"Parent seeking Roblox Safety Help": Comparing Parental Roblox Concerns to Roblox Offerings

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***Abstract*—Due to greater accessibility, diverse game options, and the social experiences provided by gaming platforms, the number of children engaging with the Roblox platform has increased over time. This increase in gaming from children of all ages has led to the parental challenge of balancing child safety with fun. Although parents typically know when their children are online, it can be challenging to trust that Roblox will protect data and minimize risky experiences due to the publicized criticisms of inadequate protections and the requirement of parent engagement. In this study, we examine parental Roblox concerns by (1) reviewing the game's privacy policy and features, (2) characterizing parental concerns expressed on Reddit, and (3) surveying adults about their Roblox opinions. Our findings indicate gaps exist between what safety features Roblox provides and what parents need. Additionally, Roblox could improve how they convey their privacy and security practices to players and parents.**

Keywords— Roblox, children, privacy, parents

I. Introduction

The Children's Privacy Protection Act or COPPA is a United States federal law that guides online operators on how to handle content directed at, potentially visited by, or used by children under the age of 13 [1]. The law requires parental consent for the collection, use, or disclosure of personal information about children under 13. For teenagers, the law provides guidelines to assist operators in designing privacy protection for that age group [2]. However, as children and teens are spending more time online while at home or school, concerns for their online safety are growing [3].

Digital social spaces, like what Roblox offers, are becoming more intertwined with their users' daily lives. One-fourth of all gamers are children, with 77% of children in the United States of America being part of the number [4]. Gaming for children and teens has provided social benefits such as making new friends or maintaining friendships in virtual environments [4]. Educators have used Roblox for STEM learning, such as programming and mathematics, and collaborative learning [5] and children use Roblox to play with friends or spend time with family [6]. However, this also means that children and teens are providing more data to companies, thus increasing their risk of digital threats as they spend more time online [7]. The statutes outlined in COPPA only apply to the handling of data from children under the age of 13, so the Federal Trade Commission (FTC) in the U.S.A has provided seven principles to guide company decisions [2]. However, even with this legislation and the tips the FTC has provided for protecting teens, some companies have had trouble protecting this data, leading to parental concerns. For example, Fortnite has been fined for violating children's privacy law [8]. A BBC report found that VRChat allowed children to engage in adult experiences and content [9]. Lastly, Roblox has been criticized for displaying ads to children, exploiting child labor, and defrauding children out of their money and purchases [10].

Previous studies on Roblox have analyzed the impacts of civility on user experience [11], but don't address potential solutions for incivility or consult the perspective of parents. Additionally, previous work on the tools protecting children has focused on non-technical or device-wide protections [12]. We will include an analysis of the parental control tools specific to Roblox as part of our larger analysis and reaffirm the safety concerns identified. We wish to explore if results in research on how gamer cultures have evolved into toxic cultures [13] are reflected in Roblox. We build off work in similar platforms that have more deeply analyzed toxic behavior in other large multiplayer games with chat features like League of Legends [14].

To identify the gaps in the gaming ecosystem that lead to parental concerns, we investigate the perspectives of legal guardians of Roblox players and compare them to Roblox offerings. Roblox is a gaming platform that contains multiple gaming experiences that can be played alone or with friends. We focus on Roblox because it is the largest multiplayer game where players can create sandbox games online [15]. Additionally, over 55% of Roblox accounts are associated with a Generation Z player, and, along with Generation A, spend more time on Roblox compared to other platforms [16]. Research suggests that they spend 68% more time on Roblox compared to YouTube and TikTok [17].

We focus on the perspective of Roblox players' parents and guardians to support prior work that focuses on the perspective of children and teens who play Roblox [18] in an effort to show a complete picture of Roblox concerns. We gather these perspectives from threads on Reddit, an online discussion forum, and responses from surveys administered on Prolific. We also review the Reddit privacy policy and features to identify how Roblox addresses privacy and security concerns. Our results suggest that each shareholder in the

gaming ecosystem has opportunities for growth to improve the current state of safety for children online.

We make the following contributions:

- To our knowledge, we are the first to characterize parental concerns related to Roblox using Reddit posts.
- We identify shortcomings in the Roblox website design and provide suggestions to improve navigation for non-players
- We highlight gaps in Roblox offerings produced from parental concerns

II. Related Work

Privacy and security threats that children encounter online fall into three categories: content, contact, and conduct risks [19]. Content-related threats pertain to published media, such as blogs, advertisements, game experiences, and digitally recorded media that may contain information or situations not suitable for children. Contact-related threats refer to children communicating with strangers and potentially exposing themselves to additional harm. Conduct-related threats refer to the actions children take online that can lead to negative impacts. In a 2018 study focused on the digital safety of elementary students, parents expressed knowing what their children were doing online but were concerned about their students being exposed to sexual content (content threat) followed by the possibility of them communicating with strangers (contact and conduct threat) [20].

While some privacy and security threats stem from Roblox infrastructure, others emerge due to the participatory nature of Roblox game development [21], [22]. While likely unintentional, game developers can incorporate game structure and elements that harm children. For example, developers have incorporated malicious aspects into their games from free resources, developed game elements attractive to children to increase revenue, implemented unmoderated elements, and incorporated adult situations to increase popularity. While Roblox systems are in place to remove these games and ban the developers, there is, unfortunately, a lack of grace given to honest mistakes. While the harm may be intentional in some cases, others are due to inexperience and utilizing free resources during development. In this way, children may also be harmed as their accounts may be suspended due to a game they designed but may not fully understand.

Parents may also be the source of the child's privacy risk as some parents unknowingly risk their child's safety through their online behavior [23], lack of gaming knowledge, and flexible rules. In some instances, parents may overshare about their child online, providing enough information to put their child at risk. Some parents have developed gaming rules, such as time limits, which, according to their children, are not enforced [18]. Other parents tend to focus their efforts on non-technical strategies to keep their children safe and ignore parental controls [12]. Research suggests that in some cases, parents are unaware of the privacy risks related to the games their children play [24], [25]. Although parents are concerned about children being online, they may approve of children using digital tools that increase security, privacy, and safety risks [26]. For example, while aware of children's risks on Roblox, parents continue to approve of their children playing the game. This is likely to support the child's social obligations, educational usage, and positive behavior changes playing may bring. For instance, some children become more social and active when playing Roblox, which could directly influence their real-life interactions [27]. Additionally, Roblox can be used for educational purposes such as teaching children how to work collaboratively and learning about programming and design [27], [28].

The prior work we've reviewed has identified parental online safety concerns and solutions through surveys and interviews focused on general online usage. Research focused around Roblox is often investigating its use for education and adult-child play. However, prior work does not discuss where parents receive their support for Roblox safety and how they interact with the support Roblox has to offer. We add to prior work by analyzing parental posts on Reddit. Similar to prior work, we use Reddit because these online communities provide enough data for in-depth qualitative analysis [29]. Thus, our research questions are as follows:

- RQ1 What concerns and issues do parents express about Roblox in online communities?
- RQ2 What role does the Roblox website play in the parental search for solutions?
- RQ3 How do the solutions that parents lean on to address their concerns compare to the information provided by Roblox?

III. Methodology

Roblox is the world's largest multiplayer game community in which players create virtual worlds, leisure communities, and other sandbox games to share and play with other users. Over half the player base is under the age of 13, making it a strong candidate for investigating parental concerns of online experiences [30].

This study was conducted in three parts. Part one includes a review of the Roblox privacy policy and features. Part two focuses on analyzing comments from parents on Reddit. Part three surveyed adults about the Roblox website and personal opinions on children playing on Roblox.

A. Part One - Privacy Policy Analysis and Security Mechanism Identification

Following techniques of previous work [31], [32], by investigating compliance with industry guidelines such as FTC recommendations and COPPA using deductive content analysis, we analyze the privacy policy and Roblox website, to identify the Roblox privacy and security mechanisms. Four researchers read the privacy policy and used predefined guidelines to identify the content present. Once complete, the researchers met and discussed areas of difference to resolve any conflict. Next, a readability analysis was conducted to determine if teen players would be able to read and understand the policy. First, we identified five countries that had the most engaged

TABLE I
SUBREDDIT QUERY KEYWORDS

Subreddit	Keywords
r/robloxparents	-
r/parenting	"roblox"
r/roblox	"parent OR safe OR concern OR danger OR scam AND (daughter OR niece OR nephew OR son OR child)"

players [33]. Then, we determined if the privacy policy was available in the most spoken language affiliated with each country. Finally, we identified the average reading level for students in that country using the PISA reading level. The PISA test evaluates the reading proficiency of students between the age of 15 and 16 in a particular country. The average score among the participating countries determines the average reading level. Since the countries of interest scored in or right below the average reading level of the U.S.A., we assume that the PISA reading levels correlate to high school reading levels. Thus, we used the Flesch-Kincaid score [34] to determine if the privacy policy was written at any of the high school grade levels.

B. Part Two - Subreddit Analysis

Data was collected from subreddits focused on Roblox and parenting - r/robloxparents, r/parenting, and r/roblox. We chose these subreddits because they were active forums during the time of the study and included posts from parents or guardians about Roblox. Before collecting data, two researchers reviewed these forums and determined that due to the large quantity of threads and variety of topics, we would need to pull threads with specific keywords in order to focus solely on the intersection of Roblox and parental concerns for some of the subreddits.A total of 12155 posts from 2016 to 2024 met our requirements and thus were collected with 10214 (84%) from r/robloxparents, 1705 (14%) from r/roblox, and 236 (2%) posts from r/parenting. Table I showcases the keywords used to pull threads from each subreddit.

1) Data Processing: F irst, the data was cleaned for processing. This included the removal of bot-generated posts, punctuation marks, emojis, links, and stop words, defined as words contributing little to no meaning to the sentences. The data is further processed with the removal of suffixes and later tokenized into vectors of numbers. Then, we employ the Latent Dirichlet Allocation (LDA) [35] model to identify relevant comments to our inquiry. We initially built an LDA model using Gensim 4.3.2 [36] and set the number of passes to 10, beta to .61, alpha to .01, and the number of topics to 5. However, based on the maximum coherence score, we ended with ten topics, with alpha and beta set as .9. One topic included general conversation unrelated to parental concerns on Roblox. The remaining topics included various concerns and issues from guardians.

TABLE II
GENERAL THEMES FROM THE ROBLOX PARENTAL COMMUNITY ON REDDIT

Theme	Definition	Codes
Roblox-related Concerns	Concerns that should be handled by Roblox	Concern social systems Concern inappropriate content Concern age requirements
Adverse Effects of Roblox Outside of Roblox	The adverse effects parents observe in children when they play Roblox	Concern Money Concern screentime Concern behavior
Parenting Tactics and Techniques as a Solution	Posts that place responsibility on parents to solve concerns mentioned from theme 1 and 2.	Solutions: Parental Advice Criticism: Parent vs. Parent
Roblox Features as a Solution	Posts that place responsibility on Roblox to solve concerns mentioned from theme 1 and 2.	Roblox Tools as Solutions
General Conversation	Messages that are not unique to the Roblox subreddits and can be reasonably found in other fandoms	Gamer conversations Miscellaneous General vs General Support
Inquiries	Questions related to parental concerns	Inquiry

2) Qualitative Analysis: We follow Braun and Clarke's approach to thematic analysis [37]. First, each researcher became familiar with the data, and then four researchers reviewed and coded a random subset of the data (n=119 posts from research-appropriate topics). Next, the researchers met to discuss and agree on the codebook that would be used and how it would be applied to the subset during the topic labeling process. Once labeled, the researchers reviewed the larger data set again and developed themes independently. They then met again to discuss and agree on the final themes (Table II). To ensure consistency, the themes were verified one last time using another random sampled data set (n=1000 posts).

C. Part Three - Survey

We recruited participants using Prolific. The survey was completed by 90 participants, most of whom were between the ages of 31 and 40 (32%), white (63%), and male (49%) (Table III). All of our participants were from the United States of America and identified as adults who have helped raise children who play, want to play, or have played Roblox. The survey consisted of a series of questions that asked

participants to find solutions to problems identified in the subreddit analysis, a follow-up Single Ease Question (SEQ) to gauge how easy or difficult it is to find information on the website, and multiple choice and extended response questions regarding their opinion on children playing Roblox.

TABLE III
SURVEY PARTICIPANT DEMOGRAPHICS

Demographics	N	%
Gender		
Male	47	49%
Female	44	46%
Non-binary	4	4%
Age		
18-22	12	13%
23-30	31	33%
31-40	30	32%
41-50	16	17%
51-60	6	6%
Race		
White	60	63%
Hispanic or Latino	10	11%
Black or African American	11	12%
Asian	11	12%
Other	2	2%
Prefer not to answer	1	1%

D. Ethical Considerations

Our study was approved by the Internal Review Board at our University. The survey was conducted on Prolific, where participants were paid $15/hr for their responses. We used Prolific to get quality responses [38]. We paraphrased all published quotes from Reddit to protect anonymity. Quotes were paraphrased by turning the quote into the related codes, and then developing new quotes manually. All researchers compared them for consistency with the original and conducted Google searches to ensure anonymity. Any potential identifying information from the extended responses in the survey were removed before analysis. Once our study is accepted for publication, we will notify Roblox of our results.

IV. RESULTS

In this section, we detail the outcomes of our three-part study. We report our analysis of the privacy policy to highlight the security mechanisms of the Roblox platform expressed through its privacy policy. This includes a review of the parental controls, privacy features of accounts of players under 13, and privacy as explained by Roblox.

A. Security Mechanisms

Roblox allows the creation of a child account for users under 13 with parental control settings to limit select features in compliance with COPPA. The parental control settings give parents the ability to 1) limit or disable chat features, 2) establish boundaries that limit the player to experiences for their age, and 3) implement spending limits. Outside of these settings, Roblox has implemented auto-detection of inappropriate clothing on avatars, provides mechanisms for reporting other players, and provides additional information in their privacy policy.

TABLE IV
PRIVACY POLICY ANALYSIS & READABILITY RESULTS

Player Demographic			Privacy Policy	
Top 5 Countries	& Language	Reading Level	Language Available	Reading Level
US	English	10th-11th	✓	
Brazil	Portuguese	9th-10th	✓	
U.K	English	10th-11th	✓	College
Phillipines	Tagalog	9th-10th	✗	
Mexico	Spanish	9th-10th	✓	

B. Privacy Policy Analysis

Our criteria analysis fell into three major categories: data collection, third-party transparency, and data security. The Roblox policy clearly defines which forms of data are collected and used, in addition to permitting the deletion of all user account-related data upon request, and clarifies that privacy is protected when user data is shared with third-party resources. The policy states that their practice of sharing data with governments and third parties is "transparent," but does not explicitly state that they will notify the user when these parties have requested their data. The policy provides some assurance that data is kept secure, but does not clarify whether personal data is encrypted. However, Roblox does state that it will send a notification to the user if there is unauthorized access to their data.

C. Readability of Privacy Policies

Since the child account does not apply to teens, it is important that the privacy policy be written for players 13 and over. The readability results suggest that the privacy policy was not written at a level suitable for comprehension by players 13-18 years old. All of the privacy policies were written for college-level readers. Since an average reading level is typically below 12th grade, most minors would struggle to understand these privacy policies independently. Additionally, while the policy is available in English, the privacy policy is not available in each of the languages affiliated with the five countries that have the most engaged players.

D. Qualitative Analysis

After reviewing the privacy policy for Roblox, we analyzed the subreddit posts, guided by the LDA topic results. The qualitative analysis yielded six themes: Roblox-related Concerns, Adverse Effects of Roblox Outside of Roblox, Parenting Tactics and Techniques as a Solution, Roblox Features as a Solution, General Conversation, and Inquiries. For the purpose of this work, we will not be discussing the General Conversation and Inquiries because it does not provide the information needed to answer our research questions.

1) Parental Concerns: The inquiry theme is defined as questions posted by subreddit participants. The range of questions was usually focused on a parental concern or a follow-up question for a parental question. One Redditor wrote the following:

> "It's insane that my child wants to use hundreds of dollars buying accessories for her Roblox avatar. The skins are such a scam. There is no way practices like these taking advantage of kids like this is supposed to be ok. "

These questions, along with other posts, allowed us to characterize the types of concerns parents expressed in the forums. Our second and third themes, *Roblox-related Concerns* and *Adverse Effects of Roblox Outside of Roblox,*, are the two types of concerns that surfaced. *Roblox-related Concerns* focused on issues parents experienced with Roblox specifically such as children having access to inappropriate content, and chatting with adults while playing the game. For example, one Redditor warned others about a role-playing game where one player is the parent and the other is the child. This game may also be used by adults to meet children.

> "watch out for the adopt and raise games i guess there are a lot of online daters there and well the chances of seeing players over there in action is somewhat likely"

However, the "Adverse Effects of Roblox Outside of Roblox" theme included concerns about how a child's behavior and thought process might be negatively impacted by playing Roblox. This included issues related to increased screen time, lack of social skills, aggressive behavior, and an increase in requesting and spending money. One parent reached out to the subreddit community to request help identifying how much their child spent.

> "Where can I go to see what my child spent their money on?"

2) Community-Provided Solutions: In response to posted concerns, other parents offered advice to solve the problems. The solutions can be categorized into two groups. The first type of solution focuses on utilizing features provided by Roblox - *Roblox Features as a Solution*. So when asked for advice on how to prevent adults from contacting their child online, one Redditor responded with the following solution:

> "If you're worried about who they chat with, I would suggest maybe turning off the chat function"

The second type of solutions provided were categorized as parenting solutions - *Parenting Tactics and Techniques as a Solution*. These solutions focused on providing parenting advice and tips that could potentially be used for other issues as well. For example, when asked how to reduce a child's screentime, one Redditor provided the following solution:

> "There is absolutely no reason your son can't go outside and play safely. You should get him and the family outside more often. He should be doing more with his life"

3) Parental Knowledge: The parents posting in these threads are looking for solutions to help decrease the potentially negative impact of playing Roblox. However, the questions being asked also suggest that while these adults are able to navigate Reddit, they are unfamiliar with Roblox and the parental controls for young players. Roblox parental controls include chat filters, chat removal, spending limits, and limits on accessing specific in game experiences. However, the inquiries that could be solved by parental controls continue to be a topic of discussion.

> "you can take away their access, I inform my kids that grandparents are unaware of the modern world and struggle to understand how things like Amazon marketplace work. I also explain to them that I may seem cruel but this is what's best for them."

> "Roblox and similar games I was wondering how other parents deal with online games, such as Roblox...I'm not really sure how to address the situation. The chatting does give me concern, but at the same time, I know how popular the app is and how fun it is for kids. Just curious what other parents do."

> "My son received an inappropriate chat on Roblox I need some advice. My 8yo son received a text on his Roblox account saying: "I will r*pe you". He does not know who the sender is. I only let him play with his friends from school and got activated all of the parental control tools inside the app. I don't know how this could have happened. I'm looking for any advice on how do you handle Roblox or any online gaming security issues?"

E. Survey

The qualitative analysis from part two of our study identified a number of major parental concerns. We narrowed the list of concerns down to four based on concerns that were also identified in prior work [28], [39]. We found that parents were concerned about their children chatting with adults, seeing adult content, falling for financial scams, and spending more time than necessary playing the game. Then, we surveyed adults about their opinions on Roblox and handling these specific concerns. The Wilcoxon rank-sum test with Bonferroni correction was used to determine if users' responses

to the SEQ and Likert scale questions were influenced by the scenario provided, similar to other studies [40]. We used content analysis to categorize the responses to the open-ended questions. Lastly, we use descriptive statistics for the remaining questions.

1) Natural Inclinations: The first survey question asked participants to detail where they would go for support if they "needed help with a safety or privacy issue related to a child's experience with Roblox". Majority (73.5%) of the participants said that they would reach out to a customer service representative and report the incident. Other participants (9.2%) said they would search the Roblox website, find answers on Reddit or other forums (4.1%), talk to the police (4.1%) or their child (4.1%), or use the settings and parental controls provided (5.1%). This suggests that adults may not be naturally inclined to search the website. Even though 99% of participants were able to find the website, only 9.2% mentioned that they would search the website to find their answer.

2) Website Navigation: We asked participants to evaluate the ease with which they were able to find solutions to the four issues identified in the subreddit analysis via the SEQ. The SEQ score ranges from 1 to 7. The SEQ score ranges from 1 (Very Difficult) to 7 (Very Easy). The average SEQ score is 5.5. Thus, a score lower or higher than this indicates that the task difficulty is more or less than average [41]. Finding a solution on the Roblox website to help with "Children seeing inappropriate content" was 4.5, 4.0 for "Children falling for financial scams", 4.2 for "Children spending excessive time on the game", and 4.3 for "Children chatting with adults". There was no significant difference between the SEQ scores. This suggests that 1) it may be difficult for adults to find information related to protecting children on the game's website and 2) finding solutions to various problems on this website may be difficult for parents to find compared to other tasks they complete online.

We also asked participants to indicate their level of agreement with the following statement - "After reviewing the website, I believe Roblox provides a solution to help prevent [scenario]". Most participants agreed to some degree that Roblox provides a solution to help prevent children from seeing inappropriate content within the game (53.1%), spending excessive time on the game (59.1%), and chatting with adults (67.4%). In contrast, participants evenly agreed (43%) and disagreed (43%) to some degree that Roblox provides a solution to help prevent children from spending excessive time on the game. There was no significant difference between the Likert scale responses. To further explore navigation, we asked participants who agreed that "Roblox provides a solution" (for each concern) to provide us with links to the solution they found. When participants agreed that Roblox provided a solution, the links provided suggest that participants were able to find the solution that Roblox provides, such as parental controls and answers to frequently asked questions. This suggests that the Roblox website has a level of complexity that makes it difficult for users to find the information they need.

V. Discussion

We explore parental concerns related to Roblox through a three-part study. In this section of the paper, we answer the previously expressed research questions and highlight how these results might apply to other games. Additionally, we highlight the disconnect between parental needs and Roblox offerings and provide suggestions to fill the gaps.

A. R1 - Characterizing Parental Concern

Our findings illustrate that many parents are concerned about the content their children are exposed to during gameplay, their interactions with adults during gameplay, and the impact gameplay currently has or will have on their child's behavior. On Reddit, parents expressed concern about the diverse effects of Roblox playtime. Specific behaviors of concern included excess screen time, aggressiveness towards parents setting gameplay limits, an increased interest in money, and a lack of social skills or interest in being social in real life. While some of the concerns are directly related to general parenting, some concerns can be addressed with the tools that Roblox provides. For example, parents can use the parental controls to limit who their child can chat with, which would solve the concern of children having conversations with adults. However, the mere expression of some concerns suggests that parents may not be familiar with the Roblox website and provided resources. For example, to help parents who are concerned about who their child interacts with, Roblox provides parental controls that allow them to disable the chat feature, enable mechanisms to filter chat content, and limit access to certain games. However, even though 57% were able to find a related link to this problem, 57% rated the task of finding this link as difficult (below 5). This suggests that the website may not be easily accessible by parents. This is further exhibited by the fact that 73.5% of the participants stated that if they had an issue they would "go to the Roblox support page first of all and look for a contact us or report function." and did not mention searching the website for suggestions they could implement.

B. R2 - Design for Parental Knowledge and Model of Problem Solving

Our results correlate with prior work in VR gaming [25] and mobile device usage [42] which suggest that parents have concerns about children interacting with adults, viewing inappropriate content, financial scams, and behavior changes. Additionally, prior work suggests that parents may also have misconceptions about VR gaming and how those systems work, leading to parents believing that the systems were harmless. We add to these findings by also suggesting that parents may be unaware of how they can use game features to protect their children. For example, our findings show that although adults were able to find the Roblox website, they had a much harder time finding information to solve their concerns. Thus, we suggest a redesign of the Roblox website to make it easier for parents to find the information they need. Considering the difficulty participants found navigating the site

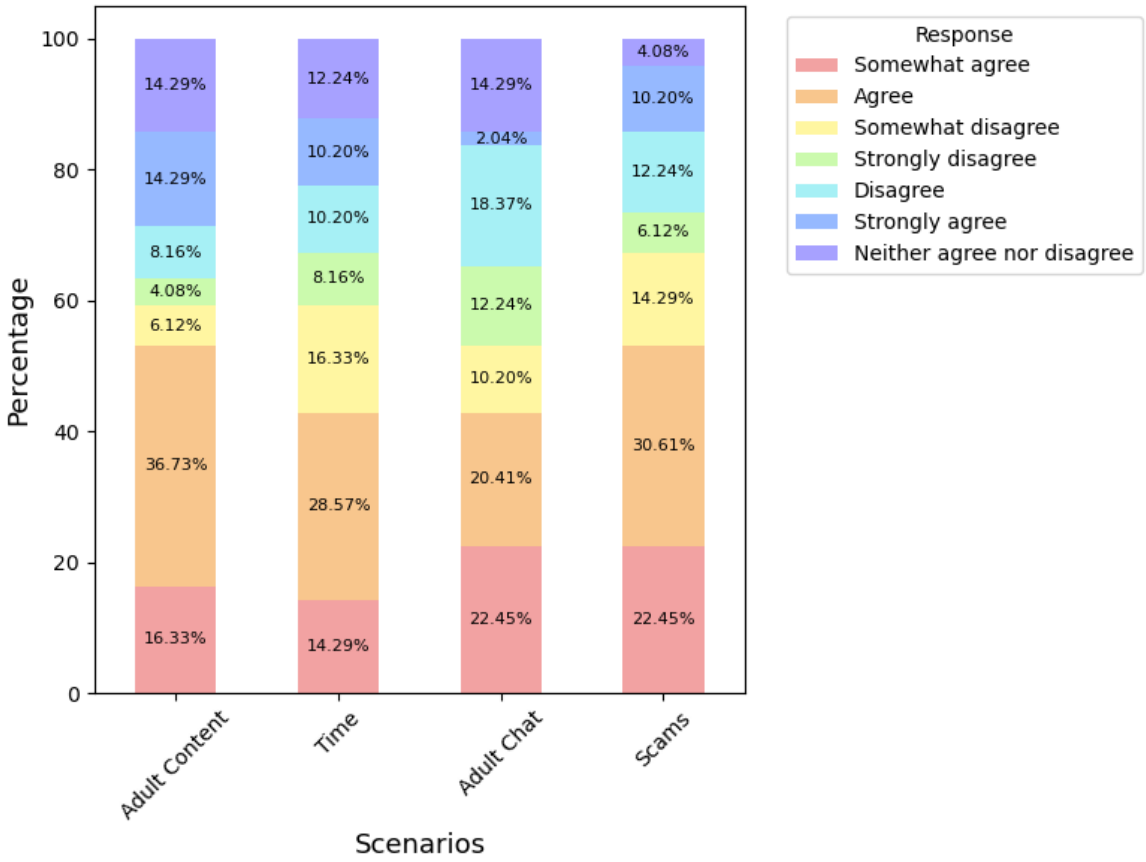

Fig. 1. Level of Agreement with Scenario Solution Availability

in our survey, it may be beneficial to reduce the number of clicks required to find the parental guidance page from the main site. This could include providing links on the main landing page to redirect parents or consolidating domains. It would also be beneficial to add videos or blogs on the parent-focused site to provide parents with guidance on how to implement parental controls as well as explain what issues the implementation could potentially solve.

C. R3 - Roblox Community Engagement

Our results suggest that adults may be naturally inclined to reach out to customer support or community forums when they want to solve security and privacy issues related to their children. This is likely due to the supportive, affirming, and anonymous nature of the experience [43]–[45]. The subreddits we reviewed are places were parents can express their concerns and receive advice and suggestions to solve their problems. In addition to the subreddits mentioned, we also recommend that Roblox, and other gaming entities provide moderated online forums specifically for parents or caregivers. Our results suggest that parents have difficulty navigating the website and would prefer to have access to a customer support representative. Providing a forum with Roblox-employed moderators may give parents the support they want and allow them to easily share solutions with others.

Providing this community would also help Roblox developers identify new security features to implement. The results suggest that there is potentially a disconnect between what parents may want or need and what Roblox provides. In particular, our analysis suggests that parents are concerned about Roblox's impact on their child's behavior and social skills. While Roblox has no bearing on how a child is raised, additional features could be provided to assist parents in setting safety boundaries for their children. For example, Roblox could add features to assist with time limits, scams, and money handling. Adding a time limit feature for parents would assist them in preventing overplay. Developing a feature that safely connects Robux to chore payment systems would assist parents in monitoring how much money their child is spending and enforce certain spending habits. Lastly, Roblox could provide warnings during gameplay for players under a specific age before purchases or send messages to the parent about purchases and login. This could help prevent successful scams. These features could provide the protections needed when parents forget the rules they have set [18].

D. Support for Developers

Prior work suggests that developers of apps directed at children require and want more support for the development process [46]. This includes easy-to-use development libraries

and design guidelines. We believe that support systems identified in prior work, such as web-based tools that explain the legal and privacy ramifications of using third-party SDKs [46], [47], automated design testing [48], automated privacy policy testings [49] and incentives for change would likely benefit Roblox, especially since the Roblox metaverse contains both adult and child developers. We also suggest requiring a basic computer-based training and certification process before a developer's game can be published. While computer-based training and certifications do not always provide learning guarantees, they can provide a cost-effective solution for employee training [50].

VI. Limitations

This research is solely focused on Roblox and parents' concerned as expressed on Reddit forums. Thus, the concerns we identify may not represent the concerns of all parents with children who play sandbox games. However, this work identifies a set of concerns that can be used to bridge the gap between what Roblox offers parents and what parents need.

VII. Conclusion

In this paper, we present our findings with the goal of identifying how Roblox could improve its online presence to meet the needs of player parents. The results show there is a gap between Roblox offerings and the perspectives of guardians of Roblox players. In order to understand parents' perspectives on children playing Roblox, we collected data from relevant subreddits, from which we were able to identify concerns. When then conducted a survey which demonstrated that while parents do go to the Roblox website to address their concerns, their needs are often unmet.

Parents have some difficulty finding solutions to the problems they have using the Roblox website, suggesting that the website may not be fully sufficient in resolving parental concerns. We suggest that Roblox improve its website by reducing the number of clicks required to find the parental guidance page from the main site, providing links on the main landing page to redirect parents to customer support or FAQ pages, or consolidating domains. It would also be beneficial to add videos or blogs on the parent focused site to provide parents with guidance on how to implement parental controls as well as explain what issues the implementation could potentially solve. Future research in this area should include an analysis of Roblox forums on the Roblox website to explore the concerns of players and game developers.

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