LessonLibrary

Section 1: Possible Futures

Suppose LessonLibrary is a browser-based search engine for all sorts of lessons regardless of where you are and what you want to study, then, while people are enjoying such convenient engine, there some profound impacts in the future.

Often, people going into a doctor’s office start with a conversation like “I searched my symptoms online and google told me….” As ECU Masters student, Michelle Hill, suggested, “[it is] tempting to use these tools to find out what may be causing your symptoms….” However, only 36 percent of the first diagnosis are correct (Edith, 2020). Making a correct diagnosis requires not only checking symptoms but also taking medical courses. Therefore, when people can find medical classes on LessonLibrary, the new opening will be “I took a cardiology lesson, and I believe I got an arrhythmia. Can you help me to perform a catheter ablation surgery[[1]](#footnote-1)?”

When we can obtain a broad range of accessible courses online, the tuition of the public schools will be cheaper, but that of the liberal art college will be more expensive. It is not uncommon for a large public school like the University of California, Berkeley to see one thousand students enrolled in one CS class. However, if we can find resources online, people might reconsider if the tuition is worthwhile. For the liberal art college, on the other side, professors are destined to concentrate more on their teaching responsibilities, and personalized tutoring would differentiate them from online courses and therefore be more expensive.

When LessonLibrary controls over the search results, governments might use the engine to foster cultural imperialism to influence the citizens of other countries favoring one over another. It has been a pervasive phenomenon throughout history. During the early 19th century, European colonized Zimbabwe, and early church groups developed missions to impose European religious and esthetic values on Africans and condemned traditional forms of expressive culture (Von, 1994). Even today, there is unofficial evidence that certain non-governmental groups are committed to the establishment and strengthening of democratic institutions across the world by supporting filming misleading documentaries.

On the other hand, by controlling search results, LessonLibrary can also serve as propaganda toward domestic citizens, recommending the lessons containing misguiding facts. A similar thing happened during the middle era of Ottoman Empire. In the late eighteenth century, the “Turkomania” was the rage in Europe; Europeans studied Ottoman clothes, Janissary music, architecture, musical themes, etc. However, as the Ottoman’s economic and political power declined, Victorian literature was dominated by Turks with enormous sex organs (Fleming, 2001). As a result, many Europeans started to see the Ottoman Empire as a realm of dreams, where they might live out their sexual or other desires. They forgot it was the Ottomans who brought coffee, tulips, smallpox inoculations, etc. to Europe. Even today, while people talking about the Middle East, people wrongly associated the area with Muslims though Christians and Judaism were the majority.

Section 2: Ten Stakeholders

There are six direct stakeholders in this project.

1. Patients who are not satisfied with online symptom checkers and want to study the material systematically to scrutinize what is going on in their bodies to relieve their anxiety.
2. Students who did not understand the course materials and wish to find a lesson that covers a more detailed explanation and related background.
3. Professors or teachers who do not sure how to give a lecture on some esoteric topics and want to see how other people do this.
4. Full-time employees who wish to dig deeper into some professional fields but do not have time to take an in-person course in a university.
5. People who are not being employed and wish to learn professional skills to find a job.
6. People who wish to know and study other cultures though a lesson.

There are four indirect stakeholders.

1. The doctor is an indirect stakeholder. They have already faced a lot of patients who took advice from Dr. Google and passed the best time to treat their disease. In the future, they need to correct patients who misunderstand class materials and spend more time giving lectures.
2. College and universities will be indirectly affected. When more and more people choose free online courses, it will force them to lower tuition to get more students enrolled.
3. The government will be affected indirectly. Suppose there are many misleading courses about a country’s culture, economics, or politics, the reputation of the government will be affected.
4. Citizens will also be affected indirectly. When coming to some misleading information, often, they are asked or judged by their government’s actions. Though, it is possible that the criticism is not even true. Even if it is true, they are not the ones who should be blamed for.

Section 3: Decision Points

The first decision point is that should we allow users to search all lessons with no restriction? Will we, for example, enable a patient to study medical science in order to alleviate their anxiety? Or, should we allow a high school kid to study advanced college material? There are two options to deal with this.

The first option is that LessonLibrary will allow users to browse for any course, but they will need to complete an online test or upload their certificate to confirm their degrees for specific professional areas. Medical science, for example, is a discipline for which LessonLibrary will require certification. Today, 35% of individuals in the United States utilize online symptom checkers to self-diagnose (Butterfield, 2013), and the issue will only become worse if they use LessonLibrary. Diagnosing needs years of study, four to seven years of being a medical student and another three years to seven years of residency. It is quite improbable that patients will be able to treat themselves appropriately after only a few classes. Most of the time, they're doing it to tempt themselves and it is more probable, though, that they will become more nervous. Jason Maude (2013), the founder and CEO of Isabel Healthcare, suggests that when a patient types in headache into an online symptom checker, they will be terrified since a brain tumor will appear. As a result, when it comes to professional issues, LessonLibrary must determine whether or not the users are qualified to search the course.

On the contrary, the second option is that LessonLibrary places no restrictions on the search; users are free to search for whatever lesson they choose. In this way, we may be able to assist the vast majority of people. For example, if a student does not comprehend the course material and wishes to learn more through online courses, the student can simply use LessonLibrary to accomplish so. This can ensure that the student's willingness to learn and explore is assured. People who want to change careers, such as from real estate to computer technology, can look for free online tutorials after a day of work without having to pay anything or attend a university. It can also assist professors who are unsure how to teach a course in a more accessible manner; the professor can take the online course and see how others teach to enhance their teaching quality. LessonLibrary, on the other hand, may be detrimental to the school, particularly the public university. Students currently pay 20,000 dollars a year for a college degree (Powell, 2021), yet at some large universities, they pay for seats in a lecture hall with little interaction with professors, and most people find office hours to be ineffective. According to Michelle Donelan (2022), the Minister of State for Universities of the United Kingdom, students are entitled to a "refund" on courses if they are dissatisfied because they are paying a significant amount of money that is an investment in their own lives. According to a recent survey (Powell, 2021), several universities are moving to online teaching as a result of covid-19 and are continuing to offer tuition discounts and grants to qualified students for the 2021-2022 academic year. However, for many families, the expense of education remains a considerable financial burden. As a result, the school may suffer because of LessonLibrary, which allows users to search for free lessons online, but others benefit.

Among these two options, I would like to choose the second one because when designing a search engine for lessons, the most central rule is to ensure users can acquire knowledge, skill, or expertise without bias, learn to respect others and be faithful. The first choice seems reasonable that if people search some professional topics that might bring hurt. However, we cannot because of this, deprive the opportunities of others to study. The best LessonLibrary can do is suggest some alternatives if, for example, the lesson you're looking for has some inappropriate content that requires you to be over a particular age or has a professional background.

The second decision point is whether or not we need to impose censorship on lessons. When it comes to search engines, one thing we must discuss is what should be appeared on the search result without introducing political bias or endangering local tradition? Things can be even more subtle when it comes to LessonLibrary, in which people are hoping to study appropriate material without biases. As forementioned, throughout history, people have used all sorts of lectures, literature, or studies to impose some opinions on students, readers, or researchers. For Europeans, literature about Ottoman Empire was disguised by sex organs, giving them a wrong fantasy that the empire was heaven. The truth, however, is the formation of authoritarian governments and the rise of military power. For the people of Zimbabwe, the early Europe church imposed European values and condemned traditional forms of music culture, which made court musicians become prominent figures in the recent history of Zimbabwe (Von, 1994). There are three options we can take to prevent this from happening on LessonLibrary in the future.

Firstly, the lessons that are malicious or too biased will be removed from the search result. It has been a common tactic during the last few centuries to use literature to spread preconceptions for political and religious benefits. During the European wars of religion, many European writers saw the Ottomans as a source of evil, portraying them as “dreadful”, “ferocious”, and "unspeakable" while also being “sex-crazed”, “harem-driven”, and “debauched”. (Fleming, 2001). In a French play in 1612, Sultan Mehmet the Conqueror, a sophisticated Renaissance prince, was portrayed as a harsh and vicious tyrant. Martin Luther, a German priest, wrote that the Ottomans were “a scourge intentionally sent by God to sin Christians” (Blasco, 2012). All these actions were rooted in Europeans' desire to define themselves by identifying the virtues which they wished to have and attributing the opposite to their enemy (Fleming, 2001). In this context, the enemy was Ottoman Empire and they preached to their own people that they were the ones that were “humaneness”, “civilization”, and “true believers” (Fleming, 2001). By reading the literature, European were misguided and their values of altruism were hurt. To stop this from happening, LessonLibrary should forbid the spread of malicious and biased lessons.

Secondly, the search engine should respect the traditional culture, favoring lessons taught by locals. If one wants to find “Zimbabwe Music,” the search engine will list traditional music on top, whilst today’s Zimbabwe music is an amalgamation of Western and indigenous musical styles (Von, 1994). This option is subtle because it does not correctly reflect the actual history and is solely out of protecting local culture and values of belonging. However, today traditional musical practices have flourished as a result of a revitalized sense of black pride and the resurrection of traditional music institutions. (Von, 1994). Furthermore, when Google doodle, a non-Zimbabwean platform, created an interactive movie that lets people play the *mbira*, a traditional Zimbabwean instrument, it was attacked for adopting “the false generosity of the colonial legacy” out of financial and marketing advantages (Rafomoyo, 2021). Tawengwa (2020), an eminent Zimbabwean musician, claimed that “…a white man walked in to teach the `Music of Africa` course on *mbira* music…[is] grounded his teaching in the very texts I found lacking.” Therefore, if it is the predominant image that people want to come back to tradition, the search engine should let it be and enhance the values religion and spiritual beliefs.

Thirdly, the search result should consider the diversity of views. For example, suppose one wants to dive into the history of the Ottoman Empire, the search engine should return as many different perspectives as possible and indicate how each lesson relates to or contradicts each other. The search engine should also suggest classes taught in foreign languages because it is not uncommon to see that more lessons are offered in popular languages such as English than that are taught in minority languages like Polish. However, we should not allow people's voices to be silenced because of the language they are speaking, since they may provide a unique viewpoint based on their cultural heritage.

Among these options, I would prefer the last one because the most important guideline to keep in mind while creating a search engine for courses is that users should be able to gain information, skill, or competence without prejudice, as well as learn to respect others and be faithful. In other words, the search engine should provide as many different results as feasible. The most it can interfere with is addressing potential prejudice and giving appropriate warning over controversial topics. LessonLibrary should give the user the entire image no matter whether it is right or wrong, let the user check different views, and decide which opinion they will believe. Only in this way, LessonLibrary can ensure the largest independency of the users. There are some advantages to the other two options, but they damage people’s value of exploring knowledge freely; concealing and filtering results is just another way of being biased.

Section 4: Algorithmic Bias

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For example, most west Europeans or Americans surely would fail to acknowledge their debt to the Ottomans for the coffee and tulips they enjoy or the smallpox inoculations that protect their lives

In daily practice, one word, “Turk”, is sufficient for Viennese mothers to put their children to bed. But at the same time, they forgot it was the Ottomans who brought coffee, tulips, smallpox inoculations, etc. to Europe. After all their efforts, while people talking about the Middle East, people wrongly associated the area with Muslims (Christians and Judaism are always forgotten, but they were the majority) and cruelty.

1. Catheter ablation is not a surgery! [↑](#footnote-ref-1)