

Psychology Internal Assessment

**Replication and modification of an
Experiment “Picnic Basket” by Brewer and
Treyens in 1981**

Non-IB Psychology

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INDEX

ABSTRACT..... 3

INTRODUCTION..... 4

METHOD..... 4

 Design..... 4

 Participants 4

 Materials 5

 Procedure..... 5

RESULTS – DESCRIPTIVE..... 6

DISCUSSION..... 7

REFERENCE..... 8

APENDIX 9

 Appendix 1 9

 Appendix 2 10

 Appendix 3 11

 Appendix 4 13

ABSTRACT

The experiment “Picnic Basket”, done by Brewer and Treyens in 1981, was conducted to investigate to what extent the schema on human memory was reliable. Researchers hypothesized that a stereotypical schema of an office room would affect memory of an office room. Schema is a mental representation stored in human memory, which informs the expectation from experiences and cultures.

First, the researchers put some objects which did not conform to the office schema, such as a picnic basket and wine bottle. The laboratory, an office room, also contained objects which conform to the office schema, such as desks, typewriter and calendar. Then, 30 university students were gathered as participants. They were, individually, left in the office and waited for 35 seconds. After that, they were taken into another room. Then, researchers asked participants to write down the objects in the office as many as they could remember.

As a result, the participants recalled the things in “typical office room” according to their schema on their memories, such as desks and typewriter. Also, some students recalled things that would be expected in a typical office but were not present in the one. In addition, some did not recall things that were not supposed to be in their “typical office”, such as a wine bottle and picnic basket, because their schema did not have those things. Researchers concluded that the memory was affected by their social schema. Memory was, to some extent, unreliable.

INTRODUCTION

According to results and conclusion of the experiment done by Brewer and Treyens in 1981, human memory was, to some extent, unreliable; it was influenced by the schema developed through experiences and cultures. This fact was proven with the evidence. However, there was a limitation; the experiment lacked ecological validity. Thus, this replication modified some procedures and aimed to re-investigate the reliability of schema, as well as to lessen the possibilities of getting inaccurate results. Because the actual experimental study lacked ecological validity, this replication used a room that participants always used in order to make them feel as comfortable as possible. Therefore, researchers hypothesized the result would be more accurate.

METHOD

Design

The type of this experiment was laboratory/controlled experiment in which the participants were put under a controlled situation and researchers aim to measure certain data. There were six possible ethical considerations (participants' protection, consent, right to withdraw, confidentiality, debriefing and deception) and all of them were strictly followed. The researchers asked participants to sign the consent form and gave each participant a debriefing note after the process. Collected signs were kept in a locked locker.

Participants

The participants were gathered by "opportunity sampling" because this was the most convenient and not time consuming. The target populations were students and teachers in Wells International School, including both Asians and Westerners. Each participant was experimented individually. They were required to have enough English understanding ability because the instruction,

results, and debriefing note were shown in English. They were also required to be able to sign the consent form and totally agree to be part of the experiment.

Materials

- Consent form
- Paper
- Pencil
- Room
- Wine glass
- Grape juice or apple juice
- Picnic basket
- Timer

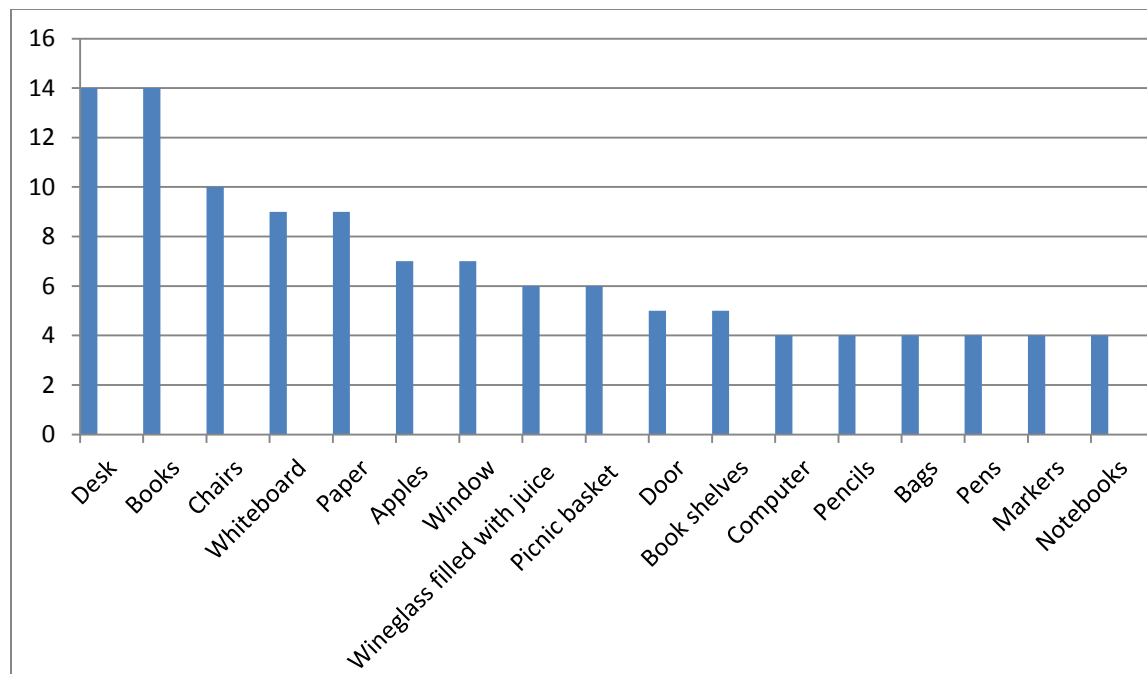
Procedure

1. Prepare a picnic basket and wine glass filled with grape/apple juice in the office (Reference to appendix 4)
2. Get the agreement sign by each participant through handing them a consent form
3. Leave one participant in the office
4. Count 35 seconds by using a timer
5. Let him/her come out of the office room
6. Give him/her a piece of paper and pencil
7. Ask him/her to recall things as many as they can for around 2 minutes
8. Debrief, or explain aim of the experiment to the participants

RESULTS – DESCRIPTIVE

The number of participants who recalled apples on the table was 7 out of 15, which was approximately 47%. The number of participants who recalled wine glass and picnic basket was 6 each out of 15, which was 40%. On the other hand, the number of participants who recalled desks, chair and window was much higher, which was approximately 84%. However, as it was shown below on the table and graph, there were other objects were recalled fewer than the non-typical objects, such as bookshelves and computers. In addition to that, the participants who recalled apples tended to recall picnic basket and wineglass as well.

Objects	Numbers recalled / 15	Percentage
Desk	14	93.3%
Books	14	93.3%
Chairs	10	71.4%
Whiteboard	9	60%
Paper	9	60%
Apples	7	46.7%
Window	7	46.7%
Wineglass filled with juice	6	40%
Picnic basket	6	40%
Door	5	33.3%
Book shelves	5	33.3%
Computer	4	26.7%
Pencils	4	26.7%
Bags	4	26.7%
Pens	4	26.7%
Markers	4	26.7%
Notebooks	4	26.7%



As the table and graph show, the typical objects such as desks, books and chairs are ranked in the first three. Then, untypical objects are ranked. After those objects, other typical objects are ranked. Thus, the untypical objects are recalled less than some typical objects, but also more than some others.

DISCUSSION

The objects which were not supposed to be in the office were recalled by less than 50% of the participants while the objects which were typically in the office were recalled by more than 80% of the participants. Therefore, it can be concluded that the replication experiment gets almost the same result and conclusion as the actual “Picnic Basket” study. The hypothesis of schema theory was proven. However, as a limitation, the number of participants was less than the actual one. Thus, it may be not as accurate as the actual one. Also, the experiment lacked ecological validity as it was carried out under a controlled situation although the room was familiar to all of the participants. In addition to that, as shown above, there were some typical objects which were not recalled by many participants. It means that human memory was, to some extent, not trustable if only put for 30 seconds in a room. Finally, the

participants who recalled apples tended to recall wine glass and picnic basket as well. It means they somehow realized the room was set artificially in order to carry out an experiment. Thus, it lacked ecological validity.

However, the experimental research also had strengths as well as limitations. First, because it had got similar results to the replicated study "Picnic Basket", replication research could support the schema theory stronger. Human memory was, to some extent, unreliable. Second, the experiment could conduct a cause-and-effect relationship of how human memories were unreliable. The schema which has been developed through participant's experience and culture was the cause, affecting their memories' reliability.

In conclusion, the replication of "Picnic Basket" had both limitations and strengths. But it could have similar results after all, proving the schema theory was true and the research study "Picnic Basket (1981)" done by Brewer and Treyens was almost accurate and reliable.

REFERENCE

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APENDIX

Appendix 1

Consent form:

Wells International School
Non-IB Psychology

Consent Form

I have read the consent form and recognize that my participation is entirely voluntary and that I am free to withdraw at any time during the course without consequence. I understand that any information resulting from this study will strictly confidential. I realize that I may ask for further information about this study if I wish to do so at any time.

I have received a copy of this consent form for my own records. I agree to participate in this study.

Signature: _____

Date: _____

Print name of the subject: _____

Appendix 2

Debriefing Note:

Wells International School
Non-IB Psychology

Debriefing Form: Brewer and Treyens (1981)

Thank you for participating in the study of Brewer and Treyens (1981). Schemas are the mental representations that are affected by society and culture we are in. Schemas can contribute to stereotypes and make it difficult to retain new information that does not conform to our established ideas about the world.

The purpose of the study is to investigate to what extent schema on memory is reliable. Our hypothesis is that participants will less likely to recall the non-typical objects such as picnic basket and wine glass filled with grape juice. On the other hand, they will more likely to recall the typical objects in an office such as desks and chairs. Therefore, memory is to some extent unreliable and that there's relationship between schema and memory.

In this study, we will ask the participants to go into a room for 35 seconds, after that, we take them to another room, give them pencil and a piece of paper, ask them to write down everything they saw in the room.

Please contact Emily, Mugi, Pimploy and Vivian if you have any questions regarding this study.
Emily: melover825@gmail.com
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Vivian: 1028885@wells-school.com

Thank you again for your participation.

Appendix 3

Result table

Objects	Numbers recalled / 15	Percentage
Desk	14	93.3%
Books	14	93.3%
Chairs	10	71.4%
Whiteboard	9	60%
Paper	9	60%
Apples	7	46.7%
Window	7	46.7%
Wineglass filled with juice	6	40%
Picnic basket	6	40%
Door	5	33.3%
Book shelves	5	33.3%
Computer	4	26.7%
Pencils	4	26.7%
Bags	4	26.7%
Pens	4	26.7%
Markers	4	26.7%
Notebooks	4	26.7%

Desk: $14/15 * 100 = 93.33333$

Books: $14/15 * 100 = 93.33333$

Chairs: $10/15 * 100 = 66.66666$

Whiteboard: $9/15 * 100 = 60$

Paper: $9/15 * 100 = 60$

Apples: $7/15 * 100 = 46.66666$

Window: $7/15 * 100 = 46.66666$

Wine glass: $6/15 * 100 = 40$

Basket: $6/15 * 100 = 40$

Door: $5/15 * 100 = 33.33333$

Bookshelves: $5/15 * 100 = 33.33333$

Computer: $4/15 * 100 = 26.66666$

Pencils: $4/15 * 100 = 26.66666$

Bags: $4/15 * 100 = 26.66666$

Pens: $4/15 * 100 = 26.66666$

Markers: $4/15 * 100 = 26.66666$

Notebooks: $4/15 * 100 = 26.66666$

Appendix 4

The room which was used for this experiment (with wineglass filled with juice, picnic basket, and apples)

