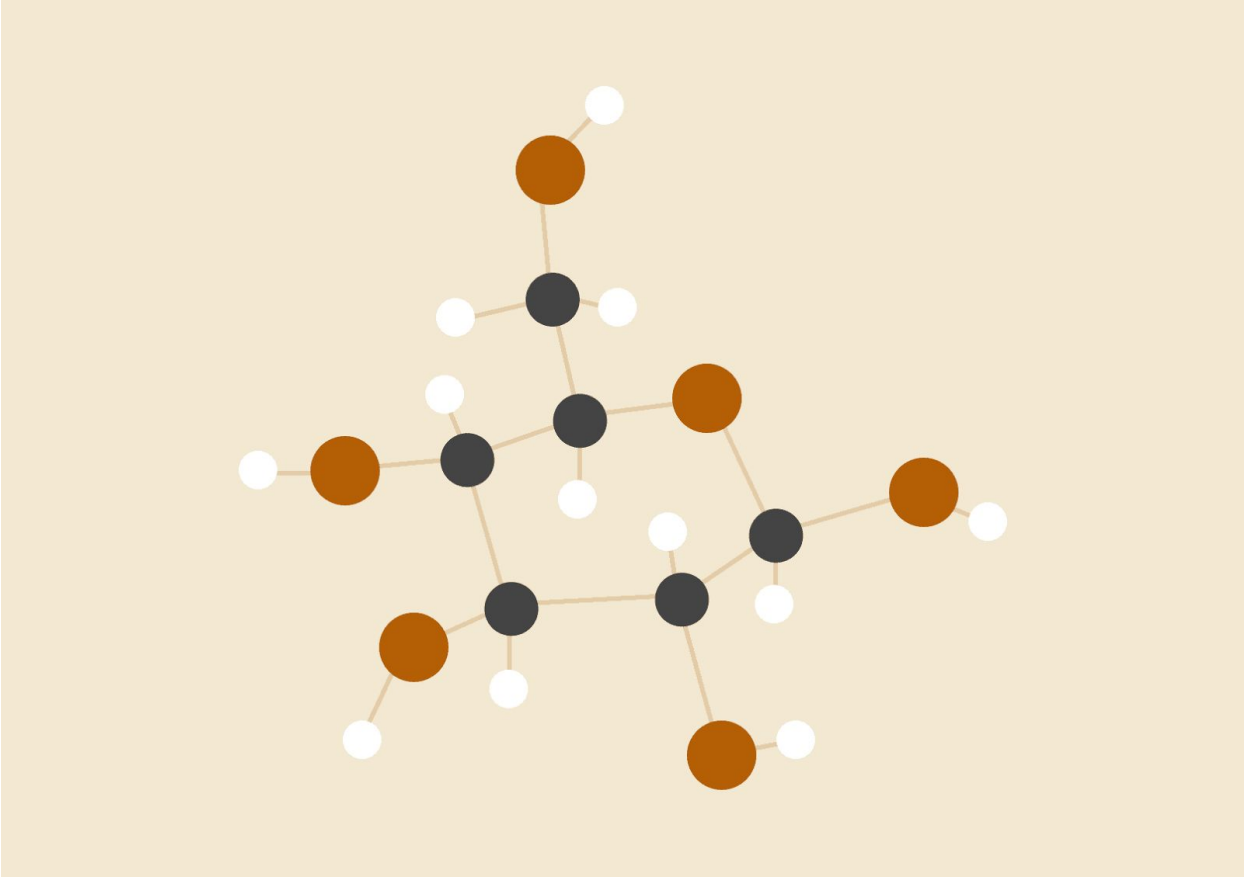
EMPIRICAL RESEARCH REPORT

3D NEWSPAPER



S N V S R K Prudhvi, 150101055

Ankit Vyas, 150101008

Supervised by, Prof. Samit Bhattacharya

Introduction

Empirical study is the collection and analysis of end user data for determining the usability of an interactive system by an observation based investigation. It is based on three themes.

1. Raising and answering questions about the existing design(coming up with testable research questions)
2. Observation and measurement of variables
3. User studies

The conduction of empirical study for 3D Newspaper interactive app is based on the above three themes.

Research Questions

Research questions help in testing the usability of the system. It can also help in comparing the performance like speed, learnability of a system with respect to an existing system. The existing system used for comparison with our system is a similar 3D Newspaper apps which are already there in the market.

Existing System

App: 3D Newspaper

Description: This is an app which contains digital news articles. It contains the current happenings all along the globe.

Question 1: How much time does it take to find the E-wallet and make the transactions?

Independent variables: Age, Experience with smartphone, gender, Educational qualifications

Dependent variables: Time taken to complete the job

Factors	Levels
Screen size	a,b,c,....f[#]
Phone processor	a,b,c

Question 2: How much time does it take to find a trending news article related to sports and read it completely?[&]

[&] It is ensured that we have at least one article is present related to sports

Independent variables: Eyesight, gender, age, Experience in reading articles, experience with smart phone

Dependent variables: Time taken

Factors	Levels
Screen size	a,b,c,....f[#]
No. of articles on sports	1,...,10

*Internet connection speed is ensured to be same for all the users as the survey is done under same conditions.

#for screen size of phones,

A - 1080*1920 B - 750*1334 C - 640*1136 D - 2048*2732

E - 1536*2048 F - 768*1024

Validity of Research Questions

Question 1: Age, gender are basic differences b/w persons which are independent variables b/w people. Experience with smartphone, educational qualifications are responsible for ease of navigating through smart phone and do the transaction

Question 2: Eyesight, gender, Experience in reading are responsible for how he can read the article once he finds it. Age, Experience in smart phones are responsible for how fast can he find the news article in trending news section

Experiment Design

Experiment Design here refers to how to organize people and the conduction of tests with a random distribution of factors, variables.

Participants

The survey is conducted on 10 participants. Based on age, gender, qualification, smartphone experience, eyesight.

S No	Age	Gender	Qualification	Smartphone experience	eyesight	Article Reading Experience
1	18	M	B Tech	I	10	A
2	19	M	B Tech	A	10	I

3	18	F	Phd	A	8	A
4	37	M	M Tech	M	9	M
5	25	M	Phd	M	10	A
6	23	F	B Tech	M	9	M
7	17	F	Phd	I	7	I
8	20	F	12th Board	I	10	M
9	21	M	10th class	A	9	A
10	21	M	B Tech	M	10	I

For Experiences: A-ADVANCED M-MODERATE I-INTERMEDIATE

For Gender: M-MALE F-FEMALE

Procedure for collecting the data:

1. The participants were first explained the general objectives of the experiment
2. The participants were taught some basic functions in the app
3. Then the app was launched and control handed over to the participant
4. The collection of data is initiated now
5. The participant is asked to go through all the modules as accurate as possible
6. Each participant was given 5 tries and the data is collected 3 times and mean is taken

Design Specifications

The design specifications for the two questions are as follows:

For question 1: A 6*3 levels of factors are present. And each participant is given only one level for all the 5 tryouts.

For question 2: A 6*10 levels of factors are present. And each participant is given only one level for all the 5 tryouts.

**And now the level : participant matching is done randomly

Data Tables:

The following times are attained after the experiment for both the questions

For Question 1:

Participant	Screen size	Processor	Time taken(in sec)
1	a	b	40
2	c	c	55
3	d	a	60
4	e	d	70
5	b	b	50
6	a	b	45
7	f	c	50
8	d	a	65
9	c	d	60
10	b	c	70

For Question 2:

Participant	**Screen size**	**No. of articles related to sports**	Time taken(in min)
1	a	1	6
2	c	3	5.6
3	d	4	5
4	e	6	5.7
5	b	8	6.2
6	a	2	7
7	f	7	6.8
8	d	10	6
9	c	9	8
10	b	5	7

Result:

Question no.	1	2
Mean	56.5	6.33
Standard Deviation	10.287	0.87
Variation	105.84	0.76

Thank You