# A Study of the Impact of Cultural Diversity on Team Performance in Southern and Northern China

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Abstract: Cultures have not developed in isolation but moved forward in mutual communication, learning, and collision, so that people from different culture backgrounds can develop broader horizons by contributing unique perspectives and bringing pragmatic exchanges. This paper is designed for testing whether the benefits of cultural diversity are more dominant in team performance rather than that of shortages, which can be applied to build a better team performance. This paper identifies that there might be four possible correlations between cultural diversity and team performance by measuring all dimensions of diversity. On the hand of the linearity, more degrees of cultural diversity will cause either more optimistic or pessimistic results in team performance. On the other hand of nonlinearity, the prediction can present as a combination of all the advantages or disadvantages of diversity. In other words, it indicates that there could be a certain degree of diversity that ensues either the best effects or the worst.

*Keywords:* Cultural diversity, Team outcomes, Team performance, Southern and Northern China, Social integration.

#### 1. Introduction

In the long history of human, the diverse cultures are like a magnificent symphony, which not only has a large and ever-changing structure but also harmoniously integrated. Today, promoting cultural exchanges and mutual learning on the basis of respect for cultural diversity is both an inherent requirement for the development of our own culture and an inevitable choice for the realization of world cultural prosperity. With the development of globalization, cultural diversity has become an indispensable part of our life. The increasing tendency shows that universities start to have teams with diverse cultural backgrounds in the expectation of gaining innovation and creativeness in order to improve the overall team productivity. [1,2,3] However, since for every plus there is a minus, the increment of cultural diversity does not necessarily mean it will be a hundred percent optimistic. Many existing researches look at all dimensions of diversity, including gender, age, and function, as well as culture and ethnicity and find all of them obligate the fluctuations of team outcomes. This conducts a worth exploring topic -– Do more degrees of cultural diversity lead to more positive or negative effects on team performance? As far as the question is concerned, there are already some published researches exploring the relationship between cultural diversity and team performance, the significant and null results are all inclusive. (e.g. positive correlation, negative correlation or unrelated). [4] In this study, we intend to probe the relationship between cultural diversity and team performance in the university, in an attempt to create a reference for generating a better team size in respect of diversity patterns during group discussions or projects. The study narrows the scope of experimental subjects down to part college students in the north and south of China and explore whether the degree of cultural diversity in Northern and Southern China has more positive or negative effects on team performance in university. Specifically, the study groups the northerners and southerners in proportion, has each group complete the similar tasks within the specified time, and evaluate the quality of the performance from different aspects that possibly matter the result.

## 2. Method

#### 2.1 Participants

This study simulates the effect of inferential statistics for reference to narrow the experiment range down to 210 undergraduates from north and south China so that it can make generalizations about the

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experiment results to a larger population (e.g., apply it to all the undergraduate in China). In order to minimize the influence of potential confounding variables on the results, the researchers have considered the following factors and adjusted the selection of experimental subjects. Firstly, taking into account inherent personality and habits might be reshaped by the surroundings, the researchers are prone to the local undergraduates in local universities (e.g., Southerners in the south university or Northerners in the north university in China) as much as possible in order to reduce the impact of social integration [1,5]. Secondly, due to the experimental content is about discussing the controversial social topics, the researchers not only need to make sure that the topic is unanimously perceived as controversial within each group to make mutual communication meaningful but also to guarantee minimizing the external factors (e.g., environment, social status, family status, education background. Etc.) that might cause accidental errors during the procedure. (e.g., The difference in educational backgrounds in each group may cause errors when evaluating the aspect of the degree of information.) At this point, even if the researchers screen out people with the same cultural backgrounds, it is hard to agree on their criteria for the controversial topics as well as avoid the subtle limitations. Therefore, the study customizes a Likert scale questionnaire. The first part of the questionnaire mainly consists of a series of "agree" or "disagree" questions on some controversial Social Hot Topics in North and South China. The volunteers need to rate how controversial they thought each question is by filling the number from 1 to 7. Another part of the questionnaire is the demographic information, which asks volunteer's age, gender, social status, education background, etc. Based on the responses to the questionnaire, the researchers can categorize volunteers who fill the same rate with similar environmental influences into the same group and assign their task topic as they firstly agree for the most controversial one.

#### 2.2 Procedure

The researchers arrange six people as a small group. To observe the impact of diversity on the performance within the group, the researchers use seven different proportions of southerners and northerners in each small group. The first one will be 0 northerners and six southerners. The second one will be one northerner and five southerners. The third one will be two northerners and four southerners. The fourth one will be three northerners and three southerners. The fifth will be four northerners and two southerners. The sixth will be five northerners and one southerner. The seventh will be six northerners and no southerners. Furthermore, to make sure the evaluation is representative and general enough, seven small groups with different proportions will again be arranged as one big group. Thus, there are five big groups, which means there are 35 small groups in total in the experiment. To motivate the enthusiasm and encourage their ambitions, every participant will be informed that the top 5 teams with the highest participation and productivity will receive the prize. [1,6]

The researchers create a group chat for each small group on a social platform, "Tencent QQ." The participants will hold a vocal call without turning the camera on so that they can share their opinions anonymously during the discussion. The reason for choosing this app is that it's commonly used in China as Instagram in the US. At this point, everyone will be able to join the discussion conveniently. On the other hand, the app provides the voice changer function during the vocal call if necessary. Therefore, no exposure of identity, appearance, plus verbality allows the participants to express their opinions more truthfully without worrying about being recognized by others, which on the other hand, increases both reliability and authenticity of the result.

Each group will be given one controversial hot social issue on North and South China from the questionnaire they did before. The goal is to get their opinion uniform and submit it as the final report. In the meantime, the entire discussion will be recorded to be better evaluated their performance. There are two rounds of discussion. In the first round, participants need to answer the questions by agree or disagree, then give it an explicit explanation. In the second round, participants need to process a brainstorming and agree on only one answer (either agree or disagree) with other team members.

To control the time, this study limit the discussion within 30 minutes. The researchers will record the time that each group used to get the agreement as their final report. Before timeout, each group will be reminded by every 10 minutes. The groups can finish the task earlier than 30 minutes, and if 30 minutes is not enough for some groups, they can decide whether to keep discussing or not. If the groups choose to keep doing the task, the researchers will continue to record the time until they finish. Otherwise, the groups will automatically be deemed unable to complete the assigned task at the specified time. Ultimately, each group needs to present their conclusions as the final report to the evaluators. The final report should include the explicit reasons in addition to "Agree" or "Disagree" within 15 minutes.

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#### 3. Measurement

The evaluation can be divided into two parts: the discussion and the final report. There are 60 ordinary students and ten experts to complete this evaluation. At this point, there is a total of 5 large groups, each of which has a total of 7 groups that have different proportions of North and South people assigned previously. Now the researchers will pick the groups that have the same proportion of northern and southerners out from the big five groups to form a new large group. For instance, in the first big group, the group that has 0 northerners and six southerners will be selected, in the second group, the group that has 0 northerners and six southerners will be selected, and so on. Therefore, the researchers will finally get a new seven groups, each group consists of five groups with the same proportion of southern and northerners, and each group represents one type of degree of cultural diversity in the study. Next, every 2 experts and 12 students from the evaluator group will assess the performance of one origin big group that contains seven small groups with different proportions of Northerners and Southerners. After they watch the video that records the whole process of discussion, they will rate the Likert Scale Questionnaire to evaluate the following six aspects: The conflict, the communication effectiveness, the degree of information, creativity, satisfaction, and team atmosphere. [4] Then, the researchers will add the scores of groups of the same type proportion together to get the total score to be a representative of one of the types of degree of cultural diversity so that the researchers can plug this result into a larger population to respond our research question.

#### 4. Result

Connecting the prediction with the hypothesis, the correlation between the diversity in team and performance can be either proportional or inversely proportional, which particularly means the degrees of cultural diversity within the group might lead to either better or worse performances. Since the degree of diversity is the independent variable, it is obvious to see if the more significant changes in diversity the teams have, the greater differences of the results of measurements might be. Thus, the diversity in the group plays a pivotal role in determining the results.

According to the measurement, the evaluators use conflict, communication effectiveness, degree of information, creativity, satisfaction, and general atmosphere as the criteria for scoring the final team performances, and all of them might be changed by the degrees of diversity. [4] As all of the participants are selected from North and South China, they must be holding more or less different perspectives and stereotypes due to the differences in cultural backgrounds or traditions. [1] Based on similarity attraction theory, individuals will take a positive attitude towards others with similar characteristics to themselves and hold negative comments on people who have different characteristics [7,8]. Under this circumstance, the characteristics mentioned in similarity attraction theory can be defined as the cultural backgrounds or the attributes that our participants have, so that people with different cultural backgrounds may create more internal conflicts during the communication than those who have relatively similar or same cultural backgrounds because they hold the different stereotypes and opinions at some traditional aspects. These internal conflicts also may negatively affect the score of a team atmosphere, which then may immediately affect the information exchange and communication effect because contradictions and negative team atmosphere can eventually discourage the team members from sharing their opinions, in other words, is information exchange, which is another criteria for this experiment. Combining all of the four aspects: in an increase of contradictions, the negative team atmosphere, the low communication effect, and discouragement of information exchange, they fully explain our first prediction: The more degrees of cultural diversity within a team can cause the worse performances.

The diversity of culture somehow is more likely to uncover more interesting thoughts from diverse cultural backgrounds, so that the team members can acquire more knowledge from a different angle. Therefore, their thoughts are not only limited to one aspect or one level according to only one cultural background, which is a bonus for a good degree of information. Besides, those different thoughts play a crucial role in providing the creativity for the team, another important criterion of the team performance. Summarizing those score criteria, the evaluators interpret High degrees of information, harmonious social integration, and high creativity. All of them introduce another form of prediction of the results — The more degrees of the diversity within a team can cause better performances.

Besides these two linear predictions above, here are another two possibilities that the result could be: A certain degree of cultural diversity that combines all of the advantages or disadvantages of those two predictions due to several confounding variables like personal abilities and characteristics. For instance, the higher diversity group has higher creativity. It reaches the high degrees of information because some

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of the members in this group used to study the different cultural backgrounds which can lead to the deeper fields of information based on the knowledge they learned before, or on the other hand, they inherently excel in the spatial intelligence fields that would produce the high creativity.

### 5. Conclusion

In this study, we identify the influence of cultural diversity on team performance. Eventually, it indicates that there are several possibilities of predictions, including linear and nonlinear correlations that might occur in a diverse group. The result plays an essential role in providing a pragmatic reference for presenting a better team performance while also helping to facilitate the development of either seminar or group work effectiveness in university.

Even though this study has clarified the general patterns of cultural diversity and team performance, there must be existing some inevitable limitations. Particularly, while selecting the participants, the range of study is narrowed down to the college students, in which the result is representative only if the population distributes in the university. Therefore, the issues with companies will be taken into other considerations. Besides, since some participants are inherently introverted while others are extroverted, those who are extroverted are more compelling that may easily lead the whole team to follow his logic and opinions. Since some participants are more excelled in the topic they discussed, it will significantly increase their score of degree of information aspect, which directly affects the final results. Therefore, as every individual has unique features and nurture, the researchers are unable to control this type of confounding variable to improve the accuracy of the study.

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