Investigating the effect of multimedia-based interactive basic techniques on futsal exercise variations

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Abstract. Futsal at a glance is similar to football. Likewise with variations when planning, when leading, shooting, and passing the ball. The choice is different between soccer and futsal which is located on a wide field between them. Extensive futsal fields are much smaller than a soccer field. This research was conducted in the area of Kusuma Cijantung, East Jakarta, Jakarta. This research was conducted in March-April. The research in this study discusses. About testing the effectiveness of variations of futsal training based on interactive multimedia. The population in this study were first semester students of STKIP Kusuma Negara Jakarta with one hundred twenty people. The part in this study was semester students from forty people randomly. The results of the study show that this variation is effective for use in futsal training or school learning.

1. Introduction
In the recent times futsal sports undergo development which is very fast, particularly among the school students and college students. This is proven by the emergence of various futsal indoor soccer team which it was formed and comprised solely of representative’s students and students. Prompted the formation of the team was is varies. There is one forming a community futsal indoor soccer plantation to hobby channeling if it is conducted, spend their time, to simply please himself gave no thought but there were also others who want to after that of last year. At first glance, futsal similar to football. So it is with techniques essentially, as leads, shoot, and passes the ball. Different choose between football and futsal located at broad field between them. Broad futsal field of far smaller than a football field. To improve skills futsal play, sure a player must understand and futsal of several playing grounds. In any game futsal, each player must control techniques fed the ball, picked, dribble, and has the ability (shooting) kicking the ball at the net with high accuracy. It is because, fed technique has a good futsal vital role in the game, because in addition to dominate the match, this also helps the players to build the variation. The fed the ball well and correctly in engineering passing futsal are some sort of them, uses the passing of the legs in, outside and with the use of the heels. In the game of futsal, a technique that is also very important to control is the ability to hold or control the ball. Controlling is one of the basic techniques in the game than a players to receive the bait ball by his friend to ended and well controlled. Friends this technique to improve play futsal skill.
2. Literature review
According to Singer that the word skilled pointed to the degree of success in achieving the goal with effectively and efficiently as determined by the speed, the accuracy of, form and the ability to adjust [1]. Although the term it has many, understanding generally referred to by skill is the ability of motion with a certain degree.

Komarudin (in Damin) there are five basic techniques need to shooting or shoot, position is: observe goalkeeper; where the minimum; fixed eyes in a state of being open, see speed run and speed the ball; see defender or goalkeeper [2].

Sugiyono is the deciding factor who among others: coordination of high means good, the amount target, sharpness the senses, far there a target distance, mastery technique, fast slowness movement, feeling of athletes and nicety, and strong weak a movement [3].

According to Dwyer Francis that explosive power limb muscles is one that concerns about the power and speed dynamic involving muscular contractions and muscle strength is the maximum expenditure within the fastest time [4]. According to a print that explosive power limb muscles is capability combination of strength and speed be established in the form of muscle ability to cope with a load by its contraction. High According to Syaiful Sagala requested said that explosive power limb muscles is one ability to display or unlock its potential in explosive or with quick. Explosive power is one aspect of the body [5].

3. Methodology
This data collection was carried out after a large group test / field trial 2. The data collection effectiveness test used the T test with SPSS software. After the Pretest and Posttest data were obtained and tabulated as many as 40 students who will be treated as many as 16 meetings to take part in the treatment as many as 72 variations.

4. Result and analysis
To know the effectiveness of the product in the form of a model exercise skill futsal based interactive multimedia tried out towards the students are effective or ineffective, then there is the data to be gathered, namely data on skill game futsal students. This was done after data collection test a large group / pilot the field 2. Test the effectiveness of using data collection software SPSS t and test. The following will be presented this kind of data in a concise manner.

| No | Name                      | Pre Test | Post Test | Different |
|----|---------------------------|----------|-----------|-----------|
| 1  | YULIUS WICAKSONO          | 269      | 360       | 91        |
| 2  | IFHAM JAYYID              | 323      | 386       | 63        |
| 3  | AKMAL FAUZI SAPUTRA       | 317      | 350       | 33        |
| 4  | PISCAL LAMUNGGA           | 325      | 392       | 67        |
| 5  | MUHAMAD ANBI              | 314      | 382       | 67        |
| 6  | RIDWAN ASYHARI            | 302      | 439       | 138       |
| 7  | T. RIDHO                  | 331      | 441       | 110       |
| 8  | RAFLI ABDULLAH H          | 271      | 341       | 70        |
| 9  | SAIFUL BASRI              | 307      | 443       | 136       |
| 10 | SENDY CAHYA DWIPUTRA      | 283      | 384       | 101       |
| 11 | DIMAS SABILA RIZKI        | 316      | 436       | 120       |
| 12 | FAJAR SURYA PUTRA         | 347      | 433       | 86        |
| 13 | IZLAN FAZIKRILAH          | 269      | 391       | 122       |
| 14 | MUHAMAD FAHMI JANUAR      | 341      | 410       | 69        |
| 15 | DEDE RUSLAN               | 306      | 439       | 134       |
Table 1. Cont.

| No | Name                          | Pre Test | Post Test | Different |
|----|-------------------------------|----------|-----------|-----------|
| 16 | MOCHAMMAD REYNALDI           | 323      | 417       | 94        |
| 17 | MUTOHIRIN                     | 283      | 419       | 136       |
| 18 | NICO HASIAN BILLY             | 305      | 423       | 118       |
| 19 | BAHTIARSYAH                   | 347      | 422       | 75        |
| 20 | EKKI SYAHRIL                  | 316      | 420       | 103       |
| 21 | GILANG DICKY RAMADHAN         | 262      | 400       | 138       |
| 22 | YATMAN HASBAN SALIM           | 298      | 412       | 114       |
| 23 | RANDI RASTIA                  | 316      | 374       | 58        |
| 24 | SYECH FIRQAN FAJRIN           | 330      | 422       | 92        |
| 25 | MUHAMAD HERU                  | 336      | 440       | 104       |
| 26 | ARI MARDIANSYAH               | 335      | 381       | 66        |
| 27 | KOSHARYANTO PRATOMO           | 294      | 448       | 155       |
| 28 | MUHAMMAD FITRAH               | 284      | 413       | 129       |
| 29 | FIRMAN                        | 308      | 403       | 95        |
| 30 | RIDWAN                        | 277      | 475       | 199       |
| 31 | IBNU ARDI                     | 315      | 476       | 161       |
| 32 | MUHAMAD DWI NUR               | 304      | 494       | 190       |
| 33 | ADE LUKMAN HENDARTO           | 302      | 461       | 160       |
| 34 | ADI AGUNG LAKSONO             | 274      | 419       | 145       |
| 35 | ARIF                          | 276      | 412       | 136       |
| 36 | FARID                         | 275      | 446       | 171       |
| 37 | IQBAL ROSYADI                 | 327      | 424       | 97        |
| 38 | IGATA                         | 276      | 455       | 179       |
| 39 | VIDE LIS RUVINO               | 323      | 389       | 66        |
| 40 | JUMADI IVAN MANALU            | 341      | 412       | 72        |
|    | Average                       | 306      | 436       | 95        |

Table 2. The scores the treatment group skill futsal students STKIP.

| No | Name                          | Pre Test | Post Test | Different |
|----|-------------------------------|----------|-----------|-----------|
| 1  | YULIUS WICAKSONO               | 279      | 420       | 141       |
| 2  | IFHAM JAYYID                   | 333      | 446       | 113       |
| 3  | AKMAL FAUZI SAPUTRA            | 312      | 410       | 98        |
| 4  | PISCAL LAMUNNGGA               | 320      | 452       | 132       |
| 5  | MUHAMAD ANBI                   | 309      | 406       | 96        |
| 6  | RIDWAN ASYHARI                 | 297      | 463       | 167       |
| 7  | T. RIDHO                       | 326      | 465       | 139       |
| 8  | RAFLI ABDULLAH H               | 266      | 365       | 99        |
| 9  | SAIFUL BASRI                   | 302      | 467       | 165       |
| 10 | SENDY CAHYA DWIPUTRA           | 293      | 434       | 141       |
| 11 | DIMAS SABILA RIZKI             | 326      | 486       | 160       |
| 12 | FAJAR SURYA PUTRA              | 357      | 483       | 126       |
| 13 | IZLAN FAZIKRILAH               | 284      | 441       | 157       |
| 14 | MUHAMAD FAHMI JANUAR           | 356      | 460       | 104       |
| 15 | DEDE RUSLAN                    | 321      | 462       | 142       |
Table 2. Cont.

|   | Name                     | Score | Posttest | Pretest | Difference |
|---|--------------------------|-------|----------|---------|------------|
| 16| MOCHHAMMAD REYNALDI      | 338   | 440      | 102     |
| 17| MUTOHIRIN                | 278   | 442      | 164     |
| 18| NICO HASLAN BILLY        | 300   | 416      | 116     |
| 19| BAHTIARSYAH              | 342   | 457      | 115     |
| 20| EKKI SYAHRIL             | 331   | 455      | 123     |
| 21| GILANG DICKY RAMADHAN    | 277   | 435      | 158     |
| 22| YATMAN HASBAN SALIM      | 313   | 447      | 134     |
| 23| RANDI RASTIA             | 331   | 409      | 78      |
| 24| SYECH FIQRAN FAJRIN      | 335   | 457      | 122     |
| 25| MUHAMAD HERU             | 341   | 475      | 134     |
| 26| ARI MARDIANSYAH          | 360   | 416      | 56      |
| 27| KOSHARYANTO PRATOMO      | 319   | 483      | 165     |
| 28| MUHAMMAD FITRAH          | 309   | 448      | 139     |
| 29| FIRMAN                   | 333   | 438      | 105     |
| 30| RIDIWAN                  | 302   | 500      | 199     |
| 31| IBNU ARDI                | 340   | 481      | 141     |
| 32| MUHAMAD DWI NUR          | 329   | 499      | 170     |
| 33| ADE LUKMAN HENDARTO      | 307   | 466      | 160     |
| 34| ADI AGUNG LAKSONO        | 279   | 424      | 145     |
| 35| ARIF                     | 296   | 417      | 121     |
| 36| FARID                    | 295   | 451      | 156     |
| 37| IQBAL ROSYADI            | 347   | 429      | 82      |
| 38| IGATA                    | 296   | 460      | 164     |
| 39| VIDELIS RUVINO           | 343   | 394      | 51      |
| 40| JUMADI IVAN MANALU       | 361   | 417      | 57      |
|   | Average                  | 317   | 445      | 128     |

Based on hypothesis testing criteria and calculations in the table above, Sig. = 0.036 <α = 0.05, it can be concluded that H0 is rejected. Thus, it was concluded that there were significant differences in posttest and pretest results between before and after being treated with interactive multimedia, where the posttest effectiveness test results were higher than the pretest.

Based on the information, it can be said that the model of futsal-based playing skills based on interactive multimedia is effective and can improve the skills of playing futsal. Based on the results of the study it can be concluded that the training model of futsal playing skills based on interactive multimedia developed has significant effectiveness.

The diagram below is a comparison of the results of the average record of the overall futsal skills test before and after the application of an interactive multimedia-based playing skill training model.

5. Conclusion

Interactive multimedia-based futsal playing skills training model was developed by researchers to assist teachers, trainers, and students in practicing futsal skills, improving futsal playing skills, as a reference for practice. This training model was created and developed on the basis of the needs of the STKIP Kusuma Negara Futsal students.

In this research, it has been maximally pursued according to the abilities of the author, but in the research there are still some limitations that must be recognized and put forward as material for consideration in generalizing the results of the research achieved.

The limitations include the following:
- This product can only be opened with a computer device.
- Products do not yet have the ability to analyse the results of futsal skills tests.
- Product testing is only limited to students of the Kusuma Negara SKIP Futsal training participants.
- Due to limited time and funds, the treatment is given when samples are not dormant, so it will affect the sample outside of the treatment schedule, which allows various social contacts to occur in the neighbourhood where it affects their appearance in training and when data collection is done finally influencing the data collected.
- The existence of psychological factors that are thought to influence the results of research that cannot be controlled include interest, confidence, and other psychological factors.

References
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