

## **PARENTS VIEWS AND RULES ABOUT TECHNOLOGY: AS TOLD BY THEIR MIDDLE SCHOOL CHILDREN IN HUNGARY AND INDIA**

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**Abstract.** To help us explore parental attitudes towards and usage of technology, we interviewed students ages 10-15 in Hungary and India in focus groups regarding their technology use. This paper focuses on the preliminary results of these students' perceptions of parental limitations on their technology use. Parents in both countries limited children's technology use; however, there were differences in the way these limitations were defined and expressed among our participants. The students from Hungary stated that in many situations their parents have a negative attitude toward technology, however, they prescribed fewer rules and gave more freedom to their children to use the technology items discussed. In India, the students indicated that their parents thought technology was useful, a helpful tool, and spent time using technology with their children and in front of their children. Yet the Indian parents limited their children's use of technology more than the Hungarian parents.

### **1. Introduction**

Girls and women are facing a multitude of challenges in the technology field. Clayton (2009) believed that gender stereotypes can influence girls' choices and keep them away from choosing Information and Communication Technology as their occupations. She indicated that mass media and educational practices reinforced these stereotypes. Moreover, family factors, for example, parental views of technology, also impact children's attitudes and behaviors towards technology. Family influences can impact children's attitude towards technology. Our study looked at parental limitations on children's technology use in two countries to explore any variation in how the parents in our study approached their children's technology use.

Recently researchers have found novel ways of studying the use of daily technology among teenagers, especially girls. For example, March and Fleuriot [1] used the combination of weblogs and interviews to collect data to study everyday life of

teenage girls in the United States and United Kingdom, “how, when and why they use technology, and the relationship between technology and their privacy practices” (p. 107). The study found that the participants preferred using voice instead of text messaging and staying mobile during phone conversations so that their phone conversations would not be overheard.

In a study regarding children’s safety on the Internet, Rodes [2] observed and interviewed twelve households, totaling fourteen adults and nineteen children to observe issues of domestic privacy and security with their children on the Internet. The results showed that computer security was enforced in several ways, including rules, such as time restrictions, and monitoring children’s use of technology by staying in the same room as the child or installing a website blocking software.

However, there has been very little research regarding parents’ attitudes towards their child’s technology use, specifically rules and restrictions, from their child’s point of view. The purpose of this paper is to report the results regarding parental rules and restrictions and parental views as presented by their children from a larger study of technology use and attitudes by these children.

## 2. Methodology

To accomplish the goals of this research we conducted focus group sessions interviewing middle school students from Hungary and India (see Table 1.)

*Table 1.* Participant information.

Country	Participants	Age Range
Hungary Female	17	10-15 years
Hungary Male	18	10-15 years
India Female	18	10-13 years
India Male	17	10-13 years

These two countries were selected for various reasons. India was selected as an important IT industry player and source of IT workforce. Hungary was selected to provide geographic diversity. The data reported in this paper will be compared to data previously collected in the US in future work. In addition, the inclusion of Hungary allowed for data collection on three continents insuring a degree of diversity,

The students from Hungary belong to two parent, mid- to upper-class families, with both parents having received either a Bachelor’s or Master’s degree. The families have two to eight children. These parents regularly use technology, higher income parents use the newest technology (phone, PC, etc.)

The students from India are also from two parent, middle to upper-class families; most participants’ parents have attended college and are familiar with technology. More than half of the families had multi-generational households, where grandparents also lived with these families or have joint families living in the same house. The parents purchase technologies such as computers, mobile phones, cameras, etc.

Six focus groups in both Hungary and India were video and audio recorded at the local schools where the children attended. The monogender focus groups consisted of five to seven children and lasted approximately one-hour.

All of the above video and audio recordings were transcribed, and in the case of Hungary, translated. The textual data was then coded and cross-coded using a grounded theory approach, by a team of seven researchers. Transcripts were coded using an iterative, mixed-method approach. First, the data was coded based on a schema developed from the focus group guides. Then, open coding was conducted to identify major themes. Finally, a round of axial coding refined theme categories, developed additional dimensions within themes, or found additional themes categories.

Multiple coders were used to code a subset of the data so that at least two but no more than three coders analyzed a subset of data. Between each round of coding, the coders met to discuss their analysis so that all coders were aware of developing themes. Each coder analyzed approximately 20% of the data.

## 2. Results and Discussion

The data has shown very strong differences in how technology is perceived and rule sets imposed regarding the usage of technology between the two countries, with very little difference suggested by gender usage and perceptions. These students from Hungary felt their parents have a very negative attitude towards technology. The Indian students presented a positive attitude from their parents, providing examples of how technology has changed their lives and can be very helpful.

### 2.1. WHAT THEIR PARENTS THINK OF TECHNOLOGY

During the focus group sessions, the students were asked the question: “What do your parents think of you using technology?” The Indian students provided three times as many positive answers as the Hungarian students (see Figure 1) including examples such as communication as a good use of technology. Over one third of the Hungarian students provided negative statements where most of the concerns from the parents related to their child completing their homework first, time spent with the family, and jealousy of the children’s technology skills.

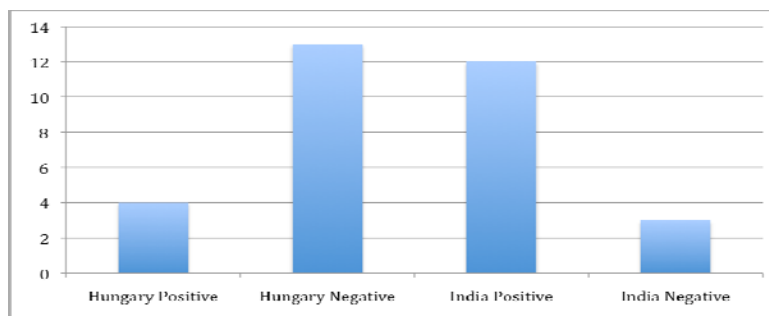


Figure 1. Positive/negative statements about technology.

### 2.1.1 Positive Comments

When asked what their parents thought of technology, the students from India provided three times as many positive comments as the Hungarian students. These positive comments from the Indian students focused more on the technology, where as the Hungarian comments tended to focus on the person using the technology.

One girl from India provided the following statements:

“They think technology has changed things which are used in our daily lives.” (IFFG4)

One boy from Hungary said:

“...sometimes they say I am clever if I am able to do something all by myself.” (HFFB1)

### 2.1.2 Negative Comments

More than 33% of the Hungarian students stated that their parents have a negative attitude toward technology. Three of the students specifically stated that their parents are concerned that using any type of technology will interfere with their or schoolwork. One girl stated that most of the students she knows have computers in their bedroom and they spend excessive time on their computers rather than with their parents.

“They are not so happy when we are in our room all the time. We hardly talk to them.” (HFFG5)

Four of the Hungarian boys explained that their parents are jealous of their technology knowledge and skills and they feel their parents envy them, which they feel gives their parents a negative attitude.

“It bothers them that I can do all the things they cannot do.” (HFFG6)

The Indian students also reported that their parents are concerned about technology getting in the way of them completing school assignments. Six of the Indian students mentioned that their parents want to make sure they do not misuse or become addicted to technology.

## 2.2. SPECIFIC TECHNOLOGIES AND PARENTS VIEWS

Well over 50% of the Indian students responded with a general answer about technology, where the Hungarian students' were more specific to technologies. Computers and cell phones were both mentioned by almost 1/3 of the Hungarian students as technology that their parents had a negative attitude towards their child's use of (see Figure 2.)

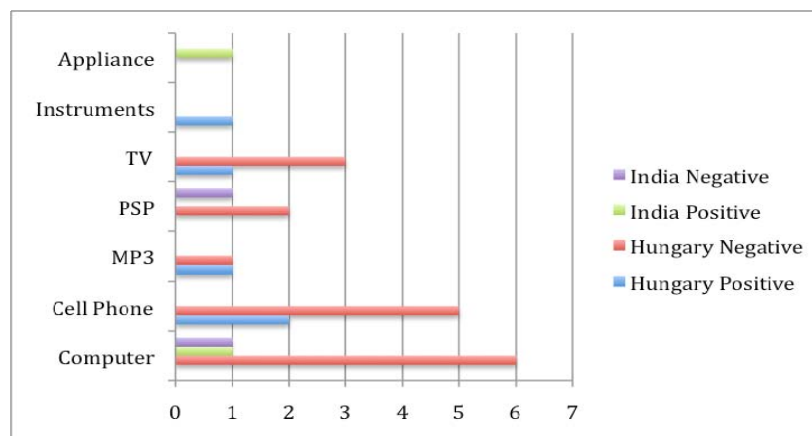


Figure 2. Parents' positive or negative views of specific technology.

Parents' negative statements about their children's use of cell phones all came from five Hungarian students. Two students mentioned that their parents specifically don't like them playing games on their cell phones. One of the Hungarian girls mentioned that having prepaid minutes does not change their attitude:

"They are not happy when I use lot of (prepaid) minutes." (HFFG1)

Of all the specific items mentioned, the PSP / Nintendo / Wii was the only kind of technology that received exclusively negative statements, though not all students commented. Only three students mentioned that their parents have a negative attitude towards the gaming consoles, but both the Indian and Hungarian students made these statements. Television was mentioned by three Hungarian students, all using emotional terms, such as "don't like" or "not happy with" in their explanations.

Another technology mentioned was iPod/MP3 players, which received one negative and one positive comment, both including that when the students listen to music too loud their parents don't like it. A musical instrument was mentioned by one of the Hungarian boys. He stated that his parents like it:

"...because that leads somewhere, it's meaningful." (HFFB3)

One girl from India mentioned that her mother likes the toaster because it helps her.

### 2.3. RULES AND RESTRICTIONS

The students were asked what rules their parents set regarding their technology usage. Computer was the most common answer, having the most restrictions. MP3 players and gaming consoles were the least restricted. As previously discussed, cell phones were one of the two most negatively viewed technologies by parents. However, it was one of the technology items that did not have many restrictions. Over half of the students mentioned that they did not have any rules or restrictions. In the following sections we will discuss the types of limitations parents posed on children across both countries.

### 2.3.1 Types of Rules and Restrictions

#### *Time Limitations*

Almost 50% of the students from Hungary and 25% of the students from India indicated that they have time restrictions on computer usage, ranging from 30 minutes to 2 hours each day (see Figure 3.) Half of all the students stated that they are allowed 1 hour a day to use the computer or the TV.

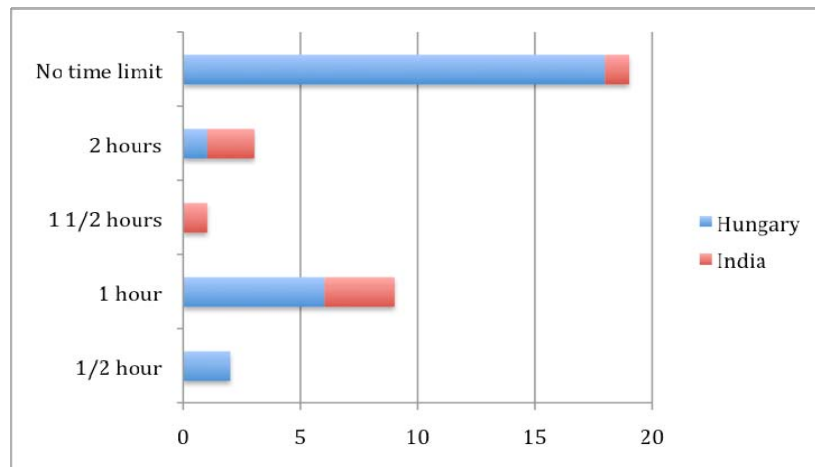


Figure 3. Student's time limits for using technology items.

Five of the students from Hungary and one from India stated that these restrictions are based on days of the week, where the weekends have no time restrictions.

"...on school days, I can not watch as much TV for sure, not like now in the summer. Or not like on Saturdays or Sundays." (HFFB4)

#### *Delayed Gratification*

One-third of the students from Hungary stated that they must complete homework, household chores, or even a reading assignment before they are allowed to use any technology. Two of the students stated that once they have completed their homework, there are no set restrictions for their technology use, although their parents may step in if they feel their child needs to stop:

"When I am done with everything I can get on the computer, but if I play too much my parents will say so." (HFFG2)

Four of the Hungarian students stated that their parents required them to complete their assigned chores before they are allowed to use any technology.

*Safety on the Internet*

The students from India specifically talked about using the Internet and their parents involvement in their activities. Six students described sitting with their parents or informing their parents of their actions on the Internet, and two indicated that they were required to provide their parents with their passwords:

“My parents know the passwords of my accounts so they routinely check.” (IFFB3)

One student indicated that he has parental controls set up on the computer:

“...I have that software which automatically blocks sites on Internet, but that is very irritating, for example I wanted to download this software ...but it does not allow it to be downloaded.” (IFFB3)

Another boy in the group added:

“It is like our mother in the computer in a software.” (IFFB3)

*No Restrictions*

Almost 70% of the Hungarian students indicated that they do not have set rules or have different types of restrictions for using technology. Where as only 15% of the students from India indicated the same

Three Indian students stated that they have no specific rules. Four Hungarian students indicated the same but provided more details.

“I do ask if can watch TV or not, but there are no rules.” (HFFG2)

Three students explained that they have different types of restrictions, depending on the day of the week or if school is in session.

“...I can only used it on weekends...summer vacation, winter vacation, then I can use it on weekdays...anytime I want.” (IFFB3)

There are three Hungarian students that mentioned they either ignore the rules completely or wait until their parents are not home and do whatever they want. One boy offered this explanation:

“...we never follow them, the rules are just too tough.” (HFFB3)

#### 2.4. WHO INTRODUCED YOU TO TECHNOLOGY?

During the focus group discussions, the students were asked to talk about their favorite technology item [3]. These items included computers (both laptops and desktops), cell phones, iPods, PSP/Nintendo/Wii, TV, bicycles, and even a bread slicer. The students were asked who introduced them to a technology item. The students in both Hungary and India indicated that just over ½ were introduced to their favorite technology item by their parents (as opposed to other sources such as friends, schools, and media.) 53% of students in Hungary indicated that their parents introduced them to their favorite technology item and the students from India indicated that 51% of them were introduced by their parents.

One of the boys tells the story about being younger in his mom’s office:

“...I was palming the keyboard...I was in my mom’s lap first.” (HFFB6)

One boy from India was given his father’s cell phone:

“My father brought it when I was three or four...I immediately took it and figured out all the functions...my father was actually really impressed...at his birthday he gave me (the cell phone).” (IFFB3)

### 3. Limitations

The number of participants in each country and the time of interaction with the children in the focus groups was limited. Thus our conclusions are valid only for our participant groups and can be transferrable to similar groups in the same country, but cannot be generalized beyond those groups with similar characteristics. However, the patterns identified in our data show some interesting trends that warrant attention.

In analyzing parents’ views and limitations, it is important to note that the focus group interviews reflect the parents’ opinions and rules through the eyes of their children. Consequently, the parents may not have such a negative view of technology, but perhaps limitations imply to the children that their parents do not like technology. Therefore, it would be interesting to compare children’s reports and parents’ accounts of these limitations. It would also be interesting to find out in future studies how parental encouragement vs. discouragement impact children’s attitude toward technology

### 4. Conclusions

Within this set of students the Hungarian parents appear to see technology as a toy that their children play with and approached it as such when establishing technology restrictions for their children:

“When I am done with everything, I can get on the computer, but if I **play** too much, my parents would say so.” (HFFG2)

“And then of course when my parents aren't at home, I **play** on weekdays too” (HFFB3)

This set of Indian parents has given the impression to their children that technology is useful and helpful and can be used as a tool.

“They think we have such a good opportunity so we should use it wisely.” (IFFB6)

“They think that it makes our work easier.” (IFFB6)

These Indian parents spend time sitting with their children when they are concerned about their Internet usage.

“My mother sits with me when I am updating Facebook.” (IFFB3)

They talk to their children about technology related current events.

Researcher “...who told you about this that they break the ozone layer?”



“our science teacher and also the newspapers and our parents” (IFFB6)

And they demonstrate using technology for work related activities.

“My mom has a lot of work because she is a teacher...she has to calculate the marks on Excel.” (IFFG5)

“My mom works in a company where...their mode of communication is Skype and email...” (IFFG5)

Parental encouragement or limitation has a potential impact influencing children's attitudes towards technology. Our paper reported on general trends in limitations and encouragement among our participants in two countries. Interesting differences in patterns of encouragement and limitations were identified between the countries. Parents who encouraged their children to use technology also often felt it was important for their children to understand the value of technology. Despite those differences, similarities in the types of limitations were observed in both participant groups. Thus, it seems that while limitations and rules are necessary for children's technology use, just as in many other areas of children's lives, patterns of encouragement can greatly vary depending on the views of the parents and the culture. A recommendation from this study is that while limits and rules should be in place, children can still be encouraged to see the value of technology and potentially develop an interest in technology fields of study.

## 5. Future Work

Our analysis is ongoing and we are planning to place our findings in the framework of research on family relations in these two countries. In addition, it would be interesting to interview the parents, to see if the children's impression of their feelings about technology matches their own views. The fact that the Hungarian parents expose their children to technology indicates that they want their children to have access to it. It would be interesting to ask Hungarian parents whether allowing their children to use technology more as a tool, say to work on their homework, rather than a reward after their homework is done, they would provide a more positive attitude towards technology and thus decrease the sneaking and rule-breaking by their children.

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