

APPENDICES



UNIVERSITI SAINS ISLAM MALAYSIA
جامعة العلوم الإسلامية الماليزية
ISLAMIC SCIENCE UNIVERSITY OF MALAYSIA

Institution	Islamic Science University of Malaysia
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NAME OF ETHICS COMMITTEE/IRB: Research Ethics Committee, Islamic Science University of Malaysia	ETHICS COMMITTEE/IRB REF NO: USIM/JKEP/2021/148
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PROTOCOL TITLE: User Experience Model in Motivation and Usability for Serious Games

PRINCIPAL INVESTIGATOR: Associate Professor Dr. Waidah Binti Ismail Faculty Science and Technology, Islamic Science University of Malaysia.

The following items (/) related to the above study that is to be conducted by the above investigator have been received and reviewed

Documents

- Research Application Form
- Research Proposal
- Non-Disclosure Agreement
- Project Agreement
- Publication Policy
- Information Sheet (Malay& English) & Consent Form (Malay & English)
- Questionnaire (Malay& English)
- Curriculum Vitae of Researcher
- Other relevant document

The Research Ethics Committee Islamic Science University of Malaysia operates in accordance to the International Conference of Harmonization Good Clinical Practice Guidelines.

Comments (if any): _____

Date of Approval: 26 April 2021



Prof Datuk Dr. Ainoon Othman
Chairman
Research Ethics Committee
Islamic Science University of Malaysia

Research Ethics Committee, Islamic Science University of Malaysia
Faculty of Medicine and Health Sciences
Persiaran Ilmu Putra Nilai, 71800 Nilai Negeri Sembilan MALAYSIA.
Website: <http://www.fpsk.usim.edu.my/>

USIM Certificate of Research Ethics



Jawatankuasa Etika Penyelidikan USIM

USIM: 2.12244 (510)
14 Ramadhan 1442H / 26 April 2021

Prof. Madya Dr. Waidah Binti Ismail
Prof. Madya
Fakulti Sains dan Teknologi
Universiti Sains Islam Malaysia.

Y.Bhg. Prof./Dr./Tuan/Puan,

KELULUSAN ETIKA MENJALANKAN PENYELIDIKAN DI UNIVERSITI SAINS ISLAM MALAYSIA

Tajuk : 'User Experience Model in Motivation and Usability for Serious Games'
Kod Projek : USIM/KEPI/2021-148

Dengan segala hormatnya merujuk kepada perkara di atas.

2. Sukacita dimaklumkan bahawa, Jawatankuasa Etika Penyelidikan USIM bertarikh pada 26 April 2021 telah meluluskan penyelidikan Y.Bhg. Profesor/Dr./Tuan/Puan bagi tajuk di atas seperti maklumat berikut:

- i. Tempoh kajian diluluskan : 1 Jan 2019 hingga 31 Disember 2021
- ii. Peruntukan : RM 126 800 daripada Skim Geran penyelidikan Fundamental (FRGS)

3. Penyelidik perlu mengemukakan **Laporan Kemajuan Setiap 6 Bulan** dan **Laporan Akhir** sebakah sahaja penyelidikan tamat kepada Sekretariat Jawatankuasa Etika Penyelidikan USIM.

Sekian, terima kasih.

"BERILMU, BERDISIPLIN DAN BERTAKWA"

Saya yang menjalankan amanah,

(PROF. DATUK DR. AINOON OTHMAN)
Pengerusi
Jawatankuasa Etika Penyelidikan
Universiti Sains Islam Malaysia

s.k. - Fal JKSP USIM



PUSAT REHABILITASI PERKESO SDN. BHD. (122493-A)
PERTUBUHAN KESELAMATAN SOSIAL
Social Security Organisation
Lot P17263 (H.S. D) 8825)
Jalan Tuah Jaya, Bandar Hijau,
73400 Malacca
No. Tel : +606 235 4000
No. Faks : +606 233 5150
Laman Web : www.sohamalaysia.com
E-mel : rehab.perkeso@sohamalaysia.com

Rajukan Tesis :
Rajukan Kursus : PPRFIA9.600-3(46)
Tarikh : 18 September 2020

Nur Nafisah Binti Sofian
Faculty of Science and Technology
Universiti Sains Islam Malaysia,
Bandar Baru Nilai,
71800 Nilai, Negeri Sembilan.

Dear Madam,

STATUS OF APPROVAL FOR CONTINUOUS ON RESEARCH PROPOSAL, USER EXPERIENCE MODEL IN MOTIVATION AND USABILITY FOR SERIOUS GAMES BASED IN REHABILITATION AT SOCSO TUN RAZAK REHABILITATION CENTER.

I would like to refer to the above mentioned matter.

Research Title : 'User Experience Model in Motivation And Usability For Serious Games Based In Rehabilitation At Socso Tun Razak Rehabilitation Center'
Researcher : Nur Nafisah Binti Sofian
Supervised : Associate Prof. Dr. Waidah Binti Ismail

2. I am pleased to inform you that the Research Committee, Research and Development Department, SOCSO Rehabilitation Centre had approved in principle, the continuous on study research of the above project.

3. The timeline of the study is on 21st September 2020 until 31st December 2020 as per email dated on 04th September 2020.

Thank you

Yours sincerely,


(DR HAFEEZ BIN ROSLI)
Chairman
Research & Development Department
Pusat Rehabilitasi PERKESO Sdn. Bhd.
"Look at the Ability, Not the Disability"

Admission Letter from SOCSO Tun Abdul Razak Rehabilitation Centre

INFORMATION SHEET FOR PATIENT

STUDY TITLE:

User Experience Model in Motivation and Usability for Serious Games

INTRODUCTION

Serious games are the assistive technology tools that applicable to be played with robotics, simulator, and virtual reality. Nowadays, technologies have been one of ways to treat patient in healthcare field including rehabilitation. In this research, the researcher will use the three technologies in rehabilitation centre to collect data on user experiences after playing the games for their therapies and activity of daily life (ADL) and user's perceptions before playing the games.

WHAT WOULD THIS INVOLVE?

User will need to undergo exercises and therapies using selected technologies for rehabilitation based on recommendation of physiotherapies. This research is mainly to study the relationship of user experience on motivation and usability on before, while and after playing the serious games. Selected users will need to complete full 5 sessions with their focused technologies and each session will cost around 15 to 30 minutes. After completing the sessions, user need to fill in questionnaire given by the researcher. Not all questions in open-ended section are necessary to answer.

THE BENEFITS

To know the relationship on user experience factors towards serious games for rehabilitation.

RISKS AND DISCOMFORTS

There is no risks and discomfort as the research does not involve procedures.

CONFIDENTIALITY

The results of the data obtained will be reported in a collected manner with no reference to specific individual. Hence, the data from each individual will remain confidential. As a subject/patient/parent, you have the right to know the results for you only.

DID I HAVE TO TAKE PART?

The participation in this study is voluntary. You may also withdraw at any point in time during the study.

PAYMENT AND COMPENSATION

You do not have to pay for participating in this study and no payment available for participating in this study.

If have any question, you may contact:

Researcher's Name: Nur Nafishah binti Safian

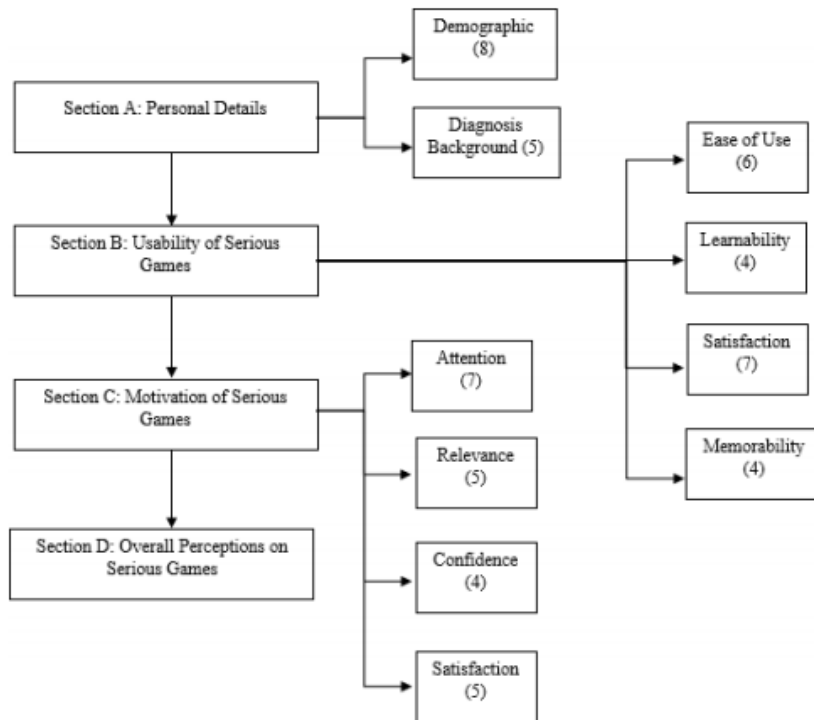
Address: USIM, FST

Tel. No: 017-3040159

Information Sharing to Respondent

SOAL SELIDIK / QUESTIONNAIRES

The distribution of questionnaires will be shown in Figure 1 below followed by the references of each questions.





USER ACCEPTANCE TEST (UAT) for USABILITY AND MOTIVATION

INFORMATION

The questionnaire is designed to examine the user experience in usability of the serious games rehabilitation and motivation gained by the patients who has undergoes rehabilitation in the form of robotic, simulation and virtual reality methods. This form consists of four (4) sections: Section A, Section B, Section C and Section D.

SECTION A: PERSONAL DETAILS

Instruction as follows:

Please circle your answer according to the number in Section A

1. Sex:
 1. Male
 2. Female

2. Age:
 1. Below 20 years old
 2. 21 – 25 years old
 3. 26 – 30 years old
 4. 31 – 35 years old
 5. 36 – 40 years old
 6. Above 40 years old

3. Race:
 1. Malay
 2. Chinese
 3. Indian
 4. Other : _____

4. Religion:
 1. Islam
 2. Christian
 3. Hindu
 4. Buddha
 5. Others: _____

5. Marital Status:
 1. Married
 2. Single
 3. Widow / Widower

6. Academic Qualifications
 1. SRP/PT3
 2. SPM
 3. STPM
 4. Diploma
 5. Degree
 6. Others: _____

7. Job / Occupation Now
 1. Unemployed
 2. Employed.
If employed, state your occupation _____

8. Working Period
 1. Less than 5 years
 2. 6 - 10 years
 3. 11 - 15 years
 4. 16 - 20 years
 5. 20 - 25 years
 6. More than 25 years

Details of Diagnosis

1. Diagnosis:
 1. Stroke
 2. Traumatic Brain Injury
 3. Spinal Cord Injury
 4. Amputee

2. Duration of Disease **BEFORE** admitted to Rehab PERKESO:
 1. Less than 6 months
 2. 6 - 12 months
 3. Less than 2 years
 4. 2 - 4 years
 5. More than 4 years

3. Side of Injuries:
 1. Left Upper Limb
 2. Right Upper Limb
 3. Left Lower Limb
 4. Right Lower Limb
 5. Both Left Upper and Lower Limb
 6. Both Right Upper and Lower Limb
 7. Upper Limb

8. Lower Limb

4. Duration of Treatment **BEFORE** admitted to Rehab PERKESO:
1. Less than 6 months
 2. 6 – 12 months
 3. Less than 2 years
 4. 2 – 4 years
 5. More than 4 years
5. Duration of Treatment in Rehab PERKESO:
1. Less than 2 weeks
 2. more than 2 weeks to a month
 3. more than a month to 2 months
 4. more than 2 months to 3 months
 5. more than 3 months

SECTION B: USABILITY

Instructions as follows:

Please tick (/) for ONE choice in the answer space provided according to the scale of the given measurement.

Measurement Scales:

- 1 - Strongly Disagree
- 2 - Disagree
- 3 - Neither Agree nor Disagree
- 4 - Agree
- 5 - Strongly Agree

No	Subject	1	2	3	4	5
Ease of Use (Kemudahan Penggunaan)						
1	I can understand the instructions well					
2	I can easily follow the tutorials given					
3	I can easily repeat movements whenever I make mistakes					
4	The presentation of the application is simple					
5	The presentation is practically adaptable					
6	Overall I can adapt with the application					
Learnability (Kebolehbelajaran)						
1	I find ease in learning the movements through tutorials					
2	I can understand the purpose of the movements shows					
3	The application raises my learning ability in my daily activities					
4	Overall application easy to use					
Satisfaction (Kepuasan)						
1	I am satisfied with the color used in the application					
2	The application used appropriate design					
3	I am satisfied as the application is simple					

4	I feel comfort using the application					
5	The application has minimal error					
6	The presentation information is clear and appropriate to users					
7	Overall application is good					
Memorability (Ingatan)						
1	I can understand clearly the instructions given					
2	I can remember every steps of instructions in the tutorial while playing the game					
3	Even after some period, I still can remember the instructions steps					
4	Overall application is memorable					

SECTION C: MOTIVATION

Instructions as follows:

Please tick (/) for ONE choice in the answer space provided according to the scale of the given measurement.

Measurement Scales:

- 1 - Strongly Disagree
- 2 - Disagree
- 3 - Neither Agree nor Disagree
- 4 - Agree
- 5 - Strongly Agree

No	Subject	1	2	3	4	5
Attention (Perhatian)						
1	I can pay my attention to the instructions given					
2	I can focus on the movement while playing the games					
3	I get less distraction on the design while playing the games					
4	I get less distraction with the music used while playing the games					
5	The color used on the application can give attention					
6	I can stay focus after 15 or 30 minutes playing the games					
7	I can do the movement by focusing my sight and hearing while playing the games					
Relevance (Perkaitan)						
1	I can feel the relationship between playing the games and daily living					
2	I get clear instructions from the games					
3	I can set up a new goals on the next session after playing the previous game					

4	I find the content of the games are suitable for me to play					
5	I can boost my interest up by choosing any types of games					
Confidence (Keyakinan)						
1	I feel motivated after seeing my final scores at the end of the games					
2	I feel excited when I can do the movement and follow the instructions correctly					
3	I can understand the scoring result after playing the games					
4	I have positive experiences while playing the games					
Satisfaction (Kepuasan)						
1	I feel release when I can complete the games successfully					
2	I can sense the my confidence level up after seeing my final score					
3	I think I can do better for the next sessions while playing the games					
4	I can maintain my motivation while playing and after getting my final score					
5	I feel eager to play the games continuously					

SECTION D: OVERALL PERCEPTIONS

Instructions as follows:

Please tick (/) for ONE choice in the answer space provided according to the scale of the given measurement.

Measurement Scales:

- 1 - Strongly Disagree
- 2 - Disagree
- 3 - Neither Agree nor Disagree
- 4 - Agree
- 5 - Strongly Agree

No	Subject	1	2	3	4	5
Used of Serious Games Rehabilitation						
1	The interface design of the serious games is attractive					
2	The way of giving instruction is understandable in serious games					
3	The color chosen in the serious games are suitable					
4	The scoring details in serious games are shown clearly to the user					
5	The serious games helping in improving your disease					
6	The overall used of serious games is good for rehabilitation					

1. Do you think serious games for rehabilitation is effective in helping you to increase your motivations? If YES, Why?

2. Do you think serious games can be deployed at home? If YES, Why? If NO, what is the limitation?

3. Overall feeling using the serious games in rehabilitation: You can pick more than one by ' / ' in the bracket.

- | | |
|----------------------------------|-----------------------------------|
| <input type="checkbox"/> FUN | <input type="checkbox"/> NORMAL |
| <input type="checkbox"/> EXCITED | <input type="checkbox"/> BORED |
| <input type="checkbox"/> ENJOY | <input type="checkbox"/> MOTIVATE |
| <input type="checkbox"/> TIRED | <input type="checkbox"/> HAPPY |

4. If the patients, playing serious games more than one, which serious games is the best to play? Why?

5. Select the serious games by numbering the best as '1' follow by '2' or '3' in the bracket

- Virtual Reality
- Robotics
- Simulator

