Assessment of Non-Computer Assessed Tests to Increase Professional Competence of School Counselors

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Article Info

Abstract

The objectives of this study were (1) to describe and analyze non computer-assisted assessment (2) to produce a hypothetical model of computer-assisted non-test assays to improve the professional competence of School counselors and (3) to know the effectiveness of non computer-assisted assessment to improve the professional competence of School counselors. This research uses the Research and Development (R & D) method to develop computer-assisted non-test assays to improve the professional competence of school counselors. Assessment of non computer-assisted tests proved to be effective in improving the professional competence of school counselors especially on the aspects of mastering aspects and practical assessment to understand the condition, needs, and problems of learners. Discussion of the findings of this study focused on the application of non-test assessments in Junior High School Sukoharjo District.

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INTRODUCTION

Today the professional competence of school counselors is a concern in Indonesia even in the world. Rust, et al. (2013) revealed in his research that the main problem of counselors in various countries is related to the competence they have. The competencies concerned are related to professional competence, where the counselor should have high competence on various types of services and activities in guidance and counseling.

Gordon (in Mulyasa, 2002) reveal aspects of professional competence are knowledge, understanding, ability, values, attitudes, and interests. Thus it is important for counselors to understand and examine these various aspects as guidance in providing services and guidance and counseling activities as a form of professional competence owned.

The stipulation of academic qualification and competency standards related to Government Regulation Number 27 the Year 2008 regarding Academic Qualification Standard and Counselor Competence (SKAKK) Article 1 Paragraph 1 which states that to be appointed as a counselor, a person must meet the standards of academic qualification and counselor competency applicable nationally.

Counselors who mastered and implement their professional competence are expected to be able to provide services and activities of guidance and counseling of quality and dignity. Components in the provision of services and activities of comprehensive guidance and counseling include the basic services, responsive services, individual planning and system support.

One form of system support is to carry out data collection activities that contain data assessment results. Gibson (2011) conveyed that data collection activity that contains assessment data are traditional services and can only be used to assist service access and develop and develop guidance and counseling programs. Unlike the case with Winkel & Hastuti (2012) explained that assessment activities are needed by the counselor because it can base the provision of services in accordance with the circumstances of learners that are objective not only the impression of a subjective assessment counselor. Jawandi, et al. (2016) said that the counselor is very necessary to understand the condition and state of learners well so that the services and activities of guidance and counseling given can be effective and efficient. Thus it can be seen that the assessment is very needed by the counselor although considered traditional because it is one of the foundations of service implementation and guidance and counseling activities.

Based on simple questionnaires and interviews with 5 (five) Junior High School counselors in Sukoharjo District it is found that the types of counseling services and counseling activities undertaken by counselors have low scores on the type of instrumentation and data collection activities. Both types of services are closely linked to the counseling and counseling assessment used by counselors to understand the client's conditions, needs, and concerns.

Constraints perceived by the counselor in implementing the two types of services are related to time issues, service implementation, data processing and presentation of service results. The time problem is related to the need for a long time to be able to implement, process the data and present the data on the assessment. Implementation of services related to the number of assessments to be carried out by counselors, in this case, is a non-test assessment. The problem of data processing is the difficulty felt by the counselor to process the data because most of the non-test assessment is done manually. While the presentation of data is related to the complexity of the assessment data conducted by the counselor because it is not arranged systematically.

These difficulties make counselors reluctant to conduct regular assessment of learners, such as the number of assessment data to be collected and processed but not implemented by the counselor. Retrieving data collected in stacked folders, resulting in wasted time and less enthusiastic learners of non-test assessments. The absence of non-computer-assisted applications or assumptions is one of the

obstacles in implementing the data collection activities of students' assessment.

Rust, et al. (2012) explains that professional competence should be continuously honed in accordance with the development trend or global development is emerging although this competence must be owned by prospective teachers Counseling Guidance since in the period of education.

The modernization of services and activities can be a new door in providing guidance and counseling services. Expected with the innovation in the field of counseling and guidance in schools, counselors can take quick and precise action, so he is able to take immediate steps to overcome every problem faced. Drummond & Karyn (2006), mentions the benefits of using the computer in the assessment are faster, easier and economical in collecting data, improving scoring accuracy, allowing the use of alternative formats desired, faster feedback to participants and assessment providers, reducing the time for other tasks, unlimited can be developed.

Therefore, considering the important of the problem of non-test assessment in guidance and counseling that affects the professional competence of counselors, it is necessary to combine or integrate non-test assessment activities with computer technology. The development is expected to improve the professional competence of counselors, especially on aspects of mastering the concept and praxis assessment to understand the conditions, needs, and problems of counseling.

METHODS

The final goal of this research is the formulation of non-computer aided test assessment to improve the professional competence of counselor. The model framework is composed based on theoretical, empirical, and factual studies of group guidance as well as the low professional competence of school counselors. Therefore, this research uses the method and design of mining research (*research*

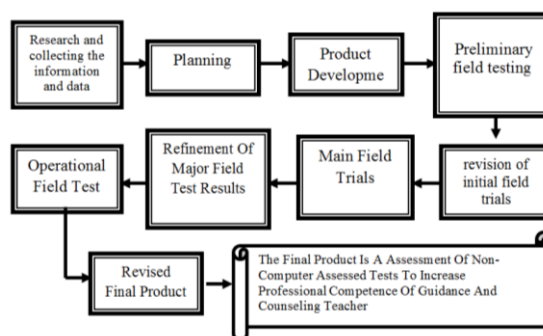*and development*) which are based on principles and steps Borg & Gall.

Figure 1. Research Procedure

The first step in this study is collecting the data and information, the activities undertaken is to perform requirement analysis by conducting interviews and observations of the requirement of counselors. Based on the results of interviews and observations can be formulated problems experienced by the counselor. The second step is planning, which is planning the development of non-computer-assisted test assessment to improve the professional competence of counselor. The third step is to develop an initial product, which is to design a computer-assisted non-test assessment and collaborate with a BNSP certified programmer to develop a computer-assisted non-test assessment.

The fourth step is the initial field trials of demonstrating a model that has been developed against experts to be assessed and given input. The fifth step is the revision of field trial results, which is to revise or refine the model according to expert judgment and input. The sixth step is a major field trial, which is conducting a computer-assisted non-test computer assessment test of 10 counselors to be assessed and advised. The seventh step is the refinement of the main field trial product, which is to improve the assessment of non-computer-assisted tests based on advice and input from the counselor.

The eighth step is an operational field test that is to conduct a wider trial of 83 Junior High School counselors in Sukoharjo District. The ninth step is to implement a final product revision, where at this stage if there is still a shortage in the operational field test then the

computer-assisted non-tested assessment is improved, otherwise, it is already a usable product.

Techniques and instruments of data collection using interview technique, observation, professional counselor competency scale and validation sheet. Interviews are used to determine the difficulties experienced by counselors in conducting non-test assessments. Instrument observation is used to reinforce the results of interviews that have been implemented. Questionnaire professional counselor competence is used to measure professional competence on aspects of conceptual mastery and practical assessment. Test the validity of competence questionnaire professional counselor using product moment correlation formula, while the reliability using Alpha Cronbach formula. Validity and reliability tests are implemented 3 (three) times to produce 60 items of valid and reliable statements. While the validation questionnaire is used to find out the expert's assessment of non-test assessment in the computer.

Sampling technique using random sampling, which is randomized to the sub-district contained in Sukoharjo Regency, then do the data collection to Junior High School which is found in the selected sub-district.

RESULTS AND DISCUSSION

The results showed that the implementation of non-test assessments at SMP and MTs Sukoharjo District is still very low in the planning, implementation, and evaluation of non-test assessments. Based on the results of interviews, observations and questionnaires it can be seen that non-test assessment planning has not been done carefully. School counselors also have difficulties in carrying out non-test assessment so often do an assessment at random and not yet comprehensive. Evaluation of non-test assessments is also disrupted by irregular planning and implementation. Based on the results of the questionnaire of professional competence of school counselors note that there

are still many school counselors who got less score that is as much as 37.35%.

Table 1. Initial Condition of Professional School Counselors Competence SMP / MTS Sukoharjo District

Criteria	Frequency	%
High	18	21.69
Medium	29	34.94
Less	31	37.35
Low	5	6.02
Total	83	100

Based on Table 1, it is known that the counselor in Junior High School/MTs Sukoharjo District dominated counselor with the level of professional competence is less and medium. More than 70% of counselors are at the level of professional competence less and medium. Therefore, it is necessary to develop a computer-assisted non-test-assessment based on analysis of empirical findings that are the objective condition of non-test-assessment to increase professional competence of counselor.

A computer-assisted, non-test assessment to enhance the professional competence of counselors was developed by combining non-test-assessment in counseling and guidance with computer technology. This model uses a special application used to implement, analyze, evaluate, store data and recall non-test result data conducted by school counselors.

The following are non-computer-assisted test assessments consisting of 5 (five) non-test assessments, including personal data, DCM, anecdotal notes, autobiographies, and sociometry. Figures 1 through 11 are a non-computer-assisted assessment view along with non-test assessment results developed.

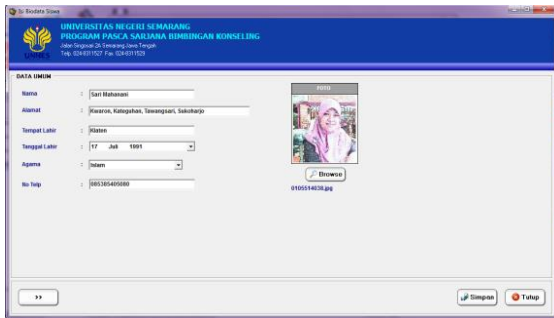**Figure 1**. Non-Test Assessment Navigation Menu

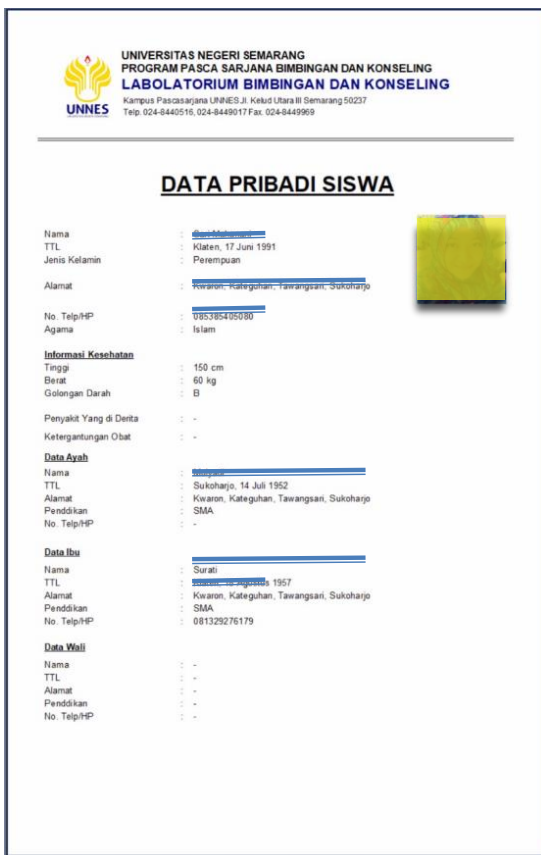**Figure 2**. Personal Data Menu Learners Part of General Data

Figure 3. Report Display of Student Personal Data
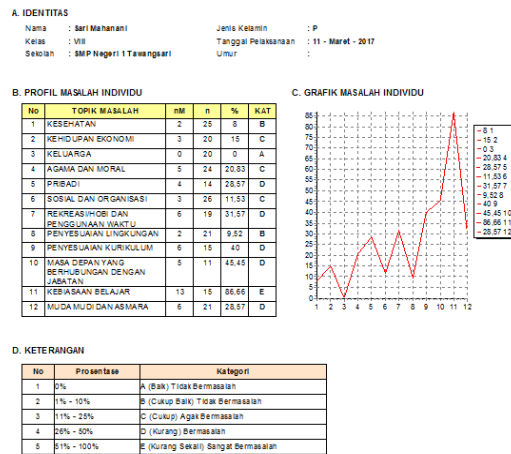

Figure 4. Check List Menu Problem (DCM)

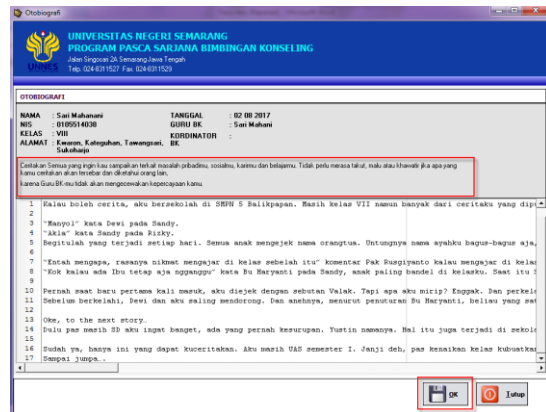**Figure 5**. Individual Report View DCM Results

Figure 6. The Autobiography Filling Menu

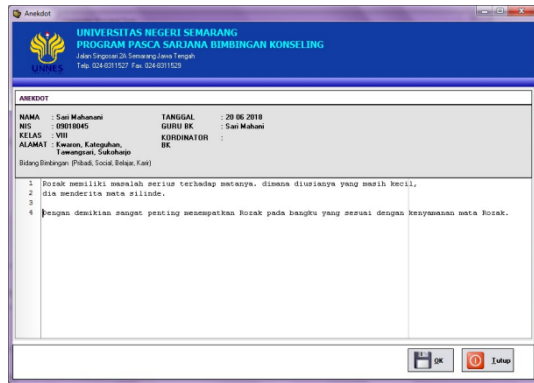**Figure 7**. Views of the Autobiographic Report

Figure 8. Anecdot Note Menu

Figure 9. Display of Anecdotal Note Report

Figure 10. Sociometry Question Menu

In Professional School Counselors Competency Variables Graph 1, shows post-test results most counselors are in the level of professional competence high and medium. This is in accordance with the research hypothesis that there is an increase in professional competence of counselors after using the assessment of non-computer-assisted tests. In addition, based on Wilcoxon test results ($Z = -7.17$, P <

0.05), the computer-assisted non-tested assays were effective in improving the professional competence of counseling and counseling teachers as predicted in this study.
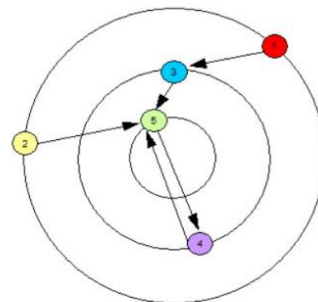
Figure 11. Sociogram View of Friends of Learning Options
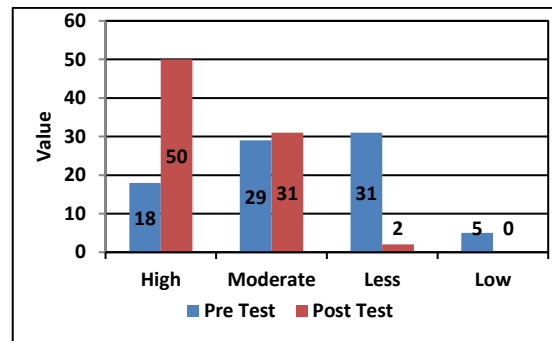
Graph 1. Comparison of Pre-Test and Post-Test Scores

Computer-assisted non-test assays contain 5 (five) types of non-test assessments including Student's Personal Data, DCM, Sociometry, Autobiography and anecdotal notes. Computer-assisted non-test assays were developed using Delphi 6 framework, Firebird database using a local network (LAN). The computer-assisted test non-test apps can run on computers that have previously installed non-test assessment apps and are associated with server computers that are present in each school.

The diversity of non-test assessments contained in computer-assisted non-test assessment applications makes non-test assessment implementation more effective and efficient. The use of computers in conducting non-test assessments has many advantages, such as faster, easier and more economical in collecting, processing and storing data and increasing scoring accuracy for non-test assessments.

The assessment of computer-assisted non-test in this study differs from previous research. Where in this non-computer-assisted test assessment there are 5 (five) non-test assessments in one application. Harum, Saman, & Malik, (2015) develop an application of sociometry program connected with a computer. The non-test assessment of the developed application is limited to sociometry, so it is still inefficient to carry out other types of non-test-assessments.

Ningrum (2016) developed a Software Social Skills (SOSIS) used to measure the level of social skills of learners. The application also can only be used for one type of non-test-assessment. Thus it can be seen that the computer-assisted non-tested-assessment developed has more advantages. This is evident in the number of non-test assessments contained in the application, the usefulness, the diversity of non-test-assessments and the effectiveness of non-test assessment execution.

Implementation of a computer-assisted non-test assay is quick and easy because it uses computer applications where counselors can directly monitor the assessment results that have been implemented by learners. Economic counselors can no longer need to photocopy non-assessment instruments for each student.

Improves the scoring accuracy of non-test-assessments performed, this is because non-test assessments are carried out using computer assistance, both for execution, data processing, and returning data. This is able to minimize the miscalculation of the assessment scores and/or data input errors that the counselor may do without using computer help.

Based on the results of the research, it can be seen that the use of computer-assisted non-test assays can improve the professional competence of first high school counselors in Sukoharjo District. Therefore, non-computer aided test assays can be developed to enable counselors to improve their professional competence. In addition, non-test-assessments can be further refined by subsequent researchers to be more easily used and developed in accordance with technological developments.

CONCLUSION

Assessment of non-computer-assisted tests is effective to enhance the professional competence of counselors. Based on the final analysis, the professional competence of the counselor has increased significantly compared to before using the computer-assisted non-test assays.

Counselors are expected to develop professional competence by using non-computer aided test assessment in carrying out non-test assessments. Further research is expected to be able to develop and refine existing non-computer-assisted test assessments to be more applicable and appropriate to the needs of counselors.

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