

## **The Effect of Education and Training Programs and It is Impact Towards Competency of Batalyon Kavaleri 3/ Tank Andhaka Cakti Soldiers in Singosari District Malang**

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**Abstract:** *This research was conducted to give us information about the effect of study, training, towards soldiers's capability and to let us know about the dominancy between skills and soldiers's performance at Batalyon Kavaleri 3/Tank Andhaka Cakti. The location of the execution of the research was in the Cavalry Battalion/Andhaka Cakti Tank 3 sub Singosari Malang with selection site through the deliberate way (purposive method). This research conducted on 30 January 2017 until 31 March 2017. Survey research method was used in this research, that means spreading questionnaire and conducting constructive interview in the process. Data analysis using the method of SEM supported by warpPLS software 5.0. The results of the analysis explains that education represented by the soldier's competence as learners and trainees represented by the competencies possessed by the power of coaches, which is absolutely correct by the methods of the training was done in practical methods by doing alutsista. By doing so, soldiers's competence was achieved by parameters 69% and the rest were 31%. Education, training and skill were affecting the soldiers's competence until it's reached 77% and the rest was the other factor that excluded from the parameters. Education and training have a dominant influence to increase soldier's individual skills, while training gave a dominant influence to their performance operating alutsista, this training is carried out by competent trainers in Batalion and cavalry 3/Tank. Suggestions for institutions that every usage of educational institution or training institution to use the right methods while carrying this operation. As for the example due to the influence of education and training in the Cavalry Battalion 3/ this was their passion, in operating alutsista there should be in accordance with the plan of education and training to improve the skills and performance of souldiers.*

**Keyword:** *Education and Training, Competency, Soldiers*

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### **I. Introduction**

#### **1.1 Background**

Organizing training for TNI AD aims to enhance the knowledge, skills, abilities and physical regeneration process in order to gain leadership in the TNI AD. This training conducted by TNI AD, must be done in a well-planned, purposeful and sustainability to achieve some competent and high quality human resources, professional and skilled soldiers. The institution is a place to learn and practice and increase the chance of improving the quality of human resources, particularly in the educational institution which is Seskoad is the highest quality place to do the training.

Educational pattern in education institution Seskoad emphasizes on self-learning activities to develop quality leadership and military skills. One of the important components of education is a lecturer who acted as a frontman in the process of teaching and learning so that the result of lecturers greatly affects the achievement of the objectives, as well the education and the results of the students. The lecturers or trainers at Seskoad picked with the consideration of skills, competence, and knowledge about military subjects. Not only for the educational system, but as the quality of it's own individual does matter in this section.

Infantry main educational facility had specific and important role for the development of TNI AD in Indonesia. It was built to enhance and increasing the skills of Infantry corps of TNI AD, by all means it was built to make a good opportunity increasing quality of TNI AD soldiers.

Educational program and training facility needs to be looked carefully. Because many institution closed down because the output from the program wasn't competent at all. And for the result, educational program and training facility becomes the main cause of keeping the institution quality stay still and make it even better. While doing the development, without forgetting the evaluation program, to look back at the mistakes, an institution could make a list about what is wrong with the program and what is need to be done. That's how to

keep an institution in a better shape. For all the explanation, what is really important is the quality of individuals and how to keep it like that, is the key of maintaining the institution in a full performance.

## **1.2 Objective**

While looking back at the explanation, then the objective of this research consisting of few things:

1. To analyze the effects of educational program and training facility to the soldiers skills and competence at Batalyon Kavaleri 3/Tank Andhaka Cakti Singosari Kabupaten Malang.
2. To analyze the dominants model that affecting the soldiers competence at Batalyon Kavaleri 3/Tank Andhaka Cakti Singosari Kabupaten Malang.

## **II. Material And Methods**

### **2.1 Time and Location**

This research located in Batalyon Kavaleri 3 Tank Andhaka Cakti, Singosari, Malang. This research allocated for 5 months from 30 May 2017 until 30 December 2017.

### **2.2 Research Methods**

This research using Descriptive and analysis methods with Qualitative sample. This method was choosed to earn very clear point about the problems and answers from the research question.

### **2.3 Sampling Technique**

Sampling technique that we used was total sampling. The commander was asked to pick 170 soldiers from batalyon and then we made them as our sample. The measurement were their skills and capability, and to decrease the bias of this research, according to Maholtra (1995) we pick the sample 5 times from the question on the questionnaire.

### **2.4 Data Analysis**

Validity and reliability test on this research was done with SEM method through WARP PLS 5 software. It is necessary to use SEM method to get authentic and reliable result in this research. The validity on the question is an indicator in measuring certain latent variables assessed by testing whether all loadings reached ( $p < 0.05$ ), indicated by the value of  $t$  is greater than 1.96 while the reliability of an indicator can done by calculating the composite reliability (reliability combined) or construct of reliability (reliability invalid constructs) by the following formula (Ghozali and Fuad, 2005)

$$\rho = (\sum \lambda)^2 / [(\sum \lambda)^2 + \sum (\theta)]$$

Explanation:

$\rho$  = composite reliability

$\lambda$  = loading indicator

$\theta$  = error variance indicator

## **III. Result**

### **3.1. Data Analysis**

#### **3.1.1. Validity Test**

The validity test on the data obtained from the instrument in the form of a questionnaire, had the meaning to find out the suitability between the measured tool (questionnaire) and what is being measured (statements in the questionnaire) so that the data used to test the validity of the instrument so that its usefulness is then based on the type of validity can be divided into the validity of content, that means the test is done based on the Foundation of theory or opinion of the expert or called face validity, validity of criteria is a little bit different from validity of content, which is by comparing the value of the correlation between each item with a score corrected by using a method called the correlation technique product moment or intercorrelation method. Based on the discriminant validity testing on the outer table of the model by using the cross loading that explained before, it can be stated that each indicator has the greatest loading values on the variable, as for the measure. Therefore, from this test we can inferred that the discriminant validity of the outer model already fulfilled. Based on the results of statistical data processed by WarpPLS, we obtain the results about the validity, which is consisted the corelation of cross loading, discriminant and convergent, the results we obtained are in the following table.

Table 1. Validity Test

	X1_PD D	X2_PL T	Y_SKIL L	Z_KINE R	X1_PD D*	X2_PL T*	Type (a	SE	P value	
x1.1	0.814	-0.205	-0.111	-0.074	-0.197	0.246	Formati	0.080	<0.001	x1.1
x1.2	0.272	-0.106	-0.122	0.283	0.807	-0.817	Formati	0.093	0.002	x1.2
x1.3	0.799	0.073	-0.070	-0.087	-0.216	0.233	Formati	0.081	<0.001	x1.3
x1.4	0.321	0.097	0.484	-0.563	-0.177	0.139	Formati	0.092	<0.001	x1.4
x1.5	0.553	0.192	0.045	0.421	0.307	-0.378	Formati	0.086	<0.001	x1.5
x2.1	-0.373	0.632	-0.043	0.253	-0.145	0.154	Formati	0.085	<0.001	x2.1
x2.2	-0.135	0.676	0.178	-0.843	-0.038	-0.002	Formati	0.084	<0.001	x2.2
x2.3	-0.092	0.105	0.503	-0.628	0.127	-0.166	Formati	0.098	0.142	x2.3
x2.4	0.393	0.613	-0.114	0.533	0.197	-0.208	Formati	0.085	<0.001	x2.4
x2.5	-0.642	0.583	0.089	0.466	-0.101	0.035	Formati	0.086	<0.001	x2.5
x2.6	0.339	0.270	-0.258	0.308	0.632	-0.542	Formati	0.093	0.002	x2.6
x2.7	0.605	0.625	-0.093	-0.329	-0.206	0.279	Formati	0.085	<0.001	x2.7
y1	-0.413	0.013	0.323	-0.483	-0.192	0.107	Formati	0.092	<0.001	y1
y2	0.306	-0.069	0.581	0.566	0.255	-0.295	Formati	0.086	<0.001	y2
y3	-0.821	0.573	0.400	0.353	-0.114	0.067	Formati	0.090	<0.001	y3
y4	-0.088	-0.055	0.789	-0.252	-0.260	0.281	Formati	0.081	<0.001	y4
y5	0.327	-0.117	0.244	0.275	0.702	-0.699	Formati	0.094	0.005	y5
y6	0.348	-0.154	0.788	-0.232	-0.008	0.075	Formati	0.081	<0.001	y6
z1	0.322	0.349	0.094	-0.111	-0.281	0.206	Formati	0.097	0.128	z1
z2	0.348	-0.266	0.038	0.816	0.086	-0.103	Formati	0.080	<0.001	z2
z3	-0.312	0.320	-0.025	0.797	-0.127	0.134	Formati	0.081	<0.001	z3
x1.1*y1	-0.695	0.825	0.238	-0.574	0.334	-0.781	Reflect	0.092	<0.001	x1.1*y1
x1.1*y2	-0.024	-0.296	0.105	0.205	0.753	0.143	Reflect	0.082	<0.001	x1.1*y2
x1.1*y3	0.186	-0.687	0.299	0.354	0.447	0.795	Reflect	0.089	<0.001	x1.1*y3
x1.1*y4	0.004	-0.187	0.237	0.094	0.759	-0.486	Reflect	0.082	<0.001	x1.1*y4
x1.1*y5	0.243	-0.030	0.212	-0.419	0.073	0.510	Reflect	0.099	0.230	x1.1*y5
x1.1*y6	-0.330	0.101	0.363	0.130	0.695	-0.319	Reflect	0.083	<0.001	x1.1*y6
x1.2*y1	0.546	0.040	-0.462	0.127	0.014	0.345	Reflect	0.100	0.445	x1.2*y1
x1.2*y2	0.206	-0.774	0.440	-0.324	0.129	0.894	Reflect	0.097	0.094	x1.2*y2
x1.2*y3	0.598	-0.360	-0.419	-0.159	0.044	0.382	Reflect	0.099	0.329	x1.2*y3
x1.2*y4	0.868	0.040	-0.371	-0.528	0.109	0.826	Reflect	0.098	0.133	x1.2*y4
x1.2*y5	0.178	-0.847	0.376	0.111	0.133	0.877	Reflect	0.097	0.086	x1.2*y5
x1.2*y6	0.414	-0.035	-0.058	-0.288	0.025	0.738	Reflect	0.100	0.401	x1.2*y6
x1.3*y1	-0.320	0.364	0.012	-0.280	0.480	-0.827	Reflect	0.088	<0.001	x1.3*y1
x1.3*y2	-0.320	-0.119	0.206	0.177	0.697	0.133	Reflect	0.083	<0.001	x1.3*y2
x1.3*y3	0.052	0.049	-0.086	0.017	0.468	0.713	Reflect	0.088	<0.001	x1.3*y3
x1.3*y4	0.066	0.491	-0.261	-0.195	0.762	-0.490	Reflect	0.082	<0.001	x1.3*y4
x1.3*y5	0.083	-0.234	0.417	-0.253	0.113	0.529	Reflect	0.097	0.125	x1.3*y5
x1.3*y6	-0.140	0.130	0.150	-0.035	0.670	-0.331	Reflect	0.084	<0.001	x1.3*y6
x1.4*y1	-0.030	0.893	-0.682	-0.470	-0.040	-0.223	Reflect	0.099	0.343	x1.4*y1
x1.4*y2	0.445	0.276	-0.772	0.288	0.192	-0.430	Reflect	0.095	0.024	x1.4*y2
x1.4*y3	0.585	-0.212	-0.800	0.602	-0.103	0.437	Reflect	0.098	0.147	x1.4*y3
x1.4*y4	0.642	0.733	-1.393	-0.076	0.267	-0.622	Reflect	0.093	0.003	x1.4*y4
x1.4*y5	0.475	0.381	-0.663	-0.070	-0.032	0.083	Reflect	0.100	0.374	x1.4*y5
x1.4*y6	0.679	0.664	-1.251	-0.204	0.248	-0.382	Reflect	0.094	0.005	x1.4*y6
x1.5*y1	0.459	0.032	-0.502	0.345	0.127	-0.160	Reflect	0.097	0.096	x1.5*y1
x1.5*y2	-0.000	-0.171	0.362	-0.699	0.325	0.827	Reflect	0.092	<0.001	x1.5*y2
x1.5*y3	-0.099	-0.513	0.193	0.245	0.249	0.941	Reflect	0.094	0.005	x1.5*y3
x1.5*y4	0.081	-0.201	-0.172	0.368	0.606	0.388	Reflect	0.085	<0.001	x1.5*y4
x1.5*y5	0.267	-0.481	0.326	-0.580	0.142	0.780	Reflect	0.097	0.072	x1.5*y5
x1.5*y6	0.154	-0.021	-0.279	0.132	0.656	0.071	Reflect	0.084	<0.001	x1.5*y6
x2.1*y1	0.024	-0.099	-0.268	0.390	-0.116	0.093	Reflect	0.098	0.174	x2.1*y1
x2.1*y2	-0.139	-0.138	0.180	-0.126	-0.663	0.527	Reflect	0.087	<0.001	x2.1*y2
x2.1*y3	-0.188	0.339	0.120	-0.254	-0.360	0.392	Reflect	0.090	<0.001	x2.1*y3
x2.1*y4	0.290	-0.311	-0.275	0.533	-0.151	0.559	Reflect	0.086	<0.001	x2.1*y4
x2.1*y5	0.484	-0.390	-0.183	-0.142	-0.496	0.211	Reflect	0.095	0.014	x2.1*y5
x2.1*y6	0.091	-0.260	-0.182	0.522	-0.312	0.481	Reflect	0.088	<0.001	x2.1*y6
x2.2*y1	0.723	-0.382	-0.537	0.303	0.522	0.174	Reflect	0.096	0.036	x2.2*y1
x2.2*y2	-0.116	0.525	-0.295	-0.189	0.469	0.609	Reflect	0.085	<0.001	x2.2*y2
x2.2*y3	-0.294	0.371	-0.203	0.291	-0.406	0.578	Reflect	0.086	<0.001	x2.2*y3
x2.2*y4	0.022	0.380	-0.296	0.023	0.854	0.539	Reflect	0.087	<0.001	x2.2*y4
x2.2*y5	0.361	0.643	-0.332	-0.747	-0.427	0.249	Reflect	0.094	0.005	x2.2*y5
x2.2*y6	0.445	0.365	-0.574	-0.181	1.064	0.521	Reflect	0.087	<0.001	x2.2*y6
x2.3*y1	1.040	0.204	-0.896	-0.262	-0.226	0.093	Reflect	0.098	0.171	x2.3*y1
x2.3*y2	0.244	0.490	-0.728	0.183	0.517	0.114	Reflect	0.097	0.122	x2.3*y2
x2.3*y3	0.650	-0.401	-0.705	0.671	-0.019	0.017	Reflect	0.100	0.434	x2.3*y3
x2.3*y4	0.844	0.423	-1.084	-0.266	0.606	0.092	Reflect	0.098	0.176	x2.3*y4

x2.3*y5	0.239	0.318	-0.353	0.000	-0.119	0.097	Reflect	0.098	0.163	x2.3*y5
x2.3*y6	0.116	0.641	-0.734	-0.138	0.402	0.136	Reflect	0.097	0.081	x2.3*y6
x2.4*y1	-0.024	0.511	-0.509	0.041	0.748	0.058	Reflect	0.099	0.281	x2.4*y1
x2.4*y2	-0.072	-0.317	0.518	-0.579	-0.439	0.445	Reflect	0.089	<0.001	x2.4*y2
x2.4*y3	-0.250	-0.083	0.249	-0.149	-0.636	0.490	Reflect	0.088	<0.001	x2.4*y3
x2.4*y4	-0.011	-0.200	0.005	0.287	0.428	0.614	Reflect	0.085	<0.001	x2.4*y4
x2.4*y5	0.096	-0.207	0.231	-0.603	-0.624	0.238	Reflect	0.094	0.007	x2.4*y5
x2.4*y6	0.177	-0.097	-0.153	0.181	0.586	0.603	Reflect	0.085	<0.001	x2.4*y6
x2.5*y1	0.154	-0.207	-0.272	0.633	-0.259	0.057	Reflect	0.099	0.282	x2.5*y1
x2.5*y2	-0.122	-0.444	0.169	0.092	-0.523	0.454	Reflect	0.089	<0.001	x2.5*y2
x2.5*y3	-0.347	-0.026	0.481	-0.065	-0.355	0.392	Reflect	0.090	<0.001	x2.5*y3
x2.5*y4	-0.453	-0.142	0.334	0.339	-0.380	0.586	Reflect	0.086	<0.001	x2.5*y4
x2.5*y5	0.391	-0.530	-0.142	0.029	-0.488	0.164	Reflect	0.096	0.045	x2.5*y5
x2.5*y6	-0.056	-0.017	-0.046	0.242	-0.366	0.512	Reflect	0.087	<0.001	x2.5*y6
x2.6*y1	0.028	0.403	-0.028	-0.273	-0.065	-0.010	Reflect	0.100	0.460	x2.6*y1
x2.6*y2	0.185	-0.968	0.676	-0.181	-0.767	0.333	Reflect	0.092	<0.001	x2.6*y2
x2.6*y3	0.262	0.065	-0.355	-0.296	-0.314	0.261	Reflect	0.094	0.003	x2.6*y3
x2.6*y4	0.679	-0.137	-0.030	-0.388	-0.487	0.187	Reflect	0.096	0.027	x2.6*y4
x2.6*y5	-0.086	-0.348	0.428	-0.135	-0.635	0.368	Reflect	0.091	<0.001	x2.6*y5
x2.6*y6	0.553	-0.186	0.003	-0.201	-0.489	0.107	Reflect	0.098	0.138	x2.6*y6
x2.7*y1	-0.563	0.518	0.374	-0.551	0.837	0.112	Reflect	0.097	0.127	x2.7*y1
x2.7*y2	-0.168	0.277	-0.048	-0.032	0.515	0.685	Reflect	0.083	<0.001	x2.7*y2
x2.7*y3	-0.483	-0.191	0.494	0.343	-0.351	0.557	Reflect	0.086	<0.001	x2.7*y3
x2.7*y4	-0.159	0.274	0.204	-0.072	1.141	0.472	Reflect	0.088	<0.001	x2.7*y4
x2.7*y5	0.011	0.276	0.312	-0.580	-0.434	0.316	Reflect	0.092	<0.001	x2.7*y5
x2.7*y6	0.088	-0.016	0.104	0.007	1.137	0.522	Reflect	0.087	<0.001	x2.7*y6
	X1_PD D	X2_PL T	Y_SKIL L	Z_KINE R	X1_PD D*	X2_PL T*	Type (a	SE	P value	
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x1.5	0.553	0.192	0.045	0.421	0.307	-0.378	Formati	0.086	<0.001	x1.5
x2.1	-0.373	0.632	-0.043	0.253	-0.145	0.154	Formati	0.085	<0.001	x2.1
x2.2	-0.135	0.676	0.178	-0.843	-0.038	-0.002	Formati	0.084	<0.001	x2.2
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y3	-0.821	0.573	0.400	0.353	-0.114	0.067	Formati	0.090	<0.001	y3
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y6	0.348	-0.154	0.788	-0.232	-0.008	0.075	Formati	0.081	<0.001	y6
z1	0.322	0.349	0.094	-0.111	-0.281	0.206	Formati	0.097	0.128	z1
z2	0.348	-0.266	0.038	0.816	0.086	-0.103	Formati	0.080	<0.001	z2
z3	-0.312	0.320	-0.025	0.797	-0.127	0.134	Formati	0.081	<0.001	z3
x1.1*y1	-0.695	0.825	0.238	-0.574	0.334	-0.781	Reflect	0.092	<0.001	x1.1*y1
x1.1*y2	-0.024	-0.296	0.105	0.205	0.753	0.143	Reflect	0.082	<0.001	x1.1*y2
x1.1*y3	0.186	-0.687	0.299	0.354	0.447	0.795	Reflect	0.089	<0.001	x1.1*y3
x1.1*y4	0.004	-0.187	0.237	0.094	0.759	-0.486	Reflect	0.082	<0.001	x1.1*y4
x1.1*y5	0.243	-0.030	0.212	-0.419	0.073	0.510	Reflect	0.099	0.230	x1.1*y5
x1.1*y6	-0.330	0.101	0.363	0.130	0.695	-0.319	Reflect	0.083	<0.001	x1.1*y6
x1.2*y1	0.546	0.040	-0.462	0.127	0.014	0.345	Reflect	0.100	0.445	x1.2*y1
x1.2*y2	0.206	-0.774	0.440	-0.324	0.129	0.894	Reflect	0.097	0.094	x1.2*y2
x1.2*y3	0.598	-0.360	-0.419	-0.159	0.044	0.382	Reflect	0.099	0.329	x1.2*y3
x1.2*y4	0.868	0.040	-0.371	-0.528	0.109	0.826	Reflect	0.098	0.133	x1.2*y4
x1.2*y5	0.178	-0.847	0.376	0.111	0.133	0.877	Reflect	0.097	0.086	x1.2*y5
x1.2*y6	0.414	-0.035	-0.058	-0.288	0.025	0.738	Reflect	0.100	0.401	x1.2*y6
x1.3*y1	-0.320	0.364	0.012	-0.280	0.480	-0.827	Reflect	0.088	<0.001	x1.3*y1
x1.3*y2	-0.320	-0.119	0.206	0.177	0.697	0.133	Reflect	0.083	<0.001	x1.3*y2
x1.3*y3	0.052	0.049	-0.086	0.017	0.468	0.713	Reflect	0.088	<0.001	x1.3*y3
x1.3*y4	0.066	0.491	-0.261	-0.195	0.762	-0.490	Reflect	0.082	<0.001	x1.3*y4
x1.3*y5	0.083	-0.234	0.417	-0.253	0.113	0.529	Reflect	0.097	0.125	x1.3*y5

(Processed data by, WarpPLS, April 2017)

Based on the validity test, we know that the type of validity used in the test was criteria validity that the p-value of 0.05. Because yvalue convergent validity < required for testing an instrument in the form of

questionnaires and the second requirement is for loading value must be greater than the value of the discriminant validity, so it can reach the standart result of the validity. A research can be said to be valid if the study were able to minimize the occurrence of errors and anomalies that could cause a bias in the research. On the processing of this data, we used a warpPLS on the table of the validity. The results obviously showed the value as p-value < 0.001 and value loading > cross loading. This result of the test, could be said valid.

**3.1.2. Reliability Test**

Internal consistency testing of the outer structural model indicators, conducted by calculating the composite reliability on their respective latent variables. The indicator is said to have a good internal consistency if the value of the composite reliability on establishment of latent variables is greater than 0.6 (Ghozali, 2008).

In designing an instrument, before we get into analysis data, we must conduct a correlation test, and after we passed all these steps, the data must be valid and reliability in order to be processed on warpPLS analysis. On the progress of software reliability test, warpPLS have 2 test reliability criteria with the same type, therefore consistency among other composite reliability cronbach's alpha's are presented in the following table.

**Table 2. Composite Reliability**

X1_PDD		X2_PLT		Y_SKILL		Z_KINER	X1_PDD*	X2_PLT*
0.703		0.713		0.705		0.773	0.778	0.846

(Data Processed by, WarpPLS, April 2017)

Based on the results of reliability criteria testing for composite reliability, it is said that the data of more than 0.6 is reliable and when the value of the composite reliability is less than 0.6 then the data is said not reliable so that in the process of further data analysis will lead to bias. On the reliability table, the numbers results more than 0.6 so that it can be said, the reliability of this test can be concluded that the framers of the indicators of the latent variables have a good internal consistency.

**Table 3. Reliability with Cronbach Alpha**

X1_PDD	X2_PLT	Y_SKILL	Z_KINER	X1_PDD*	X2_PLT*
0.701	0.753	0.721	0.728	0.780	0.832

(Data processed, WarpPLS, April 2017)

Based on the results of the processing reliability using warpPLS, we obtained the results that the figures showed more than 0.6 so data reliability is proved.

**3.1.3. Goodness of Fit Structural Model Test (Inner Model)**

Model comparison is needed if the main objective was competing models with sequence ARS, AVIF and APC APC. By the main cause of the APC some kinds of errors might be happened, because it's likely to be in minimum errors if there is a difference of the sign in the coefficient major. The use of the regression method PLS was selected in this research because there's slightly S-Curve linear on the main object how education and training skills against each for the individual and their impact on the performance of the soldiers of the Battalion 3/Cavalry tank, which is outlined in the following table.

**Table 4. Output Path Coefficient**

	X1_PDD	X2_PLT	Y_SKILL	Z_KINER	X1_PDD*	X2_PLT*
X1_PDD						
X2_PLT						
Y_SKILL	0.455	0.432				
Z_KINER	0.190	0.808	0.055		-0.140	0.223
X1_PDD*						
X2_PLT*						

(Data processed by, Warp PLS, April 2017)

**Table 5. Output P-Values**

	X1_PDD	X2_PLT	Y_SKILL	Z_KINER	X1_PDD*	X2_PLT*
X1_PDD						
X2_PLT						
Y_SKILL	<0.001	<0.001				
Z_KINER	0.024	<0.001	0.290		0.075	0.010
X1_PDD*						
X2_PLT*						

(Data processed by, WarpPLS, Maret 2017)

Upon this tabular output path and p’s tabular output we managed to obtain results with data analysis education and training have positive and significant influence against the soldier’s skills as the main human resources with deciding speller education, training energy represented by the coach as a determinant and the main factor to determine the skills and performance of soldiers who represented at the Output of WarpPLS data that has been standardized (standardize data) therefore, it can be interpreted more with big coefficient line and stronger influence.

**3.1.4. Output Latent Variabel Coefficient**

On the goodness of fit explanation, there’s one model that writers made as explanatory research, then the amount of coefficient determinant considered important. Because R-squared had the purpose to show the percentage repondent variable and it could one of the predictor variable explanation. Then, the bigger the result which is (close by 1 or 100%) then it’s getting the better model and it’s applied backwards. R-squared counting is listed on the following table :

**Table 6. R-Squared**

X1_PDD	X2_PLT	Y_SKILL	Z_KINER	X1_PDD*	X2_PLT*
		0.691	0.771		

(Data processed by ,WarpPLS, April 2017)

According to the output that shown in the table, coefficient determinant of the R-squared counting for education and training having an effect for about 69,1% and the rest of it counted as errors and listed by other variable. And the next data about education, training and also skills of the soldier having an effect on their capability for about 77,1% and the rest 22,9% listed by other variable and errors from the data. The next criteria in the goodness of fit is watching Average Varian Extracted point. The purpose in this method was to evaluated validity convergent which is needs to fulfill the requirements, that is value have to > 0,5. AVE Output entitled in the following table :

**Table 7. Ouput AVE**

X1_PDD	X2_PLT	Y_SKILL	Z_KINER	X1_PDD*	X2_PLT*
0.557	0.592	0.517	0.538	0.572	0.553

(Data processed by ,WarpPLS, April 2017)

According to the data Average Varian Extract, we noticed that all of the respond variable and predictor variable posses the value of AVE > 0,5 that means variable information strategy, education component and training facility have it’s own effect on individual skills and competency of soldiers Batalyon Kavaleri 3/Tank. And it’s declared fulfilling the requirements for convergent validity.

And in the next test, still the same goodness of fit method, is Full Collinerity VIF. This test was about collinearity measurements including multicollinearity vertically and laterals. Collinearity laterals is collinearity from predictor latent variable with criterion and it could be used to test common method bias, and the standart value is <3,3. Output WarpPLS in in the following table :

**Table 8. Full Collinerity VIF**

X1_PDD	X2_PLT	Y_SKILL	Z_KINER	X1_PDD*	X2_PLT*
2.980	4.023	3.226	2.012	3.273	3.286

(Data processed by ,WarpPLS, April2017)

According to the output table Full Collinerity test, we obtained the result that all of the observed variable hold the requirements value of VIF <3,3. Final conclusion of this test is, there’s no Multicollinearity on the variable.

**3.1.5. Output Correlations among Latent Variabels**

Output correlations among latent variables is correlation between variable with P-value result included. This result needed for validity evaluation about discriminant on research instrument. The used criteria was square root from AVE value, which is diagonal points and this points have to be higher than correlation between variable in the same column. Here is the following table :

**Table 9. Output Correlations among Latent Variabels**

	X1_PDD	X2_PLT	Y_SKILL	Z_KINER	X1_PDD*	X2_PLT*
X1_PDD	0.597	0.731	0.776	0.459	-0.185	-0.170
X2_PLT	0.731	0.541	0.758	0.693	-0.158	-0.079
Y_SKILL	0.776	0.758	0.563	0.516	-0.090	-0.103
Z_KINER	0.459	0.693	0.516	0.662	-0.169	-0.162
X1_PDD*	-0.185	-0.158	-0.090	-0.169	0.414	0.821

X2_PLT*	-0.170	-0.079	-0.103	-0.162	0.821	0.391
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(Data processed by ,WarpPLS,April 2017)

According to the Output Correlation among Latent Variables table, we managed to know the result that validity component of education and training have significant effect on individual skills, furthermore between education training and skills in the result it's affecting the competency of the Batalyon Kavaleri 3/Tank soldiers. It was fulfilled because the points of AVE was bigger 0,776 if we compare it with 0,597, 0, 731 dan 0,456, -0,185, -0,170. This data was the same case for X1.1 data as education, and then respons variable and predictor variable were taken with the highest root from AVE.

**Table 10.** P Values for Correlations

	X1_PDD	X2_PLT	Y_SKILL	Z_KINER	X1_PDD*	X2_PLT*
X1_PDD	1.000	<0.001	<0.001	<0.001	0.066	0.093
X2_PLT	<0.001	1.000	<0.001	<0.001	0.119	0.438
Y_SKILL	<0.001	<0.001	1.000	<0.001	0.377	0.310
Z_KINER	<0.001	<0.001	<0.001	1.000	0.094	0.109
X1_PDD*	0.066	0.119	0.377	0.094	1.000	<0.001
X2_PLT*	0.093	0.438	0.310	0.109	<0.001	1.000

(Data processed by ,WarpPLS, April 2017)

According to the p values output table that we observed through warpPLS, we obtained the result that p-value shows <0,0001 which means the correlation is pretty strong.

**3.1.6. Output Block Variance Inflation Factors**

Output Block Variance Inflation Factors, served us the result of the vertical collinearity or specifically predictor between collinearity variable. VIF values served at every criterion variable that indicate the level of collinearity between variable. The criteria has to be in the same level with full collinearity test, which is <3,3 points. So in the results there's no vertical collinearity problems in this research. VIF values are going to be in this following table :

**Table 11.** VIF

X1_PDD	X2_PLT	Y_SKILL	Z_KINER	X1_PDD*	X2_PLT*
2.980	4.023	3.226	2.012	3.273	3.286

(Data processed by ,WarpPLS, April 2017)

According to the data analysis results, it is known that VIF matched with criteria with <3,3 points. And for the results, there's no collinearity problems in this research.

**3.1.7. Total Effect dan P-Value Total Effect**

Total Effect and P-value Total Effect is one of the requirements that been used in the analysis to know about the effect of each manifest on the predictor variable towards the repons variable. We could see the effects on the variable by counts the p-value, if  $p < 0,001$  the the predictor variable get it's significant effect on the respons variable, if  $p > 0,05$  then it means predictor variable do not have any effects on repons variable. Due to the results from PLS method, we found the results in the following table :

**Table 12.** Total Effect

	X1_PDD	X2_PLT	Y_SKILL	Z_KINER	X1_PDD*	X2_PLT*
X1_PDD						
X2_PLT						
Y_SKILL	0.455	0.432				
Z_KINER	0.215	0.832	0.055		-0.140	-0.223
X1_PDD*						
X2_PLT*						

(Data processed by ,Warp PLS, April 2017)

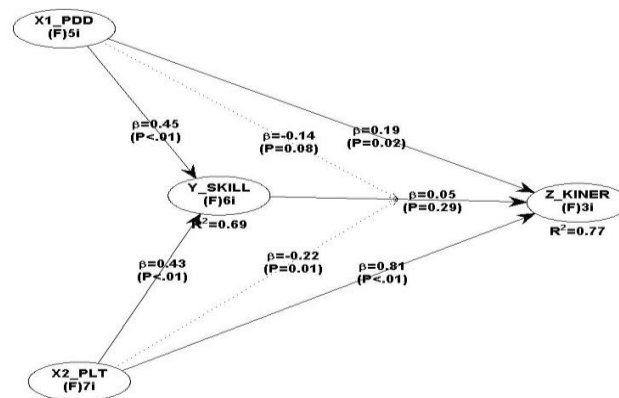
According to the output warp PLS in the total effect method, we discovered couple of variable, that we gave "bold" font, it was predictor variable having significant effects towards repons variable. In each latent variable having one manifest variable to dominate the respons variable. Strongest weight on a latent variable could be seen at the attachment for indicator weight. Transformation strategy that soldiers do having a great positive effect towards the transormation target, which is that target having positive dominant effect. Education and training components affecting skills on soldiers individual and their competency.

**5.2. Structural model role on Education and Training towards individual skills and its effect on Batalyon Kavaleri 3/Tank Singosari Soldier.**

Structural Model with Partial Least Square methods is construct model designing with development from writers as its purpose. For that matters, PLS – SEM intended to test predictive relation between construct to see if there’s correlation on both construct. But the consequences for using PLS-SEM methods was it can be done by using strong based theory, forgetting few assumption (non-parametric) and prediction model could be seen by determinants coefficient. For that matters, PLS-SEM is a right choice to developing theory on the research. In the SEM methods, there should be couples of variable, such as predictor variable, repons variable, and mediation variable. Mediation variable is the connector between predictor and repons, but it could become repons if affected by predictor variable and it could mean backwards.

Mediator variables are also called intervening variables or intermediate variables which theoretically influence observed phenomena (endogenous variables), whose effects must be inference through the effect of the relationship between exogenous variables and their phenomenon. If the exogenous variables are no longer have an effect on endogenous variables after controlling the mediator variable, the perfect or complete mediation occurs. If the influence of exogenous variables on endogenous variables decreases, but is still different from 0, after controlling the mediator variable, that is wherre partial mediation occur. (Jogiyanto and Abdillah, 2009).

The authors reason to use warpPLS as a tool in statistical data processing leads us to the approach methods to determine the effect of variables with complexity and many constructs also indicators in the form of recursive that requires a variance approach, so that the weight of each grain can be seen so that the writer knows the value of weighting that is able to represent latent variables as a predictor to influence the response variable. Here is a picture of structural models in related research Structural Model of the Role of Education and Training on Individual Skills and Its Impact on The Soldiers' Performance 3 Cavalry Cavalry / Tank Singosari.



**Figure 1. Interpretation path**

**5.3. Implication of Research Results**

Based on data analysis result using WarpPLS 5 it is known that education represented by basic competence of the soldier as learners and training which represented by instructor or trainer trainer influence to individual soldier skill equal to 62% and the rest by other variable outside of research and error, and education, training and skills represented by determining the best job portion as a skilled form of the TNI-AD soldiers in Batlyon Cavalry 3 / Tank have an influence on the soldier's performance from the labor quantity of 77% and 23% by other variables outside of the research and error.

Based on the results of warpPLS output obtained the result that education has a positive influence on the skills of individual soldiers which means that each of 1 unit ascension of basic competencies possessed by learners will increase the skill of soldiers for about 0.455, it is considered that the competence of the soldier as a participant who determined from within each soldier to be willing and able in developing themselves through education then, the soldier is able to provide a good measure of the parameters results and the education activities that have been taken.

The second result is known to have a positive influence on the soldiers skills, which means that each 1 unit ascension of the factors, it could make the size of a successful training, which is determined from the competence trainers in providing training to soldiers will improve the skills of soldiers so that the soldiers have a parameter which makes him able to have the best job portion from the training he has done for 0.432.

The third result obtained from the analysis that the education has a positive influence on the soldiers performance. And then each 1 unit ascension of competence learners, it will improve the performance of



soldiers through the quantity of work he has done by 0.190. This indicates that through educational activities conducted especially in Batlyon Cavalry 3 / Tank Andhaka Cakti in the education of defense equipment, the competence of the soldiers through education will increase the good performance performed by the soldiers.

The fourth analysis shows that the training has a positive effect on the soldiers performance which means that each 1 unit ascending of competence owned by trainers will improve the performance of soldiers from the quantity of work performed by 0.808. The results explain that the competence of trainers has a great impact on the performance of the soldiers, indicating that with the high competence of the trainer it makes the soldier motivated to improve performance through the amount of finished assignment.

The results of the analysis through warpPLS software that the training represented by trainers increased by 1 unit as the soldiers performance decreased through the skills possessed by each individual resulting in a descending points in performance of -0,223, making the attraction in the research environment as a new problem that the training done to improve the soldiers performance will actually decrease if skill improvement has not reached, through the formation of the best task parameters pursued by soldiers, it will further decrease the amount of performance because the soldiers are too busy to resolve the form of performance through the best task portions while other tasks will be completed because the soldiers assume that other tasks are not too important to be done.

## IV. Conclusion

### 4.1 Conclusion

1. Education represented by the competence of soldiers as learners and training represented by the competence of the trainers because the training is practice in carrying out engineering activities related to the defense equipment, it affects the skills of soldiers through the parameters of the best job portion determination by soldiers is 69% and the remaining 31% is influenced by other components besides education and training, while on the other segments education, training and skills simultaneously affect the performance of soldiers by 77% and the rest are influenced by other components besides education, training and skills.
2. Education and training have a dominant influence to influence individual soldier skills, while training has a dominant influence to influence the performance of soldiers in operating alutsista from training results conducted with competent trainers in 3 Cavalry / Tank Battalion.

### 4.2 Suggestion

It is expected that in every use of educational and training institutions in accordance with the teaching and training methods that are appropriate to the targets due to the influence of education and training in the 3rd Cavalry / Tank Battalion whose passion in operating the defense equipment should be in accordance with the education and training plan to improve the skills and performance of the soldiers.

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