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23.	SMART CALIPH GAME BOARD	25
24.	KEBERKESANAN EQ-MAZE DALAM MENINGKATKAN MINAT DAN PENCAPAIAN PELAJAR	26
25.	INACLE SYSTEM (INFORMATION ACCIDENT VEHICLE SYSTEM)	27
26.	PENGGUNAAN SISTEM ‘FLIPPED CLASSROOM’ BERSAMA DENGAN APLIKASI WHATSAPP DAPAT MENINGKATKAN MASA INTERAKSI PDPC	28
27.	IMMERSIVE LEARNING EXPERIENCE ON PORTFOLIO DESIGN THROUGH MASSIVE OPEN ONLINE COURSE (MOOC)	29
28.	KEBERKESANAN ALAT BANTU MENGAJAR “PERFORM VISUAL INSPECTION ON WELDED JOINT” DALAM PENGAJARAN DAN PEMBELAJARAN TEKNOLOGI KIMPALAN.	30
29.	PENGGUNAAN TRACKER DALAM PEMBELAJARAN MAKMAL FIZIK	31
30.	KEBERKESANAN APLIKASI MIKRO KOMPUTER DALAM EKSPERIMEN KAPASITOR	32
31.	EZEVENT	33
32.	SEALAB – COCOA HAND BUTTER	34
33.	SMILE: INNOVATIVE FACIAL MIST	35
34.	SNAPNUTRITION AS EDUCATION AND NUTRITION IMPROVEMENT FOR INDONESIAN PEOPLE THROUGH MACHINE LEARNING TECHNOLOGY	36
35.	DiOjekin! : MOBILE APPS OJEK ONLINE SYSTEM FOR DISABILITIES	37
36.	APATHETIC APPS – MOBILE APPLICATION DEVELOPMENT TO LOCK SMARTPHONES AND UNLOCK IT BY USER’S CONVERSATION	38
37.	CHEM-AR	39
38.	EDUCATIONAL ANDROID SIMULATOR OF RES-CIRCUIT QUIZ BOARD	40
39.	GAS LOAD MONITORING SYSTEM BASED ON IOT TECHNOLOGY	41
40.	BELOVED TRACKER SYSTEM	42
41.	RH-SILICA	43
42.	SMART TYRE	44
43.	SMART TRAFFIC SIGN GAMES: INNOVATION TECHNOLOGY BASED ON INTERACTIVE SURFACE AND AUGMENTED REALITY FOR EARLY CHILDHOOD	45
44.	ETRACE	46
45.	RAT DISSECTING KIT	47
46.	TOURGO - GAMIFIED AUGMENTED REALITY TOUR	48
47.	IMPLIMENTATION OF SANATORI FOR DETECTOR OF CORAL REEF DESTRUCTION BASED ON ULTRASONIC	49
48.	SENSOR ENHANCED REHABILITATION FOR KNEE INJURIES	50
49.	EDUCATIONAL ANDROID SIMULATOR OF RES-CIRCUIT QUIZ BOARD	51
50.	MELYNA: INNOVATIVE FACIAL SERUM	52
51.	K-TRAC GADGET	53
52.	JUBELITAS (JUAL BELI KARYA DISABILITAS)	54
53.	THE EFFECTIVENESS OF USING CIRCLE GEOMETRY BOARD (CG-BOARD) STRATEGY IN LEARNING CIRCLE GEOMETRY TOWARDS SECONDARY STUDENTS PERFORMANCE	55
54.	UTILIZING THE CIPLUKAN PLANT AS A YOGURT AND HERBAL REMEDY WITH A MYRIAD OF BENEFITS	56

INNOVATION

CATEGORY

SMART TRAFFIC SIGN GAMES: INNOVATION TECHNOLOGY BASED ON INTERACTIVE SURFACE AND AUGMENTED REALITY FOR EARLY CHILDHOOD

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Indonesia has placed the second position in ASEAN as the country with the highest accident rate based on data Head of the Police Traffic Corps of the Republic of Indonesia in 2017. That accidents due to the low level of ethics and orderly culture related to road users. Smart Traffic Sign Games is interactive multimedia developed to build the character of early childhood so that they can drive safely. It offers innovation by utilizing interactive surface technology combined with augmented reality technology so it develops learning that invites students to play while learning directly how traffic works. The concepts are (1) transforms classroom floor surfaces into interactive surfaces with the help of Wii Remote and infrared sensors mounted on toy cars, (2) virtual traffic environment projected through the projector to the surface floor, (3) when the toy car is run by students and approaches one of the traffic signs, an audio will appear explaining the functioning of the traffic signs and (4) if a toy car violates the rules of traffic signs, there will be audio describing the warnings and prohibitions. It has been tested and gone through the repair stage. Then it has given results to basic education to traffic and has a product feasibility value on top of 85%. In addition, it has been published in proceedings and published in international conferences as a contribution to the world of education and has the potential to be commercialized because of its innovation, easily available and affordable prices.



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