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**On the Meaningful Learning Determinants in Advancing  
Responsible Citizens in Indonesia Settings**

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## **On the Meaningful Learning Determinants in Advancing Responsible Citizens in Indonesia Settings**

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### **Abstract**

This study scrutinized meaningful learning factors in relation to advancing responsible citizens for the 21<sup>st</sup> century compulsion, inline with National aspiration on preparing Indonesia golden generations for entering 2045. It was aimed at recognizing on how factors involved and in what routines they were intercorrelated. The research was conducted under exploratory-design. Qualitatively, meaningful learning comprised of governance, multimedia, curriculum, educator and facility. These five factors had direct effects on integrity, smart and independent (responsible) citizens. Quantitatively, meaningful learning was an intervening variable; the five factors were independent variables; the latter were dependent variables. Respondents were selected randomly to mobilize evidences through survey by distributing 600 questionnaires to teachers; 232 were completed. Importance-performance analysis (IPA) was emulated to appraise attributes involved and the level of their importance. Eight hypotheses were examined using the structural-equation model (SEM) to comprehend the significance level, power of relations and behavioral patterns of the variables engaged; with reference to qualitative outcomes previously attained. Six hypotheses were validated by the analysis. Meaningful learning were affected by the educator, curriculum and multimedia. Integrity, smart and independent citizens were influenced by meaningful learning; 92% of respondents strongly believed that they were able to accomplish meaningful learning for a better future for Indonesia.

**Keywords:** meaningful learning, responsible citizens, exploratory-design, IPA, SEM.

## **Introduction**

The 21<sup>st</sup> century dawned as an origination of the digital age, time of exceptional growth in technology and its subsequent information explosion. Never before have the tools for information access and management made such an impact the way people live, work, and interact. New technologies and tools multiply daily and the latest technologies of today are obsolete almost as they arrive in the market (Beers, 2012). At the same time, one will think of any single product or service provided should always be better, faster, cheaper and newer (Gasperzs, 2011). This leads us to the questions of what the 21<sup>st</sup> century knowledge and skills look alike? This essential question was tightly related to the National vision of Indonesia especially on preparing responsible citizens entering 2045, as a roadmap toward 100-year of the country, as an independent nation and as one and big nation, viewed from educational perspectives (Rokhman, Hum, Syaifudin & Yuliati, 2014).

The 21<sup>st</sup> century learning should not be controversial. It is simply an effort to define modern learning using modern tools (Chen, 2010). This query is seriously essential to be brought down in conjunction with preparing both teachers and students entering the weird and wonderful universe, especially for Indonesia. It is therefore relevant to inquest what would be determinats of meaningful learning as a means of anticipating the 21<sup>st</sup> century skills (Sembiring, 2014) needed by the nation by citizens as signified by teachers within Indonesia perspectives.

This study was accomplished to explore plausible nucleus of meaningful learning. It aims at taking up some course of actions on how educational stakeholders might consider the results of this study. That is to assure great teaching and learning processes being conducted and accomplished by teachers in a classroom level (Gurney, 2007) are truly relevant to preparing responsible citizens. Additionally, it aims at distinguishing on how the variables involved were intercorrelated and in what routine they were interrelated. Further: (i) What essential aspects can meaningful learning offer to policy makers? (ii) How are school governance, use of multimedia and curriculum, role of educator and support of facility to sustaining practice of teaching and learning in assuring meaningful learning occurred? (iii) Is meaningful learning positive to internalizing integrity, smart and independent attitude to students? (iv) Are they pertinent to Indonesia situation in a broader notion?

These principal backgrounds, again, brought us to the issue of exploring determinats of meaningful learning especially in preparing responsible citizens in the Indonesian context approaching the year of 2045; at that time Indonesia would celebrate the first century (100 years; golden years) as an independent, modern and prosperous big nation.

## **Literature Review and Conceptual Framework**

Verified essence of meaningful learning in the classroom level remains in

some fundamentals, namely teacher, learner, subject matter, context, and evaluation, each of which must be integrated constructively to effect high impact to teaching and learning processes (Novak, 2011). They can be classified into several related aspects that really relevant to this study (Vallori, 2014). The importance of, for example, firm organizational structure, availability of integrated guidance and the provision of continual supervision are of three fundamentals for reliable school governance in conjunction with acquiring meaningful learning (Largen, 2009). Besides, the availability of multimedia supports in various forms for better classroom teaching and learning processes are really crucial (Keengwe, Onchwari & Wachira, 2008). The availability of those supports can be specifically viewed from accessibility, updated versions and interactivity of materials being utilized and studied by both teachers and students.

The substance learned by students should ideally be included and elaborated firmly in the operated curriculum. The outcome and the implementation of the curriculum should also be put as an integral part of the curriculum used in the school level (Taylor & Parsons, 2011). The provision of proper and sufficient buildings, equipments and finance aspects are also crucial to support meaningful learning so, to a certain extent, it factually takes place in the classroom. Comprehensively, qualified teachers, in the view of Kusmawan and Sembiring (2016), who have a systematic and continual self-personal development program plus having some advance competencies in information technology devices are regarded as critical aspects on attaining meaningful learning in practice.

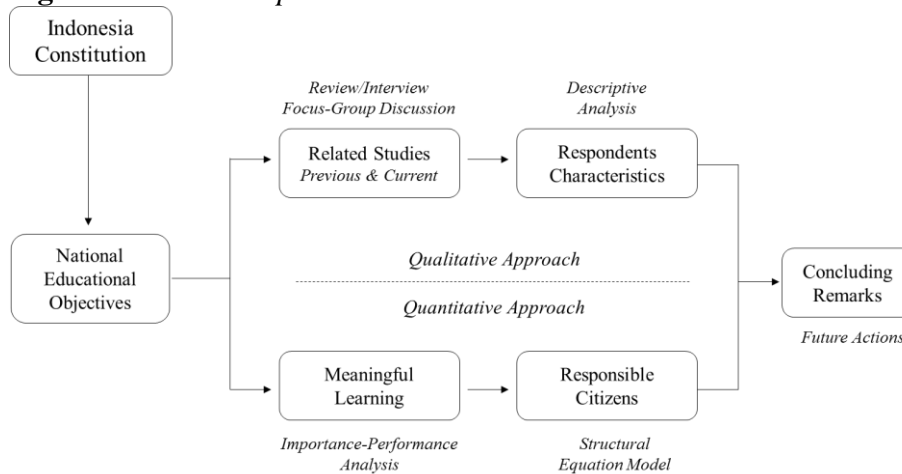
Having considered constructs elaborated previously, it is then believed that meaningful learning would really take place. Supposing meaningful learning did take place, it is therefore understood that students with these teaching and learning atmosphere would be able to take the highest advantages of becoming a great student as the outcome of schooling system. This implies that the students are more likely absorbing both knowledge and skill taught to them effectively. To a certain extent, a student is moreover able to internalize the substance they studied beyond a cognitive domain; including affective area too. If this situation took place, in this study, it is referred to as the so-called responsible citizens as a result of quality education processes. In other words, the student would not only be having integrity and intelligence but also being independent human beings related to becoming a good member of a nation as one integrated entity.

Operationally, integrity refers to having the spirit of religiosity, honesty and empathy. Smart refers to having knowledge in emotional, intellectual and kinesthetic domains. Independent refers to people who are innovative, critical and lawful. Having considered these three main attributes, they are all then referred comprehensively to responsible citizens in the Indonesian context (Sembiring, 2008). This is actually related to an effort of the Indonesian government approaching 100-years of Indonesias' independence day, that is 17 August 2045.

Those elaborative reviews are all fundamentals underpinned the conceptual

framework of this inquest (Figure 1). The framework is then used as a basis of proposing operational framework. Figure 1 explains how the fundamentals of the study obtained conclusively through literature reviews and in-depth interviews with selected experts and then followed by limited open focus-group discussions. The objectives are to find the foundations of establishing the hypotheses of the operational framework that should also be statistically examined afterwards.

**Figure 1.** *The Conceptual Framework*



Looking at the conceptual framework from literature reviews under qualitative queries implemented beforehand, it can be comprehensively recapitulated of variables, related dimensions and all attributes involved surrounding meaningful learning perspectives as shown in Table 1.

**Table 1.** *Variables, Dimensions, and Notes for the Questions*

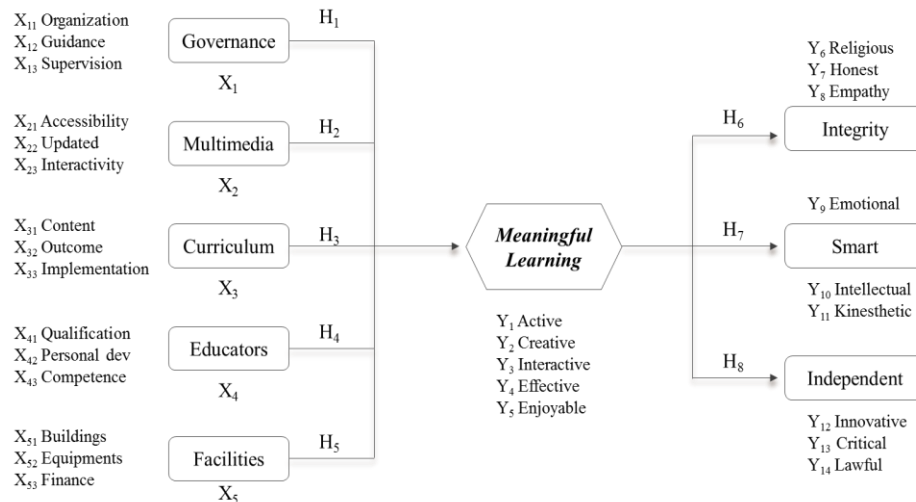
No	Variables	Dimensions	No	Variables	Dimensions	Notes
1	Meaningful Learning $Y_1$	$Y_{11}$ : Active $Y_{12}$ : Creative $Y_{13}$ : Interactive $Y_{14}$ : Effective $Y_{15}$ : Enjoyable	2	Integrity $Y_2$	$Y_{21}$ : Religious $Y_{22}$ : Honest $Y_{23}$ : Empathy	Each dimension in $X_{(1-5)}$ is measured by asking 2-item to respondent.
3	Smart $Y_3$	$Y_{31}$ : Emotional $Y_{32}$ : Intellectual $Y_{33}$ : Kinesthetic	4	Independent $Y_4$	$Y_{41}$ : Innovative $Y_{42}$ : Critical $Y_{43}$ : lawful	
5	Governance $X_1$	$X_{11}$ : Organization $X_{12}$ : Guidance $X_{13}$ : Supervision	6	Multimedia $X_2$	$X_{21}$ : Accessibility $X_{22}$ : Updated $X_{23}$ : Interactivity	
7	Curriculum $X_3$	$X_{31}$ : Content $X_{32}$ : Outcome $X_{33}$ : Execution	8	Educator $X_4$	$X_{41}$ : Qualification $X_{42}$ : Personal dev $X_{43}$ : Competence	While for $Y_1$ , 5 questions; for $Y_{2-4}$ , 4 questions. Total 43 questions
9	Multimedia $X_5$	$X_{51}$ : Building $X_{52}$ : Equipment $X_{53}$ : Finance				

**Methodology and Research Design**

It is on the right phase at this stage to establish the operational framework in accordance with both the structure in Figure 1 and the variables and dimensions involved as shown in Table 1. The framework and the table are both used as a foundation of determining the design, methodology and ways of ensuing analysis accomplished quantitatively subsequently. This inquiry utilizes exploratory-design, as one approach in mixed-methods (Creswell & Clark, 2011). It is prearranged under a qualitative approach first prior to a quantitative series. Two distinct instruments are developed; a list of questions for in-depth interviews and/or open focus-group discussions for qualitative purpose and the questionnaires for quantitative compulsion.

Table 1 and Figure 2 are both familiarizing variables, dimensions and also attributes engaged in this study operationally. Meaningful learning (Y<sub>1-5</sub>) was assessed by perceiving attributes of school governance (X<sub>1</sub>), multimedia supports (X<sub>2</sub>), curriculum operated (X<sub>3</sub>), the role of educators (X<sub>4</sub>) and provision of learning support facilities (X<sub>5</sub>). The quantitative instrument consists of 2x20 questions with the Likert Scale 1-5 related to meaningful learning and its importance level; plus 10 additional questions to validate the independent variables (integrity, smart and independent citizens) with reference to the intervening variable (meaningful learning).

**Figure 2. Operational Framework**



Variables are explored through a questionnaire inspired by Bird (2009) and Tjiptono & Chandra (2011). A survey is started to accumulate data from respondents (Fowler, 2014); teachers in this case. A purposive sampling was chosen to select resource persons for qualitative purpose and simple random sampling was applied to determine respondents for quantitative intention (Cochran, 1977; Sugijono, 2012). Respondents were all teachers who accomplished their degree in Universitas Terbuka; and limited to those who registered in Bogor Regional Office. They are all teachers stationed in several subdistricts’

schools in the West Java province. An IPA-CSI (customer-satisfaction index) was emulated with intent to concurrently measure influential level along with its importance degree (Kitcharoen, 2004; Silva & Fernandez, 2010). SEM is used to detect behavioral patterns and relation power among variables, dimensions and attributes engaged (Wijayanto, 2008; Hair, Black, Babin & Anderson, 2009).

This inquiry is then scrutinizing eight hypotheses (H, Figure 2). They are: meaningful learning is influenced by governance (H<sub>1</sub>), multimedia (H<sub>2</sub>), curriculum (H<sub>3</sub>), educators (H<sub>4</sub>), and facilities (H<sub>5</sub>). Likewise, integrity (H<sub>6</sub>), smart (H<sub>7</sub>) and independent citizens are influenced by meaningful learning.

## Results and Discussions

Prior to conversing the results, it is cherished to signify the characteristics of the respondents (Table 2). This will intensify perception on the outcomes. The results of the analyses are detailed in the following tables, figures and elaboratives analysis.

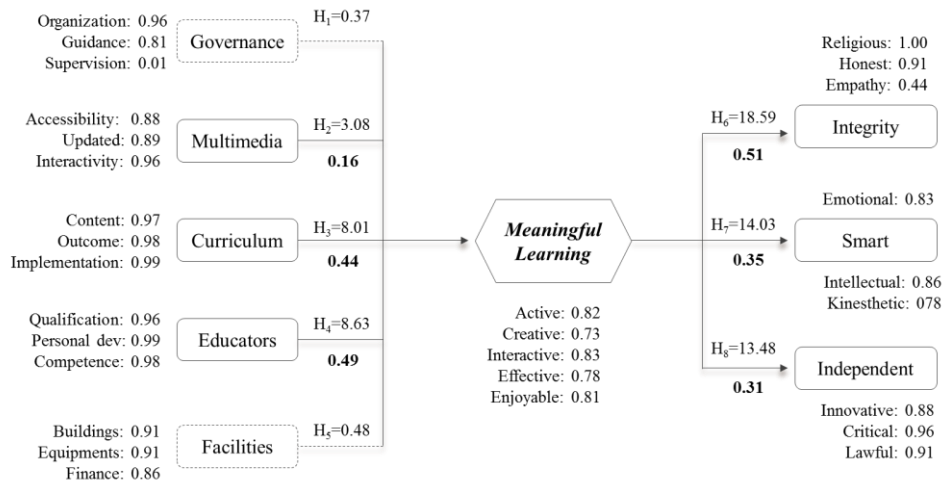
**Table 2.** *Respondents Characteristics*

		%		%		%
<b>Respondents</b>	<b>232</b>	100	Female	82.33	Female	17.67
<b>Teaching at</b>	Early Childhood	7.33	Primary School	87.50	High School	5.17
<b>School Status</b>	Public School	16.38	Private School	15.09	Others	68.53
<b>Experience (Year)</b>	1 – 5	18.10	6 – 10	50.00	11 – 15	21.98
	16 – 20	6.03	21 – 25	3.88		
<b>GPA</b>	2.00 – 2.49	5.60	2.50 – 2.99	28.88	3.00 – 3.49	46.98
	3.50 – 3.99	17.67	4.00	0.86		
<b>Age (Year)</b>	< 25	7.76	26 – 30	34.48	31 – 35	29.74
	36 – 40	12.93	41 – 45	15.09	46 <sup>++</sup>	0.00
<b>Study Length (Year)</b>	< 4	40.09	5	42.67	6	16.38
	7	0.86	≥ 8	0.86		
<b>Marital Status</b>	Married	78.88	Unmarried	21.12		

Now, let us observe the results obtained on the hypothesis analysis (Figure 3). It is clear that Figure 3 displays that two of the hypotheses are *not* validated by analysis. They are: (1) H<sub>1</sub>=0.37 (governance to meaningful learning) and (2) H<sub>5</sub>=0.48 (facilities to meaningful learning); as the  $t_{\text{values}} \leq 1.96$  ( $\alpha=5\%$ ).



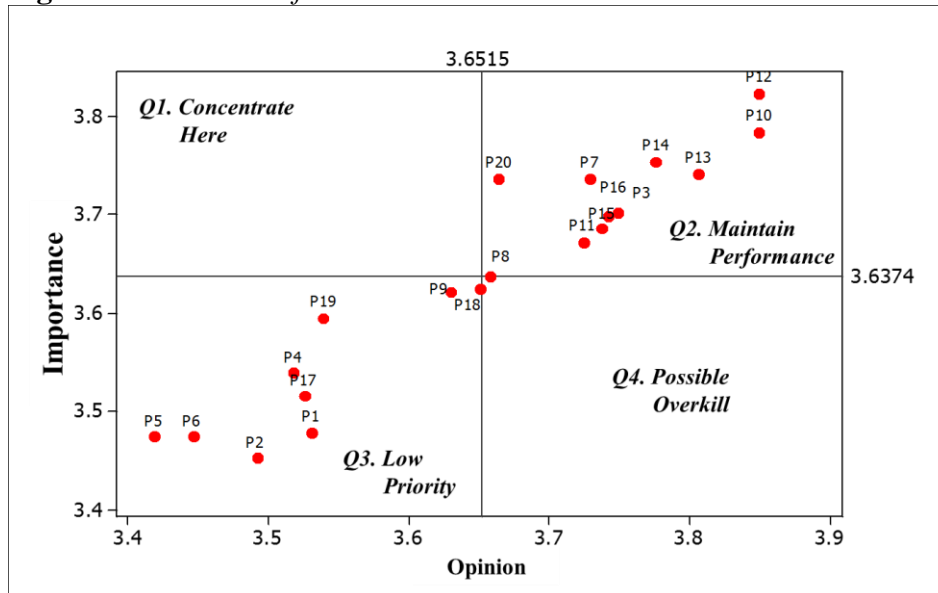
**Table 3. Results of Hypothesis and the Loading Factors**



The other six hypotheses are positively confirmed by the analysis. They are: (1)  $H_2=3.08$  (multimedia to meaningful learning), (2)  $H_3=8.01$  (curriculum to meaningful learning), (3)  $H_4=8.63$  (educator to meaningful learning), (4)  $H_6=18.59$  (meaningful learning to integrity), (5)  $H_7=14.04$  (meaningful learning to smart), and (6)  $H_8=13.48$  (meaningful learning to independent), as the  $t_{values} \geq 1.96$  ( $\alpha=5\%$ ).

Before describing the end results, relations power and behavioral patterns of all features engaged, it is worth enlightening the essence of meaningful learning and degree of its importance according to teachers. This approach was consciously *imitated* from IPA attitudes.

**Figure 4. IPA Chart of the Frame**



The analysis engenders points (P) of meaningful learning attributes related to relevant quadrants to comprehend their behavioral patterns (see Figure 4).

Figure 4 has four quadrants (Q): 1. Q<sub>1</sub> (Concentrate Here); 2. Q<sub>2</sub> (Maintain Performance); 3. Q<sub>3</sub> (Low Priority); and 4. Q<sub>4</sub> (Possible Overkill); following Wong, Hideki and George (2011).

Q<sub>1</sub> has actually no even single attribute that should be seriously noted here. It indicates that the meaningful learning root is at a low level whereas the degree of its importance is high. This implies that at this stage there are no difficulties in attaining meaningful learning in the conceptual/operational level. It denotes teachers are fully aware of the movement on the provision of meaningful learning in the classroom level; it is feasible and positive. This is a valuable motion that an effort to accomplish meaningful learning is being on the move.

Q<sub>2</sub> includes 11 points that should be cautiously recognized. They are: (1). P8 (organization), (2). P11 (personal development), (3). P15 (finance), (4). P3 (supervision), (5). P16 (active), (6). P7 (content), (7). P20 (enjoyable), (8). P13 (buildings), (9). P14 (equipments), (10). P10 (qualification) and (11). P12 (competence). This quadrant is a symptom of both teacher opinion and the degree of its importance being concurrently placed at a high level. All educational stakeholders must take care of these points thoughtfully as they are good points so there will be more teacher being well-informed and gain more advantages on attempting meaningful learning in conjunction with preparing responsible citizens for Indonesians. Attributes that fall into this quadrant are the strength and pillar of the possibility of an endeavor to accomplish meaningful learning in the classroom. This should become the pride of the policy makers in the educational sector.

Q<sub>3</sub> has nine points which should also be attended to. They are: (1). P2 (guidance), (2). P6 (interactivity), (3). P5 (updated), (4). P1 (organization), (5). P17 (creative), (6). P4 (accessibility), (7). P19 (effective), (8). P9 (implementation) and (9). P18 (outcome). This quadrant is an indication of both teacher opinion and the degree of its importance is in low category. The educational stakeholders should classify these attributes as ‘the next’ focus (if any) after concentrating on critical spots of points in Q<sub>2</sub>. Any attribute that falls into this quadrant is not critical and poses no threat in an effort to providing meaningful learning.

Finally, no point is classified as part of Q<sub>4</sub>. This quadrant indicates that any attribute that fall here are considered to be less important but teachers regarded them as high in an attempt to provide meaningful learning. Attention to attributes in this quadrant can be less focused so that the policy makers can save costs. How? By redirecting them to take up vital spots by anticipating no attributes will fall into Q<sub>1</sub> in the future. Keep maintaining fundamental spots in Q<sub>2</sub> with respect to assuring meaningful learning in each classroom of any school throughout the country.

Having positioned all attributes in the related quadrants, we are now in the position of associating results of loading factors. It was aimed at remarking the power of relations of each variable involved under SEM and the behavioral patterns of any attribute in each dimension (Wijayanto, 2008; Hair, Black, Babin & Anderson, 2009) to work out the end results.

From Figure 3, and also take a look Table 1, it can be extensively elaborated *five* vital upshots, namely:

1. The *first* effect is related to the dimensions directly influencing meaningful learning (as intervening variable). They are concecutively ordered as follows: (i) educators ( $X_4=0.49$ ), (ii) curriculum ( $X_3=0.44$ ) and (iii) multimedia ( $X_3=0.16$ ). While the other two dimensions as independent variables, i.e., governance ( $X_1$ ) and facilities ( $X_5$ ), have *no* direct influences to meaningful learning.
2. The *second* finding is related to the rank of attributes in educator dimension ( $X_4$ ). They are ordered as follows: (i)  $X_{42}$  (personal development, 0.99), (ii)  $X_{43}$  (competence, 0.98), and (iii)  $X_{41}$  (qualification, 0.96). The rank in curriculum ( $X_3$ ) is ordered as follows: (i)  $X_{31}$  (implementation, 0.99), (ii)  $X_{32}$  (outcome, 0.98), and (iii)  $X_{31}$  (content, 0.97). The position in multimedia ( $X_2$ ) is ordered as follows: (i)  $X_{23}$  (interactivity, 0.96), (ii)  $X_{22}$  (updated, 0.89), and (iii)  $X_{21}$  (accessibility, 0.88).
3. The *third* outcome, on the sequence of attributes in meaningful learning ( $Y_{1-5}$ ), as follows: (i)  $Y_3$  (interactive, 0.83), (ii)  $Y_1$  (active, 0.82), (iii)  $Y_5$  (enjoyable, 0.81), (iv)  $Y_4$  (effective, 0.78) and  $Y_2$  (creative, 0.73).
4. The *fourth* result is associated with the relations power of moderating variables (meaningful learning) and dependent variables (responsible citizens). Meaningful learning ( $Y$ ) has significant effects orderly, as follows: (i) integrity (0.51), (ii) smart (0.35) and independent (0.31). This implies that the dependent variables are all interrelated directly and positively with moderating variables.
5. The *fifth* consequence is concerning the ranks within the dimensions of: (1) integrity, as follows: (i) religious ( $Y_7=1.00$ ), (ii) honest ( $Y_8=0.91$ ) and (iii) empathy ( $Y_9=0.44$ ); (2) smart: (i) intellectual ( $Y_{11}=0.86$ ), (ii) emotional ( $Y_{10}=0.83$ ) and (iii) kinesthetic ( $Y_{12}=0.78$ ); (3) independent: (i) critical ( $Y_{14}=0.96$ ), (ii) lawful ( $Y_{15}=0.91$ ) and (iii) innovative ( $Y_{13}=0.88$ ).

Prior to validating conclusive line under the mixed-methods approach, it is sensible to reflect whether the SEM result is in a good fit category or not. If yes, it is then reliable to use the assessment and engender the loading factors to confirm the power of interrelations. The analysis confirmed that they are *all* considered in 'good fit' category (Table 3). This indicates that the validated framework is approvingly dependable. Conceptual and operational framework have no substantial and technical differences in conceptual and methodological intensity.

**Table 3. Goodness of Fit of the Framework**

Goodness of Fit	Cut-off Value	Results	Notes
RMR (Root Mean Square Residual)	< 0.05 or < 0.1	0.080	Good Fit
RMSEA (Root Mean Square Error of Approx)	≤ 0.08	0.078	Good Fit
AGFI (Adjusted Goodness of Fit Index)	≥ 0.90	0.960	Good Fit
NFI (Normed Fit Index)	≥ 0.95	0.970	Good Fit
CFI (Comparative Fit Index)	≥ 0.90	0.980	Good Fit

Goodness of fit of the framework is entirely in good fit category, so it is valuable to use them as a point of reference. There are *three* primary evaluations needed to be explored to make use of all consequences. The *first* is on the gap obtained using exploratory-design, i.e., qualitative approach was *not* perfectly authenticated by quantitative framework; two hypotheses are *not* validated by the analysis (governance and facilities to meaningful learning). The *second* is reason adjacent to approach used, by referring to respondents characteristics (Table 2). The *third* is implication of findings for related further research with a comparable theme.

Under qualitative procedure, meaningful learning (moderating variable) is interdependent with governance, multimedia, curriculum, educator and facility (independent variables). Likewise, the moderating variable was interconnected with integrity, smart and independent citizens (independent variables). Remarkably, only three dimensions of independent variables (educator, curriculum and multimedia) are interconnected with the moderating variable (meaningful learning). This implies that qualitative versus quantitative results are slightly varies; but they are providentially do *not* contradict one another.

Exploratory-design was conducted by first collecting information and analyzing data qualitatively; then building a quantitative structure prior to interpretation (Creswell & Clark, 2011). It aims at measuring qualitative exploratory findings. Prior to building operational framework, the conceptual framework should be established first since it should be statistically scrutinized afterwards. Thus, connecting two strands with respect to theoretical and/or instrumental elaboration becomes a crucial cycle. In fact, the end results show that the two hypotheses (governance and facilities) are not accomplished in chorus. The order of most dimensions and attributes are also marginally disharmonized. This indicates that quantitative approach is still *unable* to comprehensively prove qualitative exploratory findings previously obtained. Again, however, they are not contradict in high intent.

Referring to Table 2, most of the respondents are academically qualified according to their GPA; more than 62% of them have a GPA of 3.00 and up. Their working experience also showed the same effects; only 18.10% of them have experienced less than 6 years on duty. In terms of study length, less than 19% of them had studied at Universitas Terbuka more than 6 years (normally 5-year program; and this is good. Additionally, more than 68% of them are working as non-permanent teachers. In general, this grand picture implied that school governance and learning facilities are no longer becoming constraints for them in implementing and accomplishing meaningful learning in the classroom level. As long as the curriculum is firmly in place and the

multimedia supports are available and accessible, then meaningful learning atmosphere is reasonable as they are academically qualified and skilled to do so.

Anticipating analogous research for further insight, it is prominent to explore the respondents magnitude, not only restricted to teachers domiciled in the West Java provincial areas, and pursue a degree at Universitas Terbuka alone. It would be much more appropriate by welcoming other teachers and sources of information as respondents from all over Indonesia. Having involved them, it will enlarge the more vital effects obtained in accordance with conceptual and operational frameworks resulting from qualitative inquiry. Sensible insight is necessary to be wisely perceived to avoid probable limitations in retrieving harmony between qualitative versus quantitative outcomes. Above all, searching and adopting a appropriate methodology is vital to assuring that the results obtained are functional and dependable.

From the IPA Chart (Figure 3), it is good to note that it is believed that for most of respondents an attempt to deliver quality education through meaningful learning atmosphere is indeed feasible and achievable. This statement is proper for more than half of the attributes (11 out of 20 attributes) that fall in Q<sub>2</sub> (maintain performance). This implies that the fact that the vast majority of teachers that perceived meaningful learning is no longer a big deal to be realized. Additionally, the last question asked to the respondents is whether they are in position to accomplish meaningful learning in advancing the golden generation of Indonesia toward 2045 through quality teaching and learning processes in the classroom. Answers to this question proved the initial assumptions (Yes=92.67%. Not Sure=7.33%. No=0%). This is rightly a good symptom for educational stakeholders that Indonesia in general may have high positivity in adopting new challenges in accomodating and adopting uncertain turbulence entering the 21<sup>st</sup> century while searching for and realizing ways of developing a golden generation for better and prosperous Indonesia in the near future.

### **Concluding Remarks**

This study discovered tolerably significant differences between what was obtained from qualitative routines as compared to a quantitative approach. Two out of eight hypotheses assessed are *not* substantiated by the analysis. This implies that the established qualitative framework is imperfectly endorsed by a quantitative analysis. Despite that they differ, they do not contradict one another in high intent. The result is therefore definitely useful in prioritising critical attributes that should be cautiously taken. This is to consolidate the policy to fulfilling meaningful learning in each class of every school throughout the country with a population of more than 250 million viewed from the teacher outlook in the frame of quality education and a meaningful learning angle.

With the *emulated* IPA procedure, the inquiry is able to show 11 vital attributes as clues that the meaningful learning movement in Indonesia ambience is assertively promising. These 11 attributes found are the pillar and future of the Nation that an attempt of delivering meaningful learning as a means of preparing citizens through quality education did take place. Educator, curriculum and multimedia factors can be regarded as hints to educational stakeholders to be carefully noticed to deliver meaningful learning in each classroom of every school throughout the country.

Most teachers categorized the educator aspect in the first place as a hint to meaningful learning; this is inline with Kompas (2016). This entails that the Government through the Ministry of Education and Culture should take this upshot by noticing conceivable constraints that they might deal with, especially on the personal development of every teacher; their competencies related to the latest development of teaching and learning processes with the help of a new trend of ICT; minimum qualification of teachers as a profession (Ministry of National Education, 2005). The educational stakeholders are well-advised to anticipate the adoption, integration, and implementation of meaningful learning in every classroom will not obstruct anyone to get involved and contributed positively.

Conjecturing this know-how is universally prototypical in the vast majority of schools environment, administrators and academic would be well-suggested to ruminate on the variables, dimensions and attributes involved previously discussed. It aims at enlarging their insights that meaningful learning becomes an appropriate tool to sustaining quality education in preparing all Indonesian students becoming responsible citizens; as they have integrity, they are smart and they are also independent human beings. This is truly in line with the National revelation through the educational sector as well as inline with the 21<sup>st</sup> century skills compulsion for better citizens in the future approaching the golden years of Indonesia in 2045.

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