

Reviewing the Method Design in Journal Article

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Abstract: This paper mainly analyzes the experimental process of a quasi - experimental research paper, analyzes the advantages and disadvantages of the quasi-experiment as well as the advantages and disadvantages of the experiment, and how it should be improved. This article will help many beginners to quickly understand what a quasi-experiment is and how to do a quasi-experiment.

1. Introduction

The journal article “The effect of the use of video texts on ESL listening test-taker performance” acknowledged the significant role of video in the teaching of the second language(L2) listening ability, but Wagner, the author of the article, wants to understand further the role of video in the L2 listening ability test.

Wagner proposed that video has long been used in the L2 learning of listening ability because people had believed that there are many visual components from a video that can help the listeners understand the aural information. Many researchers believed that non-verbal components in the video could help test-takers in listening ability test to comprehend the listening content better. However, for the same reason, the video contains many visual components, so it is rarely used to test the listening ability of L2. Hence test takers cannot obtain a performance that matched their natural listening ability.

Therefore, Wagner conducted a quasi-experiment to find out whether non-verbal components could affect the performance of the L2 listening ability test. According to the gap, the research questions of this study was proposed. Wagner proposed that Multi-variate Analysis of Covariance (MANCOVA) was used to compare performances of two groups. And then, the study was designed according to the research question. In the end, the conclusion was drawn according to the data analysis.

2. Details about the Study

In the article, Wagner pointed out the extensive application of video in L2 listening ability learning and raised research questions. He argued non-verbal components had impacted the performance of L2 listening ability in the video.

We can receive information from the background of the paper that many previous studies on how video affected L2 listening ability had drawn contradictory conclusions. Video had been used in L2 listening ability learning for a long time. However, there were different opinions on an application in the test.

Several studies proved that the use of non-verbal components could not effectively improve the performance of test-takers. However, in several studies, the researchers investigated the attitude of test-takers toward the use of video in the L2 listening ability test. The results showed that most test-takers preferred to use video in the listening ability test.

Therefore, Wagner hoped that this study could help prove to what degree video can be used in the L2 listening ability test to affect test-takers performance. Based on the above reasons, Wagner designed a quasi-experiment in order to demonstrate the research questions.

3. Quasi-Experiment

Quasi-experiment is an empirical study that estimates the causal influence of an intervention on a target. When quasi-experiment was compared with traditional experimental design (randomized controlled trial), quasi-experiment mainly absent randomly assigned treatment or control elements. A quasi-experimental design usually allows researchers to control treatment conditions according to specific criteria rather than randomly. The study belongs to a type of quasi-experimental design: the pre-test-post-test non-equivalent group design (Cohen, Manion, & Morrison, 2011).

In addition, the quasi-experiment can be designed to be as close as possible to an actual experiment. Because in many experimental environments, there are not enough conditions for random selection or allocation, at this point, the quasi-experiment will become a kind of “compromise design” and has been used in the experiment. For example, quasi-experiments are primarily used in education studies because random selection and allocation in the school environment are very impractical (Porte, 2002).

But quasi-experiment has self-limitation. For example, in a randomized experiment, participants have the same chance to be assigned to either a treatment or control group. Therefore, all the differences observed between groups will be due to chance. Any changes in characteristics after intervention can be attributed to the intervention. Quasi-experiment may not be able to demonstrate a causal relationship between treatment conditions and observations convincingly. Internal validity is significantly absent if confounding variables cannot be controlled or explained (Cohen et al., 2011).

4. Method Design in the Study

For an experiment, which method was selected and how the experiment was designed are the key to the experiment's success.

About the design in the study, A pre-test, post-test, quasi-experimental non-randomized group design was applied to investigate the influence of the use of video in the performance of L2 listening ability text. In the study, an experimental group and a control group were created, respectively.

In part of participants, the participants are students in the Community English Program (CEP). Students who came from different countries and cultures range in age from 18 to 60. A listening part of the CEP placement test was used to the pre-test for this study. Finally, the control group was divided into 99 people and the experimental group into 103 people according to the standard that the number of people and the listening ability was as close as possible.

Pre-test and post-test texts were composed of lecturette and two-person dialogue texts. The questions included multiple-choice questions with four answer options and short answers that required participants to answer questions in no more than 25 words.

5. Strengths in the Study

Since the pre-test belonged to an extensive placement test which was a test that all the participants in CEP have to go through, the participants would not be quickly aware that they were participating in the experiment. It was beneficial for the authenticity of the experiment results. Secondly, because participants in the study were from more than 20 countries, participants' age was widely distributed between 18 and 60. The results of the study were universal.

The replicability is the other aspect of whether studies are easy to generalize and universal. The replicability of a study is the crucial point in determining whether the experiment has universality (Downing, 2004). The study explained the design, content, process and other related aspects in detail. All of the details in the method made it easier to replicate for other studies. Meanwhile, it should be noted whether the school cooperates or not. The problem of cooperation did not exist in this study. Through the description of the study, we can receive that the school was actively cooperating with the study.

While discussing a study of internal validity, we should also pay attention to the ambiguity about the direction of causal influence (Bryman, 2012). Because randomized assignment and selection are absent in quasi-experiment, many researchers argued that quasi-experiments lacks internal validity. However, there may be occasions when the temporal sequence in a study was unclear, so that it was not possible to establish which variable affects the other. "In the study, Wagner used a pre-test, post-test, quasi-experimental non-randomized group design. The design of pre-test, post-test and control group ensured the control of internal and external variables. Thus, the direction of causal influence can be determined with certainty.

6. Weakness in the Study

The pre-test was not specially designed for the study because test content was the listening components of a large placement test. Since the placement test focused on practicality, only multiple-choice items were used in the pre-test. All lecturette was presented twice. There were only twelve items, which affected the reliability of the pre-test -- whether the listening ability of test-takers can be truly reflected. Generally speaking, the reliability of the test was widely measured by adding more items. However, the pre-test was a part of a placement test. Researchers cannot increase the number of items to obtain a more objective test performance.

The post-test was custom-made for the study. It consisted of 40 items. The lecturette of post-test was presented once. Compared with a pre-test in times of play, the number of different text presentations may determine whether test-takers were understood or not in lecturette. It can also affect the performance of test-takers.

Cohen, Manion, and Morrison (2011) pointed out that "the intervention factors may not be completely the same for all participants." For example, different practices and contents, such as order, duration, intervention and degree of intervention. In the study, there was no mention of what kind of training the control group did, which may lead to the absence of internal validity. In that case, the difference of performance between the two groups in the post-test will be attributed to the progress of the listening ability in the experimental group rather than the application of video in the test. Therefore, the control group should employ the same teaching method as the experimental group did. To have direct causality in the study, video or audio-only can control the increase of internal and external variables to a certain extent in the post-test of the two groups. In addition, if treatment was only used for video training, participants may be aware of the purpose of the study affecting the authenticity of the experiment. It belonged to the reactive effects of experimental arrangements. Therefore, Wagner should add some interference items to the treatment.

Due to the characteristic of non-random in quasi-experiment, the difference between the experimental group and the control group will occur. Although the differences were avoided as far

as possible in the method design, the study still was non-equivalent and non-randomized. There were still differences between the experimental group and the control group.

7. Conclusion

The quasi-experiment of Wagner made a great effort in method design to obtain an accurate conclusion and provide references for future studies. For example, a detailed description of method design made the study which has reliability. Wagner used a creative way to make a placement test as a pre-test to avoid participants had perceived that they were in a study. But the study also has a weakness. Different instruments in pre-test and post-test can reduce internal effectiveness. The difference of treatment in the experimental group and control group led to an increase in variables.

To sum up, the article was professional and concise, which provided a lot of help for future research.

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