



Development of WEB Based Police Member Proficiency Test Application

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Article Info

Article History :

Received : April 2023

Revised : June 2023

Accepted : June 2023

Keywords:

Application,
Competency Test,
Members of the National
Police

Abstract

The purpose of this research is to produce a web-based application for the aptitude test for members of the Indonesian National Police. The type of research used in this research is development research with Research & Development (R&D) research design from Borg and Gall. This research was conducted with 9 research stages namely, (1) Research and information collecting, (2) Planning, (3) Develop preliminary form of product, (4) Preliminary field testing, (5) Main product revision, (6) Main field testing, (7) Operational product revision, (8) Operational field testing, (9) Final product revision. The population in this study used sports science faculty students. The sampling technique used purposive sampling with a Phase I trial of 15 members of the Indonesian National Police Batch 2020/2021 and a Phase II trial with a total of 30 members of the Indonesian National Police Batch 2021/2022. Furthermore, from the Phase I trial with a total of 15 students showing a score of 78.33% with the Eligible criteria, then from the Phase II trial with a total of 30 students showing a score of 93.77% with the Very Eligible category. On the basis of the data obtained, the development of a web-based aptitude test application for police officers was declared feasible to be developed as a web-based aptitude test application for police officers.

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ISSN 2685-6514 (Online)

ISSN 2477-331X (Print)

INTRODUCTION

The physical and spiritual fitness of a police officer is very much needed to support the quality of performance and avoid early retirement. The police, who have many tasks, namely maintaining security and order, enforcing the law and providing protection, protection and service to the community, a police officer must have several supporting components as factors for this success, one of which is always maintaining physical fitness. Physical fitness is an important thing because if a police officer does not have good physical fitness, then the level of productivity will be reduced and the service process will be hampered. Someone who has a high level of physical fitness can do work effectively without significant fatigue, the body remains fresh when stopping work and at rest. Conversely, a low level of physical fitness is an obstacle in doing work. Therefore, the level of physical fitness is an important factor to maintain one's level of productivity. Good physical fitness is necessary, regardless of gender, ethnicity, occupation, social and economic status. Good physical fitness is obtained not only in a short time, but must start training regularly and pay attention to the principles of training, the stages of training and the dose of exercise (Aditya Gumantan, 2020).

The Physical Freshness Test (TKJ) implemented at the Police Academy is pushups, sit ups, pull ups, shuttle runs, and aerobic running for 12 minutes. According to its origin, success comes from the word, which means ready to standby, success means preparedness. (Imran Akhmad, 2018) concluded success is a state of preparedness possessed by a person both physically, mentally and socially in dealing with various work situations. (Kresnapati et al., 2020) explained that Test Success Physical fitness (TKJ) is a

test that is carried out to measure the level of physical fitness of cadets. TKJ is carried out twice a year in the framework of the final semester exam (UAS). Test Results Success Physically (TKJ) there are those who are good and don't pass, supported by repeated data, standards, minimum scores, and some with very good results. Test Success Physical fitness (TKJ) that was assessed were pushups, sit ups, pull ups, shuttle runs, and aerobic running for 12 minutes. Regulation of the Governor of the Police Academy Number 02 of 2014 concerning Character-Based Education Evaluation Guidelines at the Police Academy the assessment of Gatra Physical is carried out on the assessment variables success physical. Test Success Physical fitness (TKJ) which was carried out at the beginning of the same A assessment, namely running for 12 minutes, until B there were 4 indicators which included pull ups, push ups, sit ups, and shuttle run. With this explanation, members of the National Police are required to take test success Physical (TKJ) periodically.

The results of observations made by researchers at SPN Hinai Polda SUMUT, show that it is indeed a test success Physical examination is always carried out by the police personnel on duty, the aim is to measure and serve as evaluation material. Carrying out tasks in the field requires quite a lot of manpower because they face situations and conditions where the number of people is greater than the number of personnel, for example when securing demonstrations. Physical fitness can also affect the mental and emotional when facing problems in the field which can make the image of the police in society worse. Hands Success Physical fitness (TKJ) is a test that is carried out to measure the level of physical fitness of Polri members. TKJ is carried out twice a year, this is used to see and maintain the level of physical fitness of Polri members. Administratively, the tests

carried out by SPN Hinai Polda SUMUT still use conventional methods by gathering all members to do TKJ tests and measurements. rapidly. Evidenced by the many changes ranging from sports infrastructure, and others. The development of sports technology is considered very important to advance sports achievements, especially in Indonesia.

The development of science and technology (science and technology) is very rapid. Along with the rapid development of science and technology, there are many innovations from various studies that are growing rapidly as well. Various human activities in everyday life have also been greatly assisted by advances in science and technology, including in the field of sports which have been assisted in the process of tests and measurements (Rizal et al., 2018). According to (Setiawan et al., 2019) technology and knowledge are developing rapidly to support human life in an advanced direction and there is a need for a new breakthrough for the development of digital tools in the field of sports so that they can easily achieve something that has been expected with the development of sports equipment. - sports equipment that is more advanced and modern. Facilities and infrastructure are very important for the development and achievements of sports. The assumption that researchers offer is to apply science and technology in Hands Success Physical (TKJ) to Polri members, especially in monitoring test results success Physical activity (TKJ) carried out by all members, therefore to support the elaboration that the researcher has described above, the researcher conducted a needs analysis of 10 members of the Indonesian National Police Class of 2021-2022 to see how far the level of need is for the product that the researcher is trying to offer. From the needs analysis that researchers did through a

questionnaire arranged by researchers it can be seen that 100% of Polri members have carried out tests and measurements success, 100% of Polri members carry out tests and measurements success scheduled by SPN Hinai Polda SUMUT, 100% of Polri members want to try to do tests and measurements success from home, 100% of Polri members want to get tests and measurements success use the application and 100% of Polri members want tests and measurements success which can be done anywhere.

Based on the results of observations and needs analysis that the researchers have described, the researcher wants to make innovations that are efficient and effective. The effective meaning is the product that the researcher designed does not change the tests and measurements success itself, meaning that researchers design web-based products that are used to view test and measurement results success carried out by members of the National Police whose results can be seen in a transparent and accountable manner so that tests and measurements are carried out success can be done from anywhere and at any time by members of the Police. Whereasefficient what is meant is that the product that the researcher designed can be seen by anyone because it uses an internet-based web system that can be accessed by anyone,Where anytime, anywhere to view test and measurement results success carried out by members of the Police. Several studies related to application development have been found by researchers (Aditya Gumantan, 2020; Evericho et al., 2018; Marpaung & Al Amzah, 2022; Sugiyani & Amrullah Ritonga, 2015; Wahyudi & Approved, 2022) (Nurkadri et al., 2023) makes the researchers who the researchers develop have a state of art. So from these results the researcher is interested in conducting research with the title "Development of Test Applications Success Web-Based

Police Members” which later this application product can facilitate Polri members in terms of tests and measurements success.

METHODS

The type of research in this study is qualitative research with development studies (Sugiyono, 2010) used in a study that must be based on the issues raised. The variables raised in the background of the problem will require a development and a method to solve it even though the research problem is the same, but sometimes a researcher can choose one or more types of research development that can be used to solve the problem. Research and development in this process uses a quantitative approach and uses a research design Research & Development (R&D) from Borg and Gall which consists of ten steps, among others.

- 1) Preliminary studies (Research and Information Collecting)
- 2) Planning Research(Planning)
- 3) Design Development(Develop Preliminary of Product)
- 4) Preliminary Field Testing
- 5) Revision of Limited Field Test Results(Main Product Revision)
- 6) Main Field Test
- 7) Revision of Wider Field Test Results(Operational Product Revision)

Data analysis aims to organize data in a meaningful way so that it can be understood. On test application development research success web-based police officers, engineering analysis data used with quantitative analysis techniques with percentages. This technique is used in order to obtain quantitative data analysis obtained from distributing questionnaires sample trials.

Subject is a portion taken from the whole object researched and is considered to represent the entire population (Dewi & Faridah, 2022). In this study, it was not about the sample but the research subjects. Subject taking technique in this study is to use a total sampling technique. The reason for taking total sampling is because the total population is less than 100 the entire population is used to research everything. Then the research subjects will explained in the following table:

Table 1. Criteria and Research Subjects

Research Stage	Amount	Criteria	Instrument
1. Early Product Plan	3	3 sports lecturers	Interview
2. Expert Evaluation	2	1 member of the Media 1 Measurement Test expert	Interview
3. Small Group Try Out	15	Members of the National Police Force 2020/2021	Test Application Development Success
4. Field Try Group	30	Member of the National Police Force 2021/2022	Web-Based Police Members

RESULT

This development research aims to produce a research product based on innovation that is efficient and effective. The effective meaning is the product that the researcher designed does not change the tests and measurements success itself,

meaning that researchers design web-based products that are used to view test and measurement results success carried out by members of the National Police whose results can be seen in a transparent and accountable manner so that tests and measurements are carried out success can be done from anywhere and at any time by members of the Police. Where efficient what is meant is that the product that the researcher designed can be seen by anyone because it uses an internet-based web system that can be accessed by anyone, Where anytime, anywhere to view test and measurement results success carried out by members of the Police. This research produces research products in the form of online-based applications that can be accessed Where only as long as it is still connected to the internet, the application can be accessed via the link <https://ebagbinjas.com/index.php>

Phase I Product Trial

Phase I trials were carried out on 15 Dikmaba POLRI students class 2020-2021. This aims to provide input and evaluate the results of trials conducted on samples to see the level of usefulness of the application and the effectiveness of the application success for members of the Indonesian National Police, so that they meet the theoretically and empirically feasible criteria.

The data obtained is then used as a basis for efforts to make revisions at a later stage. Results obtained in the field after conducting trials Phase I is the application success for members of the Indonesian National Police who are used to working quite well but must have a good internet network so it doesn't take too long to log in to the application.

From the results of trials conducted by researchers on 15 Dikmaba POLRI students class 2020-2021, it can

be seen that they have been classified in the form of questionnaires, by grouping into 3 aspects namely, clarity of material, material aspects so that it becomes a total of 12 questions, the results of the answers are grouped into 5 categories namely SS (Strongly Agree), S (Agree), SD (Moderate), TS (Disagree), STS (Strongly Disagree)) with an assessment of 5,4,3,2,1. The results of the phase 1 trial of 15 Dikmaba POLRI students from the 2022-2023 class are outlined through the formula percentage number of answers/maximum score x 100% with the following results. Of the 15 small group trial samples with a total score of 3.90 divided by the maximum score resulting in a presentation of 78.33% with the criteria Worth it. During the phase I trial, researchers found findings in the field to application success for members of the National Police that researchers pour into the table 2.

Table 2. Research Findings

No	Research Findings
1	To login to the application menu, you must use the internet network, so that the application responds quickly
2	To upload the video from the test results, you should compress the file first so that the kb of the video is not too large
3	The results of the assessment recapitulation should be stored in a pdf file

Evaluation of Application Development Product Success For Polri Members By Experts (Validators)

From the results of product trials that have been carried out the the experts also provide input and evaluations from the observations of the application success for police officers who doin the field. The following is the evaluation and input provided by experts:

App Design Expert Evaluation

The following is a brief explanation of the evaluation and suggestions from media experts presented in table 3. below this:

Table 3. Evaluation Results of Application Design Experts

No	Revised Matters	Revision Results
1	Application should be added feature- feature which is more interesting	Feature on the menu dashboard adapted to the needs of the TKJ test
2	Election Color on the menu dashboard should be adjusted to the background of members of the POLRI or the color of the greatness of the POLRI	Will be adjusted with member input
3	On the menu dashboard should filled by a picture of the POLRI emblem	The addition of the POLRI symbol must have permission from the Chief of Police as the highest mandate holder

IT Expert Evaluation Results

The following is a brief explanation of the evaluation and suggestions from test and measurement experts presented in table 4. below this:

Table 4. Evaluation of IT Experts

No	Revised Matters	Revision Results
1	The application design is designed to be easy to access via an Android cellphone	The application can be accessed via an Android cellphone with a page https://ebagbinjas.com/index.php
2	Customizable application menus	The application menu is tailored to the needs of TKJ
3	Application should be easily accessed by anyone,	Socialization will be carried out

	especially members of the POLRI
4	Color the app and the app name made even more interesting

Evaluation of POLRI Physical Trainer Experts

The following is a brief explanation of the evaluation and suggestions from academic experts presented in table 5. below this:

Table 5. Results of the Evaluation of POLRI Physical Trainers Experts

No	Revised Matters	Revision Results
1	The questionnaire provided has fulfilled several test and measurement rules	The questionnaire given and made according to the test kits and measurement height and weight
2	The clarification of the material needs to be explained more detail	The clarity of the material is explained through the questions
3	The clarity of the material aspects is adjusted to the understanding of the tester with a simple language selection	Material aspects are explained through question items
4	The language used is easy to understand tester and tester	The language used is in accordance with the EYD and the Big Indonesian Dictionary
5	The writing of test and measurement results is in accordance with valid provisions	Writing test results according to the rules of the BMI formula

Phase II Trial Results

Phase II trials were carried out on 30 active POLRI members who often conducted TKJ tests. The aim was to provide input and evaluate the results of trials conducted on samples to see the level of usefulness of the tool and the effectiveness of the application. Success for members of the Indonesian National Police, so that they meet the theoretically and empirically feasible criteria. The data obtained is then used as a basis for efforts to improve the final application product success for police officers. Results obtained in the field after conducting trials Phase II is the application work success for members of the Indonesian National Police whether it is appropriate to use and meet the criteria referred to in the application success for police officers. From the results of the trials carried out, it can be seen and classified in the form of a questionnaire. The results of the large-scale trial data (stage II) on active POLRI members who often take the TKJ test can be seen that the effectiveness aspect is 93%, the quality aspect is 93.33%, and aspects of product satisfaction 95% with an average percentage of 93.77% by category "Really Worth It" to be used as a new way of input data into the application success for POLRI members.

DISCUSSION

The National Police of the Republic of Indonesia is a state instrument that plays a role in maintaining security and public order, upholding the law and providing protection, protection and service to the community in the context of maintaining internal security (Law Number 2 of 2002 concerning the Indonesian National Police). The image of the police is formed in the profession that is attached to the police person, regardless of his professional attitude in carrying out his

duties and obligations. The image of the police will be considered good by the community if it can show the community that the police deserve to be role models or role models for the surrounding community. The public will see the attitudes and actions of the police on a daily basis, whether there is anything to emulate or not. Things that are often in the spotlight of the community, such as improving services, increasing knowledge, treatment of giving protection and how the police dress, talk, how to get along with the community, and no less important is the physical fitness of the personnel. Members of the National Police of the Republic of Indonesia can be honorably discharged if they reach the retirement age limit, special consideration for service interests, do not meet the physical and/or spiritual requirements, fall or die or pass away or disappear while on duty, and reach the age limit. (Government Regulation No. 1 of 2003 regarding Dismissal of Polri members).

The physical and spiritual fitness of a police officer is very much needed to support the quality of performance and avoid early retirement. The police, who have many tasks, namely maintaining security and order, enforcing the law and providing protection, protection and service to the community, a police officer must have several supporting components as factors for this success, one of which is always maintaining physical fitness. Physical fitness is an important thing because if a police officer does not have good physical fitness, then the level of productivity will be reduced and the service process will be hampered. Someone who has a high level of physical fitness can do work effectively without significant fatigue, the body remains fresh when stopping work and at rest. Conversely, a low level of physical fitness is an obstacle in doing work.

Therefore, the level of physical fitness is an important factor to maintain one's level of productivity. Good physical fitness is necessary, regardless of gender, ethnicity, occupation, social and economic status. Good physical fitness is obtained not only in a short time, but must start practicing regularly and pay attention to the principles of practice, the stages of exercise and the dose of exercise.

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in an advanced direction and there needs to be a new breakthrough for the development of digital tools in the field of sports so that they can easily achieve something that has been expected with the development of sports tools. more advanced and modern sports equipment. Facilities and infrastructure are very important for the development and achievements of sports. Quality "App Development Success For POLRI Members, this is included in the criteria of "Appropriate". This statement can be proven from the results of an analysis of the "Appropriate" assessment of the two experts, both application experts and physical trainers, as well as in the assessment of small group trials and large group trials.

Research Limitations

This development research has several limitations in its research including the following.

1. The trial sample is still limited, due to time constraints, or respondents and research costs.
2. Making an application design that takes a long time so that it hinders the research process.
3. The application must be accessed using an internet network

CONCLUSION

From the results of the research that has been done, the researchers concluded that the test application product success for members of the WEB-based POLRI, this is appropriate for use see results TKJ test for POLRI members. The use of application products is a new way for assessors, physical trainers and POLRI members to carry out regular tests through the TKJ test. Application product development research is a task physical trainers and members of the POLRI so effective and efficient physical trainers and members of

the POLRI able to perform their duties optimally. Utilization of technology and information in supporting the fulfillment of the growing globalization era.

ACKNOWLEDGEMENT

The researcher's thanks go out to the thesis advisors who have helped a lot in completing the writing of this thesis so that it becomes a scientific work that the researcher publishes. In addition, the researchers thanked the research sample, namely members of the hinai police of north sumatra regional police.

REFERENCES

- Aditya G, I. M. R. Y. (2020). Pengembangan Aplikasi Pengukuran Tes Kebugaran Jasmani Berbasis Android. *Jurnal Ilmu Keolahragaan*, 19(2), 196–205.
- Dewi, R., & Faridah, E. (2022). Method and Motivation in Teaching Elementary School Students to Throw and Catch the Ball. *Jurnal Pendidikan*, 14(3), 3507–3516.
<https://doi.org/10.35445/alishlah.v14i3.1635>
- Evericho, P., Kodrat, I., Satoto, I., Kridalukmana, R., & Kom, S. (2018). Makalah Seminar Tugas Akhir Pengembangan Aplikasi Berbasis Web Untuk Menampilkan Absensi Dan Nilai Akhir Peserta Didik (Studi Kasus di SMP Negeri 32 Semarang). www.mysql.com
- Gumantan, A., Mahfud, I., & Yuliandra, R. (2021). JOSSAE (Journal of Sport Science and Education) Pengembangan Alat Ukur Tes Fisik dan Keterampilan Cabang Olahraga Futsal berbasis Desktop Program. *Journal of Sport Science and Education* |, 6(2), 146–155.
<https://doi.org/10.26740/j>

- Hernawan, H., & Widyaningsih, H. (2018, November). Model Outdoor Games Activities Untuk Pemuda Karang Taruna Tenaga Penggerak Olahraga Rekreasi. Fakultas Ilmu Olahraga. Universitas Negeri Jakarta. 2018. In Prosiding Seminar dan Lokakarya Fakultas Ilmu Keolahragaan Universitas Negeri Jakarta (Vol. 3, No. 01, pp. 28-33).
- Imran A, S. (2018). Bleep Test Countermeasures Test Using Infrared and Microcontroller Based Computer System. International Journal of Science and Research (IJSR), 7(8), 759–761.
<https://doi.org/10.21275/ART2019550>
- Kresnapati, P., Setyawan, D. A., & Setiawan, S. (2020). Pengembangan Komponen Tes Kondisi Fisik Berbasis Android. Physical Activity Journal, 2(1), 42.
<https://doi.org/10.20884/1.paju.2020.2.1.3166>
- Marpaung, N. L., & Al Amzah, R. (2022). Rancang Bangun Program Aplikasi Tes Kesegaran Jasmani Indonesia Berbasis Android. Jurnal Teknik Informatika Dan Sistem Informasi, 9(2). <http://jurnal.mdp.ac.id>
- Nurkadri, N., Silwan, A., Sitepu, I. D., Nur, M., Akbar, T., & Gunri, R. N. (2021). Match Report Application for Match Commissioner (MC) Football Match. Kinestetik : Jurnal Ilmiah Pendidikan Jasmani, 5(2), 256–265.
<https://doi.org/10.33369/jk.v5i2.15666>
- Nurkadri, S A., Sitepu, I. D., Silwan, A., Nur, F. H., Akbar, T., Gunri, R. N., & Muslimin. (2023). General Preparatory Exercise Program Based on Android Tennis Sports. International Journal of Human Movement and Sports Sciences, 11(1), 112–117.
<https://doi.org/10.13189/saj.2023.110113>
- Rizal, A. A., Hafidhurrifqi, H., & Mahmudi, S. (2018). Ilmu pengetahuan dan teknologi dalam olahraga. Seminar Nasional Ilmu Keolahragaan UNIPMA), 1(1), 127–131.
<http://prosiding.unipma.ac.id/index.php/snik/index>
- Sugiyono. (2010). prof. dr. sugiyono, metode penelitian kuantitatif kualitatif dan r&d. intro (PDFDrive).pdf. In Bandung Alf (p. 143).
- Setiawan, W., Septa, B., & Triaditya, M. (2019). Tingkat Pembangunan Olahraga Ditinjau Melalui Sport Development Index (SDI) di Kecamatan Banyuwangi. Prosiding Seminar Nasional IPTEK Olahraga.
- Sugiyani, Y., & Amrullah Ritonga, R. (2015). Pengembangan Aplikasi E-Learning Berbasis Semantic Web Pada Balai Tekkom Dinas Pendidikan Provinsi Banten. Jurnal Sistem Informasi, 2.
- Wahyudi, T., & Disetujui, D. D. (2022). Pengembangan Aplikasi Berbasis Web dan Android Sebagai Penunjang Kerja di Indonesia: Systematic Literature Review. Journal Computer Science, 1(2). <https://scholar.google.co.id/>.