Usability Evaluation of Parental Control App-Norton Family

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ABSTRACT

Internet Access has now become a utility when individuals of all age groups need it to carry out routine work. However, for teens and younger ones, there is the requirement of monitoring what they are accessing and what they are exposed to, on the internet. Because there seems infinitive inappropriate stuff like violence, self-harming, etc.

Both Android and iOS play-store have parental control apps and apart from these apps, Android and Apple themselves have provided built-in features for Parental Control. However, the targeted group (parents) doesn't seem much interested in using such apps and features. Several pieces of research have been conducted to find out the reasons behind this gap of being aware of the apps but still considering these useless. The following work is done to evaluate user experience of a parental control app 'Norton Family' in terms of features and effectiveness.

Keywords: Parental Control Apps, Social Media, Usability, Usability testing, Web Content.

INTRODUCTION

Mobile technology has spread rapidly around the globe in recent years. Stats show that there are more than 3.5 billion smartphone users (• *Number of Internet Users Worldwide | Statista*). Teenagers are using it for studies and entertainment while elders, in most cases, entirely depend on smartphones for their jobs and work. However, researches have clearly shown that teenagers are more into technology than their parents or caretakers. Statistics reveal that about 93% of Millennials own a smartphone. This is such a percentage when only 76% of Generation X (age 30 or above) are smartphone users. It means about 17% of Millennials are those who have been using Smartphones while their parents are unaware of their activities (*Millennials Stand out for Their Technology Use | Pew Research Center*). However, it is the legal right and responsibility of parents to ensure safety of their children in online world which is carried out through different means like monitoring, filtration and blocking of online activities.

To facilitate users, tech giants like Android and Apple have provided parental control features that enable parents, to monitor and control screen usage of their children. Apart from built-in features, there are apps that enable parents to place restrictions on surfing the web and limit the usage of devices (Wardhana *et al*.). But these built-in features and apps aren't as user-friendly as the targeted group wants which causes difficulties for them. On the other hand, their kids quickly understand how these applications work and how to escape such restrictions.

Governments worldwide are working to formulate effective strategies to restrict inappropriate online activities Indonesian Government introduced 'Internet Sehat' program that adds a protection layer for internet usage (Ambarsari *et al*.). Researchers there noticed some worst outcomes of inappropriate and prolonged mobile usage including internet addiction and speech delay in kids. United Nations / International Telecom Union consider this program as a model of strategy for delivering online ethics and digital literacy advocacy to the public.

European Commission Safer Internet Program published a report in 2016 in which they have highlighted the critical need of parental controls to safeguard the security of their offspring in online and digital scenario. They have also pointed out that such applications in some scenarios aren't effective which puts a question mark on the usability (Zaman and Nouwen). Another report published by IMDEA Software Institute, Madrid points out the privacy issues and risks associated with these apps (Fajardo *et al*.).

Researchers from Anadolu University, Eskiúehir, Turkey found that generation gap between parents and children, is a barrier in implementing control over technology usage. Parents were quite less comfortable in using technologies which makes it difficult for them to add restrictions (Çankaya and Odabaşi). We have surveyed to find out what are the issues that parents face while using such apps and what potential usability issues are associated with them. We chose 'Norton Family' app for the research which is listed among the top 10 Parental Control Apps. The app checks the child's devices according to the rules defined by parents.

OBJECTIVES

In light of the findings discussed above, following study was conducted to evaluate the user experience of parental control applications. Evaluation includes installation of app, defining rules for devices in control of children; periodic checking of activities and their review for app. Main focus is to find out how much time parents need to set up the required monitoring and what is the most difficult part of it for them.

The research has focused to prove following hypothesis:

● Parents are familiar with the Parental Control Apps.

● Parents found Norton Family app, learnable and engaging.

● Parents recommend the app to their fellows for its effectiveness.

METHODOLOGY

Evaluation was divided into two parts, installation and usage of app and then it's assessment by filling questionnaire which was focused on finding out the Ease of use and learning. Questions from Mobile Application Usability Questionnaire (MPUQ) (Ryu) were selected to find out the user experience of Norton Family App.

● Parents are asked to fill up the form regarding their required personal information first.

● They are provided a task set including primary task relating to Parental Control.

● Duration for completion of task set is recorded along with the difficulties faced by them while setting up monitoring.

● After completion of task set, parents are asked to answer the post usability test questionnaire.

Participants

Number of Participants	35
Gender	Male: 18 Female: 17
Age	20-50 years
Familiarity with Parental Control Apps	70%

Measurements

Based on the responses obtained from participants of research, following are the stats relating to measurements of experiments.

Task	Average Time
Installation of Application on Mobile	1 minute
Sign up as a Parent	1 minute
Sign in	0.5 minute
Installation of App on Child Device	2 minutes
Adding a Child	1.5 minutes
Setting up Rules on Child Device	3.5 minutes

Questionnaire

Question	Positive Feedback	Negative Feedback	Uncertain
Is it easy to learn to operate this product?	74.3%	5.7%	20%
Is using this product sufficiently easy?	60%	11.4%	28.6%
Have the user needs regarding this product been sufficiently taken into consideration?	68.6%	8.6%	22.9%
Are the operations of this product simple and uncomplicated?	48.6%	14.3%	37.1%
Is it easy to access the information that you need from the product?	60%	8.6%	31.4%
Are the characters on the screen easy to read?	91.4%	8.6%	-
Are the command names meaningful?	88.6%	11.4%	-
Has the product at some time stopped unexpectedly?	83.3%	16.7%	-
Is the amount of information displayed on the screen adequate?	74.3%	25.7%	-
Is the product reliable, dependable, and trustworthy?	60%	2.9%	37.3%

Is the way product works overall consistent	66.7%	33.3%	-
Is it sufficiently easy to operate keys with one hand?	86.7%	13.3%	-
Is the organization of the menus sufficiently logical?	95.4%	4.6%	-
Are the HOME and MENU buttons sufficiently easy to locate for all operations?	97.1%	2.9%	-

RESULTS AND DISCUSSION

Those who are not frequent user of Android phones faced a lot more difficulties in completion of task set than those who are frequent users. Overall, parents found it useful and have given positive feedback. An unexpected issue in the app was noticed that children were getting restricted even before listing parent device on child device. Few child devices got locked without any definition of house rules on device.

Majority of parents applied the parental control for the first time and they found it just crucial for their teens monitoring. They found it useful but had to ultimately uninstall the app because of anxiety noticed in the children. Some of them refused to use the app because of continuous interruption and increased complications due to the app in smartphone usage. Results supported first and third hypothesis but not the second one because almost half of participants struggled in operating app as they didn't see it much effective or enjoyable. The study can be concluded to following:

● About 70% of participants were familiar with the Parental control feature (not with the Norton Family).

● More than 50% found the app effective and user experience enjoyable.

● Majority of parents said that they will recommend the app to their fellows.

Recommendations

Previous studies and data obtained through evaluation tell us that teenagers are quick at learning and analyzing functionalities of applications than their parents. Children teenagers usually get access to mobile phones and internet at very early age due to which they become undefeatable for parents. They do have access even to their parent's mobile phones through which they were able to make changes in the house rules defined with the help of Norton Family app.

The complications in the application are quite more than the need. The restrictions on child' device should be in a way that they don't get into anxiety. This can be done by diverting the child to appropriate site rather than continuously bothering with same message of 'site restricted'. Also the app vendor should give hourly basis reports by notifying parents so that they don't have to go to the app of email for accessing the reports of their child.

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