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Qualitative Approach Studies: Analysis of Human Capital Dimensions that Influence Vocational Education Leader

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Abstract. The purpose of this study was to determine the response of vocational education leaders regarding the dimensions that influence vocational schools. The method used in this research is a qualitative approach with a descriptive method. Where the data collection technique is done by observation, interviews, and distributing questionnaires. The results of this study found that overall, the dimensions of human capital were in the high category, in terms of education, knowledge, competence and skills. The highest dimension is education, where all educators (teaching staff) have met the requirements of academic qualifications. While the lowest dimension is conceptual skills, in terms of determining concepts and steps to measure the success of school programs, creating a school-community relations system and human relations skills in building teamwork, decision making, and mastering methods, processes and procedures, as well as activity techniques. learning at school.

Keywords: Dimensions, Human Capital, Leaders

I. Introduction

The achievement of educational goals is highly dependent on the leadership skills and wisdom of the principal who is the leader of education in the school. The principal is a professional official in the organization which is one of the components of education that plays the most role as a leader and must have several abilities including: personality abilities, knowledge, and expertise. This is human capital (human investment), [1]. In addition, every principal must fulfil five aspects of competence, namely personality, social, managerial, supervision, and entrepreneurship, based on the provisions of the Ministry of Education and Culture. However, almost all principals are weak in the areas of managerial and supervisory competence. "In fact, these two competencies are the principal's strength to manage schools well," according to the Director of Education Personnel.

Research on human capital has been carried out by many previous experts, including [2] entitled *"Human capital development and its impact on firm performance: evidence from developmental economics"* to develop a model and to show the relationship between human capital and company performance where the dimensions used to measure human capital investment are Training, Education, Knowledge, Skills [3], states that operationalizing the human capital variable does not need to look for explicit dimensions (explicitly mentioning the dimensions or elements) from the experts. The most important thing is that the definition put forward is in accordance with the object of research to be carried out and can then be used as dimensions that will be translated back into measurable indicators so that the previously abstract variables become concrete. The following are the dimensions of human capital used by experts grouped by [3], as shown in table 1.1

Table 1. Dimension of Human Capital According to Experts and Research

No.	Year	Source Reference	Dimension
1.	2001	[4]	Knowledge, Education, Ability
2.	2002	[5]	Knowledge, competence, attitude and behavior
3.	2004	[6]	Knowledge, education and ability
4.	2004	[7]	Competence, education and work experience
5.	2007	[8]	Individual knowledge, skills, competencies and attributes
6.	2008	[9]	Competence, education and work experience
7.	2009	[10]	Competence, experience and knowledge

From the several dimensions of human capital as stated by the experts above, there are differences and similarities. Where the emphasis is on Education, Knowledge, Skills, and Competencies. According to [11], all components of the dimensions will have different roles in creating human capital, and in the end these components will form the value of an organization. In accordance with the object of research to be carried out in this study, the dimensions that will be used are Education, Abilities, Skills, Knowledge and leadership competencies of the principal.

2. Method

This research is a qualitative approach with a descriptive method. Where data collection techniques are carried out by observation, interviews, and distributing questionnaires

2.1 Data Collection Techniques

Data collection techniques in qualitative research by conducting observations, interviews, and distributing questionnaires

- Observations made by researchers through 11 private vocational education leaders. The reason is because based on accreditation and the position of private vocational education is in the distribution of the sampling area.
- Interviews were conducted to obtain accurate data and appropriate data sources. In this study, the authors interviewed leaders, representatives of leaders, leaders of the special job market (BKK), educators and education staff.
- Questionnaire is a list of written questions based on indicators that are arranged according to the required information as many as 76 statements, which take approximately 45 minutes to answer all statements.

2.2 Testing Research Instruments

The design of instrument testing is carried out through validity and reliability tests. According to [4], validity is used to test how the measurement instruments developed can measure the concept of measurement. In this test, the Product Moment correlation is used. while the reliability test is intended to determine the minimum level of confidence that can be given to the sincerity of the answers received in the consistency of respondents in answering questions. The reliability test in this study was carried out using Cronbach Alpha analysis in accordance with the advice given by [12]. If the reliable coefficient is greater than 0.70, then the overall statement in the questionnaire is said to be consistent/reliable (reliable). After obtaining the reliability number, then the number is categorized based on the level of reliability shown in the following table. 2.1.

Table 2. Reliability and Validity Assessment Criteria

Criteria	Reliability	Validity
Good	0,80	**0,50**
Acceptable	0,70	**0,30**
Marginal	0,60	**0,20**
Poor	**0,50**	**0,10**

2.2 Design of Analysis and Hypothesis Testing

Descriptive analysis is used to describe or describe the variables studied in this study, thus reflecting information about good/bad or high/low and effective/ineffective respondents' perceptions of human capital, in private vocational education. To perform a descriptive analysis used the analysis of the average calculation. This is to explain each respondent's answer to each question item for each research variable. Because there are five alternative answers, the preparation of a categorization table from the average score of each item into five categories in accordance with the Sturges rule [13]:

- Calculating Range (R)
  R = Score Max – Score Min
  = 5 – 1 = 4
- Calculating the length of the class interval
  P = Range / k = 4/5 = 0. 80

Because the Likert scale is ordinal and for the analysis of the average test, data using interval data is needed, all ordinal data must be transformed to an interval level using the method described above. Based on the above technique, the categorization predicate of the research variable values is shown in the table. 2.2

Table 3. Scoring Criteria

Variable	Range Mean Score	Categorization
Human Capital	1,00 - 1,80	very lace
	1,81 - 2,60	low
	2,61 - 3,40	currently
	3,41 - 4,20	very high/good
	4,21 - 5,00	very lace

3. Results and Discussion

Based on interviews and observations that have been made, the authors can describe research data that can be used in enriching the discussion. Human capital in this study is measured based on 4 dimensions, namely education, knowledge, competence, and skills, which are measured through 15 indicators and operationalized into 28 statement items. The results of distributing questionnaires and calculations are described in a recapitulation of the distribution results of the response scores to the statement of the leadership of vocational education based on the dimensions and human capital of Vocational Education.

Based on the results of the distribution of questionnaires and calculations, it is described in the recapitulation of the distribution results of the response scores to the statement of the leadership of vocational education based on the dimensions and indicators of human capital in vocational education. The following is an evaluation of the suitability of the research model which includes Evaluation of the overall model; Evaluation of measurement models; and Evaluation of structural models.

3.1 Evaluation of Measurement Model

Aims to test whether the indicator or dimension is valid, reliable, and relevant as a measure of the variable. The following is an evaluation of the human capital measurement model, Human Capital. Where human capital is measured using 4 dimensions and operationalized into 28 indicators (manifest variables). Based on processing using second order confirmatory factor analysis, measurements for human capital are obtained as shown in Figure 3.1

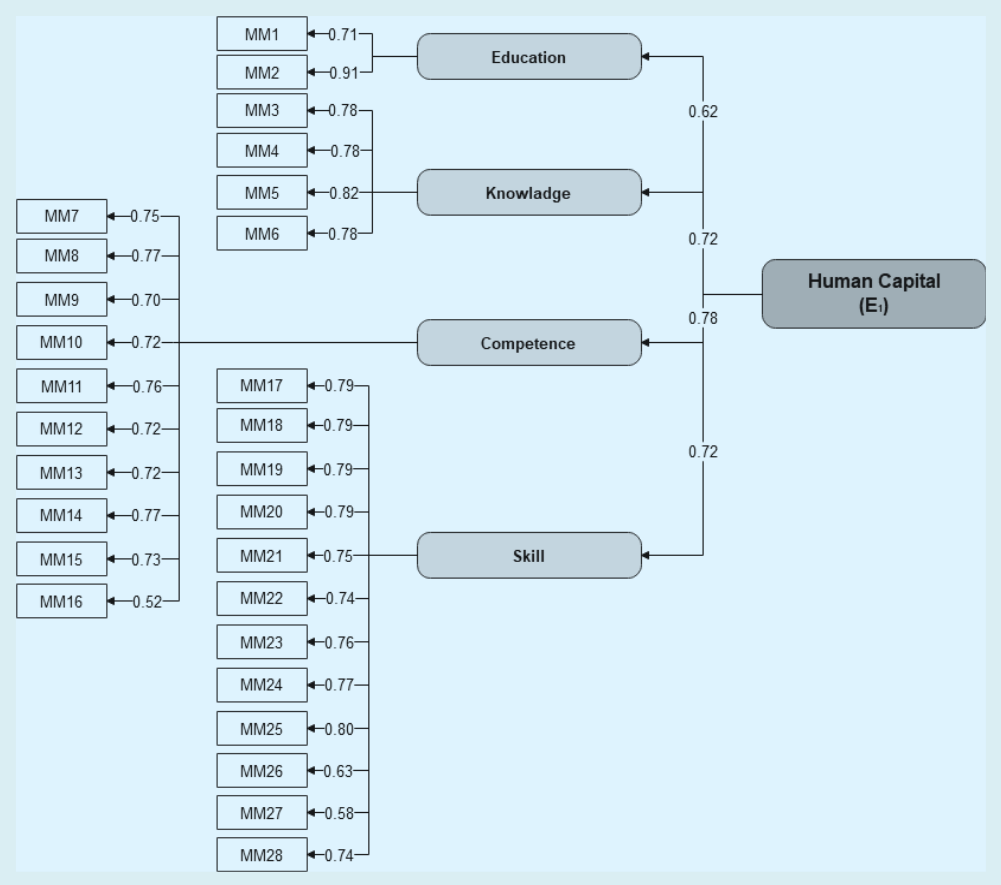

Figure 1. Path Diagram of the Human Capital Measurement Model

3.1 First Order Evaluation of Human Capital Measurement Model

The first order evaluation of the latent variable of human capital is used to test the validity and reliability of each indicator of each dimension that makes up the latent variable of human capital. Based on the factor weights of the test results of each indicator on the latent variable of human capital, it is shown in Table 4.

Table 4. Summary of First Order Test Results of Human Capital Measurement Model

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Dimension	Validity				Reliability	
	Dimension	Standardize loading (λ)	*t* Count	Variance Error (e)	*Construct reliability (CR)*	AVE
Education	MM1	0.71	-	0.496	0.797	0.666
	MM2	0.91	3.81	0.172		
Knowledge	MM3	0.78	-	0.392	0.869	0.624
	MM4	0.78	5.76	0.392		
	MM5	0.82	8.94	0.328		
	MM6	0.78	8.75	0.392		
	MM7	0.75	-	0.438	0.916	0.525
Competence	MM8	0.77	5.63	0.407		
	MM9	0,7	5.63	0.510		
	MM10	0.72	5.74	0.482		
	MM11	0.76	5.99	0.422		
	MM12	0.72	5.73	0.482		
	MM13	0.77	6.01	0.407		
	MM14	0.77	6.03	0.407		
	MM15	0.73	5.81	0.467		
	MM16	0.52	4.46	0.730		
Skills	MM17	0.79	-	0.376	0.936	0.551
	MM18	0.79	6.45	0.376		
	MM19	0.73	6.09	0.467		
	MM20	0.79	6.47	0.376		
	MM21	0.75	6.23	0.438		
	MM22	0.74	6.21	0.452		
	MM23	0.76	6.29	0.422		
	MM24	0.77	6.38	0.407		
	MM25	0.80	6.53	0.360		
	MM26	0.63	5.48	0.603		
	MM27	0.58	5.16	0.664		
	MM28	0.74	6,2	0.452		

Table 3.1 shows that human capital has a valid indicator with a value of *Standardized loading* (λ) >0.50 with t count > 1.96 t table on α=0.05. The results of construct reliability show that these indicators have a high degree of conformity in forming the latent variable with an acceptable value (>0.5). Likewise, the value of CR and AVE is still bigger than 0.5, which shows that on average greater than 50% of the information contained in each indicator can be reflected through its respective dimensions that are able to reflect all human capital variables.

3.1 Second Order Evaluation of Human Capital Measurement Model

The second order evaluation of the latent variable of human capital is used to test the validity and reliability of each dimension of the latent variable of human capital. Based on the results of data processing using LISREL 8.7 software, the results of testing each dimension on the latent variable of human capital are shown in table 5.

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Table 5. Summary of Second Order Test Results of Human Capital

Dimensions	Indicator Size		Respondent's answer score					Total	Mean Skor	Category
			5	4	3	2	1			
Education	Educational qualification	n	110	118	45	6	1	1170	4.18	High
		%	39.3	42.1	16.1	2.1	0.4			
	Educational linearity	n	105	132	36	5	2	1173	4.19	High
		%	37.5	47.1	12.9	1.8	0.7			
	Total Score							**2343**	**4.18**	High
Knowledge	Make decisions always pay attention to what is happening in the school environment	n	95	120	50	12	3	1132	4.04	High
		%	33.9	42.9	17.9	4.3	1.1			
	Use of media and information technology	n	92	125	45	18	0	1131	4.04	High
		%	32.9	44.6	16.1	6.4	0.0			
	Maintain harmonious communication with all educators	n	99	99	70	10	2	1123	4.01	High
		%	35.4	35.4	25.0	3.6	0.7			
	Ability to work collaboratively with school personnel despite different religions	n	101	124	46	8	1	1156	4.13	High
		%	36.1	44.3	16.4	2.9	0.4			
	Initiating new thinking in the process of interaction in the school environment	n	24	51	165	31	9	890	3.18	Medium
		%	8.6	18.2	58.9	11.1	3.2			
	Total Score							**5432**	**3.88**	**High**
Competence	Carry out self-development by participating in workshops, seminars, and workshops.	n	15	66	163	26	10	890	3.18	Medium
		%	5.4	23.6	58.2	9.3	3.6			
	The ability to show a personality	n	20	86	132	36	6	918	3.28	Medium
		%	7.1	30.7	47.1	12.9	2.1			

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Dimensions	Indicator Size		Respondent's answer score					Total	Mean Skor	Category
			5	4	3	2	1			
	that is exemplary by educators and staff									
	Make plans according to the school's vision and mission	n	106	115	56	3	0	1164	4.16	High
		%	37.9	41.1	20.0	1.1	0.0			
	Develop the professional abilities of educators (teachers) to attend various trainings and seminars	n	112	123	45	0	0	1187	4.24	High
		%	40.0	43.9	16.1	0.0	0.0			
	Able to create a school environment as a place of practice for students to gain real experience in the world of work	n	101	119	50	10	0	1151	4.11	High
		%	36.1	42.5	17.9	3.6	0.0			
	Provide opportunities for educators to collaborate in marketing the work of students	n	68	139	64	9	0	1106	3.95	High
		%	24.3	49.6	22.9	3.2	0.0			
	Involving students in bazaars/work exhibitions outside of school	n	25	121	80	46	8	949	3.39	Medium
		%	8.9	43.2	28.6	16.4	2.9			
	Providing services to students to improve learning	n	121	138	21	0	0	1220	4.36	High
		%	43.2	49.3	7.5	0.0	0.0			
	Total Score							**8585**	**3.83**	**High**
Skills	Ability to analyse the strengths, weaknesses, opportunities, and threats	n	98	120	49	11	2	1141	4.08	High
		%	35.0	42.9	17.5	3.9	0.7			

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Dimensions	Indicator Size		Respondent's answer score					Total	Mean Skor	Category
			5	4	3	2	1			
	faced by the school									
	Ability to focus attention on real contributions in achieving school goals	n	95	125	51	8	1	1145	4.09	High
		%	33.9	44.6	18.2	2.9	0.4			
	Ability to determine concepts and steps to measure the success of school programs	n	20	86	132	36	6	918	3.28	Medium
		%	7.1	30.7	47.1	12.9	2.1			
	Ability to analyse various events and conduct evaluations with school components	n	92	118	69	1	0	1141	4.08	High
		%	32.9	42.1	24.6	0.4	0.0			
	Ability to develop a positive attitude on an ongoing basis towards programs that have been implemented in schools	n	105	140	35	0	0	1190	4.25	High
		%	37.5	50.0	12.5	0.0	0.0			
	Able to create a system of school relations with the community	n	12	66	165	28	9	884	3.16	Medium
		%	4.3	23.6	58.9	10.0	3.2			
	Able to build a compact and dedicated teamwork in this school	n	18	86	134	36	6	914	3.26	Medium
		%	6.4	30.7	47.9	12.9	2.1			
	In working together, they can understand aspirations and motivate school	n	101	118	53	8	0	1152	4.11	High
		%	36.1	42.1	18.9	2.9	0.0			

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Dimensions	Indicator Size		Respondent's answer score					Total	Mean Skor	Category
			5	4	3	2	1			
	members to obtain optimal participation to achieve goals									
	Ability to establish harmonious communication with all educators (teachers)	n	93	120	50	14	3	1126	4.02	High
		%	33.2	42.9	17.9	5.0	1.1			
	Ability to plan the needs of school personnel to create good cooperation	n	101	119	50	10	0	1151	4.11	High
		%	36.1	42.5	17.9	3.6	0.0			
	Make decisions in groups and together with the educators (teachers) in this school	n	25	119	80	52	4	949	3.39	Medium
		%	8.9	42.5	28.6	18.6	1.4			
	Ability to master knowledge of methods, processes, and procedures, as well as techniques for learning activities at school	n	18	86	138	32	6	918	3.28	Medium
		%	6.4	30.7	49.3	11.4	2.1			
	Carry out maintenance and repair activities for school facilities	n	125	123	32	0	0	1213	4.33	High
		%	44.6	43.9	11.4	0.0	0.0			
	Total Score							**13842**	**3.80**	**High**
Average Human Capital									**3.92**	**High**

Human capital is measured using 15 indicators. Based on the answers of 280 vocational high school leaders, the average response score of vocational high school leaders was 3.92 and was in the range of

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3.41 to 4.20. Thus, it can be concluded that human capital is included in the "High" category, meaning that the human capital possessed by Vocational education is good. Overall, the dimensions of human capital are in the high category, both education, knowledge, competence, and skills. The highest dimension of human capital is education, where all educators have met the requirements of academic qualifications. Meanwhile, the lowest dimension is conceptual skills, in terms of determining concepts and steps to measure the success of school programs, creating a school relationship system with the community and human relations skills in building a compact teamwork, making decisions, and mastering methods, processes. and procedures, as well as techniques for learning activities in schools. The recapitulation of the answers of the vocational education leaders regarding human capital above can be made in a diagram of the total score for each dimension of human capital. like in the picture 3.2

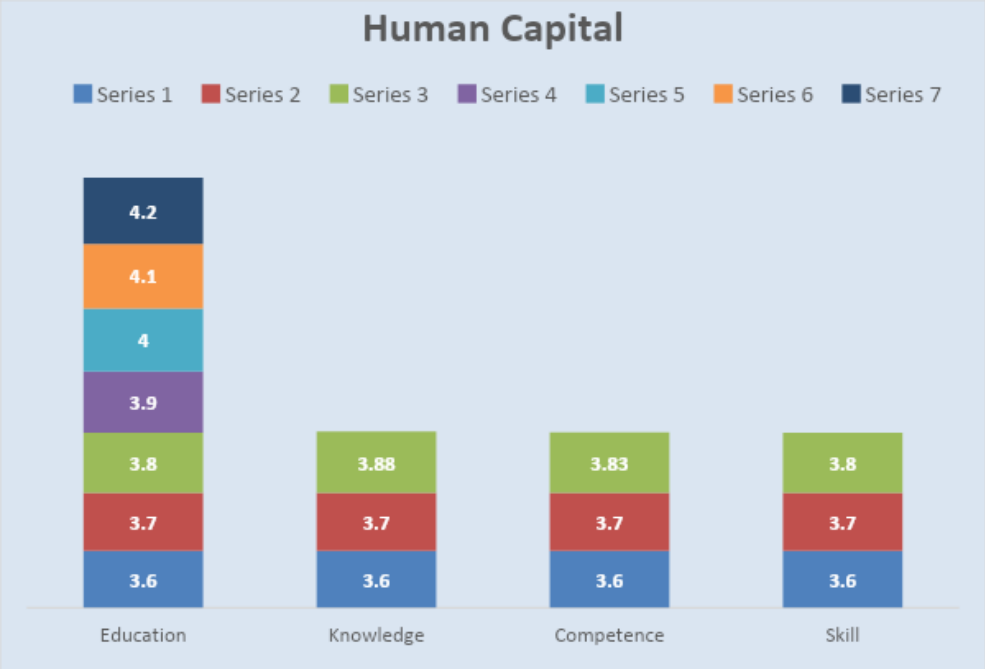

Figure 2. Diagram of the Total Score Dimension of Human Capital

Qualitative findings from interviews with leaders of vocational education, sources of qualitative data, indicate that in general the quality of human capital if assessed in a scale range of 10-100, is at 70. As for the advantages of each if seen, there is another side that private vocational education is superior. Compared to state vocational education, there is also a side where public vocational education is superior to private education. In vocational education Negeri, there is a competency improvement program (LP2KS) from the government, where this program is to improve the quality of school leaders and has been implemented since 2012 with the aim of holding a program to strengthen school leaders (school principals) as a refresher which is held annually which includes aspects of social competence, managerial competence, entrepreneurial competence. However, it is felt that it is still lacking, and has not yet reached the ideal condition. While in private vocational education, there are still weaknesses from the management side, for example, many school leaders are still inexperienced with industry, so they cannot combine industrial life with school life, this is usually because the educational leaders who serve lack knowledge about industry and are appointed as leaders based on family.

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Another condition that becomes an obstacle in strengthening human capital in public and private education is related to the quality of teaching staff. There are still many educators who do not match their educational background with the subjects they are currently responsible for. Although there has been a competency improvement program from the government, it is still considered inadequate and inadequate so schools must continuously strive to improve the quality of their human resources. This applies to both public and private vocational education.

4. Conclusion

The results of the research that have been carried out show that overall human capital still needs attention, improvement and development from the school and education leaders. In terms of knowledge, increasing the insight of the head of education is an important element in the development of human capital. This insight enhancement includes knowledge to: (1) initiate new thoughts (innovate); (2) develop the professional competence of educators; (3) the competence of educational leaders that should be imitated by educators; (4) provide opportunities for educators and students (students) to include their students' work in competitions; (5) motivating educators in improving the success of educational programs; (6) involving educators in decision making; (7) optimize the professionalism of educators; (8) create good relations with the community; and (9) build a cohesive and highly dedicated teamwork in the school.

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