Affective Evaluation

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Affective Evaluations Portfolio Development in Teaching-Learning Process

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The articles observed about the development of students' affective evaluation portfolio on SMAN. The article focused on the living-forms interactions to be taken as consideration to conduct valid and reliable students' evaluation at the school. The objective of the study was directed to develop an instrument that corresponds to evaluate affective sectorial aspects in the teaching-learning process. The study was formulated on research and development (R&D) design. The research output was examined-tested to senior high schools (SMA) in Kota Langsa. The samples were selected trough systematic sampling technique. To analyze its validity, the instruments applied two phases, i.e. panel, and constructive validity. Then, it formulated the validity and reliability to the 40 items of the developed instrument. The instrument also applied content validity of panel technique (it resembled to 4-panel members). The validity graded CVR and CVI applications, then, was processed through content-Aiken's validity coefficient. Moreover, it also was quantified trough Cronbach alpha. The CVI result formulated on 0, 496 as the proper category in panel content validity. The questioner result signified about 0,533 to 1, 00 of content-Aiken's validity coefficient. Then, it signified 0,467 of the alpha reliability test, by fair reliable formulation ratio. In conclusion, the instrument is possibly applied to evaluate the students' affective aspects in school.

INTRODUCTIONS

There are three domains of students' evaluation portfolio; cognitive, affective, and psychometric. To generate ideal evaluation systems, these domains are essentially to be developed comprehensively. Actually, the reality process the systems are executed partially comprehensive, yet, the cognitive domains are dominated over than two other. Moreover, nowadays, the higher students' cognitive achievements are taken as developmental consideration. Even though, affective slightly get lower attention by the teachers. Yet, it should not be ignored, affective evaluations share equally to cognitive and psychometric.

Within affective domain, the students are stimulated to receive, participate, decide, organize, and formulate living-forms interaction. In fact, if the students start develop their cognitive domain, the affective, behaviors and characteristics, will also continue to develop. Actually, the living-forms interactions appear to be fading on testing evaluation portfolio. Eventually, when the tests did not cover these domains, cognitive, affective, and psychometric, as one students' evaluation portfolio, the valid and reliable evaluation shall not fulfill on continuity, objectivity, balance, and comprehensive as a portfolio. Based on these improper portions of students' evaluation portfolio, the researcher developed the students' affective evaluation portfolio in teaching-learning process.

THEORITICAL FRAMEWORKS

Evaluation is students' achievement scoring systems within educational institution. As mentioned by Wand and Gerald, it is a systematical measurement (Djamarah, 1994). It determines on the score ratio in classroom process. The teacher evaluates by selecting the proper domains and dimension with certain objectives. The objectives are developed by these three domains, cognitive, affective, and psychometric (Dirman & Juarsih, 2014). Within this, article, the affective domain was selected, and it excluded the living-

forms interactions, i.e. characteristic and values, that close with feeling, interest, manner, emotion, and norm (Sudjana, 2005).

An Affective evaluations portfolio is a designed-instrument to collect students' achievement within manner or value after teaching-learning process, and as teacher consideration for scoring result within affective aspect. According to Bloom, there are five categories, from bottom level to complexes one.

Table 1. The Categories of Affective Achievements and Result

Level	Characteristic
Receiving	The curiosity of importance
Response	The curiosity of selection
Asess	The curiosity of behaviors expression with commitment to participate
Organization	The curiosity of connection and value appreciations
Valued-Characterization	The curiosity of proper value and norms

Those categories of affective achievements and results are explained bellow:

a) Receiving, the curiosity of importance, the awareness of stimulus, it forms by problems, situations, and actions agreements. The relevance verbal-actions for this layer are as follow: ask, select, follow, identify, decide, sign, and execute.
b) Responding, it is an internal reply to external stimulus. It excludes reactions, feeling, response satisfaction and responsible. The relevance verbal-actions are as follow; answer, execute, write, appreciate, help, discuss, argue, and report.
c) Values, it is as mean as the measure for norms and trusts to be stimulated and indicated by the students. It excludes acceptance for scoring, background, or experiences for having course scoring and agreements. The relevance verbal-actions are as follow; demonstrate, acknowledge, and appreciate.
d) Organization, it is the capability to manage the values one to another, the growing of systematical command distributions. The students start to actualize the value in role of priority distribution and the face-over norms. The relevance verbal-actions are as follow; Set, prepare, modifying, connecting, discuss, and, balance.
e) Characteristic, it is the merger of value and internalized for aspects that influence to living-patterns and behavioristic. This is the highest of affective domain. The relevance verbal-actions are as follow; act, heard, revising, complete, and practice (Jufri, 2013).

METHODOLOGY

The study was formulated on research and development (R&D) design. The research output was examined-tested to SMA Negeri 4 in Kota Langsa. The products are to be developed that affective evaluation instruments. The study applied the differential semantics scale. Within R&D design, there are following phases. The phases are as follow:

1. Potentiality and Problems, R&D design schematics are rooted from it potentiality and problem (Putra, 2011). The potentiality is the expectation. It develops a research problematic which is possible to be pulling out (Lisdiana & Novitasari, 2015). In this article, it focused on the missing domain of affective portfolio evaluation for Mathematics at SMAN Langsa.

2. The Data Collections are demonstrated in actual measurement products as a collected -variety of information as planning to be taken care. The data are collected through field survey distributed-questionnaire to make an assessment which is then considered as a decision for the teachers.
3. Products Design Preparation is product evaluation affective assessment instruments. The end result is a product of design activity in the form of a new product design (Sugiyono, 2010). In educational research, the products which are generated through R & D is expected to increase the productivity of educational process. It is the development of affective portfolio evaluation, by considering the following criteria:
    a. Receive, namely sensitivity to receive a stimulus from the start that comes to students in the form of a problem, situation, indications.
    b. Responding, the reaction given by a person to a stimulus, such as the precise reactions, feelings of satisfaction in responding to external stimuli that come to him.
    c. Assess, regarding the acceptance of values, background or experience to accept the value of an agreement to these values
    d. Organization including the relationship of a value with another value, stabilization and priorities of its existing value.
    e. Characteristic values or internalization of values, the integration of all system values that have been owned by someone, which affects personality and behavior patterns (Sudjana, 2005).
4. Design Validation is the process of product assessment design carried out by the members rating based on rational thought, without testing in the field. Product validation can be executed by certified expert for assessment to improve the design improvements.
5. Repair Design, it is the updating and enhancement of the products. The further weakness was tried to be reduced, which is in charge of improving the design are researchers who want to produce.
6. Product Trial is field testing, made first, produce goods, and the goods are being tested. It is the early trials conducted by simulating the use of the evaluation questionnaire. After simulated, it can be tested on a limited group. Testing was conducted to obtain information on whether a new evaluation questionnaire that they can more effectively and efficiently. The Trial early stages performed on five teachers SMAN Langsa to use affective evaluation instruments to determine the validity and reliability of the instrument.
7. Revised-product, the assessment was revised based on field testing or empirical. After getting the data from small-scale trials and then analyzed the test results and revised products.
8. Utility testing is do trials under real conditions. The results of revisions have been valid then used to measure the affective student learning outcomes in large-scale trials.
9. Product revision, if the is no shortage in usage in real conditions, the repaired product back to be more appropriate to use. A mass product manufacture after the product repaired or assessment instrument design then the end result is ready to be mass produced or generally.
10.

Table 2. The Instruments Dimension and its Sub-Dimension

Dimension	Sub-Dimension	Indicator	Item No.
1	2	3	4
a. Receive	Attentions	(a) Attention to lesson delevering (b) Did not pay attention to lesson delevering.	1.1

	Concentration	(a) Listen carefully to the lesson materials. (b) Ignored to the lesson materials.	
b. Respond	reactions	(a) Answer the teacher question briefly (b) Afraid to making comments	2.1
	Participations	(a) Argue with the improper arguments (b) Discourage to reply to answer	2.2
c. Asess	Sensitivity	(a) Learn carefully the actual value for the lesson. (b) Improper learning the actual value for the lesson	3.1
	Concepts acknowledge	(a) Acknowledge the accepted value (b) Acknowledge the accepted value without check it out.	3.2
d. Organize	Character Building	(a) Capable to classify and place for proper values (b) Incapable of to classify and place for proper values	4.1
	Behavior Building	(a) Act accordingly to accepted norms and regulations (b) Break the accepted norms and regulations	4.2
	Value Actualized	(a) Capable to place and use the proper value in living (b) Incapable to place and use the proper value in living	4.3
e. Value Characteristic	Group Cooperation	(a) Hesitate to call the arguments (b) Able to consider the others ideas	5.1

	Personal Problem solving	(a) Responsible to the Job (b) Accomplished the Job (c) Not meet the job conditions in time.	5.2
	The curiosity	(a) a higher curiosity (b) a neglected curiosity to problems	5.3

The data was analyzed through the validation panel of experts and non-test data analysis questionnaire.

1. Validation expert panels is carried out by involving four lecturers are experts in the field of evaluation and mathematics. To analyze data, descriptive analysis was applied by means of revising based note validator. The results of the analysis are used to revise the items of prepared item by the researcher. The revised design assessment will be assessed per item indicators statement by an expert panel. This is to obtain consideration of the instruments that have been developed, with the purpose of obtaining a valid approval of experts. The validation results were analyzed using the method:
   a. Response assessment criteria expert panel by taking to the feedback data using *Guttman*-scale. The scale is used to answer that is clear and consistent, the term agree - disagree. Data obtained in the form of a checklist as follows:

Tabel 3 the Response questionnaire Criteria

Criteria	Quality
Agree	**1**
Disagree	**0**

   b. The Scoring through CVR.
      i. Quantify CVR:

$$CVR = \frac{n_e - \frac{N}{2}}{\frac{N}{2}}$$

Note:

n_e : The sum of expert who positives
N : the total panels

Regulations:

- When the amount of a panel of experts who agree less than half of the panel of experts, the value of the CVR = -
- When the number of experts who had agreed panel half of the total panel of experts, the value of the CVR = 0

- When the whole panel of experts agreed that the value of the CVR = 1 (it is set to be 0.99 adjusted for the panel of experts).
- When the number of experts who had agreed panel more than half of the panel of experts, the value of the CVR = 0 - 0.99 (Satrisman, 2013).

ii. Measuring CVI scores.
The CVI score was equated via these following formula:

$$I = \frac{R}{\sum n}$$

Note:

CVR : The total of CVR

n : The sum of Statements

iii. CVR and CVI categories.

CVR and CVI number value 0 – 1. The score as follow:

Table 3 The Response questionnaire Criteria

Score	Category
0 – 0.33	Improper
0.34 – 0,67	Proper
0.68 – 1	Really proper

2. Non-Test Analysis Questionnaire Data
   a. The validity of Contents -Aiken's coefficient, the content ensured the measurement insertion and adequate representing disclosure. Increasingly, item scale reflecting the region or throughout the concept being measured, the greater the validity of the content. The validity of the contents done to determine whether the contents of the questionnaire are appropriate and relevant to the study objectives. The validity of the contents shows the contents reflect the complete range studied. The technique used to measure the validity of the ratings of each item in this research is through Aiken's validity coefficient. Aiken Aiken's V formulate formula to calculate the content validity coefficient based on the results of the assessment of a panel of n people against an item in terms of the extent to which these items represent the measured construct.

Aiken's V formula is as follow:

$$V = \frac{\sum s}{[n(c-1)]}$$

Note: $s = r - lo$

$lo =$ the lower validity score

$c =$ the highest validity score

$r =$ the resembles score

To interpret coefficient of validity the contents corresponding index, as suggested by Retnawati, it is as follow:

Tabel 4 the Response Questionare Criteria

The V Index Score	Validity Category
0.40	low
0.40 – 0.80	fair
0.80	Valid

b. The reliability means test applied Cronbach Alpha (α) variance techniques. It is intended to direct the instrument to a specific group, then calculated scores. Cronbach Alpha applied the reliability of the instrument likert's scale (1-5) or the item-item instrument in the form of an essay. The formula is as follows:

$$\alpha = \left(\frac{k}{(k-1)}\right)\left(1 - \frac{\sum s^2_i}{s^2_i}\right)$$

Note:

k = The total items

$\sum s^2_i$ = The Sum of total variance score

s^2_i = The – i item variants respondent

The reliability coefficient varies from 0 (no correlation) to 1.00 (perfect correlation). Because of this coefficient is an indicator of extent to measured instrument for the stability characteristics of respondents, the higher the coefficient the more than what is expected (Reksoadmojo, 2007). To interpret the coefficient of reliability introduced by Guilfrod, as stated by the Sugiyono, is as follows:

Tabel 5 The reliability of Cronbach Alfa Coefficient

Creteria	Coefficient
Highly Reliable	0.900
Reliable	0.700 – 0.900
Fair Reliable	0.500 – 0.700
Less Reliable	0.200 – 0.400
Not Reliable	0.200

RESULT

The result CVI equations for 25 items estimated CVR Value 0 – 0, 99 to the CVR total 12, 4. The next equation is CVI, to measure the average of CVR estimated 0, 496. It excluded that the result CVI equation indicated the proper value for evaluation item by the affective evaluation measured-indicator portfolio. The Aiken's coefficient was applied to measure out the instruments validity. The score of instruments are estimated between 0, 60 to 1, 00. It indicated the instruments shared its validity. Thus, the SPSS result projected the reliability score 0, 467 for the 25 instrument items for 0, 30 to resemble its reliable acceptances criteria.

CONCLUSION

The development of students' affective evaluation portfolio excluded five dimensional domains, i.e. receiving, response, assess, organization, and valued-characterization. The validity and reliability test of the instruments by 25 items projected valid and reliable, estimated 0,60 to 1, 00 with 0, 47 of Cronbach Alpha value 0, 467. The instruments portfolio also able to measure and differ the affective domain for teaching-learning process.

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