Increasing Efficiency for ABA Pro Bono Workflow Datacraft - Aahil Mukadam, Shresth Sharma, Kevin Patel, Jivitesh Wadhwa

We wanted to find an optimal scheduling method for the ABA to align the time of day; attorneys can answer client questions. Looking through the question data available from 2012 to 2022, we totalled the number of questions asked throughout the 10-year period for each hour of the day. We noticed a consistent trend regarding the time of day clients would send questions after organizing the data. During the typical 9 to 5 work hours, the total number of questions totalled less than half of the questions from 6 pm to 7 am, with the majority being asked between 6 pm and 11 pm. To respond more efficiently to client questions, the ABA could request volunteers to be online to answer questions during this period, allowing for most questions to be looked at within a relatively short period (2-3 hours). This allocation of the volunteer attorneys' time will not only increase the number of total questions that get answered. Still, it will also decrease attorneys' time to answer questions, as it avoids a large backload.

From the categories of questions asked throughout the day, the table was primarily created due to our curiosity on whether or not the categories would fluctuate throughout the day and if, during specific time periods, certain categories had an increased amount. This was to conclude whether or not the ABA should adjust the ratio of attorneys with different expertise. However, plotting the data revealed that all the categories were consistent throughout the day. We concluded that we could use percentages to divide all the attorneys accordingly so that a category does not have too many or too few attorneys assigned. The ratio of all experts available throughout the day would remain relatively stable.

An example of this would be the number of Family law attorneys available. As the data throughout the day shows, the family law-related questions make up, on average, 40% of the total questions in a given hour. Therefore 40% of the attorneys available should be family law experts or be prepared to respond to that line of questioning.

Moving on to current trends, the economic situation caused partially by the pandemic, supply-chain issues, and many other factors would render it reasonable to assume some uncertainty regarding jobs and employment. To put this under a microscope and confirm our hypothesis, we compared the ABA's database's frequency of questions about Work, Employment, and Unemployment to the Google Trends of the World "Unemployment" over the past five years, beginning from May 2018. We adjusted the scale of the Google Trend data, which was initially weekly, to an aggregate monthly rate. When comparing the correlation of these datasets, we found a Pearson Correlation Value of 0.82. This suggests a moderately strong positive correlation. This shows that although the database is limited to low-income households, it paints a picture of the entire nation, which lawyers and firms around the country can use to prepare for the type of requests their clients will make based on ABA's Database. We also compared monthly unemployment rates and Google Trend Rates for the same period. We found an even stronger correlation of 0.94, giving lawyers and firms something more stable and predictable to protect their clientele's needs. Lawyers specializing in the Economy are also better prepared and recruited to answer the forecasted questions due to our projections. We also compared the ethnicities who asked questions to the nation's total ethnicities. Caucasian and Asian people are underrepresented in the ABA Database, while other minorities are overrepresented compared to the population percentage. Due to this, it would be a fair measure to hire more diverse lawyers if they are not already corresponding with the portion of minorities. This measure could break down cultural barriers and help the clients and ABA fulfill their purpose.