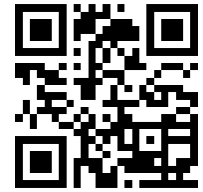


## Android-Based Protrainer Application Development to Support Personal Trainer Services



Dhedhy Purwanto<sup>1</sup>, Ahmad Nasrulloh<sup>2</sup>, Afeb Chesa Arianto<sup>3</sup>, Amri Hartanto<sup>4</sup>

<sup>1,2,3,4</sup> Department of Sport Science, Yogyakarta State University, Yogyakarta Indonesia

**ABSTRACT:** Changes in communication technology, the development of education and people's income have increased consumer awareness to get good service. Personal trainer services that suit consumers' wishes are the main thing to attract consumers to use personal trainer services. The purpose of this research is to produce an android-based protrainer application to support personal trainer services. This research is a research and development research and development (R&D). The research data that have been collected are then processed and analyzed by qualitative and quantitative descriptive analysis. The product resulting from this research is an android-based protrainer application that has been developed with the need to improve personal trainer services. Based on the validation process carried out by experts who have assessed the android-based protrainer application product to improve personal trainer services from the usability aspect, information aspect, and appearance aspect, it is very feasible. The validation of media experts that have been developed based on aspects of media usability, aspects of media information, and aspects of media appearance is very feasible. Based on the effectiveness test, which was measured by assessing consumer satisfaction factors from tangibles, reliability, responsiveness, assurance, empathy to personal trainer services, most of them were in the satisfied category.

**KEYWORDS:** protrainer application, service quality, personal trainer.

### INTRODUCTION

The rapid competition in the personal trainer service business world lately is not only caused by globalization factors, but rather because customers are only getting smarter, price conscious, and demanding (Nagle & Müller, 2017). Advances in communication technology also play a role in increasing the intensity of competition, because it gives customers access to more information about the various products offered (Lodhia & Stone, 2017). Changes in communication technology, the development of education and people's income have increased consumer awareness to get good service.

Competition between service providers is also a challenge in running a personal trainer service business, because the personal trainer business has quite a lot of enthusiasts for consumers who want to do sports privately. Communication between personal trainers and consumers is also one of the services that can increase customer satisfaction (Alhelalat et al., 2017); (Pradeep et al., 2020). These services can, of course be in the form of information that personal trainers can provide to consumers regarding the information needed by consumers, such as complete price lists from personal trainers, availability of precise training schedules, training programs offered, and measurement data taken by personal trainers to consumers.

Technological developments have also helped to provide services easily to consumers (Hoyer et al., 2020). Fitness services using applications are becoming widely used by consumers to get exercise information easily and practically. Fitness apps using smartphones leverage persuasive technology to help individuals increase physical activity. Millions of people use fitness apps to improve their physical and mental health (Rathbone & Prescott, 2017); (Baumel et al., 2019); (Cheng et al., 2018).

Every tenant of personal trainer services will expect good service and affordable prices. However, in reality it is found that there are still many personal trainer service providers that do not meet consumer expectations. Transparency of service information is still closed without consumers being able to see the training program, tracking exercise evaluations cannot be seen by consumers, training schedules that cannot be displayed to consumers, and medical history data that is still rarely used as a reference when personal trainers create exercise programs, causing dissatisfaction, towards service.

Based on this background, the author has the idea of developing an android-based protrainer application to support personal trainer services. A protrainer application that can be a tool to help personal trainer services makes it easy for personal trainers to

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create training programs and provide training evaluations that can be directly seen by consumers and assist in providing information on different programs. This research is also expected to increase customer satisfaction with the quality of personal trainer services.

### **METHOD**

This research is a research and development research and development (R&D). The research and development procedure basically has two main objectives, namely: (1) developing the product and (2) testing the effectiveness of the product in achieving the goal. This research focuses on developing a personal trainer management model based on an android application to improve the sports industry. Application trials will be carried out by operating the android application with a smartphone. This is intended to determine the feasibility of the personal trainer management model android application to support the sports industry. The large-scale trial process was observed by android application users. At this stage, a trial was conducted on 50 personal trainers, all of which consisted of trainers who worked in a fitness center or freelance in the Special Region of Yogyakarta. The research data that have been collected are then processed and analyzed by qualitative and quantitative descriptive analysis.

### **FINDING**

This study aims to develop a personal trainer service management model system based on an android application so that the work of personal trainers can be managed easily and efficiently and assist in making sophisticated training schedules and programs. The initial product will be validated by experts or experienced experts to assess the new product that has been designed to find out its weaknesses and strengths. The initial product design that has been developed is then evaluated for feasibility testing to be used and tested.

The results from the 1st material expert showed that the percentage in the android aspect was 96% in the very good/very decent category. In comparison, the percentage in the application manual aspect was 95.2% in the very good/very decent category. From the second material expert, it was found that the percentage in the android aspect was 96% in the very good/very decent category. In comparison, the percentage in the application manual aspect was 96.4% in the very good/very decent category.

The results of the 1st media expert validation obtained the percentage on the android aspect of 97.8% with the very good/very decent category, the percentage on the application manual aspect of 97.6% with the very good/very decent category. The results of the second media expert validation obtained the percentage on the android aspect of 96.8% with the very good/very decent category, the percentage on the application manual aspect of 95.8% with the very good/very decent category.

Based on the results of a small-scale trial on the development of an Android-based personal trainer management model, it was stated that it was very good (93%). In the aspect of the assessment of the guidebooks, most of them stated that they were very good (90%). Based on the results of large-scale trials on the development of a personal trainer management model based on Android, it was stated that it was very good (86%). In the aspect of the assessment of the guidebooks, most of them stated that they were very good (85%).

The effectiveness test is intended to describe the level of personal trainer service by measuring customer satisfaction. The level of satisfaction is measured by a questionnaire consisting of 30 questions with a score range of 1-4, so that the ideal score is between 30-120. Respondents for the effectiveness test are members who are already under contract with a personal trainer who have used the Protrainer application. The number of respondents to the effectiveness test is 50 members. In the analysis of the service quality pretest and posttest data above, it was found that the value of sig, (2-tailed) was 0.000 <0.05, it can be concluded that there was a significant difference between service quality in the pretest and posttest. This means that there is a difference in service quality between before the personal trainer uses the protrainer application and after the personal trainer uses the protrainer application.

The final product of this research is an application in the form of an android application for a personal trainer management system that makes it easier for instructors to manage their business. This development will support infrastructure and tools to facilitate instructors. Furthermore, if the research has been completed and declared feasible then the product can be used en masse. After obtaining the results of large-scale trials, the final product of an Android-based personal trainer management system is obtained. The final product results can be displayed as follows:

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Table 1. How to register a personal trainer account





Part	Description	Bagian	Description
	Click on "bikin akun yuk".		Fill in the requested data and select the column as a trainer.
	Fill in the requested personal data clearly and completely.		Trainer account ready.

Table 2. How to register member accounts




Part	Description	Part	Description
	Click on "bikin akun yok".		Fill in the requested data and select the column as a member.
	Fill in the requested personal data clearly and completely.		Fill in the medical history data for the last 2 months.

Table 3. On personal trainer accounts







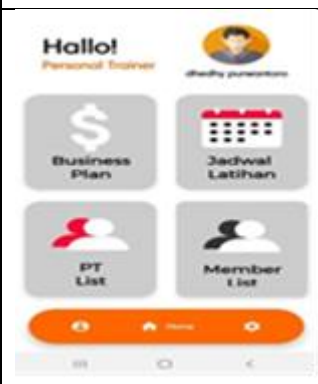

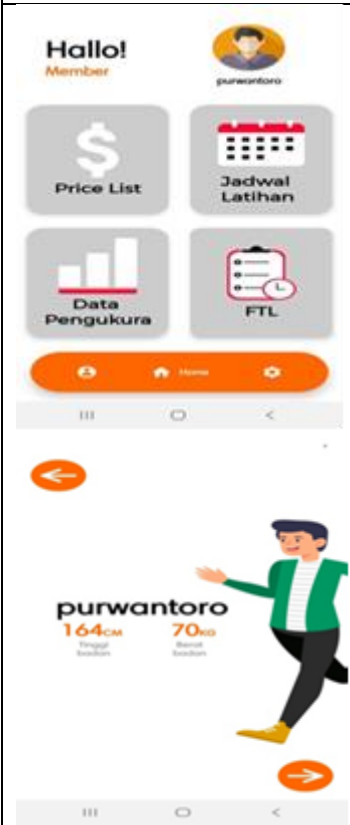
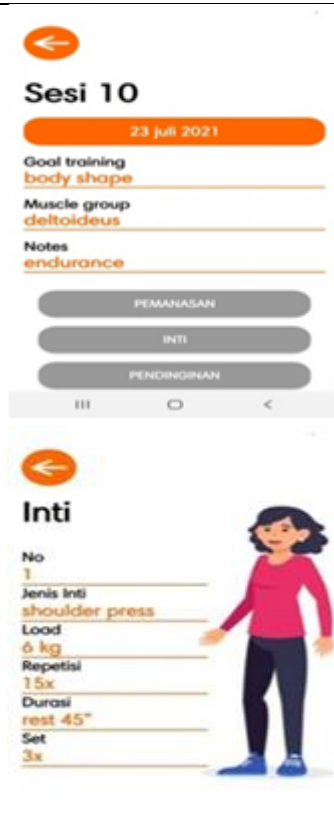
Part	Description	Part	Description
	Click on the member list feature		Click on the settings menu
	Select the member to be confirmed		Click accept personal trainer request
	Click send request to become a member		Select receive personal trainer confirmation

Table 4. Personal and Member Trainer List

Part	Description	Part	Description
	The display in this feature provides a list of personal trainer names registered in the Protrainer application. This feature can be seen by members to determine the trainer according to the goal.		The initial appearance of this feature is the same as the personal trainer list feature, but in member data it has special features such as: Par-Q, Fitness Training Log, Measurement Data.

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Table 5. Measurement data and Fitness Training Log

Part	Description	Part	Description
	Members can see the progress of the training results by looking at the measurement data carried out by the personal trainer and measured by the personal trainer.		The training log is a program created by a personal trainer for the next meeting. This feature provides information on the intensity of the exercise that will be trained at the next meeting.

### DISCUSSION

This research was conducted to develop an Android-based Protrainer application to support personal trainer services. The Protrainer application developed is in the form of a business plan arrangement that is recorded and controlled by the instructor, a training schedule that will display the availability of trainer time with members so that prospective members can determine the time that suits the instructor. Personal trainer list which displays the names of instructors registered in the application. The last feature is the member list feature that provides training program settings and member measurement data.

Based on the results of the material expert test, the average percentage of 95.9% in the very good/very decent category, while the media expert test results obtained an average percentage of 96.8% with the very good/very decent category, the results of the test. The expert indicated that the Android-based protrainer application to support personal trainer services was stated to be very good. There are several inputs and suggestions obtained in this process, such as adding the total for the business plan features, as well as creating files that are easy to open to install on smartphones.

The next stage is the trial stage which was carried out twice, namely the small group trial stage and the large group trial stage. In the small group trial, the average percentage assessment of the usability aspect was 93% in the very good / very decent category, while the results of the average percentage assessment of the information aspect were 90% in the very good / very decent category, while the results of the average percentage assessment of the aspects 90% view with very good/very decent category. Based on the results of the assessment, the value is converted based on the conversion of test scores so that it can be concluded that the results of the assessment of the usability aspect, information aspect, and display aspect are very feasible.

In the large group trial stage, the Android-based protrainer application to support personal trainer services got the results of an assessment of the usability aspect with an average percentage score of 85% with a very good/very decent category, while the results of the average percentage assessment of the information aspect were 88% with very good/very decent category, while the results of the average percentage assessment of the display aspect are 86% with very good/very decent category. Based on the results of the assessment, the value is converted based on the conversion of test scores so that it can be concluded that the results of the assessment of the usability aspect, information aspect, and display aspect are very feasible.

After revision, the effectiveness of this media is tested to find out which service quality is more effective, by measuring the level of customer satisfaction. Consumer satisfaction is the level of feeling of someone who purchases a product or service for his



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personal needs after making a comparison between the performance of the product or service provided to what is expected by the user or service actor. Satisfaction can be influenced by the user or the service actor. Satisfaction can be influenced by the services provided to consumers. If the customer is dissatisfied with a service provided, the service can be ascertained to be ineffective and inefficient. On the other hand, consumers stick to the product.

Based on the results of the study above, it was obtained that the average difference in the level of consumer customer satisfaction with the services provided by personal trainers before and after using the protrainer application, where there was an average before using the protrainer application of 88.40% and after using the application there was an average by 96.22%. These results can be interpreted that the services provided by personal trainers after using the protrainer application to improve personal trainer services to consumers have increased. This good service will of course have an impact on increasing consumers (Juanamasta et al., 2019); (Romdonny & Rosmadi, 2019); (Hong et al., 2019), because satisfied consumers will definitely extend their contracts with personal trainers (Dias et al., 2019); (Balinado et al., 2021), will even invite friends to join the exercise together. Thus good service will indirectly increase profits (Hogreve et al., 2017); (Pakurár et al., 2019).

Based on these results indicate that the development of an android-based protrainer application provides an increase in personal trainer services to consumers. To the previous description that the protrainer application can facilitate service with consumers. Provide good governance efficiency for personal trainers, especially services. Donate in the form of applications and personal trainer service manuals to become good instructors, especially for sports alumni to have business skills according to the fields studied and made it easier to develop their business. Assist prospective members and personal trainers in obtaining training information and training updates. It can be used to solve the problem of not knowing personal trainer services easily.

### CONCLUSION

The product resulting from this research is an android-based protrainer application that has been developed with the need to improve personal trainer services. It is feasible based on the validation process carried out by experts who have assessed the android-based protrainer application product to enhance personal trainer services from the usability, information, and appearance aspects. The validation of media experts that have been developed based on aspects of media usability, media information, and media appearance is very feasible. Based on the effectiveness test, which was measured by assessing consumer satisfaction factors from tangibles, reliability, responsiveness, assurance, and empathy to personal trainer services, most of them were in the satisfied category. Based on the results of this study, suggestions can be made, (1) personal trainer service providers can make choices to manage a business concisely and easily, and (2) members can get information on the development of training results from their personal trainer of choice.

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