How to design of digital personality and vocational interest test?

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Abstract. Feeling satisfied or not at work is very closely related to our interest in working. The trick to finding career satisfaction can be by identifying core interests and matching our work with them. The purpose of this study is to produce an application design that can provide an overview of the personality traits and professional interests of vocational education graduates. The method used is the SDLC waterfall model. This application is called PVI, which is a cross-platform based application with the Flutter framework. This application was developed using the Holland’s career theory that connects human personality characteristics with occupations. The results of this study obtained the PVI application design, which is useful for finding a personality and vocational interests. Career choice is determined by the interaction between personality and environment. Therefore it needs to be planned appropriately and adjusted to interests and personality.

1. Introduction

In feelings, we feel job satisfaction or dissatisfaction is a fundamental interest when we work. The trick to finding career satisfaction can be by identifying our core interests and matching our work with them. For example, if we are science people, we might not like working in jobs that require quick decisions, or where we need to use guts to guide us. Likewise, an artistic person will go crazy in a profession that has many rules and procedures, or who demands a lot of numbers. In a perfect world, we will all choose careers that fit our core interests. But this is not a perfect world, for all sorts of reasons, we can find ourselves in a position where what we do is not by our natural interests and abilities. At this point, understanding how work fits and shared personalities can help us change the situation for the better. Ability and personality are the two main things that contribute to job satisfaction. We might find that work that matches our abilities and personality is far more valuable than those that are not.

Personality traits and professional interests influence career decisions as well as to identify jobs or professions that suit them, to increase job satisfaction and performance [1]. The current condition is that many people have difficulty determining their career. Meanwhile, information about careers is very important because it is related to the future. This career selection needs to be developed since
adolescence [2]. Everyone must know the tendency of interests and talents to get a picture in the career selection. It can also help parents and teachers guide or direct the interests and talents of children.

According to Holland, a vocational choice should reflect congruence between an individual personalities (also in terms of interests). The characteristics of occupation (which can be described in terms of activities, among other things). To describe both vocational interests and occupations, Holland used six occupational or personality types: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional (RIASEC) [3]. Holland vocational talent inventory, developed by psychologist John L. Holland, is one of the most popular steps used to assess career talent [4]. Holland vocational personality theory suggests a career decision method through a hexagonal model called RIASEC which emphasizes behavioural characteristics or personality types as the main things in the development and career choices of individuals [4–8].

2. Material and methods

The method used in developing this application is to use the Software Development Life Cycle (SDLC) with the waterfall model. Consists of analysis, design, coding/implementation, testing, deployment, and maintenance [9-12] (See Figure 1). This application development uses the Flutter framework. Flutter is a superior framework that is used to create an application interface that runs across platforms, namely the Android and iOS platforms. Flutter was created and developed by the biggest internet company, Google. Flutter is open source, can develop applications quickly, native-class performance, and has a very flexible user interface [13–15].

![Figure 1. Software Development Life Cycle with the waterfall model.](image)

3. Results and discussion

In general, this study aims to produce an application design that can provide an overview of the personality traits and professional interests of vocational education graduates. The application created is a cross-platform application. Can be used on various platforms, making it easier for users to test personality and interests [16]. In this application, the user is required to fill in user data, which is then used as a basis for valuation. The user data is also used as an account, which is used for logging in the application. An assessment of personality traits and professional interests will be obtained after the user answers a series of questions.

The application design has been completed and named PVI. The first step in making this application design is to collect the complete requirements then analyzed and defined needs that must be met by the program to be built. This phase must be done in full to be able to produce a complete design.
Furthermore, the design of the test equipment will be used in the application. The design of the PVI application can be seen in Figure 2.

![Figure 2](image1.png)

**Figure 2.** The design of the PVI application.

In Figure 2, it can be explained that the actors who will participate must be registered in the PVI application to log in. Actors are divided into two actors, namely users and administrators. Users are vocational education graduates who will know their personality and vocational interests. Figure 3 is the registration page design for the user while the administrator is the actor who will control the running of the application.

![Figure 3](image2.png)

**Figure 3.** PVI application registration page.
In Figure 4 can be seen, the design of the user page to do the test to obtain data about the user personality and vocational interest. This data will then be processed by the application based on RAISEC theory so that the results of the analysis can be presented on the Result page.

Figure 4. PVI application test page.

4. Conclusion
Following the research objectives, namely to produce a design application that can provide an overview of personality traits and professional interests of vocational education graduates, can link between human personality characteristics with the type of work. The design of the PVI application has been designed, which is useful for discovering one's personality and vocation interests. Career choice is determined by the interaction between personality and environment. Therefore it needs to be planned appropriately and adjusted to interests and personality.

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