DESIGING AN AI-DRIVEN PLATFORM TO ADDRESS CASTE-BASED INEQUALITY IN INDIAN HIGHER EDUCATION

THE SOCIO-POLITICAL IMPLICATIONS OF GOVERNMENT POLICIES AND LEGISLATION ON THE CASTE SYSTEM IN INDIA

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By
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On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

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General Research Problem: Ensuring Equality for All Students Regardless of Their Caste Background.

How Can Equitable Education Be Ensured for Students from Lower Castes in Higher Education Institutions in India?

Introduction

        The caste system in India dates back 3,000 years. It has deep historical roots that go beyond British rule and continues to influence different aspects of life in India (Choragudi et al., 2022). Certain Indians, especially Hindus, have been outcasted for many centuries due to the caste they were born into. Caste is passed down through families and can dictate a person's life and profession as soon as they are born (Sahgal, 2021). This limits their educational and career prospects and determines their relationships, roles, and sometimes marriage choices from birth. This rigid social hierarchy has led to systematic inequalities and caste-based discrimination that low-caste members continue to face.

        To combat this issue, the Indian government has implemented an affirmative program that is the most extensive in the world (Jensenius, 2017). This includes quotas that aim to level the playing field for those negatively affected by their caste status. For example, "there are reservations in the form of quotas in political bodies, in educational institutions ... constituting what has been referred to as 'the world's oldest and farthest - reaching affirmative action programme" (Tharoor, 2018). These quotas do not fully mitigate the cast-based biases that occur, especially in higher education. Higher education is where students are given the opportunities to set themselves and their families up for success. Dr Ambedkar, who headed the committee drafting the Constitution of India, was the most prolific activist for the lower caste. He mentions, "education is the greatest material benefit … we cannot forego our right and opportunity to reap the benefit of the highest education to the fullest extent" (Nancharaiah, 2021). Even in higher education, low-caste students are not able to escape their caste and continue to face discrimination. This affects them mentally and socially in ways that are unimaginable by someone who is not in their position. Thus, it is vital to understand this topic and how discrimination affects low-caste students in higher education. My STS topic will focus on the socio-political implications of government policies and legislation on low-caste students in higher education. I will delve into how caste discrimination does not end after a student has been accepted into a higher educational institution. Moreover, my technical topic will focus on creating an AI-driven platform to address these issues by monitoring and reporting issues faced by low-caste students. Also, this platform will effectively use data so the government can make informed decisions on their policies.

Technical Topic

AI-Driven Platform to Address Caste-Based Inequality in Indian Higher Education

How can an AI-driven digital platform effectively address instances of caste-based discrimination in Indian higher education institutions?

Caste-based discrimination is a persistent problem that hinders the abilities of lower caste members to pursue a better life. Specifically higher educational institutions, lower-caste members are often faced with barriers that distance them from their upper-caste peers. There needs to be an innovative solution that fixes this issue. There are policies aimed at promoting equality and ensuring that there is a way for lower caste students to have an opportunity; however, there is a lack of monitoring of these changes. This causes continued discrimination, and there needs to be a proactive way to address this issue.

To tackle this issue, I will work on an AI-driven digital platform to support lower-caste students in higher education. This platform will have an AI-monitored reporting tool that will use AI algorithms to analyze student feedback for patterns of discrimination. Moreover, this platform will have a secure online space that will act as a resource hub for students to get help when they need it. For instance, this resource hub will have educational materials and counseling services, tailored to the needs of lower-caste students. To take it a step further, this platform will have the ability to compile anonymous data to inform decision-makers about the frequency of discrimination based on caste and the efficiency of current laws. This will make ensure that the government is getting useful data to take action and allow them to ensure that their efforts are working.

As mentioned, this project will utilize AI and machine learning algorithms as a foundation. Moreover, I will utilize web development frameworks such as Django, to create an accessible, responsive, and dynamic platform. The UI/UX will make sure that the platform is user-friendly, and I will utilize CI/CD to ensure relevance and effectiveness. Ideally, this platform will reduce caste-based discrimination in India's higher educational institutions.

STS Topic
The Socio-Political implications of Government Policies and Legislation on the Caste System in India

How has government policies and legislative measures impacted lower caste students in higher education?

"My birth is my fatal accident... I always was rushing. Desperate to start a life... I am not sad. I am just empty. Unconcerned about myself. That's pathetic. And that's why I am doing this," wrote Rohith Vemula, minutes before he hung himself in his room. On January 17, 2017, Rohith, a 26-year-old, took his own life (Janyala, 2016). Rohit Vemula was a Dalit or an Untouchable. Rohith Vemula was getting his Ph.D. in Life Sciences when suddenly he stopped receiving his monthly stipend of Rs 25,000 from the Hyderabad Central University because he started a protest to stop discrimination against lower-caste students (Janyala, 2016).

Initially, the Indian caste system was broken down into four main categories. They are Brahmins as the highest (Priests and teachers), Kshatriyas (warriors and rulers), Vaisyas (farmers, merchants, and artisans), and Sudras (laborers) at the fourth position (Rao 2010). The last category consists of Untouchables or Dalits and is the lowest in the system. The caste system trapped people into fixed social orders and it's impossible to escape from the system (BBC,

2019). After India gained its independence in 1947, government policies and legislation were passed to act against the caste system and inequalities faced by the lower caste. Even though it has been over 75 years since the government started to act against the caste system, the caste system is still a relevant issue in India. Thus, it is vital to understand how government policies and legislative measures have impacted the caste system in India.

Specifically, schools would not admit low-caste students making it difficult for them to get a valuable education. Not having a proper education from a well-known institution prevented lower caste students from having genuine opportunities to get a better job and provide for their families. The caste system is like a recycling process. It is never-ending unless you take yourself out of it. In 2008, India's supreme court made it mandatory for publicly funded universities and colleges to reserve at least 50% of seats for lower-caste students such as Dalits and untouchables (Ramesh, 2008). This is very similar to affirmative action in the US. In India, many upper-caste students can secure a seat at a university by paying a large sum of money, regardless of their merits. Anoop Saraya, a senior doctor at Delhi's prestigious All India Institute of Medical Sciences, states, "For the wealthy they can simply buy their children seats at the top colleges" (Ramesh, 2008). This is very unfair to those who cannot pay their way into getting a college education. Moreover, merit gets thrown out the window when money comes into the equation. A lower-caste student, who is qualified or even over-qualified, may not get a seat if an upper-caste student pays a large sum for that seat.

Even after getting into an institution, low-caste students continue to face inequalities. Darshan Solanki, an 18-year-old Dalit student at IIT-Bombay studying Chemical Technology, jumped off the seventh floor of a building (Scroll Staff, 2023). Darshan's sister reported that the month before he committed suicide, he mentioned to her that caste discrimination takes place at his institution. She mentioned how after finding out that Darshan is a Dalit, "their behavior towards him changed…and stopped talking to him. They stopped hanging out with him" (Scroll Staff, 2023). Even though Darshan was able to get into one of the most prestigious universities in the world, he couldn't escape his caste and felt like he only had one option. His mom mentioned that Darshan felt tortured and seemed as if he was in distress whenever she would talk to him. An engineering student at one of the most prestigious universities in the world should not have to commit suicide to get away from discrimination.

Also, two Dalit students at IIT-Delhi passed away by suicide in mid-2023. Both of these students were engineering students. These incidents took the student body at IIT-Delhi by storm(Lakshman, 2023). The Board of Student Publications(BSP) at IIT-Delhi created a survey to find out more information about caste discrimination on campus. This survey was shut down by school officials in less than two hours (Lakshman 2023). This is a clear indication of caste discrimination on campuses, especially at prestigious engineering universities such as the Indian Institute of Technology(IIT), or else the survey would not have been shut down.

These incidents make one wonder about belonging. Who belongs in IIT and engineering? Does caste matter? These questions stem from the continuous discrimination of lower-caste students. The government has specific quotas and policies to ensure there is no discrimination in

getting admitted to the university, but what about policies for lower-caste students who are enrolled in university?

Addressing these questions will require a deep dive into the studies of these students caste and what they face at their institutions. Moreover, digging deep into the type of government in charge plays a role in getting the evidence needed to answer these questions. For example, the prime minister of India, Narendra Modi, is of the BJP party. BJP is a Hindu nationalistic party, and its viewpoints are different from other political parties. Therefore, collecting evidence through scholarly articles and the history of each government party's viewpoints on this topic helps ensure the necessary evidence is gathered.

This paper will examine the roles and perspectives of university students from lower caste, upper caste, and government bodies. These actors will help understand the interplay of values, norms, and beliefs that cause caste discrimination in higher institutions. It will also explore the Caste Bias that stems from tech platforms. For example, Hansraj Meena, the founder of Tribal Army, "has raised an online petition against Twitter for providing blue tick-marks to those subscribed to Twitter Blue while withholding the same for accounts of activists from the Scheduled Caste (SC), Scheduled Tribe (ST), and Other Backward Castes (OBC), recognized to be marginalized due to caste by the Constitution of India" (Naik, 2023). Twitter's biases towards the verification of accounts show caste biases because anti-caste activists either take a long time to receive Blue Ticks or don't receive them at all (Naik, 2023). Verified accounts have greater visibility and a wider reach compared to other accounts that may have a substantial following, but no official marker. This is instrumental in challenging caste-based inequalities. By investigating these elements, the paper aims to provide a comprehensive understanding of the socio-technical systems that influence the educational experiences of lower-caste students in India and the inequalities they face.

Conclusion

A caste system that has been deemed illegal should not be the cause of someone's death. The Indian caste system has done more harm to society than it has good. While the Indian government has made many strides to improve discrimination and inequality faced by low-caste students, there are still many issues that persist. My technical project will aim to fix these issues. For example, my technical project will aim to monitor caste-based discrimination faced by lower-caste students in higher education. Moreover, by examining caste-based discrimination and inequalities, my STS paper will explore this topic through a socio-political lens. I hope to learn how government policies and legislation play a role in caste-based discrimination for lower caste students in higher education. I hope to learn how different factors such as historical, cultural, and political sustain caste discrimination in higher education. The insights I gain from this research will provide me with a greater understanding of the current state of caste dynamics and its' role in Indian higher education.

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