

**PERANCANGAN PROGRAM *MOBILE LEARNING* BERBASIS
AUGMENTED REALITY UNTUK IMPLEMENTASI KURIKULUM
PENDIDIKAN JASMANI OLAHRAGA DAN KESEHATAN DI SEKOLAH
DASAR**

DISERTASI

*Diajukan untuk memenuhi sebagian syarat memperoleh gelar Doktor pada
Program Studi Pengembangan Kurikulum di Universitas Pendidikan Indonesia*



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**PROGRAM STUDI PENGEMBANGAN KURIKULUM
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Faruk, Mohammad. 2025. "*Perancangan Program Mobile Learning Berbasis Augmented Reality Untuk Implementasi Kurikulum Pendidikan Jasmani Olahraga dan Kesehatan Di Sekolah Dasar.*" Doktor Pengembangan Kurikulum Fakultas Ilmu Pendidikan, Universitas Pendidikan Indonesia. Promotor: Prof. Dr. Mohammad Ali, M.A.; Co-Promotor: Prof. Norlidah Alias; Anggota: Prof. Dr. Rudi Susilana, M. Si.

Pendidikan Jasmani, Olahraga, dan Kesehatan (PJOK) memiliki peran penting dalam perkembangan fisik, kognitif, dan sosial siswa sekolah dasar. Namun, implementasinya masih menghadapi berbagai tantangan, seperti keterbatasan sarana dan prasarana, kurangnya inovasi dalam metode pembelajaran, serta rendahnya motivasi siswa dalam berpartisipasi dalam aktivitas fisik. Penelitian ini menyoroti bagaimana *mobile learning* berbasis *Augmented Reality* (AR) dapat meningkatkan efektivitas pembelajaran PJOK di sekolah dasar. AR memungkinkan pengalaman belajar yang lebih interaktif, di mana siswa dapat berinteraksi dengan konsep gerakan melalui simulasi visual yang mendalam. Penelitian ini bertujuan untuk mengembangkan dan menguji efektivitas program *mobile learning* berbasis AR sebagai media pembelajaran inovatif dalam PJOK di sekolah dasar. Hasil penelitian diharapkan dapat memberikan kontribusi dalam mengatasi kendala implementasi PJOK serta mendukung pembelajaran yang lebih menarik, interaktif, dan efektif bagi siswa. Penelitian ini menggunakan metode *Design and Development Research* (DDR) untuk merancang, mengembangkan, mengimplementasikan, dan mengevaluasi *mobile learning* berbasis *augmented reality* (AR) dalam pembelajaran PJOK di sekolah dasar. Data dikumpulkan melalui kuesioner, wawancara, dan observasi, lalu dianalisis secara kuantitatif dan kualitatif untuk menilai efektivitas program. Penelitian ini menunjukkan bahwa *mobile learning* berbasis AR efektif dalam meningkatkan aktivitas fisik siswa di luar sekolah. Hasil uji coba pada siswa SD menunjukkan peningkatan koordinasi mata-tangan dan motivasi dalam belajar PJOK. Program "PJOK Bugar" berbasis AR juga melibatkan peran guru dan orang tua dalam memantau serta membimbing siswa. Evaluasi menggunakan *pre-test* dan *post-test* menunjukkan perbedaan signifikan dalam keterampilan motorik siswa. Guru PJOK dan orang tua menyambut positif program ini, mendukung integrasi teknologi dalam pembelajaran fisik. Penelitian ini menyimpulkan bahwa *mobile learning* berbasis *augmented reality* (AR) efektif dalam meningkatkan pembelajaran PJOK di sekolah dasar. Program "PJOK Bugar" berbasis AR meningkatkan aktivitas fisik, koordinasi motorik, dan motivasi siswa dengan dukungan orang tua. Validasi pakar menunjukkan program ini layak secara teknis dan pedagogis. Guru dan siswa merespons positif integrasi AR dalam pembelajaran PJOK.

Kata Kunci: *Mobile Learning, Augmented Reality*, Kurikulum PJOK, Pendidikan berkualitas.

Faruk, Mohammad. 2025. "*Designing Augmented Reality-Based Mobile Learning Programs for the Implementation of Physical Education, Sports and Health Curriculum in Elementary Schools.*" Doctor of Curriculum Development Fakultas Ilmu Pendidikan, Universitas Pendidikan Indonesia. Promotor: Prof. Dr. Mohammad Ali, M.A.; Co-Promotor: Prof. Norlidah Alias; Anggota: Prof. Dr. Rudi Susilana, M. Si.

Physical, Sports, and Health Education (PJOK) has an important role in the physical, cognitive, and social development of elementary school students. However, its implementation still faces various challenges, such as limited facilities and infrastructure, lack of innovation in learning methods, and low motivation of students to participate in physical activities. This study highlights how Augmented Reality-based mobile learning can increase the effectiveness of PJOK learning in elementary schools. *AR* allows for a more interactive learning experience, where students can interact with movement concepts through immersive visual simulations. This research aims to develop and test the effectiveness of *AR*-based mobile learning programs as an innovative learning medium in PJOK in elementary schools. The results of the research are expected to contribute to overcoming the obstacles to PJOK implementation and support more interesting, interactive, and effective learning for students. This study uses *the Design and Development Research (DDR)* method to design, develop, implement, and evaluate augmented reality (*AR*)-based mobile learning in PJOK learning in elementary schools. Data was collected through questionnaires, interviews, and observations, and then analysed quantitatively and qualitatively to assess the effectiveness of the program. This study shows that *AR-based mobile learning* is effective in increasing students' physical activity outside of school. The results of the trial on elementary school students showed an increase in eye-hand coordination and motivation in learning PJOK. The *AR*-based "PJOK Bugar" program also involves the role of teachers and parents in monitoring and guiding students. Evaluation using *pre-test* and *post-test* showed significant differences in students' motor skills. PJOK teachers and parents positively welcomed this program, supporting the integration of technology in physical learning. This study concludes that *augmented reality (AR)-based mobile learning* is effective in improving PJOK learning in elementary schools. The *AR*-based "PJOK Fitness" program improves physical activity, motor coordination, and student motivation with parental support. Expert validation shows the program is technically and pedagogically feasible. Teachers and students responded positively to the integration of *AR* in PJOK learning.

Kata Kunci: *Mobile Learning, Augmented Reality, PJOK Curriculum, Quality Education.*

DAFTAR ISI

HALAMAN PENGESAHAN DISERTASI	iii
SURAT PERNYATAAN	iv
UCAPAN TERIMA KASIH	v
ABSRTAK	vii
DAFTAR ISI	ix
DAFTAR TABEL	xv
DAFTAR GAMBAR	xvi
DAFTAR LAMPIRAN	xviii
BAB I PENDAHULUAN	1
A. Latar Belakang	1
B. Rumusan Masalah	14
C. Tujuan Penelitian	15
D. Signifikansi Penelitian	16
1. Manfaat Secara Teoritik	16
2. Manfaat Secara Praktik	17
a. Bagi Guru PJOK	17
b. Bagi siswa	17
c. Bagi Sekolah Dasar	18
d. Bagi Pemerintah dan Pemangku Kebijakan	18
e. Bagi Peneliti lain	18
BAB II KAJIAN PUSTAKA	19
A. Hakikat Mobile Learning	19
1. Definisi dan Karakteristik <i>Mobile Learning</i>	19
2. Keunggulan <i>Mobile Learning</i> dalam Pembelajaran berbasis Aktivitas Fisik	24
B. Perancangan Program.....	34
C. Desain Kurikulum	36
1. Konsep Desain Kurikulum	36

2. Model-model Desain Kurikulum	37
D. Desain Pembelajaran	40
1. Teori dan Pendekatan Desain Pembelajaran	40
2. Model-model Desain Pembelajaran	42
E. <i>Augmented Reality</i>	43
1. Definisi, jenis, dan penerapan <i>AR</i> dalam pendidikan	43
2. Penerapan <i>Augmented Reality</i> dalam Pembelajaran di Sekolah	45
3. Manfaat <i>Augmented Reality</i> untuk pembelajaran interaktif dan kinestetik	53
4. Studi Empiris tentang Pengalaman Pengguna <i>AR</i> (siswa dan guru)	62
F. Pendidikan Jasmani, Olahraga, dan Kesehatan (PJOK)	67
1. Tujuan kurikulum PJOK di tingkat sekolah dasar	67
2. Kompetensi Inti Pendidikan Jasmani Olahraga dan Kesehatan	73
G. Integrasi Teknologi dalam Pendidikan Jasmani, Olahraga dan Kesehatan	77
1. Peran Teknologi dalam Mendukung Pembelajaran Aktif dan Inklusif	77
2. Teknologi dalam Pembelajaran Pendidikan Jasmani, Olahraga dan Kesehatan	83
3. Implementasi Kurikulum PJOK menggunakan Pendekatan Digital	95
H. Kesiapan Guru dalam Memanfaatkan teknologi <i>Mobile Learning</i> dan <i>Augmented Reality</i>	106
I. Preferensi siswa dalam menggunakan teknologi untuk pembelajaran PJOK	106
J. Infrastruktur Teknologi di Sekolah Dasar	123
K. Hambatan Teknis dan Pedagogis dalam Integrasi <i>Augmented Reality</i>	129
L. Aspek Biaya dan Keberlanjutan Program	136
M. Model dan Desain <i>Mobile Learning</i> Berbasis <i>Augmented Reality</i>	140

1. Framework Pengembangan Program	140
2. <i>Successive Approximation Model (SAM)</i>	148
3. <i>Agile Model</i>	154
4. Model Dick and Carey	158
N. Desain Interaktif <i>Augmented Reality</i>	164
1. Fitur Interaktif yang Relevan dengan Pembelajaran PJOK	164
2. Aktivitas Pembelajaran menggunakan <i>Augmented Reality</i>	169
3. Kajian <i>Usability</i> dan <i>User Experience</i>	174
O. <i>SDGs</i> Nomor 4: Pendidikan Berkualitas	178
1. Tujuan dan Indikator Pencapaian <i>SDGs</i> 4	178
2. Relevansi Teknologi dalam Mendukung Pencapaian <i>SDGs</i> 4	182
P. Kesenjangan Penelitian dan Peluang untuk Pengembangan Lebih Lanjut	187
1. Kesenjangan Penelitian	187
2. Potensi Kontribusi Program Mobile Learning berbasis <i>Augmented Reality</i>	189
3. Peluang untuk Pengembangan Lebih Lanjut	200
BAB III METODE PENELITIAN	201
A. Metode Penelitian	201
B. Partisipan	204
C. Instrumen Penelitian	205
1. Kuesioner	205
2. Wawancara	206
D. Analisis Data	206
1. Tahap Analisis Kebutuhan	207
2. Tahap Desain Program	208
3. Tahap Pengembangan Program	208
4. Tahap Implementasi Program	208
5. Tahap Evaluasi Program	208
E. Integrasi dengan <i>SDGs</i>	209
F. Penyajian Data	209

1. Penyajian Data Kuantitatif	209
2. Penyajian Data Kualitatif	210
3. Penyajian Data Komprehensif	210
G. Penarikan Kesimpulan dan Verifikasi	211
1. Penarikan Kesimpulan	211
2. Verifikasi Temuan	211
3. Penyusunan Kesimpulan Akhir	212
H. Langkah-langkah Penelitian	212
1. Identifikasi Masalah	212
2. Mendeskripsikan Tujuan	213
3. Desain dan Pengembangan Produk	214
4. Pengujian Program oleh Pakar	217
5. Uji Coba Lapangan Produk Yang Dikembangkan	216
6. Evaluasi Hasil Uji Coba	217
7. Mengkomunikasikan hasil Uji Coba	220
BAB IV TEMUAN DAN PEMBAHASAN	222
A. Temuan Penelitian	222
1. Analisis kebutuhan	222
a) Identifikasi Peran Guru dalam Pembelajaran PJOK di Sekolah Dasar	225
1) Assesmen diagnostik sebelum merencanakan pembelajaran	227
2) Penyusunan Perencanaan Pembelajaran PJOK	228
b) Identifikasi Peran Siswa dalam Pembelajaran PJOK di Sekolah Dasar	223
1) Minimnya Sumber Daya Pembelajaran di Rumah	223
2) Peran Orang Tua dalam Pembelajaran	225
3) Tingkat Penggunaan Gadget	229
c) Mendeskripsikan Tujuan Penelitian	231
1) Mengidentifikasi Masalah yang Dihadapi	231
2) Mendesain Media Pembelajaran yang Relevan	233

3) Meningkatkan Aktivitas Fisik Siswa	233
4) Meningkatkan Keterlibatan Orang Tua	234
5) Memberikan Rekomendasi kepada Guru	234
d) Desain dan Pengembangan Kurikulum PJOK di Sekolah Dasar	235
e) Desain dan Pengembangan Program <i>Mobile Learning</i> Berbasis <i>Augmented Reality</i>	237
1) Tahap Mendesain Program <i>Mobile Learning</i> Berbasis <i>Augmented Reality</i>	238
a) Analisis Kebutuhan	238
1) Identifikasi Masalah	238
2) Tujuan Pembelajaran	238
3) Perumusan Tujuan Pembelajaran	238
4) Desain Konten Pembelajaran	239
5) Uji Validitas Konten	241
b) Masukan Pakar Pendidikan Jasmani Olahraga dan Kesehatan	242
1) Variasi Latihan	242
2) Feedback Gerakan	242
3) Pemantauan Kemajuan	242
4) Integrasi dengan Aktivitas Lain	242
5) Keselamatan	243
c) Masukan Pakar Kurikulum	243
1) Keselarasan Kurikulum	243
2) Tujuan Pembelajaran yang Jelas	243
3) Penilaian	243
4) Dokumentasi	243
d) Masukan Pakar IT	244
1) Antarmuka Pengguna (UI) dan Pengalaman Pengguna (UX)	244
2) Kinerja Aplikasi	244

3) Keamanan Data	244
4) Kompatibilitas	244
5) Penggunaan Marker	244
6) Pengembangan Berkelanjutan	244
7) Pengembangan Fitur Interaktif	245
8) Evaluasi dan Revisi	245
2. Peluncuran Program	245
3. Tahapan Uji Coba Program <i>Augmented Reality</i> Pembelajaran PJOK di Rumah	247
a. Tes Awal Kebugaran Siswa	247
b. Program latihan di Rumah menggunakan AR	250
c. Hasil Uji Coba Program <i>Augmented Reality</i> Pembelajaran PJOK di Rumah	253
d. Evaluasi hasil Ujicoba Program Mobile Learning Berbasis AR	255
1) Tanggapan Orang Tua/Wali Murid	255
2) Tanggapan Siswa	256
e. Desiminasi hasil Ujicoba Program Mobile Learning Berbasis AR	257
1) Antusiasme guru	257
2) Potensi pengembangan Program	258
3) Tindak lanjut Program	258
B. Pembahasan	261
1. Assesmen Diagnostik Sebelum Perencanaan Pengajaran	261
2. Penyusunan Perencanaan Pembelajaran PJOK	264
3. Minimnya Sumber Daya Pembelajaran di Rumah	265
4. Peran Orang tua dalam Pembelajaran di Rumah	265
5. Tingkat Penggunaan <i>Gadget</i>	267
6. Analisis kebutuhan dalam perencanaan program <i>mobile learning</i> berbasis AR dalam Pembelajaran PJOK di Rumah	268

7. Hasil Pembelajaran PJOK Menggunakan Program Mobile Learning Berbasis AR	269
a. Aspek Sikap	269
b. Aspek Potensi Fisik	269
8. Tinjauan Temuan Penelitian dalam Perspektif SDGs	271
BAB V SIMPULAN, IMPLIKASI DAN REKOMENDASI	275
A. Simpulan	275
B. Implikasi	282
1. Implikasi dalam Bidang Teknologi Pendidikan	282
2. Implikasi dalam Bidang Pembelajaran PJOK	282
3. Implikasi dalam Bidang Kurikulum Pendidikan	283
4. Implikasi dalam Bidang Pengembangan Profesional Guru	283
5. Implikasi dalam Bidang Kesehatan dan Kesejahteraan	283
6. Implikasi dalam Bidang Akses Pendidikan	284
C. Rekomendasi	284
DAFTAR PUSTAKA	286
LAMPIRAN.....	309

DAFTAR TABEL

Tabel 4.1.	Program Latihan Lempar Tangkap Bola menggunakan Program Mobile Learning Berbasis AR.....	237
Tabel 4.2.	Perbandingan rata-rata hasil tes koordinasi mata dan tangan...	239
Tabel 4.3.	Hasil uji signifikansi perbandingan rata-rata.....	240

DAFTAR GAMBAR

Gambar 2.1.	Alur Kerangka kerja model ADDIE	138
Gambar 2.2.	Alur Model SAM	143
Gambar 3.1.	langkah-langkah DDR	198
Gambar 3.2.	Siklus model mengembangkan ADDIE	202
Gambar 4.1.	Respon guru PJOK tentang tes kebugaran jasmani di Awal semester (Asesmen diagnostik)	210
Gambar 4.2.	Respon Guru PJOK tentang perencanaan pengajaran (penyusunan kurikulum).....	211
Gambar 4.3.	respon orangtua tentang arahan guru untuk berolahraga/gerak di rumah.....	212
Gambar 4.4.	Grafik respon orangtua tentang aktivitas anak di rumah.....	213
Gambar 4.5.	Grafik respon orangtua tentang komunikasi dengan Guru PJOK	214
Gambar 4.6.	Grafik respon orangtua tentang aktivitas anak di rumah	215
Gambar 4.7.	Desain Pengembangan Kurikulum PJOK dengan Program Mobile Learning Berbasis AR	222
Gambar 4.8.	Tampilan Icon program Augemented Reality "PJOK Bugar"	224
Gambar 4.9.	Tampilan awal di layar HP program "PJOK Bugar".....	225
Gambar 4.10.	Gambar marker dalam program AR	226
Gambar 4.11.	Workshop dan sosialisasi penggunaan program <i>mobile learning</i> berbasis AR	232
Gambar 4.12.	Pelaksanaan kelentukan di SDN 237 Gresik	233
Gambar 4.13.	Pelaksanaan Tes Kelincahan	233
Gambar 4.14.	Pelaksanaan tes daya tahan kardiovaskuler	234
Gambar 4.15.	Pelaksanaan tes koordinasi mata dan tangan	234
Gambar 4.16.	Hasil tes Kelentukan	234
Gambar 4.17.	hasil tes kekuatan otot perut	235

Gambar 4.18.	Hasil tes Kelincahan	235
Gambar 4.19.	hasil Tes daya tahan kardiovaskuler	235
Gambar 4.20.	Grafik hasil tes koordinasi mata dan tangan	236
Gambar 4.21.	Kegiatan siswa latihan lempar tangkap bola tenis di rumah	238
Gambar 4.22.	Grafik respon orangtua tentang penggunaan program "PJOK Bugar"	242

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