Barcelona exchange students' expectations and experiences

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Introduction

Networks are everywhere. Examples include the Internet, a collection of computers linked by data connections, and human societies, which are cluster of people linked by acquaintance or social interaction [1]. The educational system is not an exception, the connection between the choice of university for different categories of people is particularly interesting to universities and for organizations that provide students with the opportunity to study in different countries. The aim of the research was to analyze the connection between students from different countries when they choose the city for study. In the first approach of analysing the survey networks were questions about how students from one country (region) are connected when they choose Barcelona as a city to study in and what did they find demotivating after a period of time spent studying in Barcelona. The topic we studied has allowed us to understand the reasons for selection, to check whether our interviewed students follow the stereotypes their country (region) hold and to find some new conclusions.

Methodology

This study analyzes the network made out of the main reasons for 38 students from 14 countries for choosing Barcelona as a studying destination. In the first approach of analysing the survey networks were created where the individual participants are represented by their country as a node. The edges displayed the strength of the connections between the individuals due to their matching answers. In the second approach of analysing the data countries with less than three participants were merged to regions like Benelux, Scandinavia and East Europe. This approach generated more reliable data and provided a better overview.

Two categories of nodes were used in this network analysis:
a) Regions to which interviewees belong.
b) Answers from the proposed list.

Figure 1. Absolute number of survey participants by regions

The conducted survey had the question "In the following questions please select the main reasons you picked Barcelona as your Erasmus destination." (Likes) and "In this section please select things you DISLIKE the most based on your experience of living in Barcelona." (Dislikes). The bi-partite networks consisted out of answers were made, being drawn and analyzed using NodeXL.
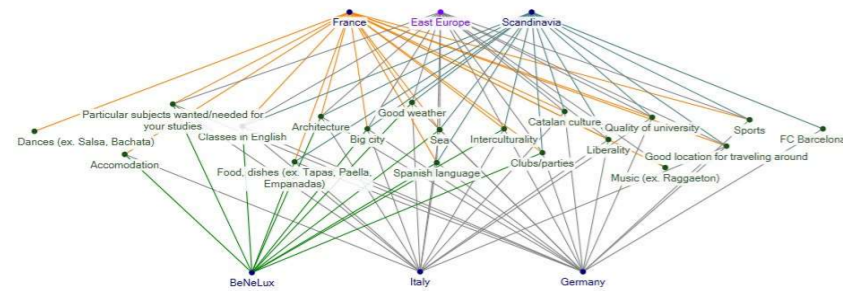

Figure 2. Visual representation of the initial bi-partite Likes network

The initial undirected bi-partite network was separated in a Co-citation network and a network with bibliographic coupling. The Co-citation network shows regions as nodes while the edges are stronger if two persons' answers are more alike. Whereas in the network with bibliographic coupling the answers are presented as nodes and edges display connection between answers.
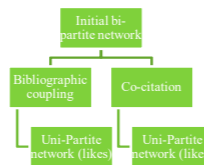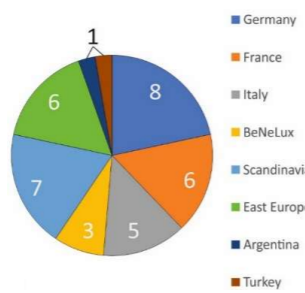

Figure 3. Separation of the network

Results and Discussion

The analysis was started by analyzing the network of answers regarding to their connection between each other. In other words, a connection between two answers is stronger if more participants have those answers mutually picked. If in a region more than 50 % choose an answer as a reason why they chose Barcelona, it is interpreted as a positive connection, below that threshold, the connection is considered to be negative.

Looking at the data, all regions chose "Good weather" and "Big city" to be reasons to pick Barcelona while the answers that were not picked by many respondents do not appear in the network visualizations. The other interesting thing is that four out of five French participants agree that "Dances" is one of the reasons they chose Barcelona.

Looking at another answer which is addressed as "Liberality", 50 % of the East European participants see it as a reason why they came to Barcelona. Other regions like Benelux, Germany and Italy agree with less than 20 % while Scandinavia and French participants agree with around 30 %. However, the strongest agreement embodied by the participants of East Europe may be connected to the more conservative social situation in East-European countries and more liberal in the west. The network whose nodes represent answers and edges the commonness of two answers picked by the same respondent can be seen on Figure 4.

Our second network analyzing the Likes survey has six nodes that represent regions and is visualized on Figure 5. Edges are stronger if participants from different regions agree on same answers. The strongest connection is displayed between the region of Benelux and France as the second strongest is between Benelux and Germany. Whereas the connection between Germany and France is relatively weak. For analyzing the network, we've set up a limit for the edge weight of 44% to highlight the stronger connections. Benelux can be labelled as the network's hub (the most connected node).
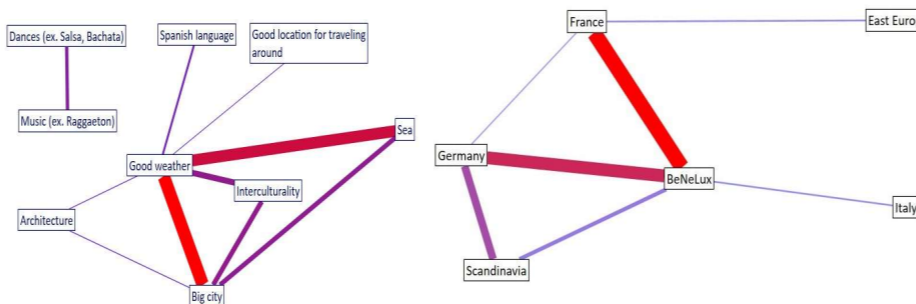

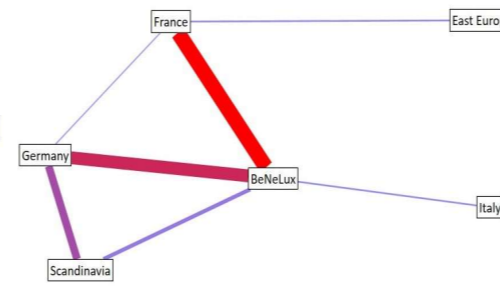Figure 4. Network of answers (Likes) regarding to connections by regions

Figure 5. Likes network with regions

Analyzing the data obtained in the survey about Dislikes, the answers "Temperature", "Interculturality" and "Public transport" have not been picked and therefore will be excluded from the network. On the other hand, more than 50% of respondents disliked "Feeling unsafe".

The network which has Dislike answers as nodes can be seen on Figure 6. Some of the answers were expected and therefore we can offer an explanation for them while others weren't. An interesting fact was that most of the respondents from Germany chose the "Lack of organization" which can be explained with the high level of organization in that country. Also, more than 50% respondents from East Europe were unhappy with the "Expensiveness" of living in Barcelona which can be explained by life costs and salaries being lower in those countries. On the other side, complaints about "Unpunctuality", "Cleanliness" and "Food" were not common.

On the last network that we analysed, connecting the regions which picked the most similar answers (visualized on Figure 7) the strongest connection is the one between France and Germany, with more than 50% respondents from these countries not liking "Too much tourists". It is also observed that a lot of German exchange students wanted to learn Spanish once they came to Barcelona since a lot of them were disappointed with the "Lack of cheap Spanish courses". Without Germans, that answer was picked only by 20% of respondents.
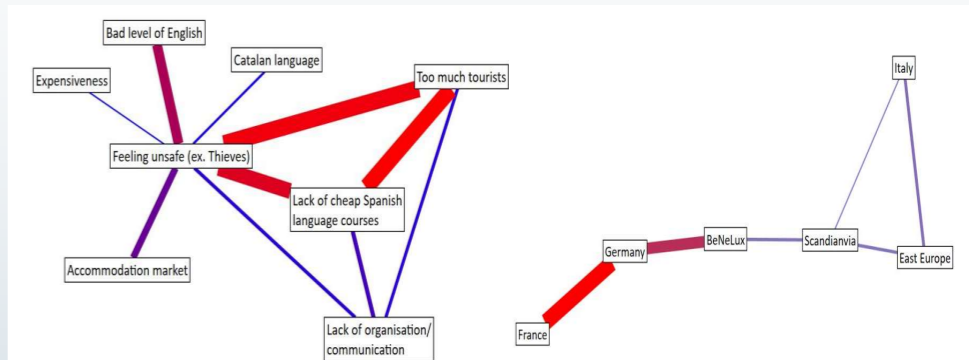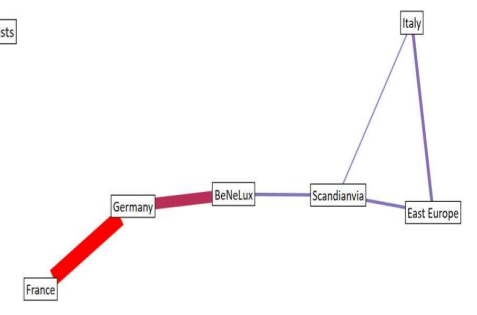

Figure 6. Dislikes network with answers

Figure 7. Dislikes network with regions

Conclusion

Despite the fact that the initial survey consisted of students related to their countries, to get better results it was necessary to combine the countries with low amount of respondents according to their region. Even though the number of surveyed students is too low to draw any strong conclusions, the created NodeXL models can give us an idea about similarities of students from each country (the 'strength' of each region) and the different regions' connections.

In the Likes network, students from Benelux and France had the most similar answers while Benelux is the network´s hub. The similarity between France and Benelux can be attributed to the geographical closeness. Benelux being the hub can be attributed to a similar, geographical reason which is that Benelux can be considered as the center of Europe. Moreover, in the region of Benelux four languages are spoken: Dutch, French, German and Luxembourgish. These languages connect Benelux to France, Germany, Switzerland and Austria whereby Benelux being the hub may be justified.

In the Dislikes network, on the other hand, German and French students picked the most similar answers while the network's hub is Scandinavia. The connectivity between France and Germany may be attributed to their geographical closeness. Scandinavia can be justified as the hub because it holds the longest geographical distance to Barcelona and is culturally different. Therefore, the Scandinavian´s expectations may be matched the least and more dislikes are created which leads to a higher probability to be connected to several regions.

The majority of all respondents chose "Good weather" and "Big city" to be a reason why they picked Barcelona and surprisingly, some of the least selected options were "Catalan culture", "Sports", "FC Barcelona" and "Particular university subjects". Especially the latter answer and "Quality of University" provides interesting information for the universities. These answers didn´t got high results in terms of agreement by all regions, which leads to the assumption that the participants didn´t include the topic of education in their decision to choose Barcelona.

The conducted analysis can be useful for determining the most popular cities to study in, as well as displaying the current situation of a city. The obtained data could be interesting both for the organizations that provide students with opportunity to study abroad and the host universities. For further research, it would be interesting to conduct a similar survey on a larger number of respondents to obtain more representative results.

Acknowledgements