statements are provided in the online survey to show the validity of control dimension, which is predicted to exit depending on phase 1 participants' statements, no proof is obtained. That dimension was indicating the preferred source of scheduling control, i.e. whether an individual insists on making the schedule decision or she is pleased to have someone making plans on behalf of herself. A further study on this hypothetical dimension and on other possible alternatives may provide a valuable contribution to the literature.

A more comprehensive work may be carried out by employing machine learning techniques at the backend operation of digital apps and measuring the reaction and approval of consumers for diverse features in the natural environment. A digital calendar successfully sensing the user's timestyle dimensions and dynamically adapting itself to the context will be the cutting-edge progress in people's time management challenge.

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APPENDICES

A. QUESTIONNAIRE FOR PHASE 1

Adınız Soyadınız: Bölümünüz:
Yaşınız: Sınıfınız:
1. Öğrencilik yanında meşguliyetleriniz nelerdir? (Birden fazla seçenek işaretleyebilirsiniz)
☐ Tam zamanlı çalışıyorum ☐ Yarı zamanlı çalışıyorum
STK (topluluk, sanat ekibi vs.) aktif üyesiyim Diğer:
2. Bilgisayar kullanma becerinizi nasıl tanımlarsınız?
☐ Çok kötü ☐ Kötü ☐ Orta ☐ İyi ☐ Çok iyi
3. Günlük ortalama kaç saat İnternet kullanıyorsunuz?
2 saatten az 2-4 saat arası 4-6 saat arası 6-8 saat arası 8 saatten fazla
4. Cep telefonunuz var mı? Varsa kaç tanesini aktif olarak kullanıyorsunuz?
☐ Cep telefonum yok ☐ Var, 1 tane ☐ Var, 2 tane ☐ Var, 2'den fazla
Cep telefonunuz varsa modeli nedir (birden fazla ise en gelişmiş olanı yazınız)?
5. Kişisel bir takviminiz var mı? (Kâğıda basılı ya da dijital olması fark etmez)
☐ Evet ☐ Hayır
Cevabınız Evet ise; takviminizi nerede tutuyor ve takip ediyorsunuz?
(Birden fazla seçenek işaretleyebilirsiniz)
Kağıda baskı: Defter Ajanda Masaüstü takvimi Post-it Diğer:
Dijital:

6. Google Takvim'i (Calendar'ı) hiç kullandınız mı?
☐ Hiç kullanmadım
Eskiden kullanıyordum, şimdi kullanmıyorum
Senede 1-2 defa kullanırım
Ayda en az bir defa kullanıyorum
☐ Haftada en az bir defa kullanıyorum
☐ Neredeyse her gün kullanıyorum
☐ Diğer:
7. Dijital takvim yazılımı ya da uygulaması kullanıyorsanız hangi yazılımları <u>sürekli</u>
kullanıyorsunuz? (Birden fazla yazılım belirtebilirsiniz)
8. Google Takvim dışında hangi dijital takvim yazılımı ya da uygulamalarını daha önce
denediniz?
(Birden fazla seçenek işaretleyebilirsiniz)
Outlook Diğer:
9. Esas amacı takvim oluşturmak olmayan bir yazılım ya da uygulamayı takvim
oluşturmak için kullandınız mı? (Birden fazla seçenek işaretleyebilirsiniz)
Hayır, kullanmadım
Evet, Word Excel Evernote Diğer:

B. SURVEY FOR PHASE 2

Personal Information

1) What are your occupations / responsibilities in addition to studentship?
Please select all that comply
I work full-time
☐ I work part-time
☐ I am an active member of a non-governmental organization (student club, art community etc.)
Other:
2) How do you perceive your level of computer use skills? Please select only one
☐ Very Good
Good
Average
Bad
☐ Very Bad
3) Do you use any personal calendar? Please select only one
Yes
□No
4) Which tools do you use for your personal calendar? (If "Yes" is picked in 3)
Please select all that comply
Daybook
Notebook
Desktop calendar
Wall-mounted calendar
Mobile phone
Personal Computer
Tablet
Other:

Practices and Expectations

5) Please, mark the importance of each feature of a calendar, for you.

Please select the most appropriate option for each item

Quite important Important Neither Unimportant Quite unimportant

Having it always by my side

Allowing addition of icons and signs

Allowing classification of items

Archiving artworks I've seen

Archiving books I've read

Keeping all my activities and tasks in a single calendar

Having all spaces utilizable

Showing former activities and tasks

Showing tasks I've finished

Easy comprehension of items

Fast insertion of new items

Visual simplicity

Being aesthetic

Having empty space for free writing

6) Please, mark the importance of each feature of a digital calendar, for you.

Please select the most appropriate option for each item

Quite important Important Neither Unimportant Quite unimportant

Working offline

Reminding with notifications

Not disturbing with notifications

Allowing change of day's widths

Allowing change of activity colors

Allowing change of visible time span

Allowing change of background color/pattern

Having all spaces utilizable

Motivations

7) Please, mark how much you agree with the following statements about the benefits of using calendars

Please select the most appropriate option for each item

I definitely agree I agree Neither I disagree I definitely disagree

makes me tidier

makes me feel good

manages my relationships

fun

makes me learn new things

provides self-fostering

makes me proud by showing tasks I've finished / achieved

enables self-expression

provides self-confidence

provides the joy of nostalgia

provides the joy of being served

Use of Time

8) Please, mark how much you agree with the following statements about your use of and approach to time

Please select the most appropriate option for each item

I definitely agree I agree Neither I disagree I definitely disagree

I like doing multiple things at the same time

People should not do more than one thing at a time

If I reserve an evening for studying, I study a single course

Preparing multiple projects/homework at the same time boosts my creativity

I spare time for social activities while I am attending courses in a semester

What I do in each day of the week is determined

I perpetually note the timings of courses' homework, projects, presentations etc.

I decide on my weekend plans during the week

I don't like making changes my plans

I search courses' hours and difficulties before term registrations start

I have difficulty in following deadlines of courses' homework, projects, presentations etc.

I prefer working in a team rather than working alone

I like spending my spare time on my own

Socializing with people makes me happy

I don't like to be alone

Group activities come about pleasant

The time spent with others is usually more entertaining than the time spent alone

Crowded places and activities are exhaustive

I focus on the future, rather than the past experiences

I frequently think about what I will do as a job in the future

I dream about the future

It is important that a person thinks about and plan the current time

Those living the moment succeed

Sometimes I think about the past and what I would do differently

Sometimes I remember what I achieved so far and be proud of myself

C. ALTERNATIVE CALENDAR VISUALS USED IN PHASE 1



Figure 9 - A Digital Calendar Sample with Dots and Squares (http://zurb.com/forrst/posts/Docket_Calendar_Project-V1I)

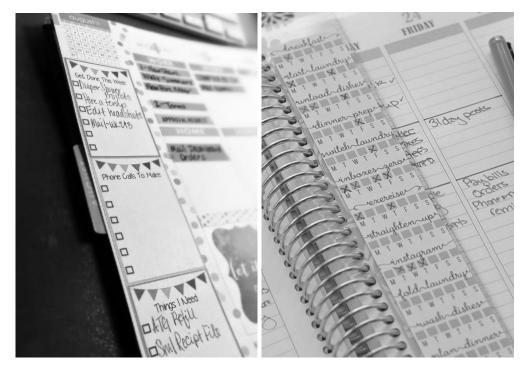


Figure 10 - Weekly To-Do Lists and Reminders

(http://lifeinprintphotography.blogspot.com.tr) (http://iheartplanners.com)



Figure 11 - An Icon Library

(Mike Rohde, https://www.flickr.com/photos/rohdesign)



Figure 12 - Notebook Sized Weekly Print

(http://passionplanner.com)

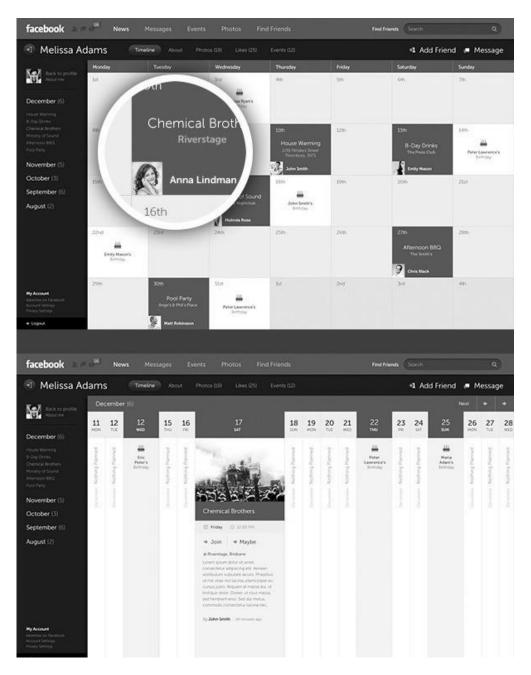


Figure 13 - Alternative Design for Facebook Events

(Nerby, Fred. Facebook - New Look & Concept.)

(https://www.behance.net/gallery/Facebook-New-Look-Concept/6504647)

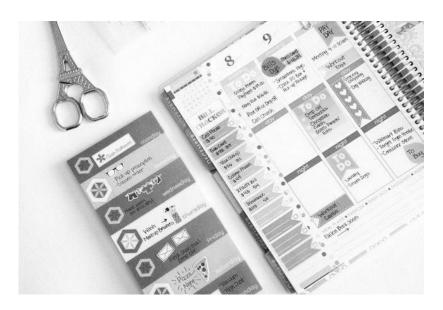


Figure 14 - A Daybook with Morning/Day/Night Layout and Excessive Icon Use (Vanessa Ponce on http://www.pinterest.com/pin/105412447504074193/)

	Pzt	Salı	Çarş	Perş	Cuma	C.tesi	Pazar	Bu Hafta	a:						
	15	16	17 Kayıt	18	19	20	21		DersA 2: 29 Aralık		DersB 		ersC poru: Ocak		ersD 30 Aralık
	22	23	24	25	26	27	28		rt-Time İş Rapor: 30 Ara		k Oyunları uş Tekrar		nıtım af Seçme		
Ekim	29	30	1	2	3	4 Kurban	5 Bayramı		Pzt.	Salı	Çarş.	Perş.	Cuma	C.tesi	Pazar
	6	7	8	9	10	11	12	Güniçi		Bölüm buluşması					
	13	14	15	16	17	18 Tanışma Çayı	19	8.40		DersC					
	20	21 DersB MT1	22	23	24	25	26		DersA	Sinif 24 DersC	DersB				
Kasım	27	28	29	30	31	1	2	9.40	Sinif 1	Sinif 24	Sinif 1				
Nasiiii		20	23	30	31	1	•		DersA	DersC	DersA				Halk
	3	4	5	6 DersD	7	8	9	10.40	Sinif 1	Sınıf 24	Sınıf 5				Oyunla
				HW1					DersB		DersA				Ţ,
	10 DersA MT1	11	12	13 Misafir	14	15	16	11.40	Sinif 5		Sınıf 5				
	17	18	19	20	21	22	23	12.40							
									Part-Time	Part-Time	Part-Time				
	24	25	26	27 DersD HW2	28	29	30	13.40	rait-fillie	Part-Time	Fait-Time				
Aralık	1	2	3 DersC MT1	4	5	6	7	14.40							
	8	9	10	11	12	13	14	15.40							
	15	16 DersB MT2	17	18 DersD HW3	19	20	21	16.40							
	22	23	24	25 DersA	26	27	28	18.00							
Ocak '15	29 DersC	30 DersD	31	MT2	2	3	4				Tanıtım	DersD Sinif 8			
OCUR 15	MT2	HW4			-			19.00				DersD			
Finaller	5	6 DersA	7	8	9	10	11	20.00				Sinif 8 DersD			
	12 DersC	Final 13	14	15 DersB	16	17 Ankara	18	21.00				Sinif 8			
	Final 19	20	21	Proje 22	23	Yemeği 24	25								_
	19	20	21	22	23	24	23		DersA 6 MT1 = 98		DersB 1% Ödev		ersC dev = 93		ersD W1 = 93
	26	27	28 Bütler	29 Bütler	30 Bütler	31	1		6 MT2 = 76 0% Final						
Şubat	2 Tatil	3	4	5	6	7	8			30	% Project	309	6 Final		HW4
	9	10	11 Kayıt	12	13	14	15	TYE	rt-Time İş 8 Ön Rapor Final Rapor		k Oyunları Muş Trabzon	İnteri	nıtım net Sitesi raf Seçme		
								AC Yazıl	ım Değerlendi nale Belgeleri		Antep		nsorluk		

Figure 15 - Alternative Layout Designed for the Study

D. INTER-CORRELATION COEFFICIENTS OF DESIGN FACTORS

Reminding with notifications	,113	,084	,111	,082	,142	,026	-,007	916,	-,003	963	,176"	800,	,235"	000,	,062	,325	,062	,327
Working offline	,228"	,00	,132	,043	,191"	,004	,127	,046	,129	,041	,190"	,005	,189"	,004	,170	600'	,176"	,007
Having empty space for free writing	690'	,282	,168	,008	,149	,018	,110	,073	,181"	,003	,037	,567	,212"	,00	990,	,277	,088	,159
Being aesthetic	,120	,063	,073	,246	,057	996,	070,	,249	-,030	,627	,026	,692	,109	620,	,110	720,	,117	,060
Visual simplicity	,236**	000,	,083	,194	,201"	,000	-,015	,805	,004	,947	,170	,010	,176	900'	,188	,003	,156	,014
Rast insertion of new items	,268"	000,	,257"	000,	,325	000,	,045	,477	,003	,961	,354"	000,	.306.	000,	,210"	,00	,253"	000,
Easy comprehension of items	,255"	000,	,230"	000,	,260"	000,	920,	,378	690,	,346	,319"	000,	,317"	000,	,194"	,003	,247"	000,
Showing tasks I've finished	,183**	,004	,159	,010	,201"	,001	,294"	000,	,243	000,	,176	900'	,158"	,010	.,675	000,		
Showing former activities and tasks	,189**	,003	,229"	000,	,192"	,000	,261"	000,	,198	,000	,185	,004	,137	,026			.,675	000,
Having all spaces utilizable	,184**	,004	,258"	000,	,338	000,	,137	,023	,135	,024	,363	000,			,137*	,026	,158	,010
Keeping all my activities and tasks in a single calendar	,384"	000,	,117	890'	,221"	,000	411,	890'	,057	,362			.363	000,	,185	,004	,176	900'
Archiving books I've read	,001	,985	,112	,063	,201"	,000	609'	000,			,057	,362	,135	,024	,198"	,000	,243"	000,
Archiving artworks I've seen	,021	,735	,153	,012	,219"	000,			609'	000,	,114	990,	,137	,023	,261"	000,	,294"	000,
o noitsaitiassla gniwollA smati	,232**	000,	,459	000,			,219"	000,	,201"	,000	,221"	,000	,338	000,	,192"	,002	,201"	,000
enooi fo noitibbs gniwollA angis bns	,163*	,011			,459	000,	,153	,012	,112	,063	,117	890,	,258"	000,	,229"	000,	,159	,010
Being at my elbow			,163	,011	,232	000,	,021	,735	,00	985	,384"	000,	,184"	,00	,189	,003	,183**	,000
		Deling at IIIy elbow	Allowing addition of	icons and signs	Allowing	ciassilication of items	Archiving artworks	l've seen	Archiving books	l've read	Keeping all my	in a single calendar	Having all spaces	utilizable	Showing former	activities and tasks	Showing tasks I've	finished

Easy comprehension of	,255	,230"	,260"	950,	650,	,319"	,317"	,194"	,247"		,654"	,362"	690'	060'	,198	,168
items	000,	000,	000,	,378	,346	000,	000,	,003	000,		000,	000,	,290	,172	,004	,011
Fast insertion of new	,268	,257"	,325"	,045	,000	,354"	.306.	,210"	,253"	,654"		,344"	660,	,110	,283	,248"
items	000,	000,	000,	,477	,961	000,	000,	,001	000,	000,		000,	,156	660,	000,	000,
	,236	,083	,201"	-,015	,004	,170	.176	,188	,156	,362"	,344"		,239"	,151,	,213**	,185
visual simplicity	000,	,194	,002	308,	,947	,010	900'	,003	,014	000,	000,		000,	,019	,000	900,
0:+04:00	,120	,073	,057	070,	-,030	,026	,109	,110	,117	690'	660,	,239"		,153	,062	860'
ספוווק מפטווופווכ	,063	,246	998,	,249	,627	,692	620,	720,	090'	,290	,156	000,		,016	,343	,125
Having empty space for	690'	,168"	,149	,110	,181"	780,	,212"	990,	980,	060,	,110	,151*	,153		,145	080,
free writing	,282	900,	,018	,073	,003	,567	,000	,277	,159	,172	660,	,019	,016		,029	,212
Modelino Scillino	,228"	,132	.191	,127	,129	190	,189	,170	,176	,198	,283"	,213"	,062	,145		,234"
	,000	,043	,004	,046	,041	900,	,004	600'	700,	,000	000,	,002	,343	,029		000,
Reminding with	,113	<u>£</u>	,142	-,007	-,003	,176	,235"	,062	,062	,168	,248"	,185	860,	080,	,234	
notifications	,084	,082	,026	916,	696,	800'	000,	,325	,327	,011	000,	,005	,125	,212	000,	
Not disturbing with	,033	-,031	860'	920,	,125	920,	,093	,115	,136	,091	960'	,168	,130	,048	,125	,033
notifications	965,	609'	,106	,205	,033	,223	,124	950,	,023	,147	,130	,007	,033	,431	,050	,598
Allowing change of day's	,110	,171**	,221"	,121*	,195	680'	,257"	,166	,186	,198	,236"	,213"	,025	,268	,147*	,074
widths	,083	900'	000,	,044	,000	,163	000,	,007	,002	,000	000,	,001	969,	000,	,024	,247
Allowing change of activity	,161	,285	,279"	,063	,048	,102	,276"	,216"	,154*	,172	960'	,177*	,140	,114	,123	,027
colors	,011	000,	000,	,296	,425	,108	000,	000,	,012	,000	,136	,005	,024	990,	,058	999,
Allowing change of visible	,203	,296	,217"	620,	090,	,233"	,176	,166	,164**	,164	,218"	,202"	,046	,217"	,225**	790'
time span	,000	000,	,00	,196	,327	000,	,005	900,	600,	,012	,00	,002	,467	,00	,00	,298
Allowing change of	,032	,190	,119	,102	,147*	-,002	,162	,132	,113	090,	,045	900'	060,	,217"	,012	,030
background color/pattern	909,	,002	,049	,084	,012	696'	,000	,028	090,	,342	,472	,924	,140	000,	,850	,630
Having all spaces	,164"	,169	,284"	,054	960,	,213"	,625"	,058	11,	,258"	,248"	,150*	780,	,167"	,182	,251"
utilizable	,010	,007	000,	,370	,115	,000	000,	,343	,072	000,	000,	,019	,165	800,	,005	000,

	,330	,193"	,157*	980'	,091	.387	,186	,241"	,208"	,159	,224"	,163	690'	,072	,185	,159
makes me more in order	000,	,003	,016	,171	,149	000,	,004	000,	,001	,019	,00	,014	,288	,272	,007	,017
	,173	,246	,174	960'	,000	,187"	,212	,228"	,222	,092	,177	760'	,213"	,106	,131	,055
makes me leel good	900'	000,	,005	,109	,912	,003	,001	000,	000,	,149	900'	,123	,000	780'	,042	,378
000000000000000000000000000000000000000	,250"	,246	,176	.197"	,202"	,189	,297	,243"	,225"	,103	,126	,111	,213"	,137	,122	,105
manages my relationsnips	000,	000,	,004	,000	,00	,003	000,	000,	000,	,105	,048	920,	,000	,026	,057	,093
	,149	660'	,053	,138	,147	,081	,125	,146	,191"	-,064	,014	980,	,192	620,	,051	,019
	,018	,108	,385	,020	,014	,200	,040	,017	,002	,316	,825	,564	,000	,199	,429	,768
makes me learn new	,019	,177	,114	,178"	,213**	620,	,185	,084	,113	,083	,034	,091	,115	,082	-,028	,057
things	,767	,004	,064	,003	000,	,539	,002	,170	,063	,195	965,	,149	,063	,186	,664	996,
	,181"	,206	,254	,227"	,205"	,226"	,181"	,260"	,279"	,118	.199	,136	,184"	,115	,218"	,054
provides seil-tostering	,005	,000	000,	000,	,00	,000	,004	000,	000,	,073	,003	920,	,004	,073	,00	,407
makes me proud by	,083	060'	,047	,305**	,267"	,112	,127*	,354"	,358"	-,012	,027	,042	,130	960'	060,	,075
snowing tasks i ve imished a	,183	,139	,442	000,	000,	,075	980,	000,	000,	,854	699'	,504	,033	,118	,161	,231
	,045	,147	760'	,093	,150	,074	,215	,131	,175"	,025	,055	,013	620,	790'	,049	,034
eliables sell-explicasion	,472	,015	, 111	,115	,011	,237	000,	,030	,004	,694	,381	,830	,198	,273	,443	,582
	/80	,158"	,112	,043	,042	020,	,119	,157"	.196	-,011	950,	-,036	,151,	,137	600'	,053
	,159	600'	,065	,466	,473	,265	,048	600'	,001	,865	,377	,563	,013	,025	788,	,394
provides the joy of	,061	,058	960,	,286	,326	-,012	,019	,176"	,197"	-,025	-,035	-,007	890'	,178	720,	,002
nostalgia	,324	,339	,116	000,	000,	,849	,747	,003	,001	689'	,575	906,	,263	,004	,224	,973
provides the joy of being	-,032	,110	760'	,192	,160	,00	,00	900'	,055	-,078	-,023	-,054	,061	-,025	800,	980,
served	,607	690'	,109	,000	900,	066'	,991	788,	,358	,217	,710	,381	,313	989'	900	,560

provides the joy of being served	-,032	209,	,110	690'	760,	,109	,192 ^{**}	,000	,160"	900'	,000	066,	,000	,991	800,	788,	,055	,358
provides the joy of nostalgia	,061	,324	,058	,339	960,	,116	,286"	000,	,326"	000,	-,012	,849	,019	,747	,176"	,003	,197**	,000
provides self-confidence	780'	,159	,158"	600'	,112	990,	,043	,466	,042	,473	020,	,265	,119	,048	,157"	600'	,196"	,000
enables self-expression	,045	,472	,147*	,015	760'	111	,093	,115	,150	,011	,074	,237	,215	000'	,131*	,030	,175	,004
makes me broud by showing tasks I've finished / ach	,083	,183	060'	,139	,047	,442	,305"	000,	,267"	000,	,112	,075	,127	980,	,354"	000'	,358"	000,
priovides self-fostering	"181"	,005	,206"	,00	,254"	000,	,227"	000,	,205"	,00	,226"	,00	,181"	,004	,260"	000,	,279"	,000
makes me learn new things	,019	792,	,177	,000	,114	,064	,178"	,003	,213"	000,	620,	,539	,185"	,002	,084	,170	,113	,063
unı	,149	,018	660'	,108	,053	,385	,138	,020	,147	,014	,081	,200	,125	,040	,146	,017	191	,002
sqidanoitalər ym səganam	,250**	000,	,246**	000,	,176"	,004	,197**	,00	,202"	,00	,189**	,003	,297"	000,	,243**	000,	,225"	000,
makes me feel good	,173**	900'	,246"	000,	,174"	,005	960'	,109	700'	,912	,187"	,003	,212"	,001	,228"	000,	,222"	000,
makes me more in order	,330"	000,	,193 ^{**}	,003	,157	,016	980'	,171	,091	,149	,387"	000,	,186"	,004	,241**	000,	,208"	,000
Having all spaces utilizable	,164**	,010	,169 ^T	,007	,284"	000,	,054	,370	960,	,115	,213"	,000	,625"	000,	,058	,343	<u>£</u>	,072
Allowing change of background color/pattern	,032	909,	.,190"	,000	,119*	,049	,102	,084	,147*	,012	-,002	696'	,162"	,000	,132	,028	,113	090,
eldisiv fo aganga of visible nsqs emit	,203**	,002	,296	000,	,217"	,000	620,	,196	090'	,327	,233	000,	,176	,005	,166	900,	,164	600'
Allowing change of activity colors	,161*	,011	,285"	000,	,279"	000,	,063	,296	,048	,425	,102	,108	,276"	000,	,216"	000,	,154	,012
'sysb fo spando gniwollA sufthiw	,110	,083	,171"	900'	,221"	000,	,121	,044	,195	,00	680'	,163	,257"	000,	,166"	,007	,186"	,002
Not disturbing with since tions	,033	,596	-,031	609'	860,	,106	,075	,205	,125	,033	920,	,223	,093	,124	,115	950,	,136	,023
	100 dio 200 di	being at my eibow	Allowing addition of	icons and signs	Allowing	classification of	Archiving artworks	l've seen	Archiving books	l've read	Keeping all my	activities and tasks in a single calendar	Having all spaces	utilizable	Showing former	activities and tasks	Showing tasks I've	finished

Easy comprehension of	,091	,198**	,172**	,164*	090'	,258	,159	,092	,103	-,064	,083	,118	-,012	,025	-,011	-,025	-,078
items	,147	,002	700,	,012	,342	000,	,019	,149	,105	,316	,195	,073	,854	,694	,865	689'	,217
Fast insertion of new	960'	,236	960'	,218"	,045	,248"	,224"	.,177	,126	,014	,034	,199	,027	,055	950,	-,035	-,023
items	,130	000'	,136	,000	,472	000,	,001	900'	,048	,825	965,	,003	699'	,381	,377	,575	,710
vicilacio la civi/	,168	,213	.,177	,202"	900'	,150	,163	760,	11,	980,	,091	,136	,042	,013	-,036	-,007	-,054
visual simplicity	,007	,000	,005	,002	,924	,019	,014	,123	,078	,564	,149	980,	,504	,830	,563	906,	,381
citodtoco seio d	,130	,025	,140	,046	060'	780,	690'	,213"	,213"	,192	,115	,184"	,130	620,	,151	990,	,061
Dellig destrienc	,033	969,	,024	,467	,140	,165	,288	,00	,00	,002	,063	,004	,033	,198	,013	,263	,313
Having empty space for	,048	,268	,114	,217	,217	,167"	,072	,106	,137	620,	,082	,115	960'	790'	,137	,178"	-,025
free writing	,431	000,	990,	,000	000,	,008	,272	,087	,026	,199	,186	,073	,118	,273	,025	,004	989'
04.130 Sci.70	,125	,147	,123	,225	,012	,182"	,185	,131*	,122	,051	-,028	,218"	060'	,049	600,	720,	,008
	,050	,024	,058	,000	,850	,005	,007	,042	,057	,429	,664	,001	,161	,443	788,	,224	900,
Reminding with	,033	,074	,027	790'	,030	,251"	,159	,055	,105	,019	,057	,054	,075	,034	,053	,000	,036
notifications	,598	,247	,665	,298	,630	000,	,017	,378	,093	,768	998,	,407	,231	,582	,394	,973	,560
Not disturbing with		.191**	,153	,190"	,102	,150	,032	,023	,030	,153	,118	,053	,054	,104	,072	,058	-,002
notifications		,002	,011	,002	,084	,013	,617	,701	,611	,010	,047	,393	,359	920,	,224	,321	,977
Allowing change of day's	,191**		,344	,279"	,181**	,326"	680,	,134*	,217**	,125	,158"	,145	,023	411,	720,	,100	-,002
widths	,002		000,	000,	,003	000,	,171	,028	,000	,041	,010	,021	,704	,058	,204	960,	979
Allowing change of activity	,153	,344**		,373"	,303	,331"	,142	,147*	,257"	,176"	,266	,220**	,116	,216	,172"	,124	,014
colors	,011	000,		000,	000,	000,	,027	,016	000,	,004	000,	000,	,054	000,	,004	,037	,816
Allowing change of visible	,190	,279	,373		,183	,209"	,270"	,120	,136	,075	680'	,269	,133	,158	,165"	,083	-,044
time span	,002	000,	000,		,003	,000	000,	,053	,028	,225	,151	000,	,031	,010	,007	,171	,469
Allowing change of	,102	,181	,303	,183		,268"	,083	,243	,205	,238	,326	,176	,224"	,301	,303	,266	,137
background color/pattern	,084	,003	000,	,003		000,	,186	000,	,001	000,	000,	,004	000,	000,	000,	000,	,019
Having all spaces	,150	,326	,331"	,209	,268		,146	,193	,156	920,	,162"	,181	,132	,221"	,156	-,028	,002
utilizable	,013	000,	000,	,000	000,		,024	,002	,010	,215	800,	,004	,029	000,	,010	,635	696'

a sold of a sold	,032	680,	,142*	,270"	,083	,146*		,428"	,340**	,167"	990'	,433**	,230"	,105	,162	990,	-,034
	,617	,171	,027	000,	,186	,024		000,	000,	600'	906,	000,	000,	860,	,010	,303	985,
7000	,023	,134	,147*	,120	,243	,193"	,428		,443"	,332"	,256"	,435	,349"	,317"	,446	,100	,173"
makes me reer good	,701	,028	,016	,053	000,	,002	000,		000,	000,	000,	000,	000,	000,	000,	,094	,004
000000000000000000000000000000000000000	020,	,217"	,257"	,136	,205	,156	,340"	,443"		,427"	,407"	.290	,303"	,345	,365	,270"	,282"
manages my relationships	,611	000,	000,	,028	,000	,010	000,	000,		000,	000,	000,	000,	000,	000,	000,	000,
	,153	,125	,176"	,075	,238	920,	,167"	,332"	,427"		,362"	,335"	,343"	,401	.376"	,286"	,245"
	,010	,041	,004	,225	000,	,215	600'	000,	000,		000,	000,	000,	000,	000,	000,	000,
makes me learn new	,118*	,158"	,266"	680,	,326"	,162"	990'	,256"	,407"	,362"		,284"	,279"	.398.	,330"	262"	,375"
	,047	,010	,000	,151	000,	900,	906,	000,	000,	,000		000,	000,	000,	000,	000,	000,
2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	,053	,145	,220"	,269	,176	,181**	,433**	,435"	,290"	,335"	,284"		,457"	,271"	,312"	,251"	,103
provides seir-lostering	,393	,021	000,	000,	,004	,004	000,	000,	000,	000,	000,		000,	000,	000,	000,	,093
makes me proud by	,054	,023	,116	,133	,224**	,132	,230**	,349**	,303	,343**	,279"	,457"		,363	,403"	,344**	,232"
snowing tasks i ve iinisned <i>i</i> achieved	,359	,704	,054	,031	000,	,029	000,	000,	000,	000,	000,	000,		000,	000,	000,	000,
300	,104	,114	,216"	,158	,301	,221"	,105	,317"	,345"	,401"	.398	,271"	,363		,561"	,314"	,355
enables sell-expression	,078	,058	000,	,010	000,	000,	860'	000,	000,	000,	000,	000,	000,		000,	000,	000,
000000000000000000000000000000000000000	,072	720,	,172"	,165	,303	,156"	,162	,446"	,365	.376"	,330	,312"	,403"	,561		,256"	,294"
provides sell-corniderice	,224	,204	,004	700'	000,	,010	,010	000,	000,	000,	000,	000,	000,	000,		000,	000,
provides the joy of	,058	,100	,124	,083	,266	-,028	990,	,100	,270"	,286"	,292"	,251"	,344"	,314"	,256"		,379"
	,321	960,	,037	,171	000,	,635	,303	,094	000,	000,	000,	000,	000,	000,	000,		000,
provides the joy of being	-,002	-,002	,014	-,044	,137	,000	-,034	,173"	,282"	,245"	,375"	,103	,232"	,355	.,294"	,379"	
	977	626,	,816	,469	,019	696'	,586	,004	000,	000,	000,	660,	000,	000,	000,	000,	

E. ETHICAL APPROVAL

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ APPLIED ETHICS RESEARCH CENTER



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17 MAYIS 2016

Sayı: 28620816 / 225

Konu: Etik Onay

Gönderilen: Doç.Dr. Eminegül KARABABA

İşletme Bölümü

Gönderen: Prof. Dr. Canan SÜMER

İnsan Araştırmaları Etik Kurulu Başkanı

İlgi:

Etik Onayı

Sayın Doç.Dr. Eminegül KARABABA'nın danışmanlığını yaptığı yüksek lisans öğrencisi Utku CİVELEK'in "Zaman Stillerinin Şekillendirdiği Kişisel Dijital Takvim Tüketimi" başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek gerekli onay 2016-FEN-036 protokol numarası ile 16.05.2016-01.09.2016 tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Canan SÜMER

İnsan Araştırmaları Etik Kurulu Başkanı

F. TURKISH SUMMARY

Zamanı planlama ve programları yönetme ihtiyacı insanları hayati önemde gördükleri çeşitli araçlar kullanmaya itmiştir. Defterler, ajandalar, post-itler ve takvimler, Dijital Çağ zaman planlama uygulamaları içeren bilgisayar, telefon ve tabletleri sunmadan önceki yaygın örnekler olmuştur. Etkinliklerimiz daha önceden belirli -ve birbirleriyle zaman konusunda rekabet içinde- oldukça sayısal zaman yönetim araçlarını değeri artmaktadır.

Bununla beraber, elektronik ve iletişim teknolojilerindeki sayısız gelişmeye karşın çoğu tüketici basılı ajandaları kullanmaya, çantalarında defter taşımaya, masalarında takvimler için yer açmaya ve Aralık ya da Ocak aylarında yenilerini alıp eskilerindeki kimi girdileri taşımaya devam etmektedir. Diğer bazı tüketiciler sayısal hesap tabloları ya da metin işleyiciler üzerinde kendi tasarımları yaratıp kullanmakta, bu belgelerin farklı cihazlar arasında eşzamanlı olması için hatırı sayılır ölçüde emek harcamaktadırlar. Bir diğer grup ise farklı mobil uygulamaları deneyip değiştirerek ihtiyaçlarına en uygun aracı bulmaya çalışmaktadır. Ve bu grupların hangisinde yer alırsa alsınlar tüketicilerin büyük bir bölümü çeşitli amaçlar doğrultusunda birden fazla aracı aynı anda kullanmaktadır. Sonuç olarak, zamanlarını yönetmeye çalışırlarken, kendilerini zaman yönetimini yönetme mücadelesi içinde bulmaktadırlar.

Zaman yönetimi konusunda uzun süredir devam eden bu durum, şu an piyasada yer alan sayısal araçların yetersizliğini işaret etmektedir. Bu yüzden, neyin eksik olduğunu ve bu son teknoloji araçların umut vadeden yönlerini ortaya çıkarmak için, zaman yönetimi araçlarının şu anki tüketimini daha iyi anlamak gerekmektedir. Bu amaç doğrultusunda bu tez, tüketicilerin pratikleri, beklentileri, motivasyonları ve anlamlandırmalarını tasarım unsuru olarak ele almakta; bu unsurların kişisel zaman stilleri ile bağlantısını ortaya koyarak tüketicilerin ihtiyaçlarını karşılayan ürünlerin tasarımı ve pazarlanmasını hedeflemektedir.

Tezin ilk aşamasında, tüketicilerin seçimini ve memnuniyetini etkileyen tasarım unsurları nitel bir araştırma ile ortaya konmuştur. Katılımcılar önce sayısal bir takvim kullanıp hızlı bir değerlendirmesini yapacakları kısa bir oturuma katılmışlardır. Sonrasındaki bir hafta boyunca zaman yönetimi araçları ile ilgili pratiklerini gözlemlemişler ve haftanın sonunda ise yarı-yapılı etraflı bir mülakata alınmışlardır. Bu süreçlerdeki bulguların analizinden sonra, tezin ikinci aşamasında, nicel bir araştırma yürütülerek tüketici zaman stilleri ile tasarım unsurları arasındaki ilişki gösterilmeye çalışılmıştır. Bu amaçla Likert ölçeğinin kullanıldığı ve zaman stili boyutlarını (planlama, aynı anda birden fazla iş yapma, sosyallik, öncelikli bakılan zaman); pratikleri, beklentileri, motivasyonları ve anlamlandırmaları ölçen bir çevrimiçi anket ODTÜ öğrencilerinin katılımına sunulmuştur.

1. AŞAMA SONUÇLARI

Pratik ve Beklentiler

"...daha fazla zaman kazanmak için gerektiği zaman maddi şeyi gözden çıkardığım da olur... Yani bazen hakikaten vakit, nakidin önüne geçiyor." (Ali)

"[Zaman] Çok değerli, çok iyi değerlendirmemiz lazım. Vakit kaybı olmaması lazım. ...takvimlerden yararlanmak da iyi tabi ki; görüyorsun çünkü ne olduğunu, ne yaptığını, ne yapman gerekeceğini." (Pelin)

Ali ve Pelin'in son mülakatlarda belirttiği üzere zamanımıza değer veriyor ve onu farklı işlere verimli bir şekilde dağıtmak istiyoruz. Zaman programımızı yönetmek için sahip olduğumuz rutin ve alışkanlıklar zaman yönetimi araçlarını nasıl kullandığımızı ve nasıl seçtiğimizi de (satın aldığımı da) etkiliyor. Bu arçalar bizim pratiklerimize ayak uydurduğu, beklentilerimizi karşıladığı ve motivasyonlarımıza uyduğu sürece memnuniyetimiz artıyor.

Zaman planlamanın bu farklı yönlerini ortaya çıkarmak adına, mülakat metinleri ciddi bir şekilde incelendi. Bulgular belli kodlar altında sınıflandırılarak özetlendi.

Erişim Kolaylığı

Zaman yönetimi araçlarına prensip olarak herhangi bir yer ve zamanda ihtiyaç duyulabilmektedir. Bununla uyumlu olarak erişim kolaylığı önemli bir özellik olarak ortaya çıkmaktadır. Ancak kolaylığın algılanması alışkanlıklara ve sahip olunan cihazlara göre değişmektedir:

"...hani mesela o ayki doğum günlerini alcan bi'yere not etçen. ... Ya ne bileyim mesela elimde olsun. Hani belki bi kâğıda yazarım, hani yanımda daha sık taşıyabileceğim, bi yerden bi yere aktarabileceğim." (Ali)

"Ajandam da yeterli; hatta gün içinde daha sık kontrol edebildiğim için daha avantajlı benim için yazı yazabilmek. ... Daha sık kullandığım için aslında telefonumu, belki küçük, ama unutma ihtimalim daha yüksek olan şeyleri not ettiğim dönemler oluyor." (Bade)

"Sürekli yanımda taşıdığım hani anında Google takvime yazabileceğim bir aletim olmadığı için... "Akşam gidince bunu yazayım" falan diye hep aklımın bir köşesine yazdım." (Derya)

"...o anda yanında bi'şeyin olması lazım not alacak... Anlık olarak güncelleyemeyince zaten ne yapcağımı unutuyorum; o yüzden bi'işe yaramıyor." (Olgun)

Çevrimdışı Erişilme

Bir aracın çevrimdişi ortamdaki kabiliyetleri araç seçimindeki temel meselelerden biridir. Kullanıcıların çevrimdişi olduğu süre (örn. akıllı bir cihaza sahip olunmadığında) arttıkça bu meselenin etkisi daha büyü olmaktadır:

"İnterneti gün içerisinde sürekli kullanan bir insan olmadığımdan kaynaklı -teknolojik kısıtlamalar yüzünden-, Google Takvim'i kullanmasam da olur aslında benim için." (Bade)

"...internet mi açıksa gelcek, olcak? Ya da internetin yoksa, Wi-Fi yoksa kaldın öyle ortada." (Ece)

"Hani tam olarak en mantıklı şeyin herhalde telefon üzerinden bi'şey yapmak olduğuna karar verdim. Çünkü internete zaten sürekli giremiyorum." (Olgun)

"Ya da bilgisayarı, mesela, Google Takvim gibi bi'şeyi, bilgisayarın yanında olmaz, ya da telefonundan giremezsin, ordan takip edemeyebilirsin, bakamayabilirsin." (Pelin)

Zaman-yönelimi

İnsanlar zamanı farklı zihinsel aralıklara bölmekte, bu da zaman aralıklarını gösterimi konusunda farklı beklentilere yol açmaktadır. Kısa-dönemli yaklaşıma sahip tüketiciler günlük ve haftalık görünümler üstüne odaklanırken diğer kişiler bir ayın tamamını ya da tüm bir yılı takvimlerinde görmek istemektedir.

Ali ve Pelin kısa-dönemli yaklaşımlarını anlatırken rutinleri anlatmakla kalmamış, aylık görünümleri de kötülemiştir.

"...ben zaten çok uzun vadeli plan yapabilen bi'insan değilim...bu Ekim Kasım Aralık hepsini bir arada birden görünce de ... hani Matrix tablosu gibi bi'şey geliyor... kalkıp üç ayı beş ayı bir arada görmeyi sevmiyorum." (Ali)

"...sadece hani o gün ne yapmam gerekiyorsa onu yazarım. ... Genelde haftalık haftalık yazarım. ... Aylık görünüm çok yoğun görünüyor zaten. Ben pek tercih etmedim kendi şeyimde dahi, haftalık olarak bakmayı tercih etmiştim." (Pelin)

Ece ve Fatma ise uzun-dönemli planlar yapmakta, bunları görmek ve not almak istemektedir:

"Evet işte. Benim istediğim şey böyle bi'şey bi de. ...O gün gelince ya da o gün değil, daha geniş bir plan görmeyi seviyorum ben, evet. Hani, bi'aylık gibi; ya da, bi'yıllık gibi." (Ece)

"...defterim vardı, deftere not alıyordum sürekli. Mesela üstüne tarih yazıyordum, o tarihte ne yapılcak... Genel olarak göremiyordum onu, o sıkıntı oluyordu." (Fatma)

Bildirimler

Çoğu katılımcı kendi başlarına açıp bakmaktansa, aracın kendilerine bildirimde bulunmasına ihtiyaç duyduklarını belirtmiştir:

"Ama bildirim gelmeyecekse de aslında bu benim ne işime yarıyor? Sadece ben kendim başına oturursam görüyorum." (Ece)

"Ya bi de internet ortamında hani hatırlatması önemli bi'şey ya da telefonda hani. Hatırlatması güzel olabiliyor." (Fatma)

"Ya bu ajandayı böyle tarayıp da "Unutmamam gereken ne var?" gibi yapamıyorum mesela ofiste. İşte bilgisayarın hemen şurasında bi post-it var, 21 Ocak, o bekliyor orada." (Selda)

Mahremiyet

Sosyal ağların ve bulut depolamanın artan kullanımı ile kullanıcılar mahremiyetlerine özen göstermeye başlamıştır:

"İşte fotoğraf, hani her bilgim birden her yere yayılsın, rehberim, onu sevmiyorum." (Ali)

"Evet, sadece kendim görebilme ayarları da olduğu sürece bence güzel. Yaani, herkesin benim takvimimi incelemesine gerek yok. Facebook, şey bi'yer; nerden başlayıp nerde bittiği belli olmayan." (Ece)

"...toplantı sırasında evet bilgisayar kullanıyoruz ama hani kendi özel şeylerime erişimim biraz sıkıntı olabiliyor." (Fatma)

"Telefona da gönderebiliyormuşuz. Ama, nasıl oluyor onu denemedim açıkçası. Google'a her şeyimizi verdiğimiz için bunu denemek istemedim, bilmiyorum." (Pelin)

İkonlar

İkon kullanımına yaygın olarak rastlanmıştır. Etkinlikleri hızlıca fark etme ve eğlenme temel motivasyonlardır. Kimileri çok geniş bir ikon kütüphanesine sahip olmak isterken diğerleri ikon sayısını sınırlandırarak seçmeyi ve hatırlamayı kolaylaştırmayı tercih etmektedir:

"...sırf yazı olunca içinden seçmek algılamak belki daha zor olabilir. Mesela yanlarına işte sembol." (Ali)

"Üç tane yeri doldurup fit fit etkinliğimi ayarlamış olsam... Mesela ikonlar olur, ikonlar çok hoşuma gider, onu sürekli kullanırım." (Derya)

"Gülen surat ya da, koyuyorsun. Yaa o kadar çok çeşit [ikon] koyduğun zaman daha zevkli oluyor aslında. Mesela "Diyete başlamalıyım.". Yok işte "Daha çok su içmeliyim"." (Ece)

"...mutlu olduğum şeylerin (Gülüyor) üstüne [:)] koyuyorum. ... Bi de mesela şey... Yeğenim küçük olduğu için onda da böyle eğlenceli bi'şeyler..." (Fatma)

Kontrol İşareti

Kontrol işaretleri pratikte en çok karşılaşılan ikonlardır. Hem bitmemiş işlerin görülmesini kolaylaştırmakta, hem de başarma mutluluğu yaşatmaktadır:

"İkinci midterm olabilir oldu, tick. Gizem'le sinemaya gittim, tick. Şu iş kaldı birazcık. Bi, bi'kaç hafta sonrasında dönebiliyorum mesela. 'Ne kaldı?', 'Neyi eksik yapmıştım?', 'Kimi boşladım?' falan..." (Selda)

"Bittiği zaman o gün, ya da bi'şeyi yaptığım zaman tick koyuyorum. Mesela Excel dosyası kullanırken de o hafta bittiği zaman, mesela, sarıya boyuyordum hepsini diyelim." (Fatma)

Sınıflandırma

Tüketiciler daha iyi bir organizasyon için etkinlik ve görevleri farklı yöntemlerle sınıflandırmaktadırlar:

- "...duyduğum bir etkinliği falan da not ediyordum belki bakarım ederim falan gibilerinden. Ve onları önem sırasına göre koymaya çalışıyordum." (Bade)
- "...o renkleri ayırdım falan toplulukla ilgili şeyler işte sarı olsun ne bileyim derslerle ilgili şeyler kırmızı olsun işte projeyle ilgili şeyler turkuaz olsun." (Derya)
- "Mesela, bazı şeyler, yıldızlı hale getirilebilir. Çok kritik bir şeydir. Kesinlikle yaklaştığını dahi hemen görmen için, mesela ara sıra mesela yıldıza tıklarsın; sadece yıldızlıları gösterir." (Olgun)
- "Böyle rengarenk olması iyi. Bi de farklı şeyler olduğunu göstermesi iyi. Eğer aynı şeyler oluyorsa zaten aynı renk yaparsın." (Pelin)
- "...bunları, hepsini yetiştirememe ihtimalim vardı ve onları öncelik sırasına, önem sırasına göre sıraladım." (Selda)

Kişiselleştirme

Kullanımı kolaylaştırmak veya sahiplenmeyi artırmak için insanlar araçlarını kişiselleştirmektedir.

- "...şekli de güzel mesela, renkli falan. Eğlenceli. Aslında kendim böyle bi'şey tasarlayıp böyle bi'şey bastırabilirim di mi. Hatta daha güzel bile olur." (Bade)
- "Atıyorum yazı tipini de ben seçeyim. ... Belki onları da ben ayarlasam kullanma sıklığım da artar; daha çok böyle benimseyebilirim onu. Da çünkü daha artık bana özel benim anlayabileceğim bi'şey gibi olur; daha güzel olur." (Derya)
- "...kendi istediğini indiriyorsun ücretsiz; çıkartma grubu. ... Kendi takvimini kendin tasarlamış olursun. Bu da bir mutluluk kaynağıdır." (Ece)

Sanat Takibi

Çoğu katılımcı kitaplar, şarkılar, tiyatro oyunları, konserler, filmler ve benzeri sanatsal ürünler için not aldıklarını söylemiştir. Bu etkinliklerin planlanmasının yanında, etkinlik sonrasında kaydedilmesinin de üstünde durulmuştur. Bunun yanında bazı katılımcılar

yaklaşan etkinlikler ya da çok beğenilen çalışmalar hakkında öneriler almak istediklerini de belirtmiştir:

"...okuduğum kitapları falan unutabiliyorum. Ama unutmak istemiyorum. ... Ya da 'Bu filmi izledin mi?'. Hatırlamıyorum ki; hani izlemiş de olabilirim, izlememiş de olabilirim." (Ece)

"Atıyorum, aylık olur; "Sinemaya gittin mi?" falan. Ya da, işte, en son tiyatroya ne zaman gittiğini görürsün. ... Albüm. Mesela albüm şeyi sevenler için mesela... 'Güzel bi'albüm dinledin mi, yeni?'" (Olgun)

"Tiyatro için var mı bilmiyorum, o yüzden demedim. Sinema için, IMDb o konuda çok iyi. Yani, hem film arşivini orda oluşturabiliyorsun izlediğin, hem puanlayabiliyorsun. ... Ya mesela her şeyi bi'yerde toplamak da öyle güzel olabilir." (Olgun)

"...kitap konusunda mesela çok takıntılıyımdır. Mutlaka oraya o tarihi yazarım; hangi zaman başladım, işte, hangi zaman bitirdim filan. Ne bileyim "Good Reads" filan vardır mesela hani onları filan takip ederim. ... tiyatroya filan gittiğimizde onları not alıyorum özellikle." (Pelin)

Veritabanı Saklama

Sanat çalışmaları veritabanı oluşturmanın ana hususunu oluştursa da, farklı türder girdiler de yer almaktadır:

"...merak etmiştim hani geçen yılki ödevlerimin zamanlarını falan. Ya, Hülyalar, bizden bi'küçük dönemdeki insanlar sordukları zaman falan, hani bi'şeylere ordan bakabiliyor olmak iyi olabilirdi." (Fatma)

"Bilmem ne yaptım, check! Tarzında bir 'track' dediğimiz izleme ve kayıt tutma isteğim varsa, evet olabilir... geçmişe dair yaptıklarımın istatistik verilerine bakmak istediğimde çalışabilir." (Mert)

"Ya çünkü, şu, mesela notların da şöyle bi'anlamı, avantajı olur... Eee, sayfa geçtiği zaman o notların da orda kalmış olacak. Ve, hani, bi'database gibi olacak yani hani. Not aldığın bi'şeyi unutmamış olacaksın, hep kalcak orda. O haftanın not alınan şeyi o olacak." (Olgun)

Ortaklaşa kullanım

Bir etkinliğin zamanlaması yapılırken sayısal zaman, collective use aspect of digital time planning tools arises.

"'...şu tiyatroya gidiyoruz. Planladım, şu saatte.' falan filan yazayım, herkes görsün onu. Gelip gelmeyeceğini, falan filan gibisinden. Etkin bi'şekilde kullanılır o zaman. Interaction önemli." (Ece)

"İstediğimiz kadar kişi davet edebiliyoruz, onlar etkinlikleri görebiliyor. ...hani, 'şekillendir, düzelt' dediğin zaman onlar da düzeltebiliyorlar; onu çok beğendim." (Pelin)

Bütünlük

Araçlara yazılan etkinliklerin bütünlüğü insanların önem verdiği diğer bir mevzudur:

"...doğum günlerini ona aklıma gelenleri yazardım. Ya çok iyi bildiklerimi de yazardım, hani madem hepsini yazıyorum bulunsun onların ne ayrıcalığı var diye." (Ali)

"Mesela bilgisayar başında aklına gelenlerle, bilgisayar başında olmayan aklına gelenler birbirinden ayrılmış oluyor; yani takvimim tümleşik olmuyor. Böyle bi'sıkıntı var..." (Olgun)

Alan Tutumluluğu

Çalışmada bulunan son pratik kağıdın, paranın ve görsel alanların tutumlu kullanılmasıdır:

"...her güne yazacak bi'şeyim yok; onu sadece o işe harcayınca biraz hani deftere yazık ediyomuşum gibi geliyor. O yüzden genelde daha böyle minik sarılı saman kağıtlarından ufak defterler alıp..." (Ali)

"Ama sürekli yan tarafta, eee, etkinlikle ilgili bu detaylandırma kısmının da açık olmasını da istemem. Kullanmadığım zamanlarda boş yere orda duruyormuş, boş yere yerimi kaplıyormuş gibi düşünürüm." (Bade)

"Bu şeyde, hani bir toplantı, bir projede proje şeyinin, ee, yürütücüsünün elinde olan bir şeydi. Çok faydalı, hoş bir şey. Ama çok materyal lazım, ve bittikçe sürekli yenilemek lazım. Bu da ekstra bir maliyet bence, istemedim." (Mert)

Kavrama Kolaylığı

Kullanıcılar içinde bulundukları zamansal durumu tek bir bakışta anlamak istiyor:

"[Örnekteki günlerin] o kapladıkları alanlar eşit değil ya, yanılgıya düşürebilir insanı. ... orda böyle bir zaman dengesizliği algısı yaratıyor..." (Bade)

"hani Excel dosyası kullandığımda mesela her bi'dersin ayrı bi'rengi var. Ayrı bi'renge göre onları görmem, onlara hakim olmamı sağlıyor." (Fatma)

"...genel görünümdeki renklendirmeli noktalar çok güzel. Kaç tane olay olduğunu görüyorsun orda. Ben sadece olayların başına rengi koyayım; bi'açıklama yani, bi'not düşeyim." (Olgun)

Hızlı Kullanım

Hızlı algılamaya ek olarak hızlı düzenleme de kullanıcılar için önemli:

"Atıyorum tekrar geri dönmemi gerektiren bi'şey olursa araya işte post-it yapıştırırım, ayraç koyarım, sayfayı kıvırırım, 'Burayı unutma' gibi şeylerim var." (Ali)

"...böyle şeye zaman ayırmak istemiyorum, hemen girip yazmak istiyorum diye. O o kadar kolay olmalı ki bir çırpıda yapmalıyım falan." (Derya)

"Ama profesyonel yaşamda zaman zaten değerli olduğu için, ...etkinliği oluştururken o [ikonlar] benim yanımda durup küçük bir mouse hareketiyle, bir tıkla olacaksa kullanırdım." (Mert)

Görsel Sadelik

Görsel sadelik bazen tek başına, bazen de kavrama kolaylığı ve hızlı kullanıma bağlı olarak beklenen bir unsur:

"Ben bildirim gönderme özelliğini kullanmıyorum, onu hiç görmiyim; çünkü Google Takvim'de bence en büyük böyle sıkıntı o. Her şey bir anda böyle önümde." (Derya)

"Elektronik ortamda böyle kompleks bir şeyler görmek istemem sanırım." (Mert)

"'Advanced' ayarlar gibi bi'şey olursa, hani isteyen burdaki o ileri ayarlara ulaşabilir ama benim için sadelik daha önemli." (Olgun)

"Yani bilgisayar ortamındaysa elimle çizemeyeceğim için öyle bir şey olsun ihtiyacı duyarım... simple olsun olabildiği kadar." (Selda)

Estetik

Kullanıcılar sayfa tasarımlarının estetiğini önemsiyor:

"Hele şu diğer görünümler... Bi'tanesi estetik değil bence. Hiç değil yani. Ve mutlu etmiyo beni açıp bakınca." (Derya)

"Mesela bu daha şey olarak, daha böyle, temiz görünüyor bana. Her yerde bir yazılar yok o işte sevmediğim yazı stilinden daha güzel bence..." (Derya)

"Belki de ekranda böyle bir şeyin olması hoşuma gitmiyor, bilmiyorum ki. ... Ya ben mesela masaüstü kullanırken de bilgisayarda; benim 3 tane ikon olur yani." (Olgun)

"Ama böyle şekilli, farklı şeyler koymak güzel; farklı şeyler olduğunu gösteriyor. Tatlı da duruyor." (Pelin)

Serbest Alan

Sayfa yerleşiminin çizgi ve başlıklarla bölünmesi kullanıcılara girdilerini yönetme konusunda yardımcı olsa da, kişisel kullanımlar için serbest alanlar bir ihtiyaç olmaktadır.

Büyüklük kısıtlamaları bazı problemlere yol açtığı için de özellikle sayısal araçlarda değiştirilebilir sayfa yerleşimleri istenmektedir:

- "...7 gün 7 gün bölünmüş ama altına da benim için kullanışlı olan bi'şey yazabilecek yer ayrılsın... tamamen hani çizgisiz boşluk bir yer olabilir. Hani her türlü şey yazarım." (Ali)
- "...mesela, burda not edebileceğim bir yer çok göremedim. ... Mesela ajandamdaki gibi bir alan yok, benim görebildiğim." (Bade)
- "...direk saatini, istediğini, her şeyini kendin yaz yani. ...mesela orda bir boşluk var. Tıklıyorsun, yazıyosun..." (Olgun)
- "...aslında not defteri olarak da kullandım ajandayı. Demek ki böyle bir kısma da ihtiyacı var... [Sayfanın] Üzerinde bi'tane post-it var, çünkü yazmam, yazmak sığmamış." (Selda)

Bahsedilmeye değer diğer bir pratik ise gereksiz ve önemsiz görülen geçmiş etkinliklerin silinmesidir:

"Ben normalde telefonuma bu şekilde hani gün gün takvim olarak yazıyorum, hani ne yapacağımı ne etçeğimi; o gün bakıyorum. Öyle, böyle geçince de siliyorum; karmaşa yaratmasın diye. ...Hani geçmiş olsa bile o yoğunluk beni daraltıyor."

Rahatsızlıktan Sakınma

Geçmiş Algısına Uyum

Bir aracın kullanıcıların bildirim alma isteğini karşılamadaki başarısı bildirimlerin yerindeliğine bağlı olmaktadır. Herhangi bir rahatsızlık verici bildirim sonrasında kullanımdan vazgeçme ya da mesajları görmezden gelme gibi sonuçlar ortaya çıkmaktadır:

"3 saatte bir su iç.', 'Su iç.' şeklinde. Yani, olabilir. Ya aslında sinir bozucu olabilir de. ... Onu yapmaktan çok, 'İşaretledim mi acaba?' falan diye böyle tedirginliğe düşerim." (Bade)

"...küçük bir hafıza bulmacası mesela uygulasın gibi bi'şeyler olabilir. Ama mesela, hemen yazmak istiyosam da öyle bir bulmacanın çıkması sinirimi bozabilir." (Derya)

"Bi de Facebook'ta falan da hatırlatılıyor [doğum günleri] aslında ama, ya çok, orda bissürü insanınkini hatırlattığı için pek önemsemiyorum aslında." (Fatma)

"Ama dediğim gibi genelde şey yapmıyorum -nedir onun adı- hatırlatıcıyla saatini pek fazla kullanmıyorum böyle. Çünkü mesela saçma sapan bi'yerde çalıyor. Rahatsız oluyorum..." (Pelin)

Motivasyon ve Anlamlandırmalar

Düzenlilik

Zaman yönetimi araçlarını kullanmadaki temel motivasyonlardan biri düzenli olmak:

"Madem her şey çok karışık; düzenli olmak güzel; işleri kolaylaştırır." (Bade)

"...geçen haftaki yoğunluğumu Google Takvim kullanarak birazcık daha organize etmeye çalıştım." (Derya)

"Çünkü bazen mesela yakın bi arkadaşın oluyor, hani, ne kadar yakın olursa olsun o yoğunlukta unutuyorsun. ... O kargaşa olayı daraltıyor. O yüzden, böyle olursa belki daha planlı programlı olunur." (Pelin)

Eğlenme

Eğlenme, söz konusu araçları kullanmak için diğer bir yaygın motivasyon kaynağı. "Canım sıkıldı resim çizerim, gülen surat koyarım, yani bi'şeyler yaparım." (Ali)

"...hani, aya falan bakıyorum ya. Aya bakmak eğlenceli oluyor....kullandığımız her şeyin bi'eğlence kısmı var ya. Bunda [Google Takvim'de] pek de bi'şey yok. Renkler haricinde." (Ece)

"Yaa o kadar çok çeşit [ikon] koyduğun zaman daha zevkli oluyor aslında." (Ece)

Nostalji

Eski etkinlikleri, notları ve araçları saklamak çalışmada gözlemlenen diğer bir pratik. Tüketicilerin bir kısmı hayatlarına dair eski kayıtları okuyarak nostaljik hisler yaşamaktan mutluluk duymaktadır:

"Gerçi mantar panoyu not için değil de daha çok, hani eskiden değer katmış şeyleri saklamak gözümün önünde olsun diye. İşte fotoğraf, ne bileyim kartpostal, yazı..." (Ali)

"Eski ajandalarımı saklıyorum. Ama bu saklayış, ajanda öznelinde değil aslında çok. Genel olarak zaten, böyle hatıravari şeyleri saklamayı seven bir insan olduğum için..." (Bade)

"Aslında diary gibi bir şey, günlük gibi bir şey. ...arkaya dönüp baktığında yaşamın grafiğini bile çıkarabilirsin yani. Mutluluk, üzüntü falan nasıl bir kişiliğe sahipsin falan olabilir; ilginç." (Mert)

"Şöyle, mesela odamda da duvarda böyle şeyler var yapışık yapışık. ...konseri çok sevmişim, yanına gülücük atmışım, bilmem nenin olduğu gün diye böyle kendi hatırlayacağım notlar almışım falan filan. Mesela bunları toptan atabilirim ama böyle şeyleri atmak istemiyorum." (Selda)

İlişki Yönetimi

Mesafelerin sözde kısaldığı küresel dünyada insanlar arkadaşları, akrabaları ve hatta anne babalarıyla iletişim kurmakta güçlük çektikçe sohbetleri organize etmek ve planlamak başlıca bir motivasyon olmaktadır. Çoğu katılımcı bu durumla ilgili sorunlarını ve önerilerini belirtmiştir:

"Ama burda mesela daha düne kadar şey de vardı: İşte, atıyorum, "dayımı arama" gibi. İşte, birileriyle görüşeceksem..." (Bade)

"... 'Bugün bi'arkadaşını aradın mı?' ... 'Uzun süredir görüşmediğin birini hatırla..., işte, sevdiğini hissettirdin mi?' ... Onlar da benim ilgimi çekiyor, arayasım geliyor. ... Şey vardı mesela, 'Komşunu çay içmeye çağırdın mı?'' (Ece)

"Mesela annesini arıyordur her gün. ... Ben aramıyorum mesela her gün ... Ama benim için haftalık arıyor olmak çok önemli. Bazen 15 gün oluyor; sonra trip yiyorsun. ... Hatta... Eveeet; kişi ziyaretleri! Mesela ben, teyzemi ziyarete, 5 yıl üzerine gittim Ankara'da. ... ne kadardır gitmediğini görebilmen için öyle bir şey de eklenebilir." (Olgun)

İyi Hissetmek

Kısa süreli eğlenme dışında insanlar araçlarını kullanırken genel olarak iyi hissetmek de istiyor:

"Hele şu diğer görünümler... Bi'tanesi estetik değil bence. Hiç değil yani. Ve mutlu etmiyo beni açıp bakınca." (Derya)

"...kendi istediğini indiriyorsun ücretsiz; çıkartma grubu. ...Kendi takvimini kendin tasarlamış olursun. Bu da bir mutluluk kaynağıdır." (Ece)

Öğrenmenin tadını çıkarmak

Kısa metinler okumak, küçük ipuçları almak ve kültürel birikimini artırmak zaman yönetimi araçlarını taşımak için diğer bir motivasyondur:

"Mesela o ajanda bence çok güzel bir ajanda. ... Şey çok hoşuma gidiyodu: Bi'yerde diyelim bir şey bekliyorum falan açıp ordan bi'şeyler okumak yeni bir şeyler falan; o hoşuma gidiyodu." (Derya)

"...onları [özdeyişler, tarihsel olaylar] okumak güzel oluyor hani. Bazı şeyler hakkında, hani, bilmediğin şeyleri de öğrenebiliyorsun. Onun yanında, hani, bildiğin şeyleri tekrar hatırlıyorsun." (Fatma)

Kendini teşvik etme

Motivasyon için motivasyon, araçların diğer bir ilgi çekici yönü. İnsanlar notlar yazarak ve kontrol listeleri yaratarak diğer görevlerini gerçekleştirmek için motivasyon yaratmaya çalışmaktadır.

"Ya da, şu not almakla, aslında kendini o işi yapmaya itiyorsun. ... dün akşam güldüler bana birden bırakıp deli gibi ödev yapmaya başlayınca. Çünkü yetişmesi lazım, hani. Ama orda görmesem, yapmazdım ben. Hani, motive ediyor galiba görmek" (Ece)

Araçların kişisel teşvik için kullanılması zaman zaman kimi tüketiciler için sinir bozucu da olabilmektedir:

"Evet, ders konusunda bi ara böyle bi'şey yapmaya çalışıyodum. Hergün bi'nebze ders çalışayım diye. Sonra baktım hiç tick olmayınca üstünde, üzülüyo insan yırttım attım. Ne öyle. O neymiş öyle!" (Selda)

Hizmet Edilme

Hizmet edilmenin hedonistik zevki gözlemlenen ilgi çekici bir durumdur. Bade "Google Takvim" e emrederken Ece "Google Takvim" i sekreterlerle kıyaslamaktadır:

"...her sabah bana e-postayla o gün n'apcağımı göndermesini emrettim Google Takvim'e" (Bade)

"...günlük sekreterler falan gelir de 'bugün yapacağınız işler şunlar' derler ya. Çünkü bunun bildirimleri ayrı ayrı geliyor. ... Ama hepsi, en azından, birden gelse diye düşündüm." (Ece)

Başarı

Tamamlanan görevlerin yanına kontrol işareti koymak ya da üstlerini çizmek, kullanıcılara başarma hissiyatı ve mutluluğu vererek onları zaman yönetimi araçlarını kullanmak için motive etmektedir:

"Bitirince, o bana zevk veriyor bak işte ben onu da seviyorum. Mesela ben işte ödevlerimi bitirdim ya, yanına tick atıyorum mesela. O bana, şey, haz veriyor. Ve onu mesela komple bütün ödevlerim bittiğinde o kağıdı komple kırıştırıp atçam ben." (Ece)

"Bittiği zaman o gün, ya da bi'şeyi yaptığım zaman tick koyuyorum. ... Onun bittiğini, geriye az bi'şey kaldığını gösteriyor mesela. Güzel bi'düşünce oluyor." (Fatma)

"İşte ayın 5'inde benim tiyatro çalışmam varmış. O çalışma geçtikten sonra onun yanına böyle bir tick -hani bu iş de yapıldı tamam-. Bu insana iyi hissettiren bir şey olduğu için ben kendim ticklerim." (Selda)

Kendini Yansıtma

Aracın görünümünden sahibinin kişiliğini yansıtması beklenebilir:

"...gösterdiğin shopping list vs. çok pembe, şöyle böyle, çok bana süslü püslü geliyor. Mesela bu çok, daha çok beni yansıtıyor. Böyle fazla renkli değil." (Pelin)

2. AŞAMA SONUÇLARI

2. aşamada toplanan anket girdilerinin analizi sonrasında erişim kolaylığı, çevrimdışı erişilme, bildirimler, bütünlük, kavrama kolaylığı, hızlı kullanım, sadelik, eğlenme, nostalji, kendini yansıtma ve özgüven; herhangi bir araç kullanıyor olsun ya da olmasın tüm tüketiciler için önemli tasarım unsurları olarak belirlenmiştir. Ayrıca kullanılan araç sayısına bakıldığında planlı tüketicilerden sonra yeni bir ürün için en hedeflenebilir tüketici grubunun aynı anda birden fazla iş yapan tüketiciler olduğu görülmüştür.

Her bir zaman stili boyutu ayrı ayrı ele alındığında, aynı anda birden fazla iş yapmanın sınıflandırma, özelleştirme ve kolay kavramaya verilen önemi artırdığı ortaya çıkmıştır. Planlama boyutu araştırmada ele alınan araçlarla en ilgili boyut olmasından beklendiği üzere çoğu tasarım unsuruyla bağlantılı çıkmıştır. Bir tüketicinin planlılığı arttıkça, özelleştirme, sanat takibi, bütünlük ve tüm alanları kullanma isteği de orantılı olarak artmaktadır. Aynı şekilde düzenlilik, eğlenme, nostalji, ilişkileri düzenleme, iyi hissetme, yeni şeyle öğrenme, kendini teşvik etme, başarı, kendini yansıtma ve özgüven de planlılık ile bağlantılı olarak önem kazanan unsurlardır. Sosyal insanlar ise, daha az sayıda unsurla (ikonlar ve kontrol işaretleri, alan tutumluluğu, ilişkileri düzenleme, başarı ve kendini yansıtma) yakın ilişkilidir. Son olarak, öncelikli bakılan zaman ele alındığında, bir bireyin odağı geçmişe kaydıkça başarı ve nostalji kayda değer ilgi kazanmakta, gelecek odaklı yaklaşım ise araçların özelleştirilmesiyle ilgili beklentileri artırmaktadır.

G. TEZ FOTOKOPISI IZIN FORMU

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