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Lampiran 1.
Persetujuan Etik Penelitian, Fakultas Kedokteran gigi, Universitas Hasanuddin

KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN
FAKULTAS KEDOKTERAN GIGI
RUMAH SAKIT GIGI DAN MULUT PENDIDIKAN
KOMITE ETIK PENELITIAN KESEHATAN
Sekretariat : JL.Kandea No. 5 Makassar Lantai 2, Gedung Lama RSGM Unhas

RSGMP

REKOMENDASI PERSETUJUAN ETIK
Nomor: 0163/PL.09/KEPK FKG-RSGM UNHAS/2024

Tanggal: 9 Juli 2024

Dengan ini menyatakan bahwa protokol dan dokumen yang berhubungan dengan protokol berikut ini telah mendapatkan persetujuan etik:

No. Protokol	UH 17121173	No Protokol Sponsor	
Peneliti Utama	drg. Carolina Stevanie	Sponsor	Pribadi
Judul Peneliti	Pengembangan teknologi mixed reality sebagai pre-surgical training pada bedah ortognati		
No. Versi Protokol	1	Tanggal Versi	12 Juni 2024
No. Versi Protokol		Tanggal Versi	
Tempat Penelitian	Fakultas Kedokteran Gigi, Universitas Hasanuddin		
Dokumen Lain			
Jenis Review	[x] Exempted Review [ ] Expedited Review [ ] Fullboard Review	Masa Berlaku 9 Juli 2024 - 9 Juli 2025	Frekuensi Review Lanjutan
Ketua Komisi Etik Penelitian	Nama: drg.Erni Marlina, Ph.D., Sp.PM., SubSp.Inf (K)	Tanda Tangan	Tanggal 9 Juli 2024
Sekretaris Komisi Etik Penelitian	Nama: drg. Muhammad Ikbal, Sp.Pros	Tanda Tangan	Tanggal 9 Juli 2024

Kewajiban peneliti utama:

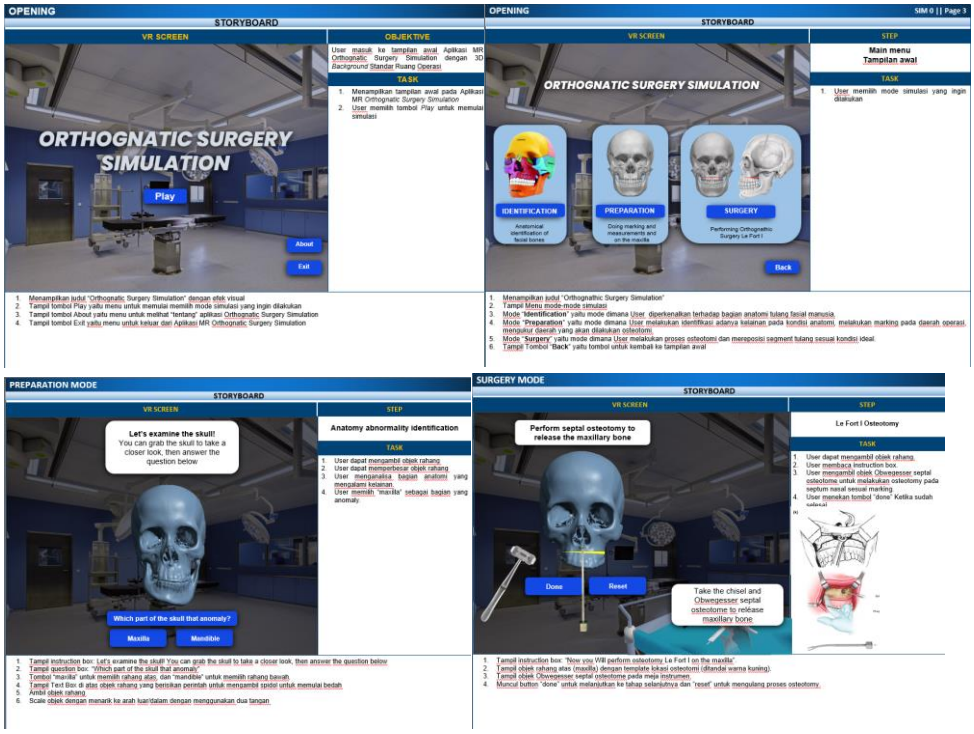
- Menyerahkan Amandemen Protokol untuk persetujuan sebelum diimplementasikan
- Menyerahkan laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan lapor SUSAR dalam 72 jam setelah peneliti utama menerima laporan.
- Menyerahkan laporan kemajuan (*progress report)* setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah.
- Menyerahkan laporan akhir setelah penelitian berakhir.
- Melaporkan penyimpangan dari protokol yang disetujui (*protocol deviation/violation)*
- Mematuhi semua aturan yang berlaku.

Lampiran 2.

Storyboard pre-surgical training bedah ortognati berbasis *mixed reality*

Available online:

https://docs.google.com/presentation/d/1CpHPIpGvi3VgYjSfJjVwUeA9wTQu5G4qhFO0bRSI4bA/edit?usp=sharing



Lampiran 3.

Form *Mixed Reality Neuroscience Questionnaire* (MRNQ)

Mixed Reality Neuroscience Questionnaire

Pakar

Program Studi:_____

Nama :_____

Keahlian:_____

ⓘ Mohon lingkari jawaban yang paling mewakili pendapat anda

Pengalaman pengguna

a. Bagaimana tingkat imersifitas yang Anda alami

1	2	3	4	5	6	7
Sangat sangat rendah	Sangat rendah	Rendah	Cukup	Tinggi	Sangat tinggi	Sangat sangat tinggi

b. Bagaimana tingkat kepuasan anda terhadap pengalaman *mixed reality* (MR)/*immersive reality* (IR) yang anda alami

1	2	3	4	5	6	7
Sangat sangat rendah	Sangat rendah	Rendah	Cukup	Tinggi	Sangat tinggi	Sangat sangat tinggi

c. Bagaimana kualitas grafisnya

1	2	3	4	5	6	7
Sangat sangat rendah	Sangat rendah	Rendah	Cukup	Tinggi	Sangat tinggi	Sangat sangat tinggi

d. Bagaimana kualitas suaranya

1	2	3	4	5	6	7
Sangat sangat rendah	Sangat rendah	Rendah	Cukup	Tinggi	Sangat tinggi	Sangat sangat tinggi

e. Bagaimana kualitas teknologi *mixed reality* (MR)/*immersive reality* (IR) secara keseluruhan (perangkat keras dan pendukung lainnya)

1	2	3	4	5	6	7
Sangat sangat rendah	Sangat rendah	Rendah	Cukup	Tinggi	Sangat tinggi	Sangat sangat tinggi

Alur aplikasi virtual

a. Seberapa mudah menggunakan sistem navigasi di lingkungan *mixed reality*

1	2	3	4	5	6	7
Sangat sangat sulit	Sangat sulit	Sulit	Cukup	Mudah	Sangat mudah	Sangat sangat mudah

b. Seberapa mudah bergerak secara fisik di lingkungan virtual

1	2	3	4	5	6	7
Sangat sangat sulit	Sangat sulit	Sulit	Cukup	Mudah	Sangat mudah	Sangat sangat mudah

c. Seberapa mudah mengambil dan/atau menempatkan barang di lingkungan *mixed reality*

1	2	3	4	5	6	7
Sangat sangat sulit	Sangat sulit	Sulit	Cukup	Mudah	Sangat mudah	Sangat sangat mudah

d. Seberapa mudah menggunakan barang-barang di lingkungan *mixed reality*

1	2	3	4	5	6	7
Sangat sangat sulit	Sangat sulit	Sulit	Cukup	Mudah	Sangat mudah	Sangat sangat mudah

Mixed Reality Neuroscience Questionnaire

Mahasiswa

Program Studi:_____

Nama :_____

Tahun ke:_____

ⓘ Mohon lingkari jawaban yang paling mewakili pendapat anda

Pengalaman pengguna

a. Bagaimana tingkat imersifitas yang Anda alami

1	2	3	4	5	6	7
Sangat sangat rendah	Sangat rendah	Rendah	Cukup	Tinggi	Sangat tinggi	Sangat sangat tinggi

b. Bagaimana tingkat kepuasan anda terhadap pengalaman *mixed reality* (MR)/*immersive reality* (IR) yang anda alami

1	2	3	4	5	6	7
Sangat sangat rendah	Sangat rendah	Rendah	Cukup	Tinggi	Sangat tinggi	Sangat sangat tinggi

c. Bagaimana kualitas grafisnya

1	2	3	4	5	6	7
Sangat sangat rendah	Sangat rendah	Rendah	Cukup	Tinggi	Sangat tinggi	Sangat sangat tinggi

d. Bagaimana kualitas suaranya

1	2	3	4	5	6	7
Sangat sangat rendah	Sangat rendah	Rendah	Cukup	Tinggi	Sangat tinggi	Sangat sangat tinggi

e. Bagaimana kualitas teknologi *mixed reality* (MR)/*immersive reality* (IR) secara keseluruhan (perangkat keras dan pendukung lainnya)

1	2	3	4	5	6	7
Sangat sangat rendah	Sangat rendah	Rendah	Cukup	Tinggi	Sangat tinggi	Sangat sangat tinggi

Alur aplikasi virtual

a. Seberapa mudah menggunakan sistem navigasi di lingkungan *mixed reality*

1	2	3	4	5	6	7
Sangat sangat sulit	Sangat sulit	Sulit	Cukup	Mudah	Sangat mudah	Sangat sangat mudah

b. Seberapa mudah bergerak secara fisik di lingkungan virtual

1	2	3	4	5	6	7
Sangat sangat sulit	Sangat sulit	Sulit	Cukup	Mudah	Sangat mudah	Sangat sangat mudah

c. Seberapa mudah mengambil dan/atau menempatkan barang di lingkungan *mixed reality*

1	2	3	4	5	6	7
Sangat sangat sulit	Sangat sulit	Sulit	Cukup	Mudah	Sangat mudah	Sangat sangat mudah

d. Seberapa mudah menggunakan barang-barang di lingkungan *mixed reality*

1	2	3	4	5	6	7
Sangat sangat sulit	Sangat sulit	Sulit	Cukup	Mudah	Sangat mudah	Sangat sangat mudah

Lampiran 4.

Form *Clinical-Virtual Evaluation Questionnaire* (CVEQ)

Clinical-Virtual Evaluation Questionnaire

(Pakar)

Hari/tanggal: _____

Nama:_____

No.	Pertanyaan	Sangat setuju	Setuju	Netral	Tidak setuju	Sangat tidak setuju
	Pengalaman dan Reabilitas					
1.	Saya menyukai metode belajar dan pelatihan seperti ini.	☐	☐	☐	☐	☐
2.	Saya dengan cepat dan mudah menangkap prosedur operasi ortognatik.	☐	☐	☐	☐	☐
3.	Pembedahan ditampilkan secara akurat dan sesuai dalam sistem.	☐	☐	☐	☐	☐
4.	Lingkungan ruang operasi ditampilkan secara akurat dan sesuai dalam sistem.	☐	☐	☐	☐	☐
5.	Instrumen ditampilkan secara akurat dan sesuai dalam sistem.	☐	☐	☐	☐	☐
6.	Saya dapat menyelesaikan peran operator dalam pembedahan dengan sangat baik.	☐	☐	☐	☐	☐
7.	Panduan dan langkah-langkahnya sama sekali tidak sulit bagi saya.	☐	☐	☐	☐	☐
8.	Saya puas dengan metode pengajaran dan pelatihan yang saya dapatkan.	☐	☐	☐	☐	☐
9.	Aplikasi ini dapat digunakan sebagai pengetahuan praktis awal bedah ortognati.	☐	☐	☐	☐	☐
	Peningkatan pengetahuan					
10.	Berdasarkan konten pelatihan dan pemahaman yang saya yang peroleh, saya dapat dengan jelas memahami struktur anatomi area bedah ortognati.	☐	☐	☐	☐	☐
11.	Metode pengajaran ini secara efektif dapat membantu saya memahami prosedur bedah ortognati dan memperdalam pemahaman saya mengenai bedah ortognati.	☐	☐	☐	☐	☐
12.	Pelatihan ini sangat membantu saya dalam mempelajari tahapan prosedur bedah ortognati.	☐	☐	☐	☐	☐
13.	Pelatihan ini sangat membantu saya dalam mempelajari kesulitan dalam tatalaksana bedah ortognati.	☐	☐	☐	☐	☐
14.	Berdasarkan konten pelatihan dan pemahaman saya, saya dapat secara mandiri melakukan desain bedah ortognati di masa depan.	☐	☐	☐	☐	☐
	Efek Samping					
15.	Saya merasa pusing selama/setelah pelatihan	☐	☐	☐	☐	☐

Clinical-Virtual Evaluation Questionnaire

(Mahasiswa)

Hari/tanggal: _____

Nama:_____

No.	Pertanyaan	Sangat setuju	Setuju	Netral	Tidak setuju	Sangat tidak setuju
	Pengalaman dan Reabilitas					
1.	Saya menyukai metode belajar dan pelatihan seperti ini.	☐	☐	☐	☐	☐
2.	Saya dengan cepat dan mudah menangkap prosedur operasi ortognatik.	☐	☐	☐	☐	☐
3.	Pembedahan ditampilkan secara akurat dan sesuai dalam sistem.	☐	☐	☐	☐	☐
4.	Lingkungan ruang operasi ditampilkan secara akurat dan sesuai dalam sistem.	☐	☐	☐	☐	☐
5.	Instrumen ditampilkan secara akurat dan sesuai dalam sistem.	☐	☐	☐	☐	☐
6.	Saya dapat menyelesaikan peran operator dalam pembedahan dengan sangat baik.	☐	☐	☐	☐	☐
7.	Panduan dan langkah-langkahnya sama sekali tidak sulit bagi saya.	☐	☐	☐	☐	☐
8.	Saya puas dengan metode pengajaran dan pelatihan yang saya dapatkan.	☐	☐	☐	☐	☐
9.	Aplikasi ini dapat digunakan sebagai pengetahuan praktis awal bedah ortognati.	☐	☐	☐	☐	☐
	Peningkatan pengetahuan					
10.	Berdasarkan konten pelatihan dan pemahaman yang saya yang peroleh, saya dapat dengan jelas memahami struktur anatomi area bedah ortognati.	☐	☐	☐	☐	☐
11.	Metode pengajaran ini secara efektif dapat membantu saya memahami prosedur bedah ortognati dan memperdalam pemahaman saya mengenai bedah ortognati.	☐	☐	☐	☐	☐
12.	Pelatihan ini sangat membantu saya dalam mempelajari tahapan prosedur bedah ortognati.	☐	☐	☐	☐	☐
13.	Pelatihan ini sangat membantu saya dalam mempelajari kesulitan dalam tatalaksana bedah ortognati.	☐	☐	☐	☐	☐
14.	Berdasarkan konten pelatihan dan pemahaman saya, saya dapat secara mandiri melakukan desain bedah ortognati di masa depan.	☐	☐	☐	☐	☐
	Efek Samping					
15.	Saya merasa pusing selama/setelah pelatihan	☐	☐	☐	☐	☐

Lampiran 5

Persetujuan Partisipasi Penelitian (Pakar dan Mahasiswa)

Lampiran 8

LEMBAR PERSETUJUAN SETELAH PENJELASAN

Orthognathic Surgery Simulator – Mixed Reality Technology Based

Nama:_____

Telp:_____

Alamat:_____

Pernyataan Umum tentang Tujuan dan Prosedur Program:

Program pelatihan ini bertujuan untuk meningkatkan pemahaman dan keterampilan yang berkaitan dengan bedah ortognatik dengan menggunakan teknologi *mixed reality*. Terdapat 3 bagian pelatihan, yaitu identifikasi anatomi, persiapan bedah, dan simulator bedah ortognatik. Setelah itu, responden dimohon untuk mengisi kuesioner untuk menilai pengalaman dan hasil yang mereka rasakan setelah mengikuti pelatihan.

Deskripsi potensi risiko:

Penggunaan *head mounted display* yang dipasang di kepala dapat menyebabkan pusing, disorientasi, dan sakit kepala pada sebagian orang.
Demi kenyamanan anda, responden yang memakai kacamata dapat terus memakainya.

Pernyataan persetujuan:

Setelah mendengar/membaca dan memahami penjelasan yang diberikan mengenai tujuan, manfaat, dan apa yang akan dilakukan dalam penelitian ini, maka saya menyetujui untuk berpartisipasi dalam penelitian ini secara sukarela tanpa ada paksaan. Saya mengetahui bahwa keikutsertaan saya dalam penelitian ini bersifat sukarela tanpa paksaan, sehingga saya dapat menolak untuk berpartisipasi atau mengundurkan diri dari penelitian ini. Saya berhak mengajukan pertanyaan atau meminta klarifikasi kepada peneliti jika ada hal-hal yang kurang jelas atau ada hal-hal yang ingin saya ketahui mengenai penelitian ini.

Saya juga memahami bahwa keamanan dan kerahasiaan data penelitian akan dijamin dan dengan ini saya menyetujui semua data saya yang dihasilkan dalam penelitian ini untuk disajikan dalam bentuk lisan maupun tulisan.

Dengan membubuhkan tanda tangan di bawah ini, saya menyatakan keikutsertaan saya secara sukarela dalam penelitian ini.

(.....)
Responden

Lampiran 7

LEMBAR PERSETUJUAN SETELAH PENJELASAN

Orthognathic Surgery Simulator – Mixed Reality Technology Based

Nama:_____

Telp:_____

Alamat:_____

Pernyataan Umum tentang Tujuan dan Prosedur Program:

Program pelatihan ini bertujuan untuk meningkatkan pemahaman dan keterampilan yang berkaitan dengan bedah ortognatik dengan menggunakan teknologi *mixed reality*. Terdapat 3 bagian pelatihan, yaitu identifikasi anatomi, persiapan bedah, dan simulator bedah ortognatik. Setelah itu, responden dimohon untuk mengisi kuesioner untuk menilai pengalaman dan hasil yang mereka rasakan setelah mengikuti pelatihan.

Deskripsi potensi risiko:

Penggunaan *head mounted display* yang dipasang di kepala dapat menyebabkan pusing, disorientasi, dan sakit kepala pada sebagian orang.
Demi kenyamanan anda, responden yang memakai kacamata dapat terus memakainya.

Pernyataan persetujuan:

Setelah mendengar/membaca dan memahami penjelasan yang diberikan mengenai tujuan, manfaat, dan apa yang akan dilakukan dalam penelitian ini, maka saya menyetujui untuk berpartisipasi dalam penelitian ini secara sukarela tanpa ada paksaan. Saya mengetahui bahwa keikutsertaan saya dalam penelitian ini bersifat sukarela tanpa paksaan, sehingga saya dapat menolak untuk berpartisipasi atau mengundurkan diri dari penelitian ini. Saya berhak mengajukan pertanyaan atau meminta klarifikasi kepada peneliti jika ada hal-hal yang kurang jelas atau ada hal-hal yang ingin saya ketahui mengenai penelitian ini.

Saya juga memahami bahwa keamanan dan kerahasiaan data penelitian akan dijamin dan dengan ini saya menyetujui semua data saya yang dihasilkan dalam penelitian ini untuk disajikan dalam bentuk lisan maupun tulisan.

Dengan membubuhkan tanda tangan di bawah ini, saya menyatakan keikutsertaan saya secara sukarela dalam penelitian ini.

(.....)
Pakar

Lampiran 6

Instruction sheet

Instruction sheet

Mixed Reality Training of
Le Fort I Orthognathic Surgery

Welcome!

This session will guide you through Le Fort I orthognathic surgery procedures in a mixed reality environtment. Please follow the instruction carefully to get best experience of your training.

1. Training objectives

The goal of this training systems is to help you:

- Understands the key of Le Fort I orthognathic surgery procedures, including anatomical structures, instrumentations, and whole procedures based on real surgical procedures.
- Repeated practice in safe simulated environment
- Develop confidence and knowledge improvement before handling real patients

2. Learning objectives:

After following the training session, students were able to:

- Understand anatomical structure related to Le Fort I orthognathic surgery
- Able to understand and identify the abnormality of facial and the need of treatment
- Understand the instrumentations needed and how to use it for Le Fort I orthognathic surgery
- Understand and able to perform surgical procedure of Le Fort I orthognathic surgery

3. Prepare yourself

Before following the training session, be sure that you don have any history of seizzures, and other medical problems regarding to virtual simulations.

4. Procedure steps

Step 1: Put on the head mouted display/ MR Headset and adjust it for comfortable fit.

Step 2: Handle the controller on the right and left hand according to its instruction. Follow the screen prompt to begin the session.

Step 3: At the main menu screen, shown 3 modes of training (anatomy, preparation, surgery). Choose anatomy mode first to learn anatomical structure.

Step 4: In anatomy mode, put you finger in the anatomy structure's button, then information box will appear explaining the structure

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Lampiran 7.

Uji validitas dan reliabilitas dengan uji korelasi *Pearson* dan uji reliabilitas Alpha Cronbach's

1. Uji validitas korelasi *Pearson* terhadap kuesioner MRNQ

Correlations

		Question_1	Question_2	Question_3	Question_4	Question_5	Question_6	Question_7	Question_8	Question_9	Question_10	Question_11	Question_12	Question_13	Question_14	Question_15	Question_16	Question_17	Question_18	Question_19	Question_20	Total_per_responden
Question_1	Pearson Correlation	1	.693**	.494**	.534**	.525**	.299	.299	.382*	.263	.352*	.294	.144	.361*	.305	.170	-.076	.024	.188	.069	-.032	.406*
	Sig. (2-tailed)		<.001	.003	.001	.002	.091	.091	.028	.139	.044	.097	.423	.039	.084	.345	.675	.894	.295	.703	.859	.019
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_2	Pearson Correlation	.693**	1	.771**	.663**	.716**	.492**	.452**	.615**	.546**	.557**	.575**	.489**	.543**	.539**	.428*	.241	.361*	.493**	.422*	.285	.736**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001	.004	.008	<.001	.001	<.001	<.001	.004	.001	.001	.013	.177	.039	.004	.014	.108	<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_3	Pearson Correlation	.494**	.771**	1	.634**	.770**	.632**	.563**	.758**	.666**	.730**	.607**	.586**	.632**	.685**	.628**	.203	.198	.376*	.330	.181	.748**
	Sig. (2-tailed)	.003	<.001		<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	.257	.270	.031	.061	.312	<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_4	Pearson Correlation	.534**	.663**	.634**	1	.684**	.469**	.345*	.567**	.499**	.567**	.499**	.495**	.600**	.485**	.343*	.246	.305	.388*	.462**	.318	.678**
	Sig. (2-tailed)	.001	<.001	<.001		<.001	.006	.049	<.001	.003	<.001	.003	.003	<.001	.004	.051	.168	.085	.026	.007	.071	<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_5	Pearson Correlation	.525**	.716**	.770**	.684**	1	.657**	.692**	.783**	.729**	.744**	.618**	.473**	.675**	.672**	.449**	.268	.398*	.553**	.479**	.404*	.819**
	Sig. (2-tailed)	.002	<.001	<.001	<.001		<.001	<.001	<.001	<.001	<.001	<.001	.005	<.001	<.001	.009	.132	.022	<.001	.005	.020	<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_6	Pearson Correlation	.299	.492**	.632**	.469**	.657**	1	.753**	.685**	.756**	.821**	.709**	.718**	.557**	.726**	.617**	.219	.300	.521**	.362*	.358*	.761**
	Sig. (2-tailed)	.091	.004	<.001	.006	<.001		<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	.222	.090	.002	.038	.041	<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_7	Pearson Correlation	.299	.452**	.563**	.345*	.692**	.753**	1	.774**	.733**	.774**	.530**	.504**	.581**	.705**	.676**	.230	.313	.414*	.363*	.300	.715**
	Sig. (2-tailed)	.091	.008	<.001	.049	<.001	<.001		<.001	<.001	<.001	.002	.003	<.001	<.001	<.001	.198	.076	.017	.038	.089	<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_8	Pearson Correlation	.382*	.615**	.758**	.567**	.783**	.685**	.774**	1	.913**	.862**	.701**	.555**	.633**	.675**	.635**	.162	.266	.441*	.381*	.272	.786**
	Sig. (2-tailed)	.028	<.001	<.001	<.001	<.001	<.001	<.001		<.001	<.001	<.001	<.001	<.001	<.001	<.001	.367	.132	.010	.029	.125	<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_9	Pearson Correlation	.263	.546**	.666**	.499**	.729**	.756**	.733**	.913**	1	.913**	.819**	.642**	.578**	.683**	.700**	.259	.369*	.519**	.397*	.336	.809**
	Sig. (2-tailed)	.139	.001	<.001	.003	<.001	<.001	<.001	<.001		<.001	<.001	<.001	<.001	<.001	<.001	.145	.035	.002	.022	.056	<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_10	Pearson Correlation	.352*	.557**	.730**	.567**	.744**	.821**	.774**	.862**	.913**	1	.772**	.683**	.676**	.761**	.745**	.186	.318	.418*	.356*	.294	.812**
	Sig. (2-tailed)	.044	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001		<.001	<.001	<.001	<.001	<.001	.299	.072	.016	.042	.097	<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_11	Pearson Correlation	.294	.575**	.607**	.499**	.618**	.709**	.530**	.701**	.819**	.772**	1	.807**	.667**	.639**	.663**	.308	.471**	.567**	.499**	.447*	.816**
	Sig. (2-tailed)	.097	<.001	<.001	.003	<.001	<.001	.002	<.001	<.001	<.001		<.001	<.001	<.001	<.001	.081	.006	<.001	.003	.009	<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_12	Pearson Correlation	.144	.489**	.586**	.495**	.473**	.718**	.504**	.555**	.642**	.683**	.807**	1	.690**	.749**	.687**	.373*	.467**	.542**	.568**	.522**	.789**
	Sig. (2-tailed)	.423	.004	<.001	.003	.005	<.001	.003	<.001	<.001	<.001	<.001		<.001	<.001	<.001	.032	.006	.001	<.001	.002	<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_13	Pearson Correlation	.361*	.543**	.632**	.600**	.675**	.557**	.581**	.633**	.578**	.676**	.667**	.690**	1	.553**	.486**	.188	.338	.393*	.441*	.404*	.725**
	Sig. (2-tailed)	.039	.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001		<.001	.004	.294	.055	.024	.010	.020	<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_14	Pearson Correlation	.305	.539**	.685**	.485**	.672**	.726**	.705**	.675**	.683**	.761**	.639**	.749**	.553**	1	.815**	.381*	.425*	.607**	.551**	.459**	.830**
	Sig. (2-tailed)	.084	.001	<.001	.004	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001		<.001	.029	.014	<.001	<.001	.007	<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_15	Pearson Correlation	.170	.428*	.628**	.343	.449**	.617**	.676**	.635**	.700**	.745**	.663**	.687**	.486**	.815**	1	.304	.328	.423*	.376*	.284	.707**
	Sig. (2-tailed)	.345	.013	<.001	.051	.009	<.001	<.001	<.001	<.001	<.001	<.001	<.001	.004	<.001		.086	.063	.014	.031	.110	<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_16	Pearson Correlation	-.076	.241	.203	.246	.268	.219	.230	.162	.259	.186	.308	.373*	.188	.381*	.304	1	.598**	.613**	.582**	.701**	.534**
	Sig. (2-tailed)	.675	.177	.257	.168	.132	.222	.198	.367	.145	.299	.081	.032	.294	.029	.086		<.001	<.001	<.001	<.001	.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_17	Pearson Correlation	.024	.361*	.198	.305	.398*	.300	.313	.268	.369*	.318	.471**	.467**	.338	.425*	.328	.598**	1	.808**	.885**	.885**	.680**
	Sig. (2-tailed)	.894	.039	.270	.085	.022	.090	.076	.132	.035	.072	.006	.006	.055	.014	.063	<.001		<.001	<.001	<.001	<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_18	Pearson Correlation	.188	.493**	.376*	.388*	.553**	.521**	.414*	.441*	.519**	.418*	.567**	.542**	.393*	.607**	.423*	.613**	.808**	1	.844**	.851**	.796**
	Sig. (2-tailed)	.295	.004	.031	.026	<.001	.002	.017	.010	.002	.016	<.001	.001	.024	<.001	.014	<.001	<.001		<.001	<.001	<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_19	Pearson Correlation	.069	.422*	.330	.462**	.479**	.362*	.363*	.381*	.397*	.356*	.499**	.568**	.441*	.551**	.376*	.582**	.885**	.844**	1	.887**	.755**
	Sig. (2-tailed)	.703	.014	.061	.007	.005	.038	.038	.029	.022	.042	.003	<.001	.010	<.001	.031	<.001	<.001	<.001		<.001	<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Question_20	Pearson Correlation	-.032	.285	.181	.318	.404*	.358*	.300	.272	.336	.294	.447*	.522**	.404*	.459**	.284	.701**	.885**	.851**	.887**	1	.689**
	Sig. (2-tailed)	.859	.108	.312	.071	.020	.041	.089	.125	.056	.097	.009	.002	.020	.007	.110	<.001	<.001	<.001	<.001		<.001
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Total_per_responden	Pearson Correlation	.406*	.736**	.748**	.678**	.819**	.761**	.715**	.786**	.809**	.812**	.816**	.789**	.725**	.830**	.707**	.534**	.680**	.796**	.755**	.689**	1
	Sig. (2-tailed)	.019	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	.001	<.001	<.001	<.001	<.001	
	N	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

2. Uji validitas korelasi *Pearson* terhadap kuesioner CVEQ

Correlations

		Question_1	Question_2	Question_3	Question_4	Question_5	Question_6	Question_7	Question_8	Question_9	Question_10	Question_11	Question_12	Question_13	Question_14	Question_15	Total_per_responden
Question_1	Pearson Correlation	1	.435*	.360	.365*	.494**	.464**	.377*	.447*	.428*	.340	.480**	.321	.647**	.376*	.452*	.755**
	Sig. (2-tailed)		.016	.050	.048	.006	.010	.040	.013	.018	.066	.007	.084	<.001	.041	.012	<.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Question_2	Pearson Correlation	.435*	1	.268	.000	.062	.286	.517**	.456*	.672**	.355	.492**	.300	.103	.114	.478**	.578**
	Sig. (2-tailed)	.016		.153	1.000	.746	.126	.003	.011	<.001	.054	.006	.107	.587	.550	.007	<.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Question_3	Pearson Correlation	.360	.268	1	.530**	.681**	.547**	.467**	.699**	.234	.309	-.046	.172	.288	.425*	.214	.667**
	Sig. (2-tailed)	.050	.153		.003	<.001	.002	.009	<.001	.214	.097	.809	.365	.123	.019	.256	<.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Question_4	Pearson Correlation	.365*	.000	.530**	1	.642**	.496**	.137	.246	.019	.132	.009	.117	.222	.225	.017	.459*
	Sig. (2-tailed)	.048	1.000	.003		<.001	.005	.472	.189	.923	.487	.961	.538	.238	.231	.929	.011
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Question_5	Pearson Correlation	.494**	.062	.681**	.642**	1	.658**	.182	.445*	.305	.199	.049	.055	.348	.324	.143	.615**
	Sig. (2-tailed)	.006	.746	<.001	<.001		<.001	.335	.014	.101	.291	.799	.773	.059	.081	.452	<.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Question_6	Pearson Correlation	.464**	.286	.547**	.496**	.658**	1	.546**	.472**	.352	.044	.272	.202	.290	.197	.096	.634**
	Sig. (2-tailed)	.010	.126	.002	.005	<.001		.002	.008	.057	.817	.146	.284	.120	.296	.614	<.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Question_7	Pearson Correlation	.377*	.517**	.467**	.137	.182	.546**	1	.579**	.562**	.191	.488**	.553**	.259	.351	.147	.656**
	Sig. (2-tailed)	.040	.003	.009	.472	.335	.002		<.001	.001	.312	.006	.002	.167	.057	.438	<.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Question_8	Pearson Correlation	.447*	.456*	.699**	.246	.445*	.472**	.579**	1	.531**	.612**	.310	.351	.468**	.343	.339	.768**
	Sig. (2-tailed)	.013	.011	<.001	.189	.014	.008	<.001		.003	<.001	.096	.057	.009	.064	.067	<.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Question_9	Pearson Correlation	.428*	.672**	.234	.019	.305	.352	.562**	.531**	1	.414*	.617**	.450*	.261	.017	.385*	.644**
	Sig. (2-tailed)	.018	<.001	.214	.923	.101	.057	.001	.003		.023	<.001	.013	.164	.931	.036	<.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Question_10	Pearson Correlation	.340	.355	.309	.132	.199	.044	.191	.612**	.414*	1	.541**	.376*	.477**	.052	.536**	.587**
	Sig. (2-tailed)	.066	.054	.097	.487	.291	.817	.312	<.001	.023		.002	.040	.008	.783	.002	<.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Question_11	Pearson Correlation	.480**	.492**	-.046	.009	.049	.272	.488**	.310	.617**	.541**	1	.628**	.488**	.106	.531**	.621**
	Sig. (2-tailed)	.007	.006	.809	.961	.799	.146	.006	.096	<.001	.002		<.001	.006	.576	.003	<.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Question_12	Pearson Correlation	.321	.300	.172	.117	.055	.202	.553**	.351	.450*	.376*	.628**	1	.553**	.406*	.450*	.620**
	Sig. (2-tailed)	.084	.107	.365	.538	.773	.284	.002	.057	.013	.040	<.001		.002	.026	.013	<.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Question_13	Pearson Correlation	.647**	.103	.288	.222	.348	.290	.259	.468**	.261	.477**	.488**	.553**	1	.581**	.331	.676**
	Sig. (2-tailed)	<.001	.587	.123	.238	.059	.120	.167	.009	.164	.008	.006	.002		<.001	.074	<.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Question_14	Pearson Correlation	.376*	.114	.425*	.225	.324	.197	.351	.343	.017	.052	.106	.406*	.581**	1	.091	.504**
	Sig. (2-tailed)	.041	.550	.019	.231	.081	.296	.057	.064	.931	.783	.576	.026	<.001		.633	.005
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Question_15	Pearson Correlation	.452*	.478**	.214	.017	.143	.096	.147	.339	.385*	.536**	.531**	.450*	.331	.091	1	.577**
	Sig. (2-tailed)	.012	.007	.256	.929	.452	.614	.438	.067	.036	.002	.003	.013	.074	.633		<.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Total_per_responden	Pearson Correlation	.755**	.578**	.667**	.459*	.615**	.634**	.656**	.768**	.644**	.587**	.621**	.620**	.676**	.504**	.577**	1
	Sig. (2-tailed)	<.001	<.001	<.001	.011	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	.005	<.001	
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

3. Uji reliabilitas Alpha Cronbach's terhadap kuesioner MRNQ

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.760	21

4. Uji reliabilitas Alpha Cronbach's kuesioner CVEQ

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.880	15

Lampiran 8.
Uji Statistik Saphiro-Wilk dan Uji One-way Annova

1. Uji normalitas kuesioner VRNQ

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Engineer_expert	.300	4	.	.915	4	.507
Engineer_students	.272	4	.	.868	4	.289
Clinical_expert	.333	4	.	.763	4	.051
Clinical_students	.250	4	.	.953	4	.734

a. Lilliefors Significance Correction

2. Uji normalitas kuesioner CVEQ

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Clinical_expert	.180	3	.	.999	3	.945
Clinical_student	.190	3	.	.997	3	.903

a. Lilliefors Significance Correction

3. Uji *one-way* annova kuesioner VRNQ

ANOVA

Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	50.117	3	16.706	4.907	.019
Within Groups	40.853	12	3.404		
Total	90.969	15			

ANOVA Effect Sizes[a,b]

			95% Confidence Interval	
		Point Estimate	Lower	Upper
Score	Eta-squared	.551	.018	.698
	Epsilon-squared	.439	-.227	.622
	Omega-squared Fixed-effect	.423	-.210	.607
	Omega-squared Random-effect	.196	-.061	.340

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.

4. Uji *one-way* annova kuesioner CVEQ

Oneway

ANOVA

Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.500	1	1.500	.004	.952
Within Groups	1477.708	4	369.427		
Total	1479.208	5			

ANOVA Effect Sizes[a,b]

		Point Estimate	95% Confidence Interval Lower	Upper
Score	Eta-squared	.001	.000	.178
	Epsilon-squared	-.249	-.250	-.028
	Omega-squared Fixed-effect	-.199	-.200	-.023
	Omega-squared Random-effect	-.199	-.200	-.023

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.

b. Negative but less biased estimates are retained, not rounded to zero.

Lampiran 9.

Dokumentasi kegiatan pengembangan teknologi dan diskusi



Lampiran 10.

Dokumentasi *trial* dan pengisian kuesioner

1. *Trial* oleh Pakar Klinis Bedah Mulut dan Maksilofasial dan pakar Teknik




2. *Trial* oleh Mahasiswa PPDGS Bedah Mulut dan Maksilofasial dan Mahasiswa Teknik Elektro