



Web Based Petanque Sports Match Statistics

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Abstract

This research aims to (1) Produce a product on web based Petanque sport match statistics , (2) Find out the use of Petanque sport match statistics. This research uses the Research and Development Method (R&D) refers to the development model from Borg and Gall through 8 stages , namely: (1) Potential and problems, (2) Information collection, (3) Product design, (4) Design validation, (5) Design revision, (6) Small scale trial, (7) Revision of small scale trial, (8) Large scale trial, (9) Final product. The subjects of this research during small group trials during routine training were 7 athletes and 4 coaches. During the trials, the large group consisted of 10 athletes and 8 coaches during the Sumut-Aceh PON XXI PELATDA Selection. The results of this research are (1) A web based statistical product for Petanque sports competitions to find out to what extent the athlete's abilities are during training. (2) The level of suitability of this product is determined through expert validation assessment. (3) Development and development of match statistics. The web based petanque match statistics application meets the criteria or is very feasible to use. It is proven that the development of web based Petanque match statistics is feasible to use.



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INTRODUCTION

The sport of petanque originates from France. This sport was originally a traditional sport from France, then developed as an achievement sport, a traditional game with the parent sport of international petanque called the federation internationale de pétanque et jeu provençal (FIPJP) which was founded in Marseille, France in 1958. The sport of petanque came to Indonesia probably in the 1990s because this sport was brought by French expatriates to Indonesia but is still limited to expatriates only.

Petanque sports statistics application has an open source and multi-tasking system, giving developers the opportunity to make modifications and access various applications. Use laptop and web-based applications on this gadget because it is practical, easy, cheap and almost everyone can access it from the web. Another benefit of this web based petanque statistical application is that it can make it easier for team coaches to analyze or to collect statistical data easily and practically while the match is in progress or using match video recordings. Development of an Android-based petanque statistics application _ which can record player and team activity data Petanque evaluation using Excel _ automatically with the application can make it easier for the referee to count.

The sport of Petanque at the time of the competition system and scoring was different from the provisions of national Petanque competitions. During international petanque matches, adults play it. Meanwhile, during national matches, they tend to be teenagers. National Ranking is displayed on the match scoreboard. Meanwhile, for international scoring, the rounds are immediately displayed on the digital scoreboard. For match statistics, there are no national or international matches yet.

So I got the idea from the sports of football, basketball and volleyball to create a statistics application for petanque sports matches. Researchers chose this title on the grounds that there were already people making statistics on sports matches using applications such as football, basketball and volleyball. Behind That underlying researcher For Do research entitled " Development Of Web Based Match Statistics For The Petanque Sport Branch" This development was made to make it easier for referees and coaches to obtain data during petanque training and determine the athletes' abilities during training.

METHOD

The research procedure uses the Research and Development method developed by Borg and Gall (1989) in 10 stages as follows: (1) Research and information, including: Observation and Interviews, (2) Planning, including: There are two important things that influence _quality research, namely the quality of instruments and the quality of research data collection. To measure the validity and statistics of developing the effectiveness of petanque matches. Data collection techniques according to (Sugiyono, 2013) are the main aim of research. If you don't know the data collection techniques, the researcher will not obtain data that meets the established standards. Data collection can be done using various types of sources and methods, for example primary data and secondary data, primary data in question is a direct data source provided to temporary data collectors. Secondary data sources are indirect data, for example through other people. person. To produce a quality development model, an instrument is needed that is capable of extracting the data needed to collect data for this research. There are two instruments used,

the first is for evaluating implementation and for evaluating material.

Sampling Procedure

This research was conducted by Pelatda PON on 27-28 May 2023 in the form of a small group trial consisting of 7 athletes and 4 coaches. Petanque sports match statistics .

Materials and Equipment

The data collection techniques used in this research were interviews, observation and questionnaires. Interviews and observations were carried out during the survey to find out what trainers needed. Meanwhile, the questionnaire will be carried out during media validation. The questionnaire was filled in by three experts, namely material experts, design experts and IT experts.

Design or Data Analysis

The ten steps of the development model are; (1) Preliminary Study; (2) research planning (planing); (3) Design Development (Product Preliminary Development); (4) Plenary Field Trial ; (5) Revision of Limited Field Test Results (Main Product Revision); (6) Main Field Test; (7) Revision of Wider Field Test Results (Operational Product Revision); (8) Feasibility test (Operation Field Testing); (9) Final Revision of Due Diligence Test Results (Final Product Revision); (10) Socialization and Implementation of the final product (Dissemination and Implementation).

RESULTS

Petanque is designed as an analytical media that makes it easier for coaches (users) in the sport of Petanque . This product was developed with reference to experts in the field of technology (IT) as the media used. This research went through several stages, namely the product

design process , product validation, small group trials, product revision, large group trials, and final product revision.

The 9-step Research & Development (R&D) method proposed by Borg & Gall (1989) was used in this research. The stages after discussing with product manufacturing experts are that the product manufacturing process takes approximately 2 months with the concept to be developed, namely the product shape, design, mechanism and how to use the product. The existence of statistical data can be used as a trainer for improvement show athletes. Data statistics That analyzed performance by including a description of the player's relationship to the characterization pattern game, complementarity between Second type measurement provides a promising approach for coaches (Travassos et al., 2013). Approach This statistical data analysis allows more objective information to be obtained given to coach And analysis show For evaluation show post suitable they And For take into account strength oppose moment planning session training and match tactics which will come (Liu et al., 2015).

Petanque sports application . This draft web-based statistical Petanque sports development product has the advantage of being a way for coaches to assess athletes' abilities. The product development draft is packaged in book form containing the Petanque manual book . After the product is created, the product is validated by material experts and media experts. Validation with 2 experts resulted in an average score for the Material Aspects of 4.6 and an achievement level of 93% which was classified as very feasible. The average media aspect of 4.6 and the achievement level of 93% are classified as very decent. IT aspect. There were several inputs and suggestions obtained in this process, such as adding material on potential talent criteria and comparisons of

sports, as well as adding and replacing features presented in product development media.

The next stage is the trial stage which is carried out twice, namely the small group trial stage and the large group trial stage. In the small group trials, the athlete's assessment of the application of web-based petanque competition statistics in the small group trials of visible aspects was 110 with an average of 4.1. interesting (attractive) aspects with a total of 123 with an average of 4.5. a specification simple (simple) with a total of 145 with an average of 4.7. aspect useful (useful) with a total of 129 with an average of 4. a accurate spec with a total of 119 with an average of 4.2. Based on the results of this assessment, the value is converted to very decent. In the small group trial, the trainer's assessment of the application of web-based petanque competition statistics in the small group trial showed a visible aspect with a total of 118 with an average of 3.6. attractive aspects with a total of 176 with an average of 3.5. aspect simple (simple) with a total of 219 with an average of 4.3. useful aspects (useful) 93% with a total of 129 with an average of 3. Accurate aspects with a total of 142 with an average of 2.9.

In large group trials, athletes' assessments of the application of web-based Petanque match statistics in group trials largely indicates the visible aspect (visible) with a total of 118 with an average of 3.6. Interesting aspects with the number 176 average 3.5. A specification simple (simple) with a total of 219 with an average of 4.3 Aspects useful (useful) with a total of 129 with an average of 3. A accurate spec with a total of 142 with an average of 2.9. Based on the results of this assessment, the value is converted to very decent. In the large group trial, the coach's assessment of the application of web-based petanque competition statistics in the large group trial of visible aspects was 181 with an average of 3.6. Interesting aspects with

the number 176 average 3.5. A specification simple (simple) with a total of 219 with an average of 4.3. Aspect useful (useful) with a total of 129 with an average of 3. a accurate spec (right) with a total of 142 with an average of 2.9. This means that the web-based petanque match statistics application product meets the criteria or is very suitable for use.

DISCUSSION

Petanque sports competition for athletes and coaches. Evaluation from Dr. Andarias Ginting, M.Or. which will be held on May 5 2023. Assessment 1 is given a questionnaire and preliminary web-based petanque match statistics products to assess. Data from the first stage of Judgment 1 validation regarding the quality of web-based Petanque match statistics can be seen in Appendix 10. The validation results at this stage are in accordance with Expert Judgment 1. Validation analysis at this stage is from Visible Aspects with an average score of 4.5 in the Very Decent category, Attractive Aspects with an average score of 4.6 in the Very Decent category, Simple Aspects with a score of an average of 4.6 in the Very Appropriate category, in the Simple Aspect the average score was 4.5 in the Very Appropriate, Useful (Useful) Aspect, with an average score of 4.6 in the Very Appropriate Aspect Accurate (Useful) category. correct) with an average score of 4.5 Very Decent Category. Judging with Dr. Abdul Hakim Siregar M.Pd which was held on May 10 2023. Judging was given in the form of a questionnaire and initial product application of petanque sports statistics for scores. Data from the second stage of expert validation is related to the quality of web-based petanque sports match statistics applications . Validation analysis at this stage is from the Visible Aspect with an average score of 4.6 in the Very Decent category, the Attractive

(attractive) aspect with an average score of 4.6 in the Very Decent category, the Simple Aspect with a score of an average of 4.6 in the Very Appropriate category, in the Simple Aspect the average score was 4.7 in the Very Appropriate, Useful (Useful) Aspect, with an average score of 4.6 in the Very Appropriate Aspect Accurate (Useful) category. correct) with an average score of 4.5 Very Decent Category.

Validation of the first stage of material with Dr. Amir Supriadi, S.Pd., M.Pd. which was held on May 9 2023. Material experts were given a questionnaire and the initial product of the web-based petanque match statistics application can be seen in the attachment. The validation result at this stage is the application of web-based petanque match statistics for coaches to hear a total score of 93%. First stage media validation with Mrs. Prof.Dr. Samsidar Tanjung, M.Pd. held on May 10 2023. Media experts were given a questionnaire and the initial product of the web-based petanque match statistics application can be seen in the attachment. The validation result at this stage is the application of web-based petanque match statistics for coaches to hear a total score of 96%. Validation of the first stage of material with Dr. Hermawan Syahputra, S.Si, M.Si. which was held on May 19 2023. Material experts were given a questionnaire and the initial product of the web-based petanque match statistics application can be seen in the attachment. The validation result at this stage is the application of web-based petanque match statistics for coaches to hear a total score of 93%.

CONCLUSION

Based on the results of small group trials, revisions, small and large group trials, revised improvements, the application of web-based petanque

competition statistics has achieved results that have been developed and can be used during the competition process.

1. Has a web-based petanque match statistics creation application for the petanque sports match process .
2. The application media (the product being developed) provides convenience and benefits for arbitration in the sport of petanque.
3. Petanque match statistics media in the form of a web-based application can help increase understanding and provide motivation to increase students' knowledge regarding technological development in developing web-based petanque match statistics applications .

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REFERENCES

- Aji, WN (2016). Dick and Carrey Learning Model in Learning Indonesian Language and Literature. *Linguistic and Literary Studies* , 1 (2), 119. <https://doi.org/10.23917/kls.v1i2.3631>
- Alias, KA (2019). Integration of the Borg & Gall (1983) and Lee & Owen (2004) models as an alternative research model based on interactive multimedia design in elementary schools. *Journal of Physics: Conference Series* , 1318 (1). <https://doi.org/10.1088/1742-6596/1318/1/012022>
- Alfatoni. (2019). Development of the

- Android-based SI Waysa (Sinau Wayang Sawah) application as an introduction to the art of Wayang Sawah in Dobongsan Village, Kulonprogo .
- Amalia, B., Nurkholis, & Sulistyarto, S. (2019). Physical and psychological performance factors in petanque sports. In *Sport Area Journal* (Vol. 4, Issue 2, pp. 309–317).
- Android, B., Player, U., & Tim, DAN (2021). *Development of Football Statistics Applications* .
- Antoni, MS, Guntur, G., Festiawan, R., Nugraha, AI, & Nurhadi, FI (2021). Rockport walking fitness test application: cardiorespiratory fitness test application using the Android-based Rockport method. *Medicore* , 20 (1), 23–35. <https://doi.org/10.21831/medikora.v20i1.34960>
- Arsyad, A. (2003). *Learning Media* . PT Raja Grafindo Persada.
- Behind, AL, (2005). *Convince as a Learning Design model* . 1–9.
- Eko C, R., & Nurkholis. (2018). Cahyono's analysis of Backswing and Release Shooting Carreau at a Distance of 7 Meters in East Java Petanque Athletes. *Journal of Sports Performance* , 1 (1), 1–5.
- Gracia Sinaga, FS, & . I (2019). Biomechanical Analysis of Pointing and Shooting Petanque in TC PON XX PAPUA Athletes. *Sports Science: Scientific Journal of Sports Science* , 3 (2), 66. <https://doi.org/10.24114/so.v3i2.15196>
- Hamidjojo & Latuheru, JD (1993). *Learning Media in the Current Teaching and Learning Process*, Ujung Pandang: Pandang Press.
- Haryanto, D. (2017). *Agent Effectiveness Test...*, Dyan Haryanto, UMP Faculty of Agriculture, 2017 .
- Inovatifa, MP (2015). *Media and Innovative Learning Models Sutirman Confederation Mondiale Sport Boules* .
- Isyani, & Primayanti, I. (2019). Effectiveness of Core Stability Training on Shooting Ability in Petanque Games. In *Sports and Health Education at IKIP Mataram* (Vol. 6, Issue 2, pp. 76–80). <https://doi.org/10.33394/gjpok.v6i2.4047>.
- Lks, P., Integrated, F., Based, K., Ctl, P., Improved, U., & Learning, H. (2014). *Journal of Physics Education Sukmadinata Unnes* . 3 (3), 77–83.
- Law Number 3 of 2005. (2005). *Law of the Republic of Indonesia Number 3 of 2005 concerning the National Sports System with. To the President of the Republic of Indonesia (1st Edition, pp. 1–53)*.
- Marista, S, D. (2018). *Silvia* . , 66 , 37–39. https://www.fairportlibrary.org/images/files/RenovationProject/Concept_cost_estimate_accepted_031914.pdf
- Mayssara A. Abo Hassanin Guided, A. (2014). *Untitled Untitled Untitled. Paper Knowledge. Toward a Media History of Documents* , 20 , 1–7.
- Prakoso, MLA, & Lumintuarso, R. (2021). Analysis of the Use of Statistical Data in Formulating Strategy, Tactics and Evaluation of Football Matches. *Proceedings of the 4th International Conference on Sports Science and Health (ICSSH 2020)* , 36 (Icssh 2020), 33–37. <https://doi.org/10.2991/ahsr.k.210707.009>
- Pratiwi, O. (2019). *Petanque Ball Modification (BOKAVIA) Wood Media for Children Aged 8-10 Years in Jepara Regency*. In *Indonesian Sports Science Media Journal, Semarang State University* (Vol. 10, Issue 1, pp. 23–27).
- Purwono, J. et al. (2018). *Use of Audio Visual Media in Science Subjects at*

- SMP Negeri 1 Pacitan. *Journal of Educational and Learning Technology* , 2 (2), 127–144.
- Rahmat, R., Rusdiana, A., Supriyatna, A., Indonesia, UP, Setiabudhi, J., & Bandung, N. (2016). Development of Petanque Measuring Instruments. *Journal of Applied Sports Science* , 01 (01), 34–39.
- Schratz, M. (2020). According to Borg & Gall (1983: 772. In *Qualitative Voice in Educational Research* . <https://doi.org/10.4324/9781003008064-1>
- Sudjana, N. (2007). *Teaching Media* (7th ed.). Algasindo's New Light.
- Sugiyono. (2016). *Quantitative, Qualitative and R&D Research Methods* . Alfabet PT.
- Sugiyono, D. (2013). *Quantitative, Qualitative, and Action Research Methods* .
- Suryawinata, OM (2019). *Textbook for Web-Based Application Development Courses Published by UMSIDA PRESS* . <https://press.umsida.ac.id/index.php/umsidapress/article/view/978-602-5914-81-2/849>; <http://dx.doi.org/10.21070/2019/978-602-5914-81-2>
- Uno, H.B., With, B., & Ailken, P. (1979). *Gagne and Briggs Gagne (1979)*,.
- Wibowo, E. A, M. (2015). *Basketball Statistics Software Development* . 151 , 10–17.
- Zraa, W. (2011). Joyce, Weil, and Calhoun, *Teaching accounting in the new millennium*. Cambridge Business and Economics Conference , 23.