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EDUCATIONAL TECHNOLOGY ETHICS

A thesis submitted in partial satisfaction of the
requirements for the degree of

Master of Science

in

COMPUTATIONAL MEDIA

by

Achala Mishra

June 2023

The Thesis of Achala Mishra
is approved:

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Abstract

Educational Technology Ethics

by

Achala Mishra

In this age of digital and remote learning, we cannot ignore the weight of educational technology (EdTech) in the classroom and beyond. Our understanding of ethical practices and concerns in EdTech lags far behind its quick adaptation in learning environments. This research consists of a literature review and web scraping of Reddit comments before June 10, 2022 to understand the ethical concerns within the EdTech industry, the creation of a website to sustain a responsible EdTech ecosystem, and the development of an automatic privacy policy analyzer for parents and educators. Instead of concentrating on the content of EdTech products, I focus on the structure of EdTech products and systems. Through this research, I intend to provide resources for EdTech developers to design more ethical and sustainable systems and help parents and educators make better informed decisions about the types of EdTech products they allow their children and students to use.

Dedicated to:

My grandparents, parents, Dirt, and Shakti for always believing in me, especially

when I forgot to believe in myself.

Special thanks to:

Professor Sri Kurniawan and Professor Soraya Murray for their guidance throughout

this research and beyond.

Chapter 1

Introduction

The EdTech industry is booming, largely in part due to Covid-19, which, at its peak left 1.6 billion students without in-person schooling [30]. Students, educators, and parents were left to adapt to this shifting landscape. Educators frantically implemented remote learning solutions and students fortunate enough to have access to the necessary technologies found themselves attending class through computer screens for months. In the rush to implement remote learning, the concerns about EdTech ethics got left behind.

Because of this, we now find ourselves in a world where 89% of EdTech products reviewed by the Human Rights Watch "engage in data practices that put children's rights at risk, contributed to undermining them, or actively infringed on these rights" [34]. To combat this, we must provide less vague guidelines and resources for EdTech developers to create their products. Without doing so, EdTech companies might continue to prioritize profits over users and create technologies that do more harm than

good both inside and outside the classroom. It is also critical that we highlight and make accessible ethically questionable practices and privacy policies behind EdTech products. We must revert power to the hands of parents and educators, allowing them to make well-informed decisions about the types of technology they allow their children and students to use.

This research tries to accomplish this through a multi-phased approach. The first phase was to conduct a thorough literature review regarding ethical concerns within the EdTech industry, current EdTech policies, the design methods used by those creating EdTech products, and other related works that exist to inform parents and educators about EdTech ethics related issues. The literature review served as the foundation for this research. It frames various ethical concerns within the EdTech industry and helped inform the structure and content of the website.

The second phase of this research involved scraping user comments on the popular social media platform, Reddit, to analyze informal feedback about ethics within the EdTech industry from the perspective of multiple types of stakeholders. This was necessary in order to obtain greater granularity about the concerns of people who interact with educational technologies daily. Reddit was the best social media platform to accomplish this because of its anonymous nature which enables users to post their raw, unfiltered opinions without fear of being identified by coworkers, friends, and family. The combination of this ethnographic research and the knowledge obtained from the literature review was used to create a website hosting information for parents, educators, and EdTech developers. The website organizes essential resources for parents and

educators to be better informed when consenting to the use of educational technologies by their children and students. It also consolidates responsible development resources for EdTech developers. In order to make privacy policies more accessible, an automatic privacy policy analyzer was created as an additional feature of the website.

The third and final phase of this research involved conducting website usability tests and analyzing the accuracy of the privacy policy analyzer. This was critical to determine if this research was providing accurate and accessible information for parents, educators, and EdTech developers about the structure of EdTech products and systems.

Chapter 2

Literature Review

The following sections cover findings from my literature review conducted in the EdTech space regarding data privacy, regulation, EdTech design, and related works.

2.1 Data Privacy

Data privacy continues to remain a critical concern among various tech industries including EdTech. Researchers argue that "de-identified data should always be the default" for EdTech companies [19]. Even if this was the case, in the age of big data, it is much easier to re-identify previously de-identified data and anonymity is not necessarily guaranteed [23]. Because of big data, technologies are able to also become more personalized and many companies, including those in the EdTech industry, find themselves stuck in a loop of collecting more and more data on students to create personalized learning platforms, but then being unable to securely de-identify the data permanently. Users find themselves in the same loop from a much more sinister angle

where they "are exchanging certain amount of privacy by access to the service" [22].

2.2   Regulation

One of the key topics of concern found was the regulation behind EdTech in the form of national laws, state policy, or internal regulation by the EdTech companies themselves. Because accountability and enforceability is of these technologies is difficult to determine , editors of the *Learning, Media, and Technology Journal* call for more research about "who gets to decide what's ethical" within the EdTech domain [35]. In the scope of this research, I focused on US federal regulations regarding EdTech. However, it should be noted that states can and do also implement their own regulations. In fact, a minimum of 40 states across the US have their own privacy laws in place to add an additional level of protection for students [9].

2.2.1   The Family Educational Rights and Privacy Act (FERPA)

The Student Privacy Policy Office (SPPO) within the US Department of Education (ED) established The Family Educational Rights and Privacy Act (FERPA) to give parents of children under the age of 18 rights to access and request amendments to their child's education records [6][28]. Through FERPA, parents also have authority over the distribution of their children's personally identifiable information (PII) available in their educational records [6]. Once students turn 18, the FERPA rights transfer to them [6]. FERPA doesn't usually apply to private schools because they do not receive funding from ED [28]. This leaves private school students more vulnerable to having

their PII distributed without consent.

For schools funded by ED, SPPO sends out a notice to superintendents regarding FERPA every year. The 2022 letter included a recommendation to maintain transparency between schools and parents about PPI shared with EdTech providers [29]. This transparency is critical because parents must be able to make a fully-informed decision about the technology being used when deciding whether to consent to its use in the classroom. Regardless, parent consent only applies to the disclosure of PII which means that, solely under FERPA, EdTech providers are free to use any and all data that doesn't fall under the PII umbrella including students' metadata [7].

2.2.2 The Protection of Pupil Rights Amendment (PPRA)

SPPO also created The Protection of Pupil Rights Amendment (PPRA) to protect student information in surveys regarding sensitive topics including familial political leanings, mental health, sexual health, illegal behavior, privileged relationships, religious affiliation, and income [26]. Before taking surveys involving questions pertaining to these topics, parental consent must be obtained if the student is under 18 years old [27]. Although schools that don't receive funding from ED are not required to get parental consent before these surveys, they are required to inform and give parents the opportunity to opt out of these surveys [27]. In this way, PPRA provides an additional level of protection to students at private schools unlike FERPA.

Additionally, under PPRA parents of students at ED funded schools are given the opportunity to inspect surveys, information collection instruments, and educational

materials before they are used on their children [27]. Parents must also be given a notice and an opportunity to opt their children out of physical screening activities and the use of their children's data for marketing purposes [27]. However, information gathered to develop EdTech products is actually exempt from PPRA regulations [27]. Essentially, within the scope of PPRA, EdTech companies can collect de-identified student information through existing products to inform the creation of products for sale in the future. Even if they are not selling this data to others, the company could still harvest data from students to later market and develop other products and make a profit.

2.2.3 The Children's Online Privacy Protection Act (COPPA)

The Children's Online Privacy Protection Act (COPPA) is enforced by the Federal Trade Commission (FTC) [12]. Under COPPA, all online services including websites must get parental consent before collection personal information from children younger than 13 [12]. Unlike FERPA or PPRA, COPPA translates to uses outside of the classroom as well.

In theory COPPA should work to thoroughly protect children under the age of 13 and their data. In practice, however, it falls short because it is difficult to obtain certified parental consent and enforce the policies under COPPA [33]. There are also workarounds used by companies like Meta which have banned children under 13 from their platforms, but have failed to provide measures to realistically enforce this ban [8]. By doing so, Meta has proven that it is possible for companies to just barely evade the legal requirements under COPPA. Instead, they can shirk their ethical responsibility by

placing accountability and blame on children sneaking onto their platform. Therefore, though COPPA is a protective policy in theory, it isn't as powerful as it could be because of its lack of enforceability.

2.3 EdTech Design

When designing educational technologies, it seems that a common problem is creating technologies that educational systems must adjust to instead of designing technologies that fit the needs of the educational system [3]. If creating educational technologies this way, EdTech companies and their designers indicate that their priorities align more with creating novel technologies rather than involving educators meaningfully as stakeholders in the design process. Ultimately, when operating under this model, the actual needs of the educators, students, and parents who might use these technologies is not given the high priority it deserves. These companies, designers, and researchers need to understand the complex nature and context of the environment they are designing for, otherwise the technology will be more of a burden than an aide [3]. The best way for designers to understand the complexities of the educational ecosystem is by working with expert stakeholders like educators.

EdTech companies should also not view themselves as school saviors by trying to solve problems they assume exist [3]. By assuming what problems exist and what users might want, EdTech companies are more likely to create unsuccessful products with major design flaws [24]. Instead, companies should work directly with expert

stakeholders and users to identify the problems and co-design effective, user-friendly solutions [3][16][24]. When educators, users, and other experts have a say in the design-process, the final product or service will automatically be better suited to protect privacy and maintain a high level of ethics. Through this process, ideas that could harm users or lack value will be filtered out [3].

However, one key setback to consider is the technical literacy of the stakehold-ers. Educators must have the knowledge to make well-informed decisions about the technology being created. If they do not, then they could potentially fall prey to the promise of the technology without taking into account the harms it could cause. This is why, a diverse set of stakeholders including those with technical knowledge should be involved in the co-design process rooted in design based research [5][16]. Another way to combat this is to provide basic technical training for non-technical stakeholders so that they can form their own opinions about the design decisions being made.

2.4   Related Works

This section discusses two of many EdTech resource platforms explored through-out the course of this research. It analyzes these platforms based on information avail-able for parents, educators, and EdTech developers regarding ethical educational tech-nologies.

2.4.1 Common Sense Education

Common Sense Education is a resource website created by the nonprofit, Common Sense. It strives to arm educators with information and lesson plans about privacy, digital citizenship, and media literacy. The site's free Digital Citizenship Curriculum is suitable for K-12 students and has been used by more than 70% of US schools [25]. It also provides trainings for educators and hosts resources that can be shared with families to learn more about technology use at home and beyond.

One of the most interesting and unique aspects of the website is a review of almost 3,000 educational apps and websites. Each app or website has a thorough review based on a learning rating, an overall community rating, and, when deemed necessary, an expert privacy rating.

Specifically, the privacy rating is assigned a percentage and is deemed as "Pass", "Warning", or "Fail" by the expert evaluators. There is a brief privacy rating report provided and a more detailed version for those who are interested. The detailed version includes the following categories which are each assigned a score out of 100%: Data Collection, Data Sharing, Data Security, Data Rights, Data Sold, Data Safety, Ads & Tracking, Parental Consent, School Purpose, Individual Control.

There is no doubt that Common Sense Education holds a wealth of knowledge for educators to pass on to their students and their students' families, however, it does not provide information for EdTech developers on how to create more ethical technologies. It also fails to inform parents about the rights they have regarding their
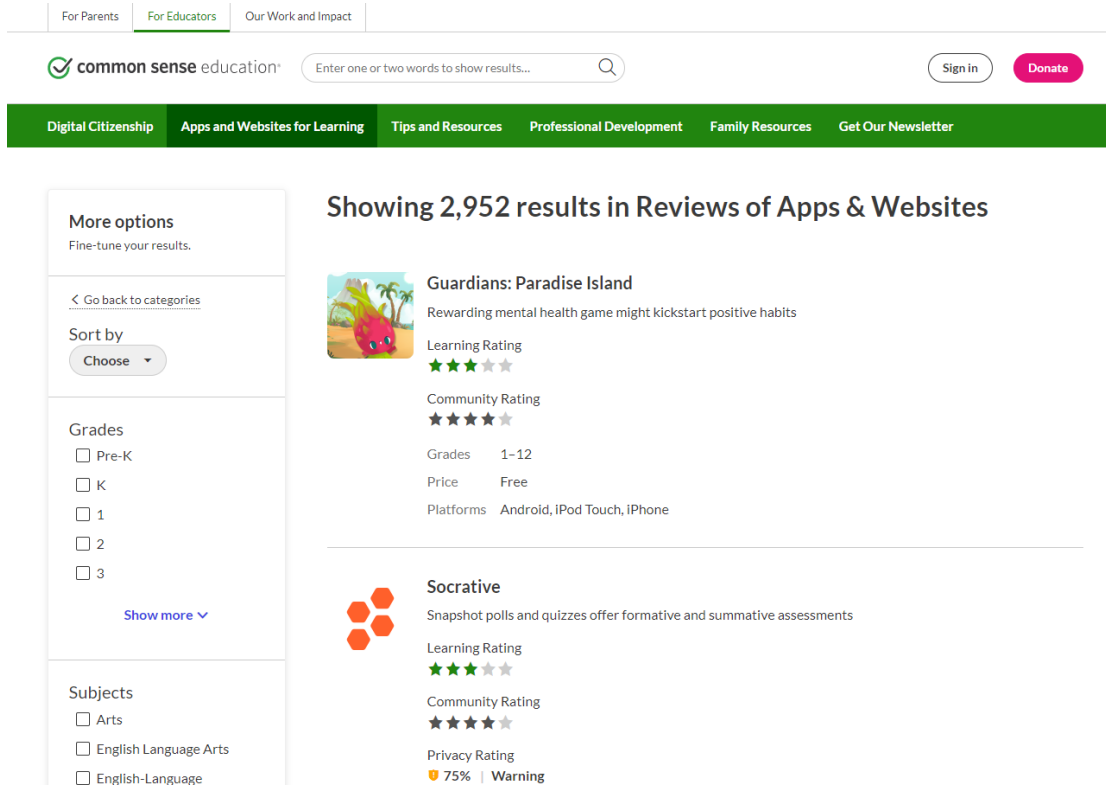
Figure 2.1: Common Sense Education's review of apps and websites.

children's data in the classroom and beyond. It does not provide them concise resources about the steps they can take to further protect their children's data and who they can contact and how for more information. Essentially, Common Sense Education is an excellent resource for educators, but does not provide the same depth of resources for parents and developers. Because of this, it ultimately places responsibility on educators most of all rather than working to create a meaningful collaboration between educators, parents, and EdTech developers.
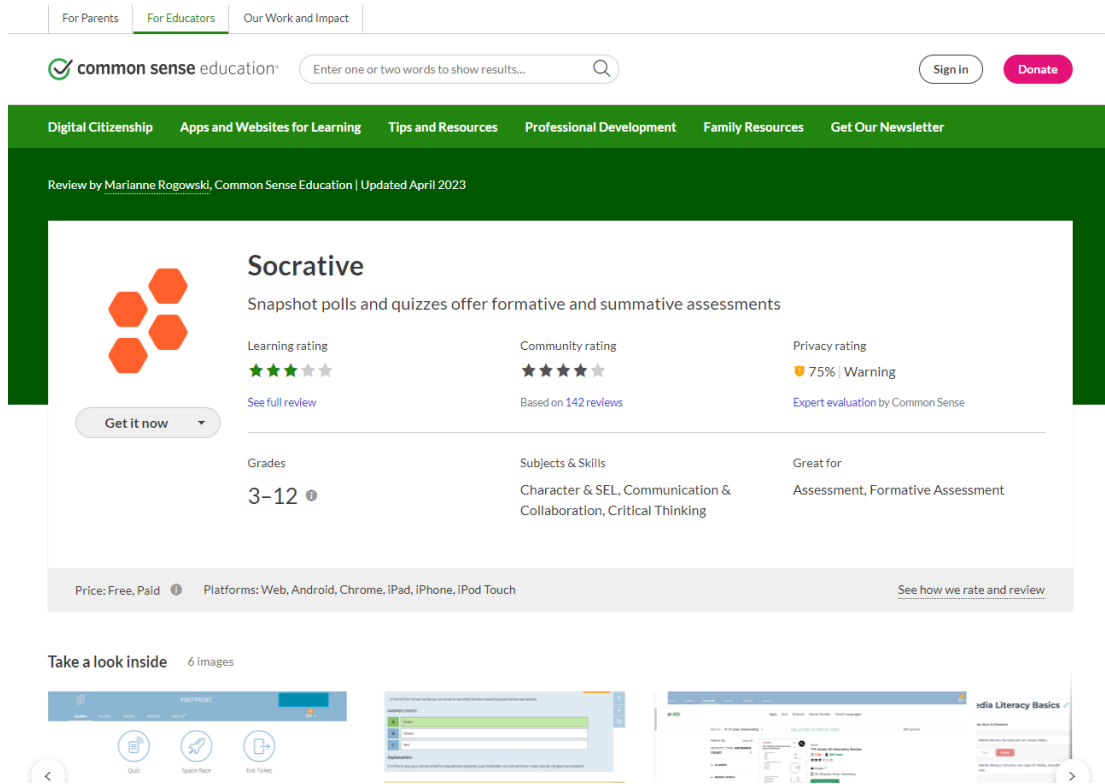
Figure 2.2: Evaluation of Socrative on Common Sense Education.

2.4.2 EdPrivacy

EdPrivacy is a platform developed by the company Education Framework to check if online technologies used in classrooms comply with state and federal privacy regulations. It also scores application privacy quality out of 5 stars which is determined by the following main criteria: Privacy Policy Posted, Educational Use Only, Parental Review/Deletion, Personal Data Encrypted, Data Retained for Educational Purposes, and Data Securely Protected [10].

Unlike Common Sense Education, the complete version of EdPrivacy is not free and as of 2023, school districts must pay $2.99 per student per year or $3000 minimum

for tiered pricing [11]. The free version only allows district administrators to access the platform in a limited capacity and there is no option for parents to register.
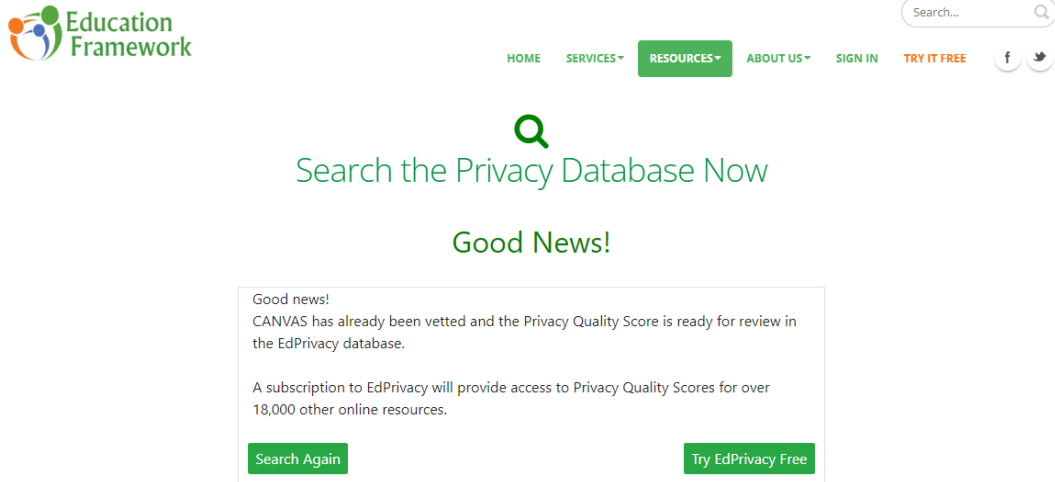
Figure 2.3: Paywall block to view EdPrivacy's privacy quality score for Canvas.

Although the paid version might be a viable solution for school districts that are able to spend money on the product, it provides a formidable barrier to entry for schools who might not have the funding. This in turn could increase the digital divide amongst students based on district funding and wealth. Schools who use the platform will be better informed about privacy compliance of the educational technologies being used, and schools who don't use the platform could potentially leave their students more vulnerable to unethical privacy practices.

EdPrivacy is certainly a useful tool for districts with the financial capabilities to afford it. However, it not only leaves districts with insufficient funding behind, it also fails to provide the same detailed information for parents to synthesize and EdTech developers to learn from. Because of its for-profit and proprietary nature, it

fails to create an impactful collaborative effort between educators, parents, and EdTech developers.

Chapter 3

Methods

This section details the various methods of conducting this research such as Reddit webscraping and analysis, designing the final website, and creating the automatic privacy policy analyzer.

3.1 Reddit Webscraping

I created a Python script using the PSAW module to scrape Reddit comments and identify which ones related to ethics in EdTech. My script (found in Apendix A) is based on Dr. Melanie Walsh's open source code and PSAW documentation [31][20]. When running the script the following search terms were used: privacy + ethics, ethics + edtech, ethical + edtech, unethical + edtech, legal + edtech, illegal + edtech, design + edtech. The script was originally run on May 22, 2022 and identified over 100,000 words worth of Reddit comments pertaining to the search terms. A second version of the script (found in Appendix B) with modifications limited to collecting comments

after May 22, 2022 was run on June 9, 2022 and identified around 3,500 more words of Reddit comments related to the same search terms. Only the body text of the comments were displayed by the script so as to allow for further anonymity of the Reddit users. In total, over 500 Reddit comments were analyzed and categorized from thematic analysis.

3.2   Website Design

After conducting the literature review, examining existing platforms, and analyzing the scraped Reddit comments from key stakeholders in the EdTech space, I knew that I wanted to create a collaborative ethical EdTech ecosystem. I feel that in the current climate, it is essential to foster a sense of community and teamwork between parents, educators, and EdTech developers. This way these stakeholders can work together to protect students' best interests while developing novel technologies. Ideally, this type of environment will help them hold each other accountable in a responsible and civil manner instead of pitting the individual groups against one another to shift the blame.

I developed the website using Wix and decided to name it "EdThical". I spent some time brainstorming the structure of the website on paper, and ultimately settled for the following main sections: Home page, Parents & Educators page, Developers page, Contact page, and Blog.

The Home page is minimalist. It includes a brief overview of what EdThical is, as well as an option to subscribe to EdThical's newsletter about creating and using

educational technologies.
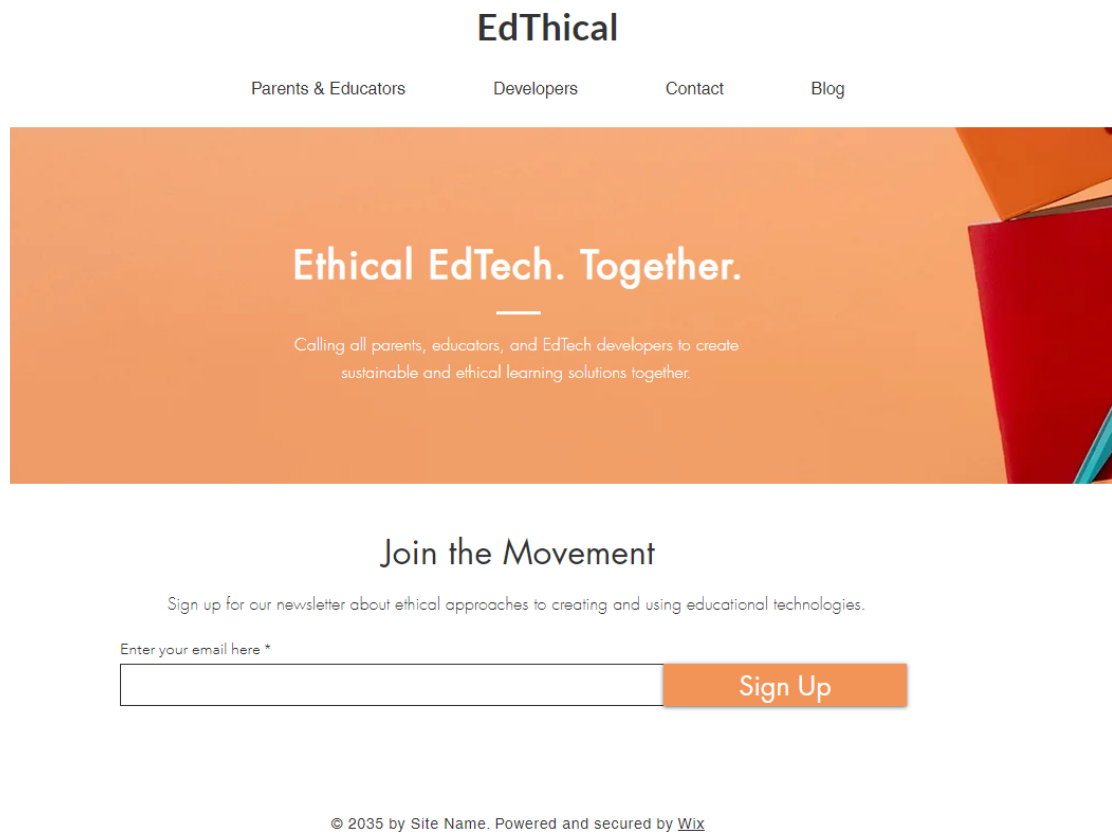
Figure 3.1: EdThical's Home page.

The Parents & Educators page provides short summaries of the three main types of resources available for parents and educators on EdThical and gives users the option to further explore these resources. These include the following subpages: Know Your Rights, Privacy Policy Analyzer, and Email Templates.

From the Parents & Educators page, users can go to the Know Your Rights subpage. This subpage has information relevant to parents and educators regarding FERPA, PPRA, and COPPA. There is also a button at the top of the page to download

Figure 3.2: EdThical's Parents & Educators page.

the PDF version of the information. This page was made with assistance from the AI

tool, Phind. By crafting appropriate prompts, I was able to use Phind to generate the

relevant information about FERPA, PPRA, and COPPA for parents and educators.

This output was then used to create the final Know Your Rights subpage.

The Privacy Policy Analyzer landing subpage can also be accessed from the

Parents & Educators page. Here, users can understand the latest logic and capabilities

EdThical

Parents & Educators   Developers   Contact   Blog

Know Your Rights

Learn more about the laws and regulations in place to protect students in America.

Download PDF ↓

The Family Educational Rights and Privacy Act (FERPA)

FERPA, or the Family Educational Rights and Privacy Act, is a federal law that protects the privacy of student education records. Here are some key points for parents and educators to keep in mind:

- FERPA applies to all schools that receive federal funding, including public schools and most private schools.
- Under FERPA, parents have the right to access and review their child's education records, and schools must provide this access within 45 days of the request.
- Parents also have the right to request that schools correct any inaccurate or misleading information in their child's education records.
- Schools must obtain written consent from parents before disclosing any personally identifiable information from a student's education records, except in certain limited circumstances such as health and safety emergencies or when the information is being shared with school officials who have a legitimate educational interest.
- Schools may disclose "directory information" about a student, such as name, address, and phone number, without consent, but must provide parents with notice of this policy and allow them to opt out if they wish.
- FERPA also applies to postsecondary education records, but once a student turns 18 or attends a postsecondary institution, the

Figure 3.3: EdThical's Know Your Rights subpage for parents and educators.

behind the Privacy Policy Analyzer. They can also access the most up-to-date code for the analyzer through Google Colab by pressed the "Open in Google Colab" button at the bottom of the page. When open in Google Colab, users can easily see the source code, make a copy of the project, and modify it to fit their own needs and experiment further with the setup. I intend to keep the analyzer's code open-access at all times because I feel that it is the best way to maintain transparency and foster collaboration between key stakeholders.

The Email Templates subpage can be navigated to from the Parents & Educators page as well. The purpose of this subpage is to provide parents with ready-made templates to contact their district administrator's and children's teachers with. It can be daunting to send emails to authority figures about topics that you may not be an expert on. Through these templates, I hope to instill confidence and agency in parents when emailing school administrators and teachers. These templates could be particularly helpful for parents and families who don't consider English their first language. The email template subjects include: Revoking Consent for FERPA, Request for Child's Educational Records, Request for Correction of Student Records, Inquiry about Educational Technology Platforms, Violation of PPRA, and Religious Violation of PPRA. Although these templates were originally created using ChatGPT, I also did heavy fact checking and editing to make the templates less verbose.

The Developers page provides information about the main resources available for EdTech developers on EdThical and serves as a launching point for users to further explore those topics. The topics included are: Know the Law, Collorative Design, and Legal Templates.

Users can visit the Know the Law subpage from the Developers page. The Know the Law subpage is similar to the Know Your Rights subpage, except that it examines FERPA, PPRA, and COPPA from a developers lens. Developers learn the key aspects of each regulation and understand how to comply with them. Just like the Know Your Rights subpage, the Know the Law subpage has a button at the top where users can download the PDF version of the page's content. It was also created through

the assistance of Phind.

Users can also visit the Collaborative Design subpage from the Developers page. The Collaborative Design subpage serves as a resource hub for developers regarding co-design methodology. It includes a short but informative embedded YouTube video created by Relab Studios explaining what co-design is. The subppage also includes co-design training resources including free and paid courses as well as open source seminars and tips for co-designing. I thought it would be helpful to also include co-designing tools that could be useful for developers during their sessions. These tools include Setting Group Intentions for Brave Spaces, Empathy Techniques for Educational Equity, Envisioning Cards, and Miro. Additionally, the last section of the subpage includes a co-design recruitment email template for developers that they can modify to fit their needs when reaching out to potential collaborators. Just like the templates from the Email Templates subppage, this template was also originally generated using ChatGPT and then edited by me.

From the Developers page, users can access the Legal Resources subpage as well. There are two main sections included in this subppage. The first section covers tools that can automatically generate privacy policies for developers. This information is directly embedded as a page from a Themeisle post. Similarly, two US News law firm search results are also embedded. The first includes the ranked Best Law Firms for Technology Law and the second includes all law firms specializing in Education Law. These resources are provided so not only can developers generate policies if they are meticulous about fact-checking, but they can also directly contact law firms specializing

in their needs.

The Contact page is simple and easy to use. Users can enter their first and last name, email, subject, and a short message which will help them reach out to us if needed. Their email is collected so we can reply to their message.

The Blog page is a future component of the website currently beyond the scope of the thesis. Ultimately, the intention of the Blog page is to consolidate the problems and potential solutions identified by experts in the education, technology, and legal fields regarding ethics within the EdTech industry. Recruitment of these experts is currently underway and a common sentiment shared between them is excitement about being able to voice their genuine views on a platform uninterested in filtering them to fit its own needs. This shows that there is a need for such a platform where experts can share their true opinions and understand the perspectives of other key stakeholders.

Overall, the website serves as a resource hub for parents, educators, and developers alike. By creating a space where these key stakeholders can work together and view issues from each others' perspectives, EdThical can flourish by bringing collaborative development and accountability into the EdTech space.

3.3   Privacy Policy Analyzer

Originally, the Privacy Policy Analyzer was supposed to be rooted in OpenAI's API. However, after some experimentation with the code and analysis of the ethical considerations of using a closed-loop system for a user-facing product, I decided against

this route. If I used OpenAI's API, the logic and reasoning behind the decisions it made about analyzing the privacy policy would not be evident. There would be too many aspects of the analysis occurring behind the scene for any user to fully grasp.

Because of this, I decided to have the Privacy Policy Analyzer code be fully open-source, transparent, and available to the public. Instead of using large language-learning models, I decided to utilize fundamental concepts from Natural Language Processing (NLP) in Python instead.

First, the Privacy Policy analyzer asks user's for the url of the privacy policy they want analyzed. Once it has the URL, it can scrape that webpage using the *Beautiful Soup* package [1]. After all of the text on the webpage has been scraped, the text is preprocessed and is made to exclude some common *stopwords* identified by the *Natural Language Toolkit (NLTK)* library [2]. After this, text summarization is conducted by obtaining the weighted frequencies of each of the remaining words based on the process described bt Usman Malik [18]. However, because the purpose of this code was to analyze privacy policies rather than summarize Wikipedia articles like Malik's example, I purposely skewed the weights of certain words which seemed important to users. While most words' weights were the frequency of their occurrence divided by the frequency of the most frequent word's occurrence, these special words added extra weight to that calculation. The words "collect", "give", and "provide" added an extra 1.5 point because they generally indicate the data the company gets access to from users. The words "party" and "share" added an extra point because they indicate what sort of data the company shared with other third-party companies. Punctuation and *stopwords* carry a

weight of 0 points.

The score of each sentence in the privacy policy is calculated by summing up each word's weight. The sentence with the greatest weight is deemed to be the most important. Based on this, each sentence of the privacy policy is outputted to the user in the order of importance deemed by the algorithm. This way, users can sift through the most relevant pieces of information first instead of getting bogged down by sifting through the entire privacy policy.

The code for the Privacy Policy Analyzer can be found in Appendix C. A sample privacy policy and the outputted version by the Privacy Policy Analyzer is included in Appendix D.

Figure 3.4: EdThical's Privacy Policy Analyzer landing page.

EdThical

Parents & Educators   Developers   Contact   Blog

Email Templates

Use these templates to advocate for your student's rights when using educational technologies.

Disclaimers:
*Please be mindful of additional state and local regulations and modify templates accordingly.
*This webpage was developed with assistance from ChatGPT.

Subject: Revoking Consent for FERPA

Dear [School Name] Administration,

I am writing to revoke my consent for the Family Educational Rights and Privacy Act (FERPA) regarding my child, [Child's Name], who attends [School Name]. I would like to request that [School Name] no longer share my child's educational records with third parties without my explicit consent.

Please confirm in writing that this revocation of consent has been processed and that my child's educational records will no longer be shared without my permission. Also, please provide me with any information I need to know regarding how this will impact my child's educational experience.

Thank you for your prompt attention to this matter.

Sincerely,
[Your Name]

Figure 3.5: EdThical's Email Templates subpage.

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Figure 3.6: EdThical's Developers page.

EdThical

Parents & Educators   Developers   Contact   Blog

Know the Law

Learn how to stay compliant with the laws in place to protect students in America.

Download PDF ↓

The Family Educational Rights and Privacy Act (FERPA)

FERPA, or the Family Educational Rights and Privacy Act, is a federal law that protects the privacy of student education records. EdTech developers need to be aware of FERPA requirements to ensure that they are not violating students' privacy rights. Here are some key points from FERPA for EdTech developers:

- FERPA applies to all educational institutions that receive federal funding, including K-12 schools and colleges and universities.
- FERPA protects the privacy of students' education records, which include any records that are directly related to a student and maintained by an educational institution or a party acting on behalf of the institution.
- EdTech developers must obtain written consent from parents or eligible students (those who are 18 or older) before collecting, using, or disclosing any personally identifiable information from education records.
- Personally identifiable information includes, but is not limited to, student names, addresses, Social Security numbers, and grades.
- EdTech developers must ensure that any third-party service providers they use to process education records also comply with FERPA requirements.
- EdTech developers must implement reasonable security measures to protect education records from unauthorized access or disclosure.
- EdTech developers must provide parents and eligible students with access to their education records and the opportunity to request that any inaccurate or misleading information in the records be corrected.

To comply with FERPA requirements, EdTech developers can take the following steps:
- Obtain written consent from parents or eligible students before collecting, using, or disclosing any personally identifiable information from education records. This can be done through a consent form or a terms of service agreement.
- Implement reasonable security measures to protect education records from unauthorized access or disclosure. This can include

Figure 3.7: EdThical's Know the Law subpage for developers.

Figure 3.8: EdThical's Collaborative Design subpage.

Figure 3.9: EdThical's Legal Resources subpage.

Figure 3.10: EdThical's Contact page.

Chapter 4

Results

4.1 Reddit Thematic Analysis

Through thematic analysis of the Reddit comments, six major themes identified within the EdTech ethics discussion were: (1) data privacy, (2) regulation, (3) lack of resources, (4) marketing and sales, (5) public distrust, and (6) interdisciplinary collaboration. These themes were identified a total of 225 times with data privacy identified 52 times, regulation identified 34 times, lack of resources identified 22 times, marketing and sales identified 22 times, public distrust identified 38 times, and interdisciplinary collaboration identified 57 times.

4.1.1 Data Privacy

Analysis of the Reddit comments pertaining to data privacy corroborated the findings from the literature review. The poster of comment #79, "the founder and CEO

of a small successful EdTech company" warns people about the company, Clever which offers a free service to schools. The poster says that "districts are handing over keys to their EdTech student/teacher entryway -they are authorizing a Clever controlled paywall, where clever keeps 100% of the door, that limits the flow of EdTech to the district."

While comment #79 warns of free EdTech not truly being free, comment #62 claims that for-profit "large EdTech companies have constructed a business model that allows to extract profits twice: First, they profit from the sale of educational software to schools and educational institutions, and from then on, they continue to profit by data mining the information they collect from their userbase." This claim is further bolstered by the fact that information gathered to develop EdTech products does not need to comply with PPRA [27].

However, not all companies are taking this approach. One CEO of a non-profit in the EdTech industry, Amelia (pseudonym) is convinced that "this whole contortion people make around student data privacy interfering with edtech is like just total bull-shit" [17]. For her and others in the field, it might be a challenge to secure student data, but it is a challenge they are more than willing to take on. Reddit poster of comment #74 provides advice to an EdTech industry job-seeker: "EdTech companies should be the perfect blend between teaching/learning and safe, scalable technology policies and procedures. If they can't get the basics of privacy and information security then I'd not sign on." There is no doubt that individuals like these are holding up the proper ethical form within the EdTech industry, but it is also important for educators, parents,

and students to be aware of their rights to privacy and how these companies might be infringing upon those rights.

One teacher who posted comment #156 on Reddit says, "No way am I putting a camera on the students. Mainly for privacy concerns". Students are also hesitant to give up their privacy. In fact, the majority of students in a study conducted in Japan "answered that they were most reluctant to upload their personal photos in any online language learning activity" [32]. In my own experience as a TA for during the 2021 - 2022 academic year at University of California, Santa Cruz (UCSC), students in my Zoom discussion sections rarely, if ever turn on their cameras. And although no one has yet to explicitly say "no" to recording in any of my own classes, there have been instances in Zoom meetings outside of UCSC where people have expressed that they do not wish to be recorded.

4.1.2   Regulation

The literature review indicates that there are some US federal regulations in place to protect students and their data and privacy. From the Reddit comments, it is clear that posters in the industry are aware of these regulations and try their best to meet them. The poster of Reddit comment #316 stated that "in the states if a teacher utilizes software that violates FERPA, the entire school can be held accountable, even shut down. This is because the school assumes liability when utilizing third-party software." From this comment it is evident that even if EdTech companies are attempting to shirk FERPA, schools are meant to filter out such companies and not use their products

otherwise they will face severe repercussions. However, this brings into question the risk of teachers and administrators lacking the necessary technical literacy to make these decisions.

The poster of Reddit comment #305 spoke about the flip side of such harsh repercussions. They spoke about being the "solo IT for 1100 students, 58 staff" and how IT staff "often make decisions unconsciously, that cut 100 lbs of benefit to learning, because of 2lb of risk." This poster then went on to provide specific examples such as "internet filtering, security profiles so tight on chromebooks we can't adjust keyboard or track speed, or plug in an external mouse." Because of this poster's high levels of technical literacy, they were able to understand more about the risk these technologies pose and implement stricter security measures even if that was only possible by sacrificing some of the broadcasted benefits of the technology. At the same time, this poster's situation is not ideal since they are the only IT staff implementing these security measures solo. If there was someone else there to shoulder the responsibility of protecting student data, perhaps less harsh measures could be taken.

In a more balanced approach, the poster of Reddit comment #400 mentioned that their district has "two programmers, we work with other districts that have implemented tech and tech policies effectively, and are regularly training school staff of digital citizenship (students as well) and our legal obligations as well as respecting student privacy." This multilevel approach covers the needs of multiple stakeholders including administrators, educators, and students while also providing them with the proper technical literacy training to make well-informed decisions. However, this poster

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acknowledged that "the reality is this kind of stuff isn't a priority in many districts." If this is truly the case, then we cannot only hold school staff responsible for determining what is and isn't ethical in the EdTech domain because they might not have the appropraite training to do so.

We must also hold our lawmakers responsible for being informed and creating legislation that supports our rights to privacy and demands only the creation of ethical educational technologies. Reddit poster of comment #447 pointed out that "the EU has a set of standards for protecting the privacy of minors (which I think is changing at the moment), as does the US, and I'm not sure what the UK laws are. Some states/districts/nations also require data storage to happen in-country." Although these laws and regulations are necessary, it is even more necessary to make them understandable and accessible to both the general public and the individuals creating educational technologies.

Amelia (mentioned in the previous section) explained that "a lot of the laws kind of don't make sense...we agree with where they're trying to get to. Their ultimate goal is dead right. So, basically, we do back bends to follow it and to lead on it" [17]. Reddit poster of comment #229 echoed this same sentiment by stating that "myself and the chief I report to are very keen on making sure we're not doing evil shit, because we don't want to do evil shit. Not because of some potential PR nightmare surfaced by allowing external auditors or would-be whistleblower researchers in." Both these EdTech professionals are adamant about setting high ethical standards at their companies despite the perceived vagueness of the laws. They strive to not only stay

within the bounds of these laws, but also to self-regulate and make sure they are not doing anything unethical.

A poster from India mentioned in Reddit comment #55 that "edtech companies are allowed to self-regulate [while] the offline coaching have [Indian] govt regulations." Within this umbrella of self-regulation, the poster points out that BYJU'S, an Indian EdTech company, "allows calling minor children from adults for selling their courses". It is evident that this self-regulatory practice of EdTech companies only works if the leaders and individual professionals of a company are committed to upholding ethics in the field themselves. Without government oversight, it is up to the companies if they wish to take advantage of or protect their users. This falls in line with the core weakness of many EdTech ethics regulatory approaches: lacking enforceability [14]. Until we combine user tech literacy, accessible EdTech laws, and company driven professional ethics, it will be difficult to regulate and enforce EdTech ethics in the industry. We need a balance between the public, private, and personal domains of governance in order to build these ethical educational technologies.

4.1.3   Lack of Resources

Job seekers trying to break into the EdTech industry quickly realize that they must market themselves as a jack-of-all-trades. The Redditor who posted comment #45 provides advice for job seekers and states that "HR and managers will want a 'one man band' and not have a large enough team for success. They'll want you to be an ID and Multimedia Developer and tech support and videographer and graphic designer and

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web developer." This means that job-seekers and industry professionals find themselves spread thin trying to juggle the multiple roles their companies expect from them.

The poster of Reddit comment #34 points out that this is partly because "edtech is just severely underfunded [in Silicon Valley] compared to other tech companies. There's not much money in education to generate revenue from compared to other sectors." This lack of resources might directly feed into the reasoning for why EdTech companies are looking for employees who can cover multiple roles. Because of this, resources are spread thin and there are more generalists with a breadth of knowledge rather than experts with depth of relevant topics such as data privacy, accessibility, and cultural sensitivity. Essentially the technology platforms end up being "based on the data of the average learner and do not recognize cultural differences, special needs, or different learning paths, even though it would be technically possible" because there are not enough resources to accomplish this [15]. Although the desire for these types of learning distinctions and learning paths may be rooted in good intentions, we cannot forget that such distinctions and categorization of student learning paths have been used for nefarious purposes in the past.

In the 1950's, classrooms "were often divided by race, ethnicity, gender, and class" even if it wasn't explicitly stated to be the case [23]. With all of the big data involved in EdTech, we need to aware of the harmful effects of student groupings and not forget our past mistakes. In fact, it is in our best interest to not pursue this path of grouping students in categories based on data collected from an EdTech platform. Categorization stifles creativity and movement. It's the same reason some students

claim they are not "math people" and some students claim they hate "artsy stuff". As soon as we group students and label them as good or bad at something, as soon as we say you're on the advanced math track or the creative writing track, we tell them that's they path they are meant to be on. In fact, depending on how students are labeled by their teachers (likely to be successfully or likely to be unsuccessful), lower-achieving students are more likely to follow that path [13]. If a teacher's perception has the potential to derail a student's future in terms of career and socio-economic status, we need to be extremely cautious of how closed-box systems label students. Especially when the root cause of the label is difficult to identify within artificial intelligence systems. Students are not just some data points on a screen. We need to harness their creativity and potential rather than place them in a box which sets them on a path for the rest of their lives.

4.1.4 Marketing and Sales

Unethical Marketing and Sales practices of EdTech companies were mentioned multiple times throughout various different Reddit posts, although they were not explicitly mentioned by an of the articles I read for the literature. However, this is a critical issue we must discuss in the industry since it preys on parents and their desire to give their children the best education they can.

Reddit poster of comment #269 brought up some interesting points. They stated that "there is a company called BYJUs in India. It's an EdTech company which provides video of academic material from school students. Highly unethical. Plays with

parents' emotions to sell the courses at expensive rates. Managers abuse the salesperson to meet the targets anyhow and use any trick, wether good or bad to sell the product. Reason i am sharing is they're always on a hiring spree. Employees resign due to the toxic environment and the chain goes on and on." Within this comment we can see the chain reaction of unethical practices clearly displayed in front of us. Based on this comment and others, BYJUs abuses its sales staff who then viciously pursue parents and children for their business. Observationally, from my own family and friends in India, the competition to succeed academically is cutthroat. Because of this, it could be easy to swindle parents who would do anything to give their children a leg up in the competition.

Reddit comment #234 mentions another company, WhiteHat Jr and how "people started to put on videos and posts to show how aggressive their sales and marketing techniques are and how they try to put parents in a position where they think 'If I don't get this course for my child, I am making a huge mistake and ruining his/her future' and also how they call you and mail you again and again even after declining the offer." Another Redditor who posted comment #146, complains that EdTech companies "hire salespeople business development executives to find ways to push the product down your throat. And sometimes, in borderline legal but unethical ways." Furthermore, even if some companies don't pursue clients in such an aggressive way, Reddit user of comment #251 claims that they are still busy "exploiting parents and children by making the children get enamored by the technology but offer complete crap at the end."

Based on these comments and others, it seems that the EdTech industry not only has issues maintaining technical ethical standards, but that it also struggles with maintaining sales and marketing ethical standards. By aggressively pursuing potential clients and marketing products using what Reddit comment #416 describes as "dishonest and unevidenced claims", some predatory EdTech companies are easily able to take advantage of parents through emotional manipulation. Although this can be attributed to a larger, systemic issue not just found within the EdTech industry, parents, educators, and students need to be aware that not all EdTech companies have their best interest in mind. They need to have easily accessible information about the EdTech companies and their products so they can make a well-informed decision about the types of technologies they want to let into the classroom and beyond.

4.1.5 Public Distrust

Because of the ethical concerns identified throughout this research, there is a growing public distrust regarding EdTech. Though it was not identified through the literature review, I felt it was important to include the voices of Reddit users who feel wary about educational technologies regardless of if they are the minority.

Although more teachers are shifting careers, some even to the EdTech industry, one transitioning teacher who wrote Reddit comment #136 "didn't want to deal with EdTech because I feel like it is part of the problem where funds are diverted from classrooms and into shiny new pet projects for politicians and administrators." Again, this is part of a larger systemic issue. In part, teachers might feel that already insuffi-

cient school funding should utilized for more pressing and immediate needs rather than improving educational technologies within the classroom.

Another Reddit user who wrote comment #489 is convinced that the EdTech industry wants "to use public schools as an aggregator of big data that they can re-package and then sell, and design textbooks and curriculum to address those deficiencies." This distrust could be mitigated if laws and regulations were not only in place but also were easily accessible to the general public. If the public was aware that EdTech companies could be held accountable for selling data in such a way, then people like this Reddit user might regain some trust in the use of educational technologies within the classroom.

The poster of Reddit comment #401, an EdTech professional, has noticed that "schools in the EU have been incredibly skeptical of adopting cloud-based student systems like G-Suite, especially now with GDPR giving a renewed sense of importance to personal data privacy. We haven't heard nearly the same thing in North America. The most schools and parents are worried about is whether or not their school-issued laptop is accidentally monitoring them at home." Not only does this indicate that policy changes can sway public opinion in regards to the EdTech industry, but it also shows that when policymakers concentrate on the outreach and accessibility of policies, we see positive changes. We see the general public gain more technical literacy and further understand their rights to privacy. This in turn pushes them to actually fight for and want to preserve those rights. Perhaps if America also implemented something like the GDPR, Americans would also be more likely to care about their general right to privacy,

not just in the EdTech space.

4.1.6   Interdisciplinary Collaboration

The single strongest finding throughout the literature review and Reddit comments is that "EdTech companies want all stakeholders to work together" to overcome ethical challenges in EdTech including AI [15]. By working together and identifying stakeholder needs and wants and values, EdTech companies can actually create learning platforms that serve their users' best interests and put ethics at the forefront of the discussion. One academic mentioned in Reddit comment #405 that "There is a lot of discussion around ethics among scholars. It is something that worries me and should worry all of us. It is something we should always bring up as this EdTech advances to ensure it is too of mind. Should we let it prevent advancement? No, but we need to have checks and balances in place. Google Classroom has become quite popular. The system is interesting but just the thought of Google having the data scares me a bit." By having checks and balances and bringing various stakeholders into the decision-making process, the industry will essentially be able to hold each other accountable. Through a co-design approach, EdTech professionals, educators, parents, and students can ultimately design a safe and reliable product together. Similarly, policy makers cannot blindly make policies without first consulting EdTech professionals, educators, parents, and students to determine reasonable policies. Together, these stakeholders can work to preserve privacy and ethics in EdTech. If even one or two of the stakeholders try to go against preserving ethics and privacy, the other stakeholders can hold them accountable

and make sure to have their voices heard in the decision-making process.

Even in the testing process, poster of Reddit comment #291 states that by having a "a webinar or other live tutorial, you can potentially walk users through the app and have time for them to directly send instructions to students, with you there to debug." This way various stakeholders are able to provide feedback in an iterative manner throughout the design process. I advocate for co-designing between EdTech professionals and their users because "educational technologists should not be busy using technology to do things to and for learners. We should be busy asking learners to tell us what to do" [21]. To support this train of thought, one Reddit user mentioned in comment #340, "we had the resources to compensate a cohort of [high school educators] in Massachusetts as co-developers, especially in the early stages of the project...Now, with the platform launching in January, we are looking for a more diverse range of perspectives, comments and critiques from across the world. The platform will only be as strong as the community using it!." Although the downside of co-designing is the time lost by discussing opinions and design decisions with people from a wide range for backgrounds, it is time well spent. Through this process, EdTech professional will better understand the needs of their users and what they value the most. More importantly, they will see things from a different perspective. Diversity is critical as it expands the lenses, we can look at a subject through. In such an essential topic as ethics in EdTech, it is crucial that we view it from as many perspectives as possible. That way, edge cases can't slip through the cracks as easily as they would otherwise.

4.2 Website Usability

I used the Usability Analysis & Design checklist from Xerox to evaluate the usability of the EdThical website [4]. There were 13 main sections of the checklist: (1) Visibility of System Status, (2) Match Between System and the Real World, (3) User Control and Freedom, (4) Consistency Standards, (5) Help Users Recognize, Diagnose, and Recover From Errors, (6) Error Prevention, (7) Recognition Rather Than Recall, (8) Flexibility and Minimalist Design, (9) Aesthetic and Minimalist Design, (10) Help and Documentation, (11) Skills, (12) Pleasurable and Respectful Interaction with the User, (13) Privacy.

Although there were multiple items that were not applicable within the 13 main sections, all applicable items' standards were met in (2) Match Between System and the Real World, (3) User Control and Freedom, (5) Help Users Recognize, Diagnose, and Recover From Errors, (6) Error Prevention, (8) Flexibility and Minimalist Design, (9) Aesthetic and Minimalist Design, (10) Help and Documentation, (11) Skills, (12) Pleasurable and Respectful Interaction with the User, and (13) Privacy.

There were 28 items in the (1) Visibility of System Status section. Of these 28 items, 10 were not applicable. The only standard that was not met was "Does every display begin with a title or header that describes screen contents?" because neither the Contact page not the Blog page have a header banner unlike the rest of the pages and subpages.

Of the 51 items in the (4) Consistency Standards section, 22 were not applica-

ble. The only applicable standard which wasn't met was "Have pairings of high-chroma, spectrally extreme colors been avoided?" because some pages of the website include burnt-orange and dark blue contrasting sections.

In section (7) Recognition Rather Than Recall, there were 29 items. 16 of these items were not applicable and only 1 applicable item didn't meet standards. This item was "Are zones no more that twelve to fourteen characters wide and six to seven lines high", because the Know Your Rights and Know the Law subppages all contain detailed textual information regarding the rights students have and the laws developers need to be aware of.

Overall, the EdThical website met usability standards across all sections. Because of its minimalist aesthetic, stakeholders such as parents, educators, and developers should hopefully find the site easy to navigate. In the scope of this thesis, I was not able to acquire IRB approval to conduct human subjects research. If this had been possible, it would be much more valuable to evaluate actual users' experiences with the website.

4.3 Privacy Policy Analyzer Accuracy

The version of the Privacy Policy Analyzer available to the public right now is the most accurate version of the system to date. However, it should be noted that the measurements of accuracy and even the goals of the Privacy Policy Analyzer changed throughout the duration of this research.

Originally, I intended for the Privacy Policy Analyzer to use OpenAI's API to

generate ChatGPT-like feedback on specific questions about a product's privacy policy. Although this version of the system could have impressed users more, determining the accuracy and constantly ensuring it for each user would be difficult especially because it was not possible to understand exactly how and why the conclusions were reached by the system. Additionally, no generated response would be exactly the same because of the human-like and conversational elements of a ChatGPT-like product. Therefore, accuracy and reproducibility would be impossible when using this system.

Afterwards, when I attempted to use simple web-scraping techniques and used similar filtering methods as I did during the Reddit webscraping, key aspects of the privacy policy analyzed were being missed. At that point I was trying to shave down the sheer volume of information available in the privacy policy. By using a relevant filtering word like "collect", I was able to reduce the word count of the privacy policy from 4,857 words to 1,992 words. However, even though the word count was reduced, when I read through the modified privacy policy, I kept noticing significant missing chunks of information users might be interested in. Therefore, although there was less information for users to parse through, this version of the Privacy Policy Analyzer was certainly not accurate.

It was at this point that I decided to fully embrace NLP techniques to assign weights to each sentence of the privacy policy. By doing this and outputting the most heavily weighted sentences first without sacrificing the rest of the content in the privacy policy, I feel that I have finally created a Privacy Policy Analyzer that is accurate, transparent, and reliable. The entirety of the privacy policy is readily available for

users, albeit not in the order it was originally in. This leaves users free to read the whole policy or focus on the most relevant sections at the top of the policy without having to sift through the whole document searching for it themselves.

I am also confident that significant improvements can be made to the Privacy Policy Analyzer without sacrificing ethics and transparency. By having the system open-source, I am certain that users with the technical knowledge will be well-equipped to provide suggestions for improvements and perhaps build more powerful systems themselves. The goal of this research is not to create a profitable tool, but a tool that can be used and modified widely to fit the needs of the ethical EdTech ecosystem.

Chapter 5

Conclusion

This research was undertaken to raise awareness of the ethical pitfalls within the EdTech industry and to provide viable tools and resources for parents, educators, and developers to collaborate in creating a sustainable ethical EdTech ecosystem. Through the course of this research, I conducted a literature review and scraped Reddit comments to understand the ethical issues facing the EdTech field. From this knowledge and analysis, I created the website EdThical to serve as a resource hub for parents, educators, and developers to work together in promoting ethical practices within the EdTech field. I also created a Privacy Policy Analyzer that enables non-experts to identify and understand the key elements of a privacy policy in order to be more informed consumers and protect the rights of students under their care.

Overall, this research shows promise in shaping the future of the EdTech landscape by promoting collaboration between essential stakeholders. On a broader level, the Privacy Policy Analyzer is applicable to multiple legal research areas not just limited

to the EdTech industry.

In the future I will invest more time on this research by conducting user testing and embedding the Privacy Policy Analyzer as a web-app on the EdThical site. I will also collaborate with lawyers to implement general improvements in the logic of the Privacy Policy Analyzer. Currently I am also investigating how to use this research as a foundation to launch a nonprfit committed to creating and maintaining an ethical EdTech ecosystem.

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Appendix A

Reddit Scraping Code

A.1 Version 1.0

```
# https://melaniewalsh.github.io/Intro-Cultural-Analytics/04-Data-
Collection/14-RedditData.html for line 2-4
from psaw import PushshiftAPI

api = PushshiftAPI()
gen = api.search_comments(q='((privacy)&(edtech))|((ethics)&(edtech))|
((ethical)&(edtech))|((unethical)&(edtech))|((legal)&(edtech))|((illeg
al)&(edtech))|((design)&(edtech)))')



# https://psaw.readthedocs.io/en/latest/ for lines 7 through 20
max_response_cache = 1000
cache = []

for c in gen:
    cache.append(c)

    # Omit this test to actually return all results. Wouldn't recommend
    it though: could take a while, but you do you.
    if len(cache) >= max_response_cache:
        break

# If you really want to: pick up where we left off to get the rest of
```

```
the results.
if False:
    for c in gen:
        cache.append(c)


# my own code
num = 0
for item in cache:
    print("*********", num, item.body)
    print("_____")
    num += 1
```

A.2   Version 2.0

```
# https://psaw.readthedocs.io/en/latest/
import datetime as dt

start_epoch=int(dt.datetime(2022, 5, 22).timestamp())

# https://melaniewalsh.github.io/Intro-Cultural-Analytics/04-Data-
Collection/14-RedditData.html for line 2-4
from psaw import PushshiftAPI

api = PushshiftAPI()
gen = api.search_comments(q='((privacy)&(edtech))|((ethics)&(edtech))|
((ethical)&(edtech))|((unethical)&(edtech))|((legal)&(edtech))|((illeg
al)&(edtech))|((design)&(edtech))))')



# https://psaw.readthedocs.io/en/latest/ for lines 7 through 20
max_response_cache = 1000
cache = []

for c in gen:
    cache.append(c)

    # Omit this test to actually return all results. Wouldn't recommend
    it though: could take a while, but you do you.
    if len(cache) >= max_response_cache:
        break
```

```
# If you really want to: pick up where we left off to get the rest of
the results.
if False:
    for c in gen:
        cache.append(c)

# my own code
num = 492
for item in cache:
    print("********", num, item.body)
    print("_____")
    num += 1
```

Appendix B

Select Reddit Comments

B.1 Data Privacy

59: I've spent my whole career in edtech and it never ceases to amaze me how many entrepreneurs are willing to cut corners on privacy and security to get a product to market.

66: Edtech is an absurdly wild industry and student privacy is often an afterthought. I think we were very fortunate to have Ian with us.

274: Nah fintech and edtech use AWS S3, Google Cloud Storage or Azure Share File / Blob storage. Never heard of anybody using Dropbox for production applications. It's for consumers, and lately consumers are choosing local storage due to privacy concerns and plummeting HDD prices ($40 for 8TB of magnetic

137: Teachers and students should be aware of the privacy implications of using free EdTech programs, she said, adding there should also be mutual understanding established about practices of screenshotting, recording and link-sharing

79: I am the founder and CEO of a small successful edTech company.

You know the saying, "IF you are not paying for a service, they YOU are the produc"? That is the case here. Districts are handing over keys to their edTech student/teacher entryway — they are authorizing a Clever controlled paywall, where Clever keeps 100% of the door, that limits the flow of edTech to the district. Access to the District is the product that Clever is selling. The district, its department heads and teachers are no longer the ones making edTech decisions — though they make think they are — they now are limited to only the edTech that Clever allows through the door (which is the edTech that has paid "key money" to Clever)

I realize that for most K12 system admins, this is not really your concern. You just want things to work, and Clever works. But those at the higher district level should never be taking Clever up on their "free" offer – any more than the people of Troy should be opening up the gates to allow a giant hollow horse to enter, no matter how ornate and pretty.

But if you are a decision maker — you really need to fully understand what it means accept this "free" service from Clever.

62: Large EdTech companies have constructed a business model that allows to extract profits *twice*: First, they profit from the sale of educational software to schools and educational institutions, and from then on, they continue to profit by data mining the information they collect from their userbase, which happens to include

74: EdTech companies should be the perfect blend between teaching/ learning and safe, scalable technology policies and procedures. If they can't get the basics of privacy and information security then I'd not sign on.

253: It can be tough to find publicly available data sets because researchers tend to be a bit guarded about it. Additionally, sometimes the data comes with ethics committee approval that it only be used internally (even if identifying information is scrubbed). I know when I was working in EdTech we were never able to publish our data because of that.

156: No way am I putting a camera on the students. Mainly for privacy concerns, but also because I do not want some kid hamming it up and derailing the video, or worse, putting something out there offensive that I don't catch

491: First, a disclaimer. I work in EdTech and routinely see parents not informed and in essence bamboozled about giving away their and their student's privacy, typically by

hyping the magic of technology. As such, I have some experience in this area and also some opinions. :-)

With this software the computer is a monitoring device. Imagine what parents' reactions would be if the school required their child to take home a tape recorder and were told that if the child did not use the tempting tape recorder in exactly the proper way that the tape recorder would start recording what went on in the student's home.

502: "The HRW findings show that 89 per cent of the educational technology, or "EdTech", products used globally could put children's privacy at risk.

Despite international privacy obligations, **the products requested access to students' contacts and locations and monitored their keystrokes**. The data was sent to nearly 200 ad-technology companies.

The application had access to students' cameras and microphones, and HRW identified code allowing it to collect phone numbers."

How has this sort of perverse spying and tracking of children (of all of us really) become so normalised and forced on society? And why aren't millions of people pissed off about it and fighting for their privacy? Your every movement, thought, and like is being harvested and sold to hundreds of advertising corporations to sell you shit to keep the

consumers consuming and the economic model churning that puts profit before people and planet.

B.2   Regulation

55: Similarly, edtech companies are allowed to self regulate whole the offline coaching have govt regulations. Byjus allows calling minor children from adults for selling their courses.

63: As for ethics and accountability, yes the Indian tech policy landscape are lagging behind the world (especially EU). But frankly, it's not that much better in the US. It's only NOW that policies are being put in place to protect customers and citizens. The biggest culprits of predatory behaviour, that I can think of, are edtech companies.

229: Granted I don't work for Google, I do work for a smaller EdTech company that frequently partners with public and private research/philanthropic firms specifically on the topic of ethical concerns within our AI/ML offerings, among other topics. Myself and the chief I report to are very keen on making sure we're not doing evil shit, because we don't want to do evil shit. Not because of some potential PR nightmare surfaced by allowing external auditors or would-be whistleblower researchers in. But this isn't relevant – assume we're a private corporation with good intentions for the benefit of my next point.

The liability that comes with a 20% gross revenue fine tied to not dotting our T's, crossing our I's, and being completely transparent with these engagements I mention above, would halt ***all*** of these engagements. Period. We would go from, with some caveats, allowing these external partners to embed with us for a time to explore some of these problems, to exclusively checking our own work. I'm not sure if this is the desired effect of your proposed fine, or if a company like Google would have a similar response, but it would be the reality for my company and dozens of other EdTech vendors I've had conversations with on this topic of "ethics in AI/ML

270: In terms of privacy though, my general take is if a privacy policy is confusing, there's probably some weird loophole. Many edtech companies are really operating close to that line of legality... and ethically out of the water.

305: I too was solo IT for 1100 students, 58 staff.

It's already too easy for IT to be a gatekeeper. K12 edtech even easier with all the typical "save the children" fears tacked on. We often make decisions, unconsciously, that cut 100 lbs of benefits to learning, because of 2 lbs of risk. Internet filtering, security profiles so tight on chromebooks we can't adjust keyboard or trackpad speed, or plug in an external mouse (things I've seen my peers do in other districts).

316: NTA

Data privacy and protection is a major issue in education technology, especially when it involves children under the age of 18. I'm not familiar with the laws in China, but in the states if a teacher utilizes software that violates FERPA, the entire school can be held accountable, even shut down. This is because the school assumes liability when utilizing third-party software.

400: Our filter is monitored in house, we have two programmers, we work with other districts that have implemented tech and tech policies effectively, and are regularly training school staff on digital citizenship (students as well) and our legal obligations as well as respecting student privacy.

But the reality is this kind of stuff isn't a priority in many districts.

447: I would absolutely recommend it. If you don't put it out there, it's hard for people to know, and it certainly can't hurt.

Looking into things from here, the EU has a set of standards for protecting the privacy of minors (which I think is changing at the moment), as does the US, and I'm not sure what the UK laws are.

Some states/districts/nations also require data storage to happen in-country, so that's another thing. It's worth being transparent, in my opinion, to give whoever is making the decisions about edtech use what they need to make the decision.

B.3 Lack of Resources

45: HR and managers will want a 'one man band' and not have a large enough team for success. They'll want you to be an ID and Multimedia Developer and tech support and videographer and graphic designer and web developer.

34: I've spent the last 4 years teaching in Silicon Valley, around lots of startups. From what I have observed, edtech is just severely underfunded compared to other tech companies. There's not much money in education to generate revenue from compared to other sectors

B.4 Marketing and Sales

146: they hire   salespeople   business development executives to find ways to push the product down your throat.

And sometimes, in borderline legal but unethical ways

223: Pichai is seriously a bad influence, ever since he took over as google CEO google as a whole is going down in terms of service and ethics, their senior management is corrupt to the core. I have heard stories of senior managers making backroom deals with other companies to allow them to service unethical advertising. They made a deal with an edtech company to run advertising targeted at 6 year olds for repackaged courses which are freely available in Code.org. these advertising also featured google logo the Google CEO's picture promoting this scam of an edtch company. Irony is that these advertising ran on google platform and used googles name to promote such scams.

234: Then people started to put on videos and posts to show how aggressive their sales and Marketing techniques are and how they try to put parents in a position where they think "If I don't get this course for my child, I am making a huge mistake and ruining his/her future" and also how they call you and mail you again and again even after declining the offer

245: While edtech in itself is not bad at all, the ploys used by companies like Byjus to attract customers is completely unethical.

251: All these edtech companies are busy exploiting parents and children by making the children get enamored by the technology but offer complete crap in the end.

416: dishonest and unevidenced claim that I think should be kept far away from edu-

cation for obvious ethical reasons.

269: There is a company called BYJUs in India. It's an EdTech company which provides video of the academic material from school students.

Highly unethical. Plays with parents' emotions to sell the courses at expensive rates. Managers abuse the sales person to meet the targets anyhow and use any trick, wether good or bad to sell the product.

Reason i am sharing is they're always on a hiring spree. Employees resign due to the toxic environment and the chain goes on and on.

B.5   Public Distrust

136: I didn't want to deal with EdTech because I feel like it is part of the problem where funds are diverted from classrooms and into shiny new pet projects for politicians and administrators.

401: Working in edtech, schools in the EU have been incredibly skeptical of adopting cloud-based student systems like G-Suite, especially now with GDPR giving a renewed sense of importance to personal data privacy.

We haven't heard nearly the same thing in North America. The most schools and parents are worried about is whether or not their school-issued laptop is accidentally monitoring them at home.

489: It's not administrators "we" need to convince. It's the EdTech crowd who want to use public schools as an aggregator of big data that they can re-package and then sell, and design textbooks and curriculum to address those deficiencies. Or, to bring it back, morons like Chris Christie who are making policy and mouthing off to their constituents who also happen to be teachers.

B.6 Interdisciplinary Collaboration

137: Teachers and students should be aware of the privacy implications of using free EdTech programs, she said, adding there should also be mutual understanding established about practices of screenshotting, recording and link-sharing

291: If you can drum up enough interest to do a webinar or other live tutorial, you can potentially walk users through the app and have time for them to directly send instructions to students, with you there to debug. Another thing to note - a lot of educational facilities have strict-ish policies around data and privacy, so teachers are hesitant to use apps (especially for interacting with students) unless it has been explicitly signed off on by school admins.

340: Totally agree. Besides the members of our team who are or were classroom teach-

ers, we had the resources to compensate a cohort of [high school educators](https://about.labxchange.org/co

in Massachusetts as co-developers, especially in the early stages of the project. As you

point out, there are so many edtech resources out there that don't include teachers in

the design process from step 1 - so we have been really intentional about getting feed-

back every step of the way.

Now, with the platform launching in January, we are looking for a more diverse range

of perspectives, comments and critiques from across the world. The platform will only

be as strong as the community using it!

405: Agreed! There is a lot of discussion around ethics among scholars. It is something

that worries me and should worry all of us. It is something we should always bring up as

this EdTech advances to ensure it is too of mind. Should we let it prevent advancement?

No, but we need to have checks and balances in place. Google Classroom has become

quite popular. The system is interesting but just the thought of Google having the data

scares me a bit

Appendix C

Privacy Policy Analyzer Code

```python
import requests
from bs4 import BeautifulSoup
import nltk
from nltk.tokenize import sent_tokenize, word_tokenize
nltk.download('punkt')
nltk.download("stopwords")
from nltk.corpus import stopwords
import collections
stopwords = set(stopwords.words('english'))

# https://stackabuse.com/text-summarization-with-nltk-in-python/

def analyze(url):

  #url = 'https://www.wonderschool.com/corp/privacy'
  response = requests.get(url)
  soup = BeautifulSoup(response.content, 'html.parser')
  privacy_policy = soup.get_text()

  privacy_policy = privacy_policy.replace("e.g.", "eg")
  privacy_policy = privacy_policy.replace(".", ". ")
  privacy_policy = privacy_policy.replace(".", ". ")

  # https://www.nltk.org/api/nltk.tokenize.html
  words = word_tokenize(privacy_policy)
```

```python
# https://stackoverflow.com/questions/15547409/how-to-get-rid-of-
punctuation-using-nltk-tokenizer
words_no_stop = [word.lower() for word in words if word.isalpha()
and word.lower() not in stopwords]

# https://www.tutorialspoint.com/list-frequency-of-elements-in-python
frequency = collections.Counter(words_no_stop)

max_word  = max(dict(frequency), key=dict(frequency).get)
max_freq = dict(frequency)[max_word]

weighted_freq = {}
for word in dict(frequency):
    if word == "collect" or word == "give" or word == "provide":
        weighted_freq[word] = dict(frequency)[word]/dict(frequency)
        [max_word] + 1.5
    elif word == "party" or word == "share":
        weighted_freq[word] = dict(frequency)[word]/dict(frequency)
        [max_word] + 1
    else:
        weighted_freq[word] = dict(frequency)[word]/dict(frequency)
        [max_word]

tok_sentences = sent_tokenize(privacy_policy)
sent_score = {}

for sent in tok_sentences:
    sent_val = 0
    sent_words = [w.lower() for w in word_tokenize(sent)]
    for word in sent_words:
        if word in weighted_freq:
            sent_val += weighted_freq[word]
    sent_score[sent] = sent_val

sorted_score = sorted(sent_score, key=sent_score.get, reverse=True)

count = 1
for sent in sorted_score:
    print(str(count) + ". " + sent + "\n")
    count += 1
```

```
url = "https://www.wonderschool.com/corp/privacy"

analyze(url)
```

Appendix D

Privacy Policies

D.1   Original Wonderschool Privacy Policy

Privacy Policy Effective date: 10/8/2020

Wonderschool, Inc. ("Wonderschool," "we," "us," or "our") knows you care about how your personal information is used and shared, and we take your privacy seriously. This Privacy Policy describes the information we collect, how we use it, and when and with whom we share it. Except as explicitly provided herein, this Privacy Policy applies only to information that we collect and use about you when you access or use our website, mobile application, or other online or mobile service that links to or otherwise presents this Privacy Policy to you. We refer to these products and services collectively as the "Services." By using or accessing the Services in any manner, you acknowledge that you accept the practices and policies outlined in this Privacy Policy, and you hereby consent that we will collect, use, and share your information in the

following ways. If you do not agree to this Privacy Policy, please do not access or use the Services.

Remember that your use of the Services is at all times subject to the Terms of Use, which incorporates this Privacy Policy. Any terms we use in this Privacy Policy without defining them have the definitions given to them in the Terms of Use.

WILL WONDERSCHOOL EVER CHANGE THIS PRIVACY POLICY? We're constantly trying to improve our Services, so we may need to change this Privacy Policy from time to time as well, but we will alert you to material changes by placing a notice on the Services, by sending you an email, and/or by some other means. Please note that if you've opted not to receive legal notice emails from us (or you haven't provided us with your email address), those legal notices will still govern your use of the Services, and you are still responsible for reading and understanding them. If you use the Services after any changes to the Privacy Policy have been posted, that means you agree to all of the changes.

WHAT INFORMATION DOES WONDERSCHOOL COLLECT? We obtain information about you through the means discussed below when we provide the Services. Please note that we need certain types of information to provide the Services to you. If you do not provide us with such information, or if you ask us to delete that information, you may no longer be able to access or use certain Services.

INFORMATION YOU PROVIDE TO US We may collect information that you provide directly to us, such as:

When you register for the Services; When you use the Services, such as when

you enroll in childcare programs or offer a program through our Services; When you participate in surveys or fill out forms; When you subscribe to newsletters; When you register for promotions; When you transmit user content to us; When you request customer support and/or technical assistance; and When you otherwise communicate with us or with others through the Services. The information you provide directly to us may concern you or others and may include, but is not limited to:

Registration Information: We may collect registration information such as your name, email address, phone number, birthdate, address, social security number, driver's license number, immunization records, occupation and third-party account credentials (for example, your log-in credentials for Facebook or other third party sites). Information Regarding Children: We may collect the name of your child(ren), birth date, and other information regarding your child(ren), including without limitation immunization records.Health Information: We may collect information regarding the health of you or your children. You acknowledge and agree that any such information is provided by you and not a health care professional of any kind. Health information is treated the same as all other personal information. Communications: We may collect communications you make on or through the Services, including communications between you and other users of the Services.You are not required to provide us with such information, but certain features of the Services may not be accessible or available, absent the provision of the requested information. INFORMATION COLLECTED AUTOMATICALLY Device/Usage Information. We and our third-party service providers, which include ad networks and analytics companies, may use cookies, web beacons, and other tracking

technologies to collect information about the computers or devices (including mobile devices) you use to access the Services. As described further below, we may collect and analyze information including but not limited to (a) browser type; (b) ISP or operating system; (c) domain name; (d) access time; (e) referring or exit pages; (f) page views; (g) IP address; (h) unique device identifiers (e.g. IDFA or Android ID); and (i) the type of device that you use. We may also track when and how frequently you access or use the Services, including how you engage with or navigate our website or mobile application. We use this information (including the information collected by our third-party service providers) for analytics (including to determine which portions of the Services are used most frequently and what our users like/do not like), to assist in determining relevant advertising (both on and off the Services), to evaluate the success of our advertising campaigns, and as otherwise described in this Privacy Policy.

Cookies and Other Electronic Technologies. We and our third-party service providers may use cookies, clear GIFs, pixel tags, and other technologies that help us better understand user behavior, personalize preferences, perform research and analytics, and improve the Services. These technologies, for example, may allow us to tailor the Services to your needs, save your password in password-protected areas, track the pages you visit, help us manage content, and compile statistics about usage of our Services. We or our third-party service providers also may use certain of these technologies in emails to our customers to help us track email response rates, identify when our emails are viewed, and track whether our emails are forwarded.

We may also use local shared objects (also known as "Flash cookies") to assist

in delivering special content, such as video clips or animation. Flash cookies are stored on your device, but they are not managed through your web browser. To learn more about how to manage Flash cookies, you can visit the Adobe website and make changes at the Global Privacy Settings Panel.

You can choose to accept or decline cookies. Most web browsers automatically accept cookies, but your browser may allow you to modify your browser settings to decline cookies if you prefer. If you disable cookies, you may be prevented from taking full advantage of the Services, because the Services may not function properly. Flash cookies operate differently than browser cookies, and cookie management tools available in a web browser may not affect flash cookies. As we adopt additional technologies, we may also gather additional information through other methods.

Location Information. When you use the Services, we may collect general location information (such as general location inferred from an IP address). If you authorize us, we may also collect precise geolocation information, which we may use to, for example, provide you with childcare options near you.

INFORMATION COLLECTED FROM THIRD PARTIES We may collect information about you or others through third parties. For example, to the extent permitted by law, if you seek to offer childcare through our Services, we may ask for and collect supplemental information from third parties, such as information to verify your identity or information for other fraud or safety protection purposes.We may collect information about you or others through non-affiliated third parties. For example, you may be able to access the Services through a social networking account, such as

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Facebook. If you access the Services through your Facebook account, you may allow us to have access to certain information in your Facebook profile. This may include your name, profile picture, gender, networks, user IDs, list of friends, location, date of birth, email address, photos, videos, people you follow and/or who follow you, and/or your posts or "likes." Social networking sites, such as Facebook, have their own policies for handling your information. For a description of how these sites may use and disclose your information, including any information you make public, please consult the sites' privacy policies. We have no control over how any third-party site uses or discloses the personal information it collects about you.

We may combine information that we collect from you through the Services with information that we obtain from such third parties and information derived from other products or services we provide.

HOW DOES WONDERSCHOOL USE INFORMATION ABOUT YOU? We use your information for business and commercial purposes, such as:

To provide you with the Services, including to help you locate childcare, to help a third party company support you in locating childcare,to provide a platform through which you may offer childcare, or to support a third party in supporting you to start, operate, or grow your childcare; To respond to your questions or inquiries, including to provide customer support and troubleshooting assistance; To communicate with you, including to send you emails about products and services that may interest you; To manage and remember your preferences and personalize the Services;To analyze and improve the Services or any other products and services we provide; To administer

surveys, sweepstakes, promotions, or contests; To verify your identity;- To comply with our legal obligations or as permitted by law; To protect the safety and/or integrity of our users, employees, third parties, members of the public, and/or our Services; To prevent fraud and enforce our legal terms; and To administer and troubleshoot the Services. We may combine information that we collect from you through the Services with information that we obtain from affiliated and nonaffiliated third parties, and information derived from any other products or services we provide.We may aggregate and/or de-identify information collected through the Services. We may use de-identified or aggregated data for any purpose, including without limitation for research and marketing purposes and may also share such data with any third parties at our discretion.

HOW DOES WONDERSCHOOL SHARE INFORMATION ABOUT YOU? We may share or disclose information in the following ways:

Affiliates. We may share your information with any of our affiliates. Consent/At Your Direction. We may disclose your information to nonaffiliated third parties based on your consent to do so. Such consent includes the disclosure of your information (a) in order to facilitate inquiries or registrations for childcare programs, including sharing your profile information that is publicly available; (b) when we have your permission; or (c) as described in this Privacy Policy, the Terms of Use, or any other legal terms governing your use of the Services. Business Partners. We may disclose certain business-related information of those who offer programs through our Services. For example, to promote enrollment in these programs, we may provide to our business partners information regarding program enrollment and program locations. Service

Providers: We provide access to or share your information with select third parties who perform services on our behalf. They provide a variety of services to us, including data storage, analytics, billing, marketing, product content and features, customer service, data storage, security, fraud prevention, and legal services. Protection of Wonderschool and Others: We may share or disclose certain information if we believe in good faith that doing so is necessary or appropriate to (i) protect or defend the rights, safety, or property of Wonderschool or third parties, including to defend or enforce our Privacy Policy, our Terms of Use, or any other contractual arrangement or (ii) respond to your requests for customer service; and/or (iii) protect the rights, property or personal safety of Wonderschool, its agents and affiliates, its employees, users and/or the public. Legal Requirements: We may share or disclose certain information if we believe in good faith that doing so is necessary or appropriate to comply with any law enforcement, legal, or regulatory process, such as to respond to a warrant, subpoena, court order, or other applicable laws and regulations. Business Transfer: We may share or disclose certain information, in connection with or during negotiations of any merger, sale of company assets, financing, or acquisition of all or a portion of our business to another company. Aggregate/Anonymous Information: From time to time, we may share aggregate/anonymous information about use of the Services, such as by creating reports on usage trends. The sharing of such data is unrestricted. ONLINE ANALYTICS AND TAILORED ADVERTISING ANALYTICS We may use third-party web analytics services on the Services, such as those of Google Analytics. These service providers use the sort of technology described in the "Information we collect automatically" section

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above to help us analyze how users use the Services, including by noting the third-party website from which you arrive. The information collected by the technology will be disclosed to or collected directly by these service providers, who use the information to evaluate your use of the Services. We may also use Google Analytics for certain purposes related to advertising, as described in the following section. To prevent Google Analytics from using your information for analytics, you may install the Google Analytics Opt-Out Browser Add-on.

TAILORED ADVERTISING Third parties whose products or services are accessible or marketed via the Services may also place cookies or other tracking technologies on your computer, mobile phone, or other device to collect information about your use of the Services in order to (a) inform, optimize, and serve marketing content based on past visits to our websites and other sites and (b) report how our marketing content impressions, other uses of marketing services, and interactions with these marketing impressions and marketing services are related to visits to our websites. We also allow other third parties (e.g., ad networks and ad servers such as Google Analytics) to serve tailored marketing to you and to access their own cookies or other tracking technologies on your computer, mobile phone, or other device you use to access the Services. We neither have access to, nor does this Privacy Policy govern, the use of cookies or other tracking technologies that may be placed on your computer, mobile phone, or other device you use to access the Services by non-affiliated, third-party ad technologies, ad servers, ad networks or any other non-affiliated third parties. Those parties that use these technologies may offer you a way to opt out of targeted advertising as described

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below. You may receive tailored advertising on your computer through a web browser. Cookies may be associated with de-identified data linked to or derived from data you voluntarily have submitted to us (e.g., your email address) that we may share with a service provider in hashed, non-human-readable form.

If you are interested in more information about tailored browser advertising and how you can generally control cookies from being put on your computer to deliver tailored marketing, you may visit the Network Advertising Initiative's ("NAI") Consumer Opt-Out Link and/or the Digital Advertising Alliance's ("DAA") Consumer Opt-Out Link to opt-out of receiving tailored advertising from companies that participate in those programs. To opt out of Google Analytics for Display Advertising or customize Google Display Network ads, you can visit the Google Ads Settings page. Please note that to the extent advertising technology is integrated into the Services, you may still receive advertising content even if you opt out of tailored advertising. In that case, the advertising content will just not be tailored to your interests. Also, we do not control any of the above opt-out links and are not responsible for any choices you make using these mechanisms or the continued availability or accuracy of these mechanisms. If your browsers are configured to reject cookies when you visit this opt-out page, or you subsequently erase your cookies, use a different computer or change web browsers, your NAI or DAA opt-out may no longer be effective. Additional information is available on NAI's and DAA's websites, accessible by the above links.

When using a mobile application, you may also receive tailored in-application advertising content. Each operating system–iOS for Apple devices, Android for Android

devices, and Windows for Microsoft devices–provides its own instructions on how to prevent the delivery of tailored in-application marketing content. You may review the support materials and/or the privacy settings for the respective operating systems in order to opt-out of tailored in-application advertising. For any other devices and/or operating systems, please visit the privacy settings for the applicable device or contact the applicable platform operator.

HOW DOES WONDERSCHOOL PROTECT INFORMATION ABOUT YOU? We implement technical, administrative, and physical safeguards to protect the information provided via the Services from loss, misuse, and unauthorized access, disclosure, alteration, or destruction. However, no Internet or email transmission is ever fully secure or error free, so we cannot guarantee complete security. Your Wonderschool Account is protected by a password for your privacy and security. Among other things, you must prevent unauthorized access to your Wonderschool Account and information by selecting and protecting your password and/or other sign-on mechanism appropriately and limiting access to your computer or device and browser by signing off after you have finished accessing your account.

CHILDREN'S PRIVACY While we may collect information about children under 13 from their parents, guardians, and/or caregivers, the Services themselves are not designed for minors under the age of 18. As noted in the Terms of Use, we do not knowingly collect or solicit personal information from anyone under the age of 13. If you are under 13, please do not attempt to register for the Services or send any personal information about yourself to us. If we learn that we have collected personal information

from a child under age 13, we will delete that information as quickly as possible. If you believe that a child under 13 may have provided us personal information, please contact us at hello@wonderschool.com.

THIRD-PARTY LINKS The Services may contain links to third-party websites or services. We are not responsible for the content or practices of those websites or services. The collection, use, and disclosure of your information will be subject to the privacy policies of the third-party websites or services, and not this Privacy Policy. We urge you to read the privacy and security policies of these third parties.

WHAT CHOICES DO I HAVE? Disclosure of Information. You can always opt not to disclose information to us, but keep in mind some information may be needed to register with us or to take advantage of some of our features. Account Information. You may access your Wonderschool Account to access and, in some cases, edit or remove certain information. This may include your (1) name and password; (2) email address; (3) phone number; and (4) other user profile information. The information you can view, update, and remove may change as the Services change. Some of the information in your Wonderschool Account such as your location, phone number, address, email address and user profile information, may be visible to other user with whom you have confirmed bookings. If you have any questions about viewing or updating information we have on file about you, please contact us at hello@wonderschool.com. Marketing Communications. You can unsubscribe from marketing emails by following the directions in those emails. Cookies & Analytics: You can opt out of certain cookie-related and analytics processing by following the instructions in this Privacy Policy. California

Residents: Please click here to view details on rights for California residents. Please note, however, that certain information may be exempt from such requests in some circumstances, which may include needing to continue processing your information for our legitimate interests or to comply with a legal obligation. We may request that you provide us with information necessary to confirm your identity before responding to your request.

CALIFORNIA DO-NOT-TRACK DISCLOSURE Wonderschool is committed to providing you with meaningful choices about the information collected on our Services for third party purposes. That is why we have provided links (above) to the NAI "Consumer Opt-Out" link, the DAA opt-out link, and a Google opt-out link. However, Wonderschool does not currently recognize or respond to browser-initiated Do-Not-Track signals, as the Internet industry is currently still working on Do-Not-Track standards, implementations and solutions.

CONSENT TO TRANSFER Our computer systems are currently based in the United States, so your personal information will be processed by us in the United States, where data protection and privacy regulations may not offer the same level of protection as in other parts of the world. By using the Services, you agree to this Privacy Policy and you consent to the transfer of all such information to the United States, which may not offer a level of protection equivalent to that required in the European Union or certain other countries, and to the processing of that information as described in this Privacy Policy.

WHAT IF I HAVE QUESTIONS ABOUT THIS POLICY? If you have any

questions or concerns regarding our privacy policies, please send us a detailed message to hello@wonderschool.com, and we will try to resolve your concerns.

CALIFORNIA NOTICE AT COLLECTION AND SUPPLEMENTAL PRIVACY NOTICE This California Notice at Collection and Supplemental Privacy Notice supplements the information in our Privacy Policy above, and except as provided herein, applies solely to California residents. It applies to personal information we collect on or through the Services and through other means (such as information collected offline, in person, and over the telephone). It does not apply to personal information we collect from our employees and job applicants in their capacity as employees and job applicants. It also does not apply to personal information we collect from employees, owners, directors, officers, or contractors of businesses in the course of our provision or receipt of business-related services.

California law requires us to disclose information regarding the categories of personal information that we have collected about California consumers, the categories of sources from which the information was collected, the business or commercial purposes (as those terms are defined by applicable law) for which the information was collected, and the categories of parties with whom we share personal information.

As described further in our Privacy Policy above, in the preceding twelve months, we or our service providers may have collected the below categories of personal information for business or commercial purposes:

Identifiers: We may collect identifiers such as name, email address, phone number, government identifiers, and other account information. Commercial Information:

We may collect commercial information, such as transaction data regarding the transactions you've made with or through us. Demographic Information: We may collect demographic information through photo identification information. Financial or Payment Information: We or our service providers may collect payment or other financial information, such as to process tuition payments. Employment Information: We may collect employment and business contact information, such as job positions and titles, and business contact information. Education Information: We may collect information related to your educational history, such as college attended. Internet or Other Network or Device Activity: We may collect network or device information, such as an IP address, unique device identifiers, advertising and app identifiers, browsing history, or other usage data. Location Information: We may collect general location information (such as those inferred from an IP address), or specific geolocation where you grant us access to such information. Sensory Information: We may collect sensory information, such as audio recordings if you call our customer service.Health Information: We may collect health information, such as if users provide us with health information related to enrollment at childcare centers. Personal Information Related to Protected Classifications: Our users may provide us with information that reveals information related to protected classifications, such as gender, sexual orientation, marital status, political opinions, or ethnicity. Other Information that Identifies or Can Be Reasonably Associated With You: We may also collect other information that identifies or can be reasonably associated with you, such as when you send us communications. We collect the categories of personal information identified above from the following sources: (1)

directly from you; (2) through your use of the Services; (3) affiliates; and (4) third parties such as screening services, childcare providers, other users, social networks, and data brokers.

We collect the categories of personal information identified above for the following business and commercial purposes, which are also described further above in our Privacy Policy:

Provide the Services (e.g., account servicing and maintenance, order processing and fulfillment, customer service, advertising and marketing, analytics, and communication about the Services); Operational purposes (e.g. to enable and troubleshoot our Services); Auditing consumer interactions on our site (e.g., measuring ad impressions); Detecting, protecting against, and prosecuting security incidents and fraudulent or illegal activity;Bug detection, error reporting, and activities to maintain the quality or safety of our Services; Short-term, transient use, such as customizing content that we or our service providers display on the Services; Improving our existing Services and developing new services (e.g., by conducting research to develop new products or features); Other uses that advance our commercial or economic interests, such as third-party advertising and communicating with you about relevant offers from third-party partners; Other uses about which we notify you. We describe our information sharing practices in the Privacy Policy above. In the previous twelve months, we may have shared certain categories of personal information with third parties for business purposes. For example, you may direct us to share information with childcare providers offering childcare through the Services. The information we share may include the following categories

of personal information: (1) identifiers; (2) demographic information; (3) employment information; (4) health information; (5) information related to protected classifications; and (6) other information that identifies or can reasonably identify you.

If you are a California resident, you may have certain rights. California law may permit you to request that we:

Provide you the categories of personal information we have collected or disclosed about you in the last twelve months; the categories of sources of such information; the business or commercial purpose for collecting or selling your personal information; and the categories of third parties with whom we shared personal information. Provide access to and/or a copy of certain information we hold about you. Delete certain information we have about you. You have the right to not be discriminated against (as provided for in applicable law) for exercising certain of your rights. Certain information may be exempt from such requests under applicable law. We need certain types of information so that we can provide the Services to you. If you ask us to delete it, you may no longer be able to access or use the Services.

If you would like to exercise any of these rights, please submit a request using this form or contact us at hello@wonderschool.com. You will be required to verify your identity before we fulfill your request. If you have an online account with us, logging into your account will serve to verify your identity and request, although we may request additional information if we believe your account has been compromised. If you do not have an account with us, or if we have reason to suspect that the security of your account is compromised, we will request additional information from you to match with

our existing records to verify your identity, depending on the nature of the request and the sensitivity of the information sought.

You can also designate an authorized agent to make a request on your behalf. To do so, you must provide us with written authorization or a power of attorney, signed by you, for the agent to act on your behalf. You will still need to verify your identity directly with us.

The CCPA requires businesses that "sell" personal information, as the term "sell" is defined under the CCPA, to provide an opt-out from such sales. Some people have taken the position that when a website uses third parties' cookies or similar technology for its own analytics or advertising purposes, the website is engaged in a "sale" under the CCPA if the third parties have some ability to use, disclose or retain the data to improve their service or to take steps beyond the most narrowly drawn bounds of merely providing their service to the website/app. Some take this position even when the website pays the third party (not vice versa), and in most cases merely provides the third party with an opportunity to collect data directly, instead of providing personal information to the third party. If you take the position that any of those relationships involve a "sale" within the meaning of the CCPA, then you may consider Wonderschool to have "sold" what the CCPA calls "identifiers" (like IP addresses), "internet or other electronic network activity information" (like information regarding an individual's browsing interactions on a Wonderschool website), and "commercial information" (like the fact that a browser visited a page directed to people who are considering obtaining childcare through our Services) to those sorts of companies.

While Wonderschool does not believe these are "sales" as that term is defined under the CCPA, you can opt out of this activity by following the directions in Section 5 above.

Under California Civil Code Sections 1798.83-1798.84, California residents are entitled to contact us to prevent disclosure of personal information to third parties for such third parties' direct marketing purposes; in order to submit such a request, please contact us at hello@wonderschool.com.

D.2   Reordered Wonderschool Privacy Policy

1. HOW DOES WONDERSCHOOL USE INFORMATION ABOUT YOU?We use your information for business and commercial purposes, such as:To provide you with the Services, including to help you locate childcare, to help a third party company support you in locating childcare,to provide a platform through which you may offer childcare, or to support a third party in supporting you to start, operate, or grow your childcare;To respond to your questions or inquiries, including to provide customer support and troubleshooting assistance;To communicate with you, including to send you emails about products and services that may interest you;To manage and remember your preferences and personalize the Services;To analyze and improve the Services or any other products and services we provide;To administer surveys, sweepstakes, promotions, or contests;To verify your identity;- To comply with our legal obligations or as permitted by law;To protect the safety and/or integrity of our users, employees, third parties, members of the public, and/or our Services;To prevent fraud and enforce our

legal terms; andTo administer and troubleshoot the Services.

2. INFORMATION YOU PROVIDE TO USWe may collect information that you provide directly to us, such as:When you register for the Services;When you use the Services, such as when you enroll in childcare programs or offer a program through our Services;When you participate in surveys or fill out forms;When you subscribe to newsletters;When you register for promotions;When you transmit user content to us;When you request customer support and/or technical assistance; andWhen you otherwise communicate with us or with others through the Services.

3. We collect the categories of personal information identified above for the following business and commercial purposes, which are also described further above in our Privacy Policy:Provide the Services (eg, account servicing and maintenance, order processing and fulfillment, customer service, advertising and marketing, analytics, and communication about the Services);Operational purposes (eg to enable and troubleshoot our Services);Auditing consumer interactions on our site (eg, measuring ad impressions);Detecting, protecting against, and prosecuting security incidents and fraudulent or illegal activity;Bug detection, error reporting, and activities to maintain the quality or safety of our Services;Short-term, transient use, such as customizing content that we or our service providers display on the Services;Improving our existing Services and developing new services (eg, by conducting research to develop new products or features);Other uses that advance our commercial or economic interests, such as third-party advertising and communicating with you about relevant offers from third-party partners;Other uses about which we notify you.

4. The information you provide directly to us may concern you or others and may include, but is not limited to:Registration Information: We may collect registration information such as your name, email address, phone number, birthdate, address, social security number, driver's license number, immunization records, occupation and third-party account credentials (for example, your log-in credentials for Facebook or other third party sites).

5. The information we share may include the following categories of personal information: (1) identifiers; (2) demographic information; (3) employment information; (4) health information; (5) information related to protected classifications; and (6) other information that identifies or can reasonably identify you.

6. We may combine information that we collect from you through the Services with information that we obtain from affiliated and nonaffiliated third parties, and information derived from any other products or services we provide.

7. We may combine information that we collect from you through the Services with information that we obtain from such third parties and information derived from other products or services we provide.

8. TAILORED ADVERTISINGThird parties whose products or services are accessible or marketed via the Services may also place cookies or other tracking technologies on your computer, mobile phone, or other device to collect information about your use of the Services in order to (a) inform, optimize, and serve marketing content based on past visits to our websites and other sites and (b) report how our marketing content impressions, other uses of marketing services, and interactions with these

marketing impressions and marketing services are related to visits to our websites.

9. California law requires us to disclose information regarding the categories of personal information that we have collected about California consumers, the categories of sources from which the information was collected, the business or commercial purposes (as those terms are defined by applicable law) for which the information was collected, and the categories of parties with whom we share personal information.

10. California law may permit you to request that we:Provide you the categories of personal information we have collected or disclosed about you in the last twelve months; the categories of sources of such information; the business or commercial purpose for collecting or selling your personal information; and the categories of third parties with whom we shared personal information.

11. Health Information: We may collect health information, such as if users provide us with health information related to enrollment at childcare centers.

12. Some take this position even when the website pays the third party (not vice versa), and in most cases merely provides the third party with an opportunity to collect data directly, instead of providing personal information to the third party.

13. For example, to the extent permitted by law, if you seek to offer childcare through our Services, we may ask for and collect supplemental information from third parties, such as information to verify your identity or information for other fraud or safety protection purposes.

14. As described further in our Privacy Policy above, in the preceding twelve months, we or our service providers may have collected the below categories of personal

information for business or commercial purposes:Identifiers: We may collect identifiers such as name, email address, phone number, government identifiers, and other account information.

15. If you authorize us, we may also collect precise geolocation information, which we may use to, for example, provide you with childcare options near you.

16. WHAT INFORMATION DOES WONDERSCHOOL COLLECT?We obtain information about you through the means discussed below when we provide the Services.

17. Personal Information Related to Protected Classifications: Our users may provide us with information that reveals information related to protected classifications, such as gender, sexual orientation, marital status, political opinions, or ethnicity.

18. Location Information: We may collect general location information (such as those inferred from an IP address), or specific geolocation where you grant us access to such information.

19. If you do not provide us with such information, or if you ask us to delete that information, you may no longer be able to access or use certain Services.

20. Employment Information: We may collect employment and business contact information, such as job positions and titles, and business contact information.

21. We and our third-party service providers, which include ad networks and analytics companies, may use cookies, web beacons, and other tracking technologies to collect information about the computers or devices (including mobile devices) you use to access the Services.

22. Demographic Information: We may collect demographic information through photo identification information.

23. You are not required to provide us with such information, but certain features of the Services may not be accessible or available, absent the provision of the requested information.

24. " By using or accessing the Services in any manner, you acknowledge that you accept the practices and policies outlined in this Privacy Policy, and you hereby consent that we will collect, use, and share your information in the following ways.

25. If you take the position that any of those relationships involve a "sale" within the meaning of the CCPA, then you may consider Wonderschool to have "sold" what the CCPA calls "identifiers" (like IP addresses), "internet or other electronic network activity information" (like information regarding an individual's browsing interactions on a Wonderschool website), and "commercial information" (like the fact that a browser visited a page directed to people who are considering obtaining childcare through our Services) to those sorts of companies.

26. Protection of Wonderschool and Others: We may share or disclose certain information if we believe in good faith that doing so is necessary or appropriate to (i) protect or defend the rights, safety, or property of Wonderschool or third parties, including to defend or enforce our Privacy Policy, our Terms of Use, or any other contractual arrangement or (ii) respond to your requests for customer service; and/or (iii) protect the rights, property or personal safety of Wonderschool, its agents and affiliates, its employees, users and/or the public.

27. We collect the categories of personal information identified above from the following sources: (1) directly from you; (2) through your use of the Services; (3) affiliates; and (4) third parties such as screening services, childcare providers, other users, social networks, and data brokers.

28. HOW DOES WONDERSCHOOL SHARE INFORMATION ABOUT YOU?We may share or disclose information in the following ways:Affiliates.

29. Service Providers: We provide access to or share your information with select third parties who perform services on our behalf.

30. INFORMATION COLLECTED FROM THIRD PARTIESWe may collect information about you or others through third parties.

31. Other Information that Identifies or Can Be Reasonably Associated With You: We may also collect other information that identifies or can be reasonably associated with you, such as when you send us communications.

32. Commercial Information: We may collect commercial information, such as transaction data regarding the transactions you've made with or through us.

33. Information Regarding Children: We may collect the name of your child(ren), birth date, and other information regarding your child(ren), including without limitation immunization records.

34. We use this information (including the information collected by our third-party service providers) for analytics (including to determine which portions of the Services are used most frequently and what our users like/do not like), to assist in determining relevant advertising (both on and off the Services), to evaluate the success

of our advertising campaigns, and as otherwise described in this Privacy Policy.

35. These service providers use the sort of technology described in the "Information we collect automatically" section above to help us analyze how users use the Services, including by noting the third-party website from which you arrive.

36. As described further below, we may collect and analyze information including but not limited to (a) browser type; (b) ISP or operating system; (c) domain name; (d) access time; (e) referring or exit pages; (f) page views; (g) IP address; (h) unique device identifiers (eg IDFA or Android ID); and (i) the type of device that you use.

37. Aggregate/Anonymous Information: From time to time, we may share aggregate/anonymous information about use of the Services, such as by creating reports on usage trends.

38. Except as explicitly provided herein, this Privacy Policy applies only to information that we collect and use about you when you access or use our website, mobile application, or other online or mobile service that links to or otherwise presents this Privacy Policy to you.

39. Financial or Payment Information: We or our service providers may collect payment or other financial information, such as to process tuition payments.

40. It applies to personal information we collect on or through the Services and through other means (such as information collected offline, in person, and over the telephone).

41. Sensory Information: We may collect sensory information, such as audio

recordings if you call our customer service.

42. Health Information: We may collect information regarding the health of you or your children.

43. This Privacy Policy describes the information we collect, how we use it, and when and with whom we share it.

44. Education Information: We may collect information related to your educational history, such as college attended.

45. When you use the Services, we may collect general location information (such as general location inferred from an IP address).

46. If you believe that a child under 13 may have provided us personal information, please contact us at THIRD-PARTY LINKSThe Services may contain links to third-party websites or services.

47. By using the Services, you agree to this Privacy Policy and you consent to the transfer of all such information to the United States, which may not offer a level of protection equivalent to that required in the European Union or certain other countries, and to the processing of that information as described in this Privacy Policy.

48. Such consent includes the disclosure of your information (a) in order to facilitate inquiries or registrations for childcare programs, including sharing your profile information that is publicly available; (b) when we have your permission; or (c) as described in this Privacy Policy, the Terms of Use, or any other legal terms governing your use of the Services.

49. Internet or Other Network or Device Activity: We may collect network

or device information, such as an IP address, unique device identifiers, advertising and app identifiers, browsing history, or other usage data.

50. CHILDREN'S PRIVACYWhile we may collect information about children under 13 from their parents, guardians, and/or caregivers, the Services themselves are not designed for minors under the age of 18.

51. They provide a variety of services to us, including data storage, analytics, billing, marketing, product content and features, customer service, data storage, security, fraud prevention, and legal services.

52. For example, you may direct us to share information with childcare providers offering childcare through the Services.

53. We may request that you provide us with information necessary to confirm your identity before responding to your request.

54. We may collect information about you or others through non-affiliated third parties.

55. Please note, however, that certain information may be exempt from such requests in some circumstances, which may include needing to continue processing your information for our legitimate interests or to comply with a legal obligation.

56. Communications: We may collect communications you make on or through the Services, including communications between you and other users of the Services.

57. It also does not apply to personal information we collect from employees, owners, directors, officers, or contractors of businesses in the course of our provision or receipt of business-related services.

58. The information collected by the technology will be disclosed to or collected directly by these service providers, who use the information to evaluate your use of the Services.

59. For example, to promote enrollment in these programs, we may provide to our business partners information regarding program enrollment and program locations.

60. For a description of how these sites may use and disclose your information, including any information you make public, please consult the sites' privacy policies.

61. Please note that we need certain types of information to provide the Services to you.

62. We may use de-identified or aggregated data for any purpose, including without limitation for research and marketing purposes and may also share such data with any third parties at our discretion.

63. We need certain types of information so that we can provide the Services to you.

64. 84, California residents are entitled to contact us to prevent disclosure of personal information to third parties for such third parties' direct marketing purposes; in order to submit such a request, please contact us at FIND YOUR LOCAL WONDERSCHOOLNew York, NYBronx, NYBrooklyn, NYLos Angeles, CAIrvine, CASan Jose, CASan Francisco, CABerkeley, CAOakland, CASan Mateo, CARichmond, CADenver, COCharlotte, NCDallas, TXHouston, TXAll LocationsYOUR ROLEFamiliesProvidersGovernments & NetworksEmployersPROGRAM CREATIONIndividuals GovernmentsPRODUCTCCMSBillingFood ProgramParenthoodsCOM-

PANYAboutCareersSafetyChild Care ResourcesPodcastPartnersPress KitPrivacyTerms-GET IN TOUCHContactHelpdesk

65. You can always opt not to disclose information to us, but keep in mind some information may be needed to register with us or to take advantage of some of our features.

66. As noted in the Terms of Use, we do not knowingly collect or solicit personal information from anyone under the age of 13.

67. We neither have access to, nor does this Privacy Policy govern, the use of cookies or other tracking technologies that may be placed on your computer, mobile phone, or other device you use to access the Services by non-affiliated, third-party ad technologies, ad servers, ad networks or any other non-affiliated third parties.

68. Legal Requirements: We may share or disclose certain information if we believe in good faith that doing so is necessary or appropriate to comply with any law enforcement, legal, or regulatory process, such as to respond to a warrant, subpoena, court order, or other applicable laws and regulations.

69. Some of the information in your Wonderschool Account such as your location, phone number, address, email address and user profile information, may be visible to other user with whom you have confirmed bookings.

70. Cookies may be associated with de-identified data linked to or derived from data you voluntarily have submitted to us (eg, your email address) that we may share with a service provider in hashed, non-human-readable form.

71. Business Transfer: We may share or disclose certain information, in con-

nection with or during negotiations of any merger, sale of company assets, financing, or acquisition of all or a portion of our business to another company.

72. It does not apply to personal information we collect from our employees and job applicants in their capacity as employees and job applicants.

73. CALIFORNIA DO-NOT-TRACK DISCLOSUREWonderschool is committed to providing you with meaningful choices about the information collected on our Services for third party purposes.

74. HOW DOES WONDERSCHOOL PROTECT INFORMATION ABOUT YOU?We implement technical, administrative, and physical safeguards to protect the information provided via the Services from loss, misuse, and unauthorized access, disclosure, alteration, or destruction.

75. The CCPA requires businesses that "sell" personal information, as the term "sell" is defined under the CCPA, to provide an opt-out from such sales.

76. If you access the Services through your Facebook account, you may allow us to have access to certain information in your Facebook profile.

77. If you are interested in more information about tailored browser advertising and how you can generally control cookies from being put on your computer to deliver tailored marketing, you may visit the Network Advertising Initiative's ("NAI") Consumer Opt-Out Link and/or the Digital Advertising Alliance's ("DAA") Consumer Opt-Out Link to opt-out of receiving tailored advertising from companies that participate in those programs.

78. Provide access to and/or a copy of certain information we hold about you.

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79. If you do not have an account with us, or if we have reason to suspect that the security of your account is compromised, we will request additional information from you to match with our existing records to verify your identity, depending on the nature of the request and the sensitivity of the information sought.

80. Privacy — Wonderschool

Your RoleFamiliesChild Care FinderProvidersSoftware for profitable child care-Governments & NetworksChild care solutions for states and citiesEmployersChild care benefits for workforceProgram CreationIndividualsStarting your own child careGovernmentsIncreasing child care capacity in statesProductProgram ManagementSave time on administrative tasksBillingTuition collection without the stressFood ProgramFast, seamless reimbursementCompanyAboutCareersPodcastWonderschool BlogProgram ResourcesContact UsFIND CHILD CARELOG INSIGNUPPrivacy PolicyEffective date: 10/8/2020Wonderschool, Inc. ("Wonderschool," "we," "us," or "our") knows you care about how your personal information is used and shared, and we take your privacy seriously.

81. WILL WONDERSCHOOL EVER CHANGE THIS PRIVACY POLICY?We're constantly trying to improve our Services, so we may need to change this Privacy Policy from time to time as well, but we will alert you to material changes by placing a notice on the Services, by sending you an email, and/or by some other means.

82. We may share your information with any of our affiliates.

83. CONSENT TO TRANSFEROur computer systems are currently based in the United States, so your personal information will be processed by us in the United

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States, where data protection and privacy regulations may not offer the same level of protection as in other parts of the world.

84. These technologies, for example, may allow us to tailor the Services to your needs, save your password in password-protected areas, track the pages you visit, help us manage content, and compile statistics about usage of our Services.

85. The collection, use, and disclosure of your information will be subject to the privacy policies of the third-party websites or services, and not this Privacy Policy.

86. If you have an online account with us, logging into your account will serve to verify your identity and request, although we may request additional information if we believe your account has been compromised.

87. In the previous twelve months, we may have shared certain categories of personal information with third parties for business purposes.

88. We also allow other third parties (eg, ad networks and ad servers such as Google Analytics) to serve tailored marketing to you and to access their own cookies or other tracking technologies on your computer, mobile phone, or other device you use to access the Services.

89. ONLINE ANALYTICS AND TAILORED ADVERTISINGANALYTIC-SWe may use third-party web analytics services on the Services, such as those of Google Analytics.

90. If you disable cookies, you may be prevented from taking full advantage of the Services, because the Services may not function properly.

91. We may disclose certain business-related information of those who offer

programs through our Services.

92. If we learn that we have collected personal information from a child under age 13, we will delete that information as quickly as possible.

93. We and our third-party service providers may use cookies, clear GIFs, pixel tags, and other technologies that help us better understand user behavior, personalize preferences, perform research and analytics, and improve the Services.

94. CALIFORNIA NOTICE AT COLLECTION AND SUPPLEMENTAL PRIVACY NOTICEThis California Notice at Collection and Supplemental Privacy Notice supplements the information in our Privacy Policy above, and except as provided herein, applies solely to California residents.

95. Health information is treated the same as all other personal information.

96. You may access your Wonderschool Account to access and, in some cases, edit or remove certain information.

97. We may aggregate and/or de-identify information collected through the Services.

98. The information you can view, update, and remove may change as the Services change.

99. To prevent Google Analytics from using your information for analytics, you may install the Google Analytics Opt-Out Browser Add-on.

100. INFORMATION COLLECTED AUTOMATICALLYDevice/Usage Information.

101. If you are under 13, please do not attempt to register for the Services or

send any personal information about yourself to us.

102. Some people have taken the position that when a website uses third parties' cookies or similar technology for its own analytics or advertising purposes, the website is engaged in a "sale" under the CCPA if the third parties have some ability to use, disclose or retain the data to improve their service or to take steps beyond the most narrowly drawn bounds of merely providing their service to the website/app.

103. We may disclose your information to nonaffiliated third parties based on your consent to do so.

104. To do so, you must provide us with written authorization or a power of attorney, signed by you, for the agent to act on your behalf.

105. This may include your (1) name and password; (2) email address; (3) phone number; and (4) other user profile information.

106. Please note that if you've opted not to receive legal notice emails from us (or you haven't provided us with your email address), those legal notices will still govern your use of the Services, and you are still responsible for reading and understanding them.

107. We or our third-party service providers also may use certain of these technologies in emails to our customers to help us track email response rates, identify when our emails are viewed, and track whether our emails are forwarded.

108. Among other things, you must prevent unauthorized access to your Wonderschool Account and information by selecting and protecting your password and/or other sign-on mechanism appropriately and limiting access to your computer or device

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and browser by signing off after you have finished accessing your account.

109. We may also track when and how frequently you access or use the Services, including how you engage with or navigate our website or mobile application.

110. If you ask us to delete it, you may no longer be able to access or use the Services.

111. Please note that to the extent advertising technology is integrated into the Services, you may still receive advertising content even if you opt out of tailored advertising.

112. Certain information may be exempt from such requests under applicable law.

113. As we adopt additional technologies, we may also gather additional information through other methods.

114. If you have any questions about viewing or updating information we have on file about you, please contact us at Marketing Communications.

115. We may also use Google Analytics for certain purposes related to advertising, as described in the following section.

116. Remember that your use of the Services is at all times subject to the Terms of Use, which incorporates this Privacy Policy.

117. If your browsers are configured to reject cookies when you visit this opt-out page, or you subsequently erase your cookies, use a different computer or change web browsers, your NAI or DAA opt-out may no longer be effective.

118. For example, you may be able to access the Services through a social

networking account, such as Facebook.

119. If you do not agree to this Privacy Policy, please do not access or use the Services.

120. We describe our information sharing practices in the Privacy Policy above.

121. We may also use local shared objects (also known as "Flash cookies") to assist in delivering special content, such as video clips or animation.

122. Those parties that use these technologies may offer you a way to opt out of targeted advertising as described below.

123. Flash cookies operate differently than browser cookies, and cookie management tools available in a web browser may not affect flash cookies.

124. If you use the Services after any changes to the Privacy Policy have been posted, that means you agree to all of the changes.

125. We have no control over how any third-party site uses or discloses the personal information it collects about you.

126. You acknowledge and agree that any such information is provided by you and not a health care professional of any kind.

127. Additional information is available on NAI's and DAA's websites, accessible by the above links.

128. Delete certain information we have about you.

129. Most web browsers automatically accept cookies, but your browser may allow you to modify your browser settings to decline cookies if you prefer.

130. Social networking sites, such as Facebook, have their own policies for

handling your information.

131. You may review the support materials and/or the privacy settings for the respective operating systems in order to opt-out of tailored in-application advertising.

132. Account Information.

133. We refer to these products and services collectively as the "Services.

134. Any terms we use in this Privacy Policy without defining them have the definitions given to them in the Terms of Use.

135. This may include your name, profile picture, gender, networks, user IDs, list of friends, location, date of birth, email address, photos, videos, people you follow and/or who follow you, and/or your posts or "likes. "

136. When using a mobile application, you may also receive tailored in-application advertising content.

137. WHAT CHOICES DO I HAVE?Disclosure of Information.

138. Location Information.

139. WHAT IF I HAVE QUESTIONS ABOUT THIS POLICY?If you have any questions or concerns regarding our privacy policies, please send us a detailed message to , and we will try to resolve your concerns.

140. You may receive tailored advertising on your computer through a web browser.

141. Cookies & Analytics: You can opt out of certain cookie-related and analytics processing by following the instructions in this Privacy Policy.

142. If you would like to exercise any of these rights, please submit a request

using this form or contact us at You will be required to verify your identity before we fulfill your request.

143. If you are a California resident, you may have certain rights.

144. We are not responsible for the content or practices of those websites or services.

145. For any other devices and/or operating systems, please visit the privacy settings for the applicable device or contact the applicable platform operator.

146. We urge you to read the privacy and security policies of these third parties.

147. To opt out of Google Analytics for Display Advertising or customize Google Display Network ads, you can visit the Google Ads Settings page.

148. To learn more about how to manage Flash cookies, you can visit the Adobe website and make changes at the Global Privacy Settings Panel.

149. Your Wonderschool Account is protected by a password for your privacy and security.

150. Each operating system–iOS for Apple devices, Android for Android devices, and Windows for Microsoft devices–provides its own instructions on how to prevent the delivery of tailored in-application marketing content.

151. You will still need to verify your identity directly with us.

152. While Wonderschool does not believe these are "sales" as that term is defined under the CCPA, you can opt out of this activity by following the directions in Section 5 above.

153. Flash cookies are stored on your device, but they are not managed through your web browser.

154. California Residents: Please click here to view details on rights for California residents.

155. You have the right to not be discriminated against (as provided for in applicable law) for exercising certain of your rights.

156. That is why we have provided links (above) to the NAI "Consumer Opt-Out" link, the DAA opt-out link, and a Google opt-out link.

157. In that case, the advertising content will just not be tailored to your interests.

158. Also, we do not control any of the above opt-out links and are not responsible for any choices you make using these mechanisms or the continued availability or accuracy of these mechanisms.

159. However, Wonderschool does not currently recognize or respond to browser-initiated Do-Not-Track signals, as the Internet industry is currently still working on Do-Not-Track standards, implementations and solutions.

160. You can also designate an authorized agent to make a request on your behalf.

161. You can unsubscribe from marketing emails by following the directions in those emails.

162. However, no Internet or email transmission is ever fully secure or error free, so we cannot guarantee complete security.

163. Cookies and Other Electronic Technologies.

164. You can choose to accept or decline cookies.

165. The sharing of such data is unrestricted.

166. Under California Civil Code Sections 1798.

167. Business Partners.

168. Consent/At Your Direction.

169. 83-1798.