

Google for Education as an LMS: Do the Benefits Outweigh the Ethical Concerns?

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Educational technology companies bailed themselves as saviours during the first COVID-19 lockdown. Private Learning Management Systems (LMSs) like Google for Education or Microsoft Teams for Education saw their user base grow exponentially thanks to the open endorsement from governments worldwide. This governmental decision in education in response to unpreparedness to a full pivot to online learning enabled Edtech services to launch fast implementation to facilitate learning during this period. Google for Education rose to the challenge and has regularly updated its tools to reinforce its position. Yet a rushed and uncautious implementation of private LMSs can be seen as naive and short-sighted, given Alphabet Inc's lack of ethical considerations regarding data privacy. In this paper, the rise of Google Workspace for Education as a solution to online learning is reviewed by two primary users/teachers with a holistic view of the prospective privacy and democratic issues. Furthermore, the benefits and concerns regarding the uncautious adoption of Edtech tools provided by companies with tarnished ethical records are discussed.

Keywords: Datafication, Edtech, Ethics, Google, Learning Management System (LMS)

Introduction

In 2008 the first cloud-based LMS, Eucalyptus, was created (Sharma, 2015) and since then the implementation of private LMSs in Education has grown exponentially. The pandemic catalysed this impressive increase of users as governments around the world looked for solutions to facilitate remote learning. Italy, for instance, moved their entire school system online thanks to Google Workspace for Education, GWfE, (Bergen & De Vynck, 2020). In K-12 schools in England, the market has been divided between two major providers, Microsoft Teams for Education and GWfE, with both platforms being endorsed throughout the first lockdown in March by Boris Johnston's government (GOV.UK, 2020) as a rapid response to the pivot to online learning. The initial results of this short-term initiative were positive and the majority of students were provided with satisfactory online lessons with both providers developing further tools following the analysis of data collected and user feedback. Within the next three years, schools are set to double their spending on Edtech exemplified by Pearson Education's 14% year-on-year growth in its online division within the first three quarters of 2020 (Lam, 2020). Yet, long-standing ethical questions have arisen regarding the use of private LMS regarding their trustworthiness and potential financial agendas. Focussing on GWfE, its policies and our experience as frontline platform users, in this paper we aim to discuss both sides, the benefits of the adoption of private LMSs, and also the ethical concerns that these adoptions raise.

Literature Review

EdTech evolution

In order to comprehend the challenges faced nowadays by educators in an Edtech world, a review of the evolution of technologies in education is necessary. Teaching machines are the earliest use of a learning management system designed in the 1920's by Sidney Pressey. In her latest book on the history of machine learning, Audrey Watters (2021) points out that personalised learning was not an original idea of Silicon Valley but has been an evolving process, which sells the idea of personalised learning by teaching machines with a high level of standardisation (Young, 2021), which

in the context of GWfE the latter applies with new offers on chatbot creation to schools for example (Google, n.d.-e). Furthermore, the use of privately owned LMS in education raises similarities with American educational tracking in the 1950s based on IQ and test scores (McCardle, 2020; Burkholder, 2011; Fass, 1980) and challenges ethical concerns on data privacy; anonymity; dataveillance; dependency; discrimination; and data ownership (Regan & Jesse, 2018).

Business Ethics

Kantian theory is the root of Alphabet's business ethics, which are accumulated under its Code of Conduct based on seven principles (Alphabet, 2015, 2020). Interestingly Google struggles on occasions to adhere to its own principles exemplified below:

Table 1
Analysis of Alphabet Code of Conduct principles

Alphabet/Google code of conduct principles	Alphabet/Google code of conduct/principles contradictions
1. Serve Our Users	Google has a history of data breaches. The latest privacy breach was in 2018 when 52.5 million users' data were leaked (Heiligenstein, 2021)
2. Respect Each Other	In 2018 a walkout from 20 000 Google employees took place asking for an end to sexual harassment, discrimination, and systematic racism. Yet in 2021 Google fired its lead Ethics AI researchers for pointing out flaws in Google AI language models but also for pointing out bias and discrimination (Vincent, 2021).
3. Avoid Conflicts of Interest	Since 2017, Google has been fined on multiple occasions for breaching antitrust legislation for asserting its market dominance. The latest one was in 2021 when France fined Google 592 million USD regarding publishing infringements rights (Chan & Charlton, 2021)
4. Preserve Confidentiality	In 2019 the CNIL fined Google 50 million euros for misleading users on targeted advertising consent (CNIL, 2019). In late 2021, Google was accused of collecting NHS data without the patients' consent (Lasserson, 2021).
5. Protect Google's Assets	Alphabet has increased its assets by over 15% year on year for the past 5 years while exponentially increasing revenue and continuing to buy out small competitors. Google was fined for forcing the use of Chrome and search apps on Android (Warren, 2018 and Statista, 2021).
6. Ensure Financial Integrity and Responsibility	In 2019, the CNIL's restricted committee imposed a financial penalty of 50 Million euros against the company GOOGLE LLC, in accordance with the General Data Protection Regulation (GDPR), for lack of transparency, inadequate information and lack of valid consent regarding the ads personalization (CNIL, 2019)
7. Obey the Law	Between 2008 and 2010 Google Street View cars collected personal data without consent from nearby unencrypted homes and businesses (Newcomb, 2013)

Continuously evolving policies are resulting from these breaches, which means that analysing these changes from Google itself but also from its additional services and third party benefactors is a must for any school administrator, who wishes to adopt this platform and understand the benefits and the issues it brings but also in order to evaluate how they challenge the ethical professional standards set in education, especially the safeguarding standards.

The Benefits

Online learning solution during Covid

One of the major benefits of GWfE is the accessibility of the online learning platform. It is simple to set up and it enables “easier collaboration, centralised organisation and streamlined processes” (Google, n.d.-a). The platformisation of organisations is relatively fast and can be done in only eight steps, which is appealing to school leaders during the COVID-19 pandemic (Lossec & Millar, 2021). Furthermore, there is specialist help on hand and schools are given two options regarding the kind of set-up they need, consisting of either a basic free version, ‘Google Workspace for Education’ or the upgraded monthly paid version, ‘Google Workspace for Education Plus’. The main differences between the two, excluding the price, is some extra cloud security and increased control of the tool for the school like data analytics.

Ease of Use for Stakeholders

The beauty of GWfE and most LMSs is simplicity. Once implemented, users can access every tool at the click of a button. Teachers, like us, feel personal ownership of our accounts and an understanding of all Google Classroom possibilities is now becoming comprehensive teacher-knowledge given the ubiquitousness of the platform’s adoption. The need for school inset training on using this wide range of tools is obviously necessary. Google provides teachers with online training sessions through its Teacher Centre page (Google, n.d.-d) and also has a partnership providing lessons created by the Google for Education Community with the Times Education Supplement in England. An additional benefit is the equity and access this tool provides for students as it works theoretically on any device and furthermore, the stream layout is akin to social media platforms like Facebook. Google Calendar also provides a great organisational tool, especially for due dates on assignments and live lesson meetings. The communication between students and teachers is alleviated as comments under each post can be either private or public and are notified by email too.

Centralized Data

GWfE, especially the Plus mode, associates itself with data security and analytics, claiming to be a safe tool for school use. Datafication in educational institutions generates huge amounts of data, which results in storage issues. GWfE is an LMS that stores all its data on Cloud, meaning various schools’ data is stored in various data centres in various locations, on possibly different continents. The data stored in data centres for the LMS is run externally, thus, the need for IT technicians in school is minimised resulting in savings in school budgets. Finally, clouds enable mobility and accessibility for students/teachers working from home or at school, which were essential during the first pivot to online learning.

The Issues

Notwithstanding the many benefits, GWfE raises concerns of a serious ethical nature. The main issues here are founded on the lack of transparency regarding the use of aggregated educational data (Perrotta et al., 2020). Google has invested so much money into Edtech tools and to offer its basic GWfE services for free, one must be wary of underlying incentives. For a company with such an appalling ethical reputation (Bartz, 2020; Burdon & McKillop, 2014; Lomas, 2017), one must question the motivations of these investments. After all, “there is no such thing as a free lunch” (Heinlein, 1966/1997, pp. 8–9).

Collection and Use of Data

The promotion of private LMS platforms by the UK government (GOV.UK, 2020) as a quick solution to the pivot to online learning during lockdown led to a rushed implementation without the consideration of ethical challenges, long-term societal consequences or the consultation of stakeholders for their consent and/or without training provided to teachers, students and parents on data privacy. Google is required to conform to the Children’s Online Privacy Protection Act, COPPA, a US federal law on the collection of children’s data. Google is also “committed to GDPR compliance across Google Workspace for Education” (Google, n.d.-c), however, their privacy policies lack transparency in regards to data privacy.

The latest Google data privacy breach resulted in a €134,000,000 GDPR fine this December (Ray, 2020) and yet schools in England are being advised to use their tools for online learning and teaching. Before cloud storing school data breaches were mostly localised, now there is a potential for not only a national-level breach but also an international-level data breach.

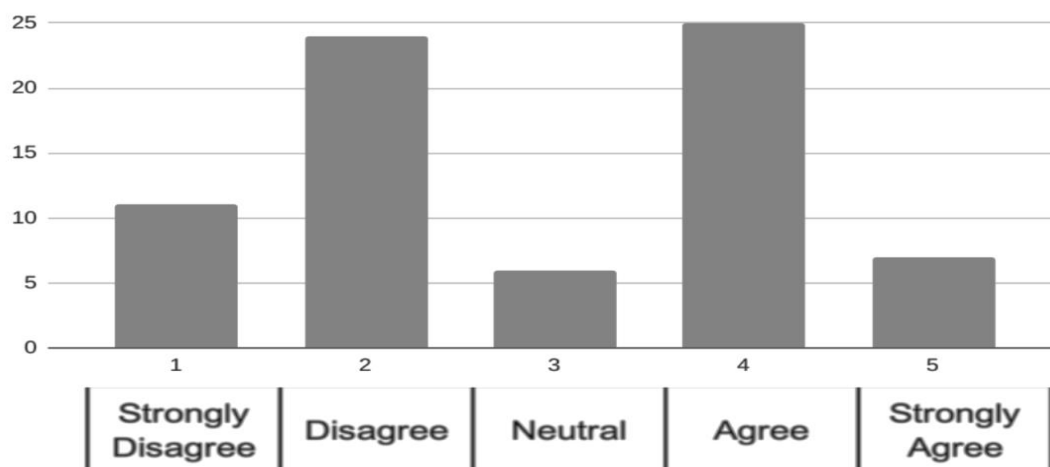
Google clearly specifies that data profiling and tracking will take place on Additional Services like Youtube in order to “to provide, maintain, protect and improve them, and to develop new ones” (Google, n.d.-b). However, with the implementation of Google Education from primary to secondary schools (and possibly at the university level too), it is reasonable to ask what will happen to the structured and unstructured data collected when a student leaves the platform permanently as this is not clearly stipulated in GWfE’s policies. Unlike schools, many of Google’s general data privacy protections in these Additional Services cease when one reaches the age of 13, which raises the question of why 13-year-olds can’t vote, drink or own weapons when they are treated as adults by Google at this age.

Past incidents exemplify the misuse of personal data for ‘surveillance capitalism’ (Zuboff, 2019) and political influence like the Cambridge Analytica scandal (Confessore, 2018). These can be interpreted as a contemporary digital version of Foucault’s panopticon (1977) that schools need to safeguard against, not open their doors to. The above examples demonstrate a clear potential power imbalance between teachers and Google exemplified by our previous research (Lossec & Millar, 2021) which demonstrated that educators prior to using the platform do not read the policies, blaming time constraints, or trusting that someone higher up would have checked them prior, or even admitting to lack of digital knowledge to understand the ramification of their online actions. Yet when asked about their personal accountability, a polarisation of their answers can be noted:

Table 2

Survey results for Question 17 on responsibility for the safeguarding of students’ data on GWfE (Lossec & Millar, 2021)

Q17. As a teacher, I believe I am ultimately and solely responsible for the safeguarding of students’ data through the use of Google Workspace for Education in your school or any other Edtech tools.



One-trick Pony

During the pandemic, teachers have been and are still bombarded with offers from Edtech tools supposedly created to revolutionise teaching and learning. Yet it is recognised that teachers are resistant to Edtech tools and will only incorporate them if benefits are experienced (Howard & Mozejko, 2015). For example, contrary to Edtech’s promotion of the simplification of tasks, a 2020 research project by Neil Selwyn over three Australian schools found that actually, the increased datafication of schools resulted in an increased workload for teachers and students through on-screen activities. Furthermore, the personalisation of learning being promoted does not take into account the social aspects that teaching and learning requires and this results in the user being limited in his/her development (Okita, 2012).

Indeed, Google classroom increasingly seems to be more about “datafication, automation, surveillance, and interoperability into digitally mediated pedagogies” (Perrota et al, 2020) than actual learning. GWfE through this business model claims to offer equity for all by providing easy access on any device. Yet, it disregards its users’ economical backgrounds or learning abilities, therefore, creating a divide (Lam, 2020) by driving wealthier students

and parents to throw themselves into 'shadow education' by subscribing to further tools (Williamson & Hogan, 2020). Reinforcing this viewpoint is a simple fact that non-educators are creating Edtech tools, their coding and algorithms are being influenced by their own experiences and values thus their platform outcomes are biased exemplified by the dismissal of Google's lead ethical AI researchers Timnit Gebru and Margaret Mitchell (Simonite, 2021). Furthermore, the major power imbalance which such widespread implementations of Edtech such as GWfE creates is concerning not only due to the many unethical behaviours of the said corporation (Noble, 2018; Whittaker, 2020; Burdon & McKillop, 2014; Hern, 2017) but additionally due to their anti-competitive actions (McCabe et al., 2020; Nadler, 2020).

Business Model

GWfE's business model is based on CLV (customer lifetime value), which is a lifelong consumer customer retention strategy (Fader & Hoyne, 2021) based on individual life-long learning (Google for Education, 2019). Added to their advertising and user profiling strategies as well as the sales of their own devices like Chromebooks to schools, it is obvious that it is not just from the goodness of their heart that Google is investing in the EdTech market. By offering its services to schools, local authorities and governments, Google can lawfully target a younger audience, thus potentially bypassing the COPPA restrictions on targeting and tracking under 13 while keeping school administrators responsible for the students' data management (Google, 2021). Yet services regarding data management and data analytics are only part of their fee-paying GWfE Plus version.

Dependency on Its Products

The EU has recently shown its frustration in regards to actions like these antitrust lawsuits involving large tech firms such as Google and Amazon for their aggressive business practices and attempts at dominating and monopolizing many different markets in Europe (Chee, 2020). The EU now seeks to limit these abuses of power with the Digital Markets Act, DMA, which will seek to deter market dominance with fines of up to 10% of annual turnover and breakups of companies (European Commission, 2019).

Besides, Google's book-scanning project, dubbed the new 'library of Alexandria', slowed to a full stop following a lengthy copyright battle between Google, authors and publishers. The question is, what if all user data eventually legally becomes a semi-tangible property of the user? The EU seems to be heading much this way. Would it then be worth Google's while to have people withdrawing their data from these agreements using the right of erasure under article 17 of GDPR? Logistical issues may impact many schools whose nervous systems now depend on these systems if Google were to one day decide GWfE is no longer economically viable, as the now-abandoned foundations of the digital library of Alexandria.

Additionally, by restricting the user to one Edtech tool like GWfE, Google creates a dependency on Google affiliated tools with the added possibility of creating compatibility-dependent products. Furthermore, by encouraging users to upload their resources, lessons and whole syllabi courses to the cloud, Google is restricting and monopolising the users' tools slowly creating a generation of moulded Google-teachers, "rather than a generation of teachers capable of flexibly using technology to navigate the biggest disruption to education in over a century" as Harris (2020) points out. Additionally, it perpetuates cohorts of Google-familiar students who become dependent on Google products. With public education spending on the decline in many western countries, compounded with the flourishing market of Edtech, the diminishment of professionally-led teacher education (Selwyn et al., 2020) could result in the solidifying and trusting of a Google-dominated Edtech market.

Conclusion

Recommendations

This adoption of a private LMS as a short-term solution has been useful, but it will have serious long-term societal, monetary and democratic consequences if continued. As a result, we would recommend for school leaders and governments, especially governments that fully endorsed GWfE (GOV.UK, 2020) to reflect on the latest UNESCO social contract, which states clearly that we need to reimagine education as the present digital innovations "are not adequately directed at equity, inclusion and democratic participation" (UNESCO, 2021, p1). The Edtech sector benefited greatly from the COVID-19 pandemic in terms of its expansion and value. Yet the COVID-19 pandemic also shone a light on EdTech's current and future major downfalls by highlighting the inequality, privacy issues and ethical shortcomings nationally and internationally. Following the guidance of the 2021 Dutch DPIA report would be a good start especially regarding the clarification of Google's role and its affiliated services in data collecting, processing and controlling. Indeed, setting limitations on the data collected under an educational account, agreeing on

transparency of purposes and on a defined period for data retention as well as allowing users to access their personal processed data should be requirements for any EdTech tools (Nas & Terra, 2021).

For educational institutions, our recommendations would be to take caution when implementing new EdTech tools through the due diligence of their privacy policies followed by post-adoption reviews of Google policy updates. Secondly, institutions should choose EdTech companies not only on price or service offered but base their decision on their data collection transparency and processing and have a clear agreement on data control. Finally, the most important and proactive action that institutions can do for their users regarding any data manipulation is offering complete transparency on the EdTech tools it uses, explaining the rationale behind their implementations and then asking for their users' consent.

Future Research

The overall intention of this critical piece was not to empirically measure the possible future risk to schools, students and teachers, an actuary would be needed, which is much too expensive for institutions to afford. The intention was to investigate and highlight potential risks of schools fully committing to the GWfE infrastructure whilst cross-comparing Alphabet/Google's ethical track record to justify these predicted concerns. Fortunately and unfortunately, we are not the only educators, researchers flashing the warning lights and raising flags, as in the past year and before, there has been an abundance of literature and projects based on the same worrying trend (Williamson and Hogan, 2020; Lupton and Williamson, 2017; Watters, 2020; Coates et al., 2005).

Despite Google Workspace for Education being a useful tool for blended learning, it displays limitations for a full online pivot. As useful as this tool can be, serious ethical concerns exist, especially regarding data privacy and the company's track record of deceiving users (Burdon and McKillop, 2014), which can be worrying for long-term use. We would welcome further research into the use of digital trace data in Education (Hakimi, Eynon & Murphy, 2021), AI ethical use in Education and with GWfE as well as on the feasibility of data transparency on LMS, especially regarding control, processing and sharing. Finally, a study comparison between private LMS, like GWfE and public-funded and government-run LMS, like in France, during the pandemic, would be interesting at students' achievement level.

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