



# Development of Individual Learning Plan Program Assessments

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**Abstract.** The benefits of individual learning plans (ILP) for students: (a) make decisions about their own learning style; (b) understand and how they will plan in the future; (c) giving confidence to students in setting goals for the future; (d) identify and understand learning barriers; and (e) measure the success of learning and plans that have been prepared by themselves. The purpose of this study is to develop an individual learning plan assessment program. The research method used is a 3D model which is a modification of Thiagarajan, with a mixed qualitative and quantitative approach. Participants are documents and experts. Data collection using literature review with narrative review type, then continued with FGD and delphi technique. The research instrument used a questionnaire with a rating scale of 1 to 5. The results showed that the value of the Aiken coefficient was above 0.76, so it can be said that all aspects are valid. In addition, Chronbach's Alhpda and ICC values of 0.510 are also produced, so it can be said that this instrument is quite reliable. Thus, it can be concluded that the instrument assessment program of the individual learning plan has high Aiken validity, and the reliability between raters is quite strong.

**Keywords:** Individual Learning Plan, Program, Assessment

## 1 Introduction

Every student has the potential to develop fully and optimally. Learning strategy affects learning outcomes and motivation (Berry, Cook, Hill, & Stevens, 2010). The intangible teaching-learning process benefits the development of communication, discipline, and teacher-and-student relationships (Chiu, 2010). Students also have differences in intelligence, talents, interests, personality, physical condition, family background and learning experience. These differences illustrate the variation in development needs as a whole and optimally through guidance and counseling services that are preventive, repair and healing, maintenance, and development (Glading, 2009). School counselors, school involvement, parental support, and teacher support are predictors of academic performance for career readiness, career planning, and self-efficiency of career decision-making in students (Bryan, Moore-Thomas, Day-Vines, & Holcomb-McCoy, 2011).

The results of an interview with a Guidance and counseling teacher at one of the high schools in Bantul Regency obtained information that there are still many students

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who are confused about the direction of further study, students are less able to plan their further studies, and there are still many students who have not been able to accommodate their learning styles and still lack student knowledge about the weaknesses of their learning planning. The next problem is that student specialization and education planning services have not been carried out optimally, counselors use more information services to students without any special treatment from counselors

One of the right learning management strategies that can be used by guidance and counseling teachers is the individual learning plan (ILP) program. ILP is often interpreted as "Individual negotiated programs of study" which means ILP is a program that can be used to plan methods and ways of learning so that in the long term students will be able to plan their further studies (LSIS, 2009)

Wilkerson (2010) said that ILP is can integrate various aspects that support students and also aspects outside students in making learning plans. So by including these aspects, you will be able to choose the right learning and career planning for him. Furthermore, Hamilton (2009) said that ILP forms a relationship between teaching carried out by teachers and learning carried out by students can be aligned because there is permissive guidance combined with the core curriculum, audit, examination demands. This is reinforced by the Rennie Center for Education Research & Policy (2011). Based on the results of his research the student learning plan will increase residual awareness of his shortcomings and weaknesses so that he will be more selective in making educational plans to achieve his career goals.

Baker & Goldberg (1970; 73) states that counselors can use individual learning plan (ILP) programs and can minimize obstacles or risks that will be experienced by students during education planning.

This study aims to develop an assessment of the individual learning plan program by referring to the assessment learning plan developed by Moorfoot & Shefiled (2001). ILP is a program that can improve student academic achievement and help plan student education (Wayne, 2006).

## 2 Methods

The research method that will be used in the research development of the individual learning plan assessment program is the research and development (R&D) method. Development research has cyclical steps, namely product development steps, trial steps, product validity, reliability test steps. This step as mentioned is carried out in several cycles that ultimately produce the best final product. This method is used because it is considered in accordance with the purpose of the study, which is to develop an individual learning plan assessment program. Research and development is a research method used to develop and validate a new product and test a product so that it can be accounted for. The research and development method used in this study is a 3D model which is a modification of the 4D model, (Lawhon, 1976) namely: (1) the defining stage (Define), (2) the design stage (Design), (3) the development stage (Develop). The 3D activity procedure includes three stages which are outlined as follows: The first stage is defining (Define). At this stage the qualitative approach with the literature reviews method with

narrative review type (Ferrari, 2015) articles, journals, and text books related to the assessment of individual learning plan programs. The second stage of planning (Design). In this second stage, prepare a draft of the construction of individual learning plan program instruments and compile indicators. The third stage of development (Develop). At this stage, there are several steps, namely the first step is to test the validity of the content, by means of Focus Group Discussion (FGD) to equalize the perception of the draft construction assessment program individual learning plan. The results of the FGD are in the form of input for the improvement of the construction draft assessment of the individual learning plan program. After improving the FGD results, the expert test of the instrument assessment of the individual learning program and the Delphi Technique (Cox et al., 2016) continued where each expert judgment was not found in assessing the construction of the individual learning plan program assessment. The subjects in this study were documents and 3 experts. The expert consists of two expert judgement lecturers and two guidance and counseling teachers.

The instrument used to collect data in this study was a questionnaire. In this study, the data collection technique that will be carried out is the provision of instruments in the form of questionnaires to the assessment, namely expert judgment. The questionnaire used in this research and development is a structured questionnaire using a rating scale of 1 to 5. Data from expert judgment assessment are analyzed with Aiken's formula (Aiken, 1980) where each aspect is calculated this validity index with the following calculation:

$$V = \sum s / [n(C-1)]$$

$$S = r - lo$$

Lo = Lowest Rating Numbers  
 C = Highest Rating Numbers  
 R = skor given by the assesor.

Analysis using Aiken's formula approach will be summed up in the form of categorization of validity. The categorization of content validity referring to the classification proposed by Guilford (Guilford, 1956) is as follows:  $0.80 < r_{xy} < 1.00$ : very high validity (very good),  $0.60 < r_{xy} < 0.80$ : high validity (good),  $0.40 < r_{xy} < 0.60$ : medium validity (sufficient),  $0.20 < r_{xy} < 0.40$ : low validity (less),  $0.00 < r_{xy} < 0.20$ : very low validity (ugly), and then  $r_{xy} < 0.00$ : invalid.

The reliability test between raters is to see the level of agreement between experts or raters in assessing every aspect of the instrument, using Cronbach's Alpha SPSS and Intraclass Correlation Coefficients (ICC). The results of Alpha Cronbach's calculations and ICC will later be classified the level of reliability between raters into four categories according to (Fleiss, 1975) which are as follows:  $Kappa < 0.4$ : bad,  $Kappa 0.4-0.60$ : fair,  $Kappa 0.60-0.75$ : satisfactory,  $Kappa > 0.75$ : excellent.

### 3 Results and Discussion

The results of the study are described based on the steps that have been taken to obtain valid results and adequate instruments, the results of instrument development are as follows:

#### 1. Define

Researchers conduct literature studies to find theories and concepts of a product. Concepts or theoretical foundations about Individual Learning Plans. According to the National Contract Service, the 2003 Individual Learning Plan is an individualized learning plan at the heart of assessment, learning progression, support, and achievement, individualized learning plan programs help learners to become active and motivated in learning. That individual learning plan is; (a) a personal flexible map to guide each student's journey in learning in the form of a document; (b) records of the progress of each student in learning; (c) ways to create and strengthen students' commitment to learning.

#### 2. Design

The individual Learning Plan instrument is adapted based on the instruments proposed by (BTEC National Certificate, National Contract Service, 2003) with the following aspects: thinking and learning independently, thinking creatively, and thinking about your learning. Work as part of a team, manage yourself, and participate in educational, work, or community life. Through the results of the Aiken grain validity coefficient analysis with an error degree of 5%, it was obtained that all 38 items with a coefficient value below 0.92 items were declared void using 3 raters.

#### 3. Develop

The items on the Individual Learning Plan scale are prepared based on the grid developed at the operational definition stage of these aspects, then reviewed by researchers and involving several expert assessments, researchers 2 lecturers at Universitas Ahmad Dahlan, and 1 Guidance and Counseling Teacher at SMA 1 Kretek to become an expert judgment at the content validation stage.

#### **Aiken Validity Test Results.**

Aspects of individual learning plan program assessment assessed by the expert judgement which include the following aspects: (1) Career preferences and suitability, (2) Qualifications and achievements, (3) Ability and potential, (4) prior learning and experience, (5) basic skills, (6) key skills, (7) learning difficulties, (8) interests, (9) learning style, (10) job role, (11) personal effectiveness, (12) personal circumstances. Expert assessments use a range of 1 to 5. The assessment is closer to number 1 the less relevant, the assessment approaching number 5 is increasingly relevant. The expert

judgment assessment data is then quantitatively analyzed with Aiken's formula, Aiken's validity test results as Table 1.

**Table 1.** Aiken's Content Validity Test Results

Penilai	ASPEK 1	ASPEK 2	ASPEK 3	ASPEK 4	ASPEK 5	ASPEK 6	ASPEK 7	ASPEK 8	ASPEK 9	ASPEK 10	ASPEK 11	ASPEK 12
A	4	4	4	4	4	4	4	4	4	4	4	4
B	4	4	3	3	3	4	3	3	4	4	3	4
C	3	5	4	4	4	4	4	4	3	4	4	3
$\sum S$	8	10	9	8	8	9	8	8	8	9	8	8
V	0,83	0,83	0,83	0,67	0,67	0,83	0,83	0,67	0,67	0,83	0,83	0,83

Based on table 1, aspect 1 shows the Aiken's V coefficient value of 0.67, aspect 2 shows the Aiken's V coefficient value of 0.83, aspect 3 shows the Aiken's V coefficient value of 0.75, aspect 4 shows the Aiken's V coefficient value of 0.67, aspect 5 shows the Aiken's V coefficient value of 0.67, aspect 6 shows the Aiken's V coefficient value of 0.75, aspect 7 shows the Aiken V coefficient value of 0.67, aspect 8 shows the Aiken's V coefficient value of 0.67, aspect 9 shows the Aiken's V coefficient value of 0.67, aspect 10 shows the Aiken's V coefficient value of 0.75, aspect 11 shows the Aiken's V coefficient value of 0.67, aspect 12 shows the Aiken's V coefficient value of 0.67. Based on the validity classification proposed by Guilford (Guilford, 1956) is as follows:  $0.80 < r_{xy} < 1.00$ : very high validity (very good),  $0.60 < r_{xy} < 0.80$ : high validity (good),  $0.40 < r_{xy} < 0.60$ : moderate validity (enough),  $0.20 < r_{xy} < 0.40$ : low validity (less),  $0.00 < r_{xy} < 0.20$ : very low validity (poor), and then  $r_{xy} < 0.00$ : invalid, it can be concluded that the aspect of the agility reative test instrument has high content validity.

#### Results of Inter-Rater Reliability Test.

The results of the inter-rater reliability test using Cronbach's Alpha analysis are presented in Table 2.

**Table 2.** Results of Inter-Rater Reliability Test

Chronbach's Alpha	N of Items
.750	12

Table 2 shows the Cronbach Alpha value of 0.750. The results of this analysis show that the average agreement between raters is 0.750. If the Cronbach's Alpha value is 0.750, it can be concluded that this instrument is reliable.

**Results of Inter-rater Agreement Test**

Test the agreement between raters or reliability between raters using the interclass correlation coefficients (ICC). The ICC results are presented in table 3.

**Table 3.** Results of Interclass Correlations Coefficientt

	Intraclass Correlation <sup>a</sup>	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.500 <sup>b</sup>	.169	.762	1.000	2	22	.384
Average Measures	.510 <sup>c</sup>	.338	.975	1.000	2	22	.384

Based on table 3, the average agreement between raters is 0.510, while for one rater the consistency is 0.500. if the results of the ICC score are classified as reliability as proposed by (Fleiss, 1975), then it can be concluded that the agreement between raters is very strong.

An individual learning plan is a guidance and counseling program that can be used by counselors in helping students plan their education up to making further study decisions. Hamilton (2009) said that ILP forms a relationship between teaching carried out by teachers and learning carried out by students can be aligned because there is permissive guidance that is combined with the core curriculum, audit and examination demands. The results of research by Tomlinson & Coulter (2006) state that individual learning plans are a method that can improve student academic achievement and can assist students' educational planning. This study aims to develop an individual learning plan assessment program. The development of an assessment so that it is more suitable for use must have several conditions, namely valid and reliable (Widhiarso, 2010).

This research was conducted in three stages, the first stage is defining (Define). At this stage the approach used is a qualitative approach with the method of literature reviews through articles, journals, and text books related to the individual learning plan program. The second stage of planning (Design). In this second stage, namely preparing a construction draft of the individual learning plan assessment instrument program and compiling the indicators. The third stage of development (Develop). At this stage there are several steps, namely the first step is to test the validity of the content, by way of a Focus Group Discussion to equate the perception of the individual learning plan assessment program construction draft. The next stage is to test the reliability of each aspect of the individual learning plan program assessment instrument measured using Cronbach's Alpha. The results of the Cronbach's Alpha instrument assessment program for individual learning plans are 0.750. The minimum value for the reliability level of Cronbach's Alpha is 0.70. If the Cronbach's Alpha value is  $\geq 0.7$ , the assessment instrument aspect of the individual learning plan program is very reliable

The next step is to test the reliability between raters and the consistency of each rater by using interclass correlation coefficient (ICC) analysis. Based on the results of the reliability test, the average value of agreement between raters was 0.510, while for one

rater the consistency was 0.500. according to (Fleis et al., 2004) the value category of agreement between raters is a value above 0.510 with very good agreement, a value of 0.40-0.75 is good agreement. Based on the results of the reliability test, the ICC value was obtained at 0.510, it can be concluded that the agreement between raters is very strong, and each rater has a fairly good consistency.

Based on the results of the qualitative and quantitative approaches, it can be said that the individual learning plan program assessment instrument has high content validity and has good inter-rater reliability.

## 4 Conclusion

Based on the results and discussion, it can be concluded that the individual learning plan assessment program has adequate content validity with Aiken, and reliability between raters is quite reliable. Therefore this assessment program can be used by guidance and counseling teachers in an effort to plan student education. It is suggested that a stronger instrument needs to be tested for empirical validity and test-retest reliability for a wider range of subjects.

### Authors Contributions

Appreciation is conveyed to the instrument validator providing assessments and notes of improvement, so that the individual learning plan assessment program can be used by guidance and counseling teachers

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