PISA Data Visualization Project

Summary

PISA is a survey of 15 year old students about their scholastic performance on mathematics, science, and reading. The PISA 2012 survey includes 510,000 students in 65 economies.

In this project, I am interested in the students' math behavior in each country. In this project, I have find the following relationships.

Analysis 1:
people are willing to engage the less pressure math behavior like talk about math and help friends maths other than competitive math behavior like participate competition or math club.

Analysis 2:
student in always percentage and often percentage of math behavior activity has more change to be good at math!

Analysis 3:
HelpFriendMaths and talkaboutmath has stronger relationship with good math ability.

Analysis 4:
The country of Albania and United Arab Emirates has higher frequency of math behaviors than other countries.

Analysis 5:
Albania and United Arab Emirates who have more engagement of math activity have stronger math ability.

Conclusion

From the above analysis, I have strong evidence to show there is a relationship between math ability and the frequency of math behavior engagement. Also, we can see that countries Albania and United Arab Emirates who have more engagement of math activity have stronger math ability.

Design

The variable of the dataset has 636 variables. I only included the subset of 8 students' math behavior("talkAboutMaths","helpFriendsMaths","extracurricularActivity","participateInCompetitions","studyMoreThan2ExtraHoursADay","playChess","computerProgramming","participateInMathClub") for analysis.

I reconstructed the dataset to be a table showing the frequency of each of the students' math behavior in each country. Then I used the new dataset in tableau to show how each students' math behavior goes in each country and how the frequency are different among the 8 math behaviors and also the relationship between math behavior and self-confidence of math.

Feedback

Person 1
You should do more comparison for the view

Follow-up:
I change the filter as multiple value dropdown. So, we can see more comparison among different subject

Person 2
You should write a story not just a dashboard to show your result.

Follow-up:
I rework on my tableau and create the story to show my project.

Person 3

1. You should involve deeper insight of this project and find out how can you make the insights you uncovered in your analysis relevant to people's lives
2. Please add concise but descriptive titles to all of your charts

Follow-up:
I made more logic analysis after review my project and adjusted all my charts

Final Result

My first version visualization is
https://public.tableau.com/views/Project9_97/Dashboard1?:embed=y&:display_count=yes

My second version is
https://public.tableau.com/views/Project9_97/Story1?:embed=y&:display_count=yes&publish=yes

My final version is:
https://public.tableau.com/shared/G723C635R?:display_count=yes

Resources

- **Udacity** » https://classroom.udacity.com/
- **Stackoverflow** » stackoverflow.com