The needs analysis of the android-based online psychological assessment applications usage for school counselors in West Sumatra

Zadrian Ardi[1*], Ilmiyati Rahmy Jasril[1], Frischa Meivilona Yendi[1], Verlanda Yuca[1]
[1]Universitas Negeri Padang
*Corresponding author, e-mail: zadrian@fip.unp.ac.id

Abstract: Psychological assessment for students is one of the activities that cannot be separated from counseling services. Psychological attributes obtained from the implementation of the assessment can be used by school counselors to intervene and develop counseling programs. However, conditions in the field indicate that school counselors still have not carried out a comprehensive assessment of the condition of students, so this has an impact on the effectiveness of counseling services. This research and community service aims to provide training and skills for school counselors in conducting psychological assessments using an Android application called Potential. The urgency of using this application has increased since the emergence of the Covid-19 pandemic, where students and school counselors cannot meet face-to-face. This community service is carried out in stages in a series of workshops and independent training. School counselors are provided with a Potential account that can be used at their school. The results of community service activities show that students' psychological conditions are generally mapped through applications and assist school counselors in planning and developing effective programs.

Keywords: Psychological Assessment, Online Assessment

Conflict of Interest Disclosures:
The authors declare that they have no significant competing financial, professional or personal interests that might have influenced the performance or presentation of the work described in this manuscript.

Introduction

Psychological assessment of clients (both students, students and the general public) is one of the most essential procedures in knowing the condition of psychological attributes so that it will affect counseling interventions (Ardi, Febriani, Ifdil, & Afdal, 2019; Ardi, Ifdil, & Maysitoh, 2020; Ardi & Sukmawati, 2019; Harari et al., 2020; Oloidi, Nduaguba, & Obamiro, 2020; Song, Yi, & Park, 2020; Sukmawati, Ardi, Ifdil, & Zikra, 2019). This implies that psychological assessment is a crucial aspect in the success of counseling services. In addition, the results of measurements of the psychological condition of an individual will determine what indicators should be given intervention and the right program is given to the individual (Ardi, Putra, & Ifdil, 2017; Ardi et al., 2018).

The limited resources of guidance and counseling teachers in developing psychological measuring tools make the assessment process not optimal and result in a counseling intervention program that is not comprehensive (Ardi, 2019; Ardi et al., 2020; Ardi & Sukmawati, 2019). The "classic" assessment and measurement process in the form of a Paper and Pencil Test (PPT) also makes assessment activities inefficient in terms of time and resources used (Ardi, Febriani, et al., 2019; Ardi & Putri, 2020; Ardi & Sukmawati, 2018; Bacca-Acosta & Avila-Garzon, 2020; Bai, Elavsky, Kishida, Dvořáková, & Greenberg, 2020; Hamilton et al., 2020). Coupled with the current state of the Covid-19 pandemic, it worsens the condition of psychological assessments in the field, especially for students and other counseling service targets (Ifdil, Fadli, Suranata, Zola, & Ardi, 2020; Liu et al., 2020). The Covid-19 pandemic has made the assessment process no longer able to be done conventionally and must move to a face-to-face process to a digital process. This is an obstacle and problem that must be faced by partners who are a collection of all high school counselors in West Sumatra.

Responding to the challenges and current conditions from partners in the field, research results in the form of application products (software) have been developed since 2018 (Ardi, Febriani, et al., 2019) and has been updated (upgraded) to give birth to Android-based applications from 2019 to 2020 (Ardi et al., 2020; Ardi, Neviyarni, & Daharnis, 2019; Ardi & Sukmawati, 2019). So as a form of downstreaming and disseminating research products as well as responding to the challenges of conditions in the field, collaboration with High School Counselor Consultative partners in West Sumatra is a set of all guidance and counseling teachers in West Sumatra in the form of implementing an Android-based online assessment application using Potensia apps. This collaboration is also a pilot project as a projection for the implementation of online assessments throughout Indonesia.

The implementation process in the form of community service activities is based on various needs analysis, according to the problems experienced by partners. The supply of assessment resources currently available generally comes from when the guidance and counseling teacher is studying at a university. In other words, measuring instruments have been around for a long time with almost no refinement and upgrading processes. In addition, the quality of psychological measuring instruments owned by guidance and counseling teachers in the field tends to be low, in fact in some cases there is no standardized assessment in developing counseling service programs. Based on the results of research in 2019, almost 80% of counselors in West Sumatra did not develop their own measuring tools for disclosing students' psychological conditions. This means that school counselors have not produced many measuring tools for assessing students' psychological conditions. Governance and management of partners are still conventional and less effective. Not all the latest information and products from partners can be used directly by members in West Sumatra. This is one of the most important parts to be developed in the future. This is also coupled with the Covid-19 pandemic which has hampered the management and governance of partners, especially in terms of developing assessments. Based on the problems, the focus of this study leads to a study of the need for using an online assessment application after a workshop for school counselors in West Sumatra was conducted.

Method

Measurement

The process of collecting research data uses a series of feedback assessments that contain questions and statements regarding the needs and responses of partner users to the developed application. In addition, a search was also carried out on the effectiveness of the workshop in terms of the understanding gained by partner users. The instrument also used in this survey is the Acceptability of Mental-Health Mobile App Survey (AMMS) and a measuring tool that is a feature of the application, namely the Zadrian-Ifdil Problem Checklist (ZIPC) as an instrument that has been included in the Potensia Apps.

Participant

This survey data was collected from user partners who are school counselors throughout West Sumatra totaling 150 people spread from various schools. To ensure the use of respondent's data, the respondent was first asked for a consent form for data collection and publication. This process is carried out entirely through distance as a form of anticipation of the spread of the Covid-19 virus. The data collection process was also carried out using the Potensia Apps which was first installed by the respondent.

Results and Discussion

From the problems experienced by partners and proposed solutions to alleviate these problems, the priority problems that will be handled together are optimizing the quality of mobile-based psychological assessments, distributing applications to all partner members in West Sumatra, optimizing the quality of human resources in utilizing technology for psychological assessment and counseling services, upgrading governance and management as well as opening up opportunities for business units for partners. This activity will be realized through the implementation of the Android-based Potential application for online psychological assessments.

This method is also equipped with the application of science and technology to realize the alleviation of problems experienced by partners. In the first year, in order to optimize the quality and conditions of the assessment that will be used, an online FGD activity will be carried out in the first year involving 30 partner managers, the results of which will later be used to improve the features and content of existing applications. This activity utilizes virtual conference applications such as Zoom Cloud Meeting with a series schedule, so that all ideas and suggestions from partners can be accommodated for better application development. Then in the following month, orientation activities and online workshops were held for all partner members spread across five regencies/cities in West Sumatra, namely Payakumbuh City, Padang City, Fifty Cities Regency, Padang Pariaman Regency and Padang Panjang City. The distribution of these products is also a manifestation of the application of science and technology to solve product distribution problems to partner members.

The next activity to solve the problem of human resource development is the implementation of a webinar series for wider application implementation with follow-up activities in the form of assistance in the use of applications. Specifically, the activity materials consist of (1) an overview of the application, (2) the integration of the preparation of reporting the results of the assessment, (3) the implementation of the results of the online psychological assessment for the preparation of a digital counseling service program.

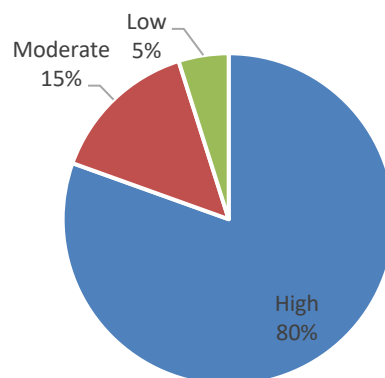Based on the data obtained after the workshop and FGD, it can be presented in Figure 1.

Figure 1. Clarity of use of the application

After the workshop, participants who came from partner users in general (80%) had clarity in using the application properly. This means that the application has been precise and consistent enough to maintain practical conditions in accordance with the results of previous research. The next finding relates to the convenience of using the application as described in Figure 2.
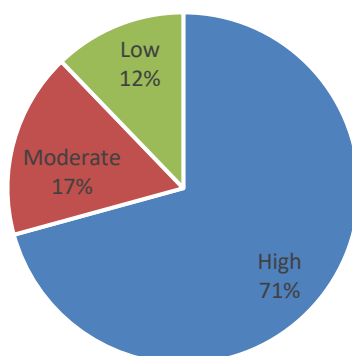
Figure 2. Convenience in using the application

Based on Figure 2, it can be interpreted that users generally feel comfortable using the application. Counselor users feel that the application is very helpful in providing a good mapping of the psychological condition of students. This mapping will ultimately assist in the preparation of a good counseling service program. However, there are still 12% of users who feel low comfort. In general, these users still do not understand the flow of using the application thoroughly and need time to adapt to the online psychological assessment system. Furthermore, an analysis of the conditions and a study of the needs of partner users is carried out on the aspect of the tendency to use the application in the future as shown in Figure 3.
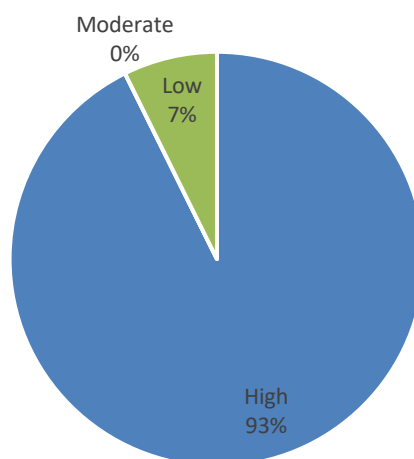

Figure 3. Tendency to always use the app

Based on Figure 3, it can be interpreted that 93% of partner users have a positive response to the application so they plan to continue using the application in the future. This indicates that the application is sufficient to contribute to the implementation of counseling interventions in schools, particularly with regard to the psychological assessment process. The application is also very helpful for school counselors in data processing, mapping students' psychological conditions and reporting. While 7% of them have a low tendency to use the application in the future. This is due to the small variety of instruments available in the application, so this limitation will be solved by releasing additional instruments and being included in the application.

Conclusion

The implementation of psychological assessment is an essential element in the implementation of counseling services, especially for students in schools. School counselors need to know the condition of the psychological attributes of their students in the context of preparing a counseling service program. This condition is not limited to the problems experienced by students, but also relates to the potential that needs to be developed from students. However, the conditions in the field indicate that the assessment efforts on the psychological condition of students are still not in optimal condition. Some of the conditions that cause the implementation of psychological assessments in schools to be not optimal are the constraints of instrument resources and the limited space for school counselors to provide services due to the Covid-19 pandemic. In addition, the implementation of the assessment also requires time for processing and interpreting the results, so that not all aspects of the assessment are measurable in preparing the counseling service program in schools. The results of the survey on the results of the activity resulted in the condition of the need for application use by user partners, which showed that users were able to properly map the psychological condition of students, comfort in using the application and the tendency to continue using the application in the future.

Acknowledgment

References

Ardi, Z. (2019). An analysis of education principle implementation in an online counseling approach: a preliminary study based on analysis using the Rasch model. *COUNS-EDU: The International Journal of Counseling and Education, 4*(2), 59-68.

Ardi, Z., Febriani, R. D., Ifdil, I., & Afdal, A. (2019). *Android "karirKu" Software Development for Exploration of Career Trends based on Personality Types.* Paper presented at the Journal of Physics: Conference Series.

Ardi, Z., Ifdil, I., & Maysitoh, M. (2020). Development and validation of the Zadrian-Ifdil Problem Checklist (ZIPC) for college students. *International Journal of Technology, Innovation and Humanities, 1*(1), 41-50.

Ardi, Z., Neviyarni, & Daharnis. (2019). Konselo app: The future of distance counselling and therapy applications based on android technology. *International Journal of Innovation, Creativity and Change, 5*(6), 231-244. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084436048&partnerID=40&md5=fa9c4d31b0195e977e60383f7350523c

Ardi, Z., Putra, M. R. M., & Ifdil, I. (2017). Ethics And Legal Issues In Online Counseling Services: Counseling Principles Analysis. *Jurnal Psikologi Pendidikan Dan Konseling: Jurnal Kajian Psikologi Pendidikan Dan Bimbingan Konseling*, 15-22.

Ardi, Z., & Putri, S. A. (2020). The analysis of the social media impact on the millennial generation behavior and social interactions. *Southeast Asian Journal of Technology and Science, 1*(2), 70-77.

Ardi, Z., & Sukmawati, I. (2018). Social Media and the Quality of Subjective Well-Being; Counseling Perspective in Digital Era.

Ardi, Z., & Sukmawati, I. (2019). The Contribution of Social Media and Mobile Application to Individual Subjective Well-Being in Counseling Perspective. *Journal of Counseling and Educational Technology, 2*(1).

Ardi, Z., Sukmawati, I., Ifdil, I., Afdal, A., Rangka, I., & Suranata, K. (2018). *Exploring the acceptability of internet-based mental health mobile app services using network psychometrics analysis.* Paper presented at the Journal of Physics: Conference Series.

Bacca-Acosta, J., & Avila-Garzon, C. (2020). Student engagement with mobile-based assessment systems: A survival analysis. *JOURNAL OF COMPUTER ASSISTED LEARNING.*

Bai, S., Elavsky, S., Kishida, M., Dvořáková, K., & Greenberg, M. T. (2020). Effects of Mindfulness Training on Daily Stress Response in College Students: Ecological Momentary Assessment of a Randomized Controlled Trial. *Mindfulness, 11*(6), 1433-1445. doi:10.1007/s12671-020-01358-x

Hamilton, J. L., Chand, S., Reinhardt, L., Ladouceur, C. D., Silk, J. S., Moreno, M., . . . Bylsma, L. M. (2020). Social media use predicts later sleep timing and greater sleep variability: An ecological momentary assessment study of youth at high and low familial risk for depression. *Journal of Adolescence, 83*, 122-130. doi:10.1016/j.adolescence.2020.07.009

Harari, G. M., Vaid, S. S., Müller, S. R., Stachl, C., Marrero, Z., Schoedel, R., . . . Gosling, S. D. (2020). Personality Sensing for Theory Development and Assessment in the Digital Age. *European Journal of Personality*. doi:10.1002/per.2273

Ifdil, I., Fadli, R. P., Suranata, K., Zola, N., & Ardi, Z. (2020). Online mental health services in Indonesia during the COVID-19 outbreak. *Asian Journal of Psychiatry, 51*. doi:10.1016/j.ajp.2020.102153

Liu, D., Clemente, L., Poirier, C., Ding, X., Chinazzi, M., Davis, J. T., . . . Santillana, M. (2020). A machine learning methodology for real-time forecasting of the 2019-2020 COVID-19 outbreak using Internet searches, news alerts, and estimates from mechanistic models. *ArXiv*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/32550248

Oloidi, A., Nduaguba, S. O., & Obamiro, K. (2020). Assessment of quality and readability of internet-based health information related to commonly prescribed angiotensin receptor blockers. *Pan Afr Med J, 35*, 70. doi:10.11604/pamj.2020.35.70.18237

Song, H., Yi, D.-J., & Park, H.-J. (2020). Validation of a mobile game-based assessment of cognitive control among children and adolescents. *PLOS one, 15*(3), e0230498.

Sukmawati, I., Ardi, Z., Ifdil, I., & Zikra, Z. (2019). *Development and Validation of Acceptability of Mental-Health Mobile App Survey (AMMS) for Android-based Online Counseling Service Assessment.* Paper presented at the Journal of Physics: Conference Series.