



THE INFLUENCE OF BKK INFORMATION SYSTEM SERVICES ON MANPOWER DISTRIBUTION IN VOCATIONAL HIGH SCHOOLS

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ABSTRACTS

This study examines the impact of a Special Job Exchange (Bursa Kerja Khusus - BKK) information system service on the employment rate of graduates from Al-Manshuriyah Vocational High School (SMK). This research based on the quality of information services as the main influencing indicator overall benefits to workforce distribution institutions such as BKK in vocational schools. Utilizing a quantitative methodology, the study surveyed 162 respondents, including school staff, recent alumni, and current students. Findings revealed a significant positive correlation between the quality of the information system services provided by BKK and the successful job placement of graduates. Statistical analysis using SPSS showed a Pearson correlation coefficient of 0.300, indicating a low yet positive relationship. Additionally, regression analysis confirmed that 5.3% of the variance in job placement success could be attributed to the quality of the information system services. These results underscore the importance of robust information system services in enhancing the operational efficiency of BKK and improving graduate employment outcomes. The study suggests further development and enhancement of these services to attract more company partnerships and diversify job opportunities for graduates.

Keyword: DeLone and McLean Model, Employment Rate, Information System, Job Placement Special Job Exchange, Vocational High School.

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1. INTRODUCTION

Special Job Fairs at Vocational High Schools (SMK) function to channel SMK graduates to be ready to become workers needed by the Business World/Industry World (DU/DI). According to [Ayu and Trihantoyo \(2021\)](#), that BKK SMK is one of the components of the implementation of dual system education, because it is impossible to implement a learning process that leads to competence if there is no industrial/work business partner, as a work environment where students learn skills and professionalism as well as work ethic according to the demands of the world of work.

The implementation of the Job Fair is an effort to match job opportunities with available human resources. BKK in this case can be said to be a bridge between the job market and job seekers (students or SMK graduates) ([Qomariana and Muhyadi, 2016](#)). Job fairs are one of the recruitment channels that are currently one of the main choices for many companies, by utilizing job fair managers, companies can filter as many applicants as possible in a relatively short time. However, job fairs require preparation that cannot be done casually, both from the company and the organizers. Inadequate preparation will hamper implementation ([Iskarim, 2019](#)). The importance of BKK in vocational schools was also mentioned by [Ayu and Trihantoyo \(2021\)](#), that the involvement of BKK in channeling SMK graduates plays a major role in reducing the unemployment rate of SMK graduates. The results of statistical research from BPS in Figure 1 show that the TPT of Vocational High School graduates is still the highest compared to graduates of other levels of education, which is 9.60 percent.

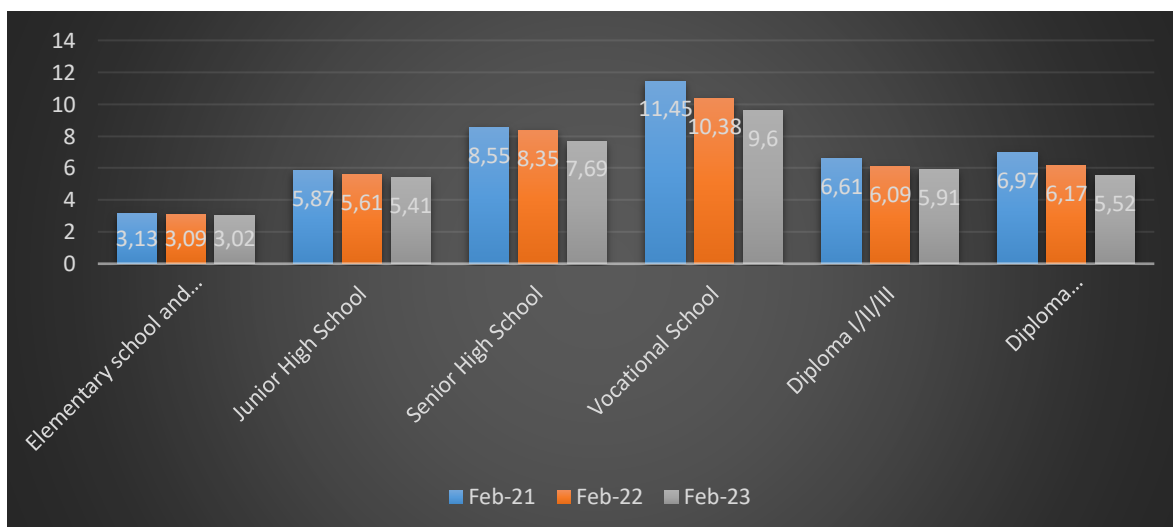


Figure 1. Open Unemployment Rate (TPT) according to Highest Education Completed (percent) February 2021- February 2023

There are various factors that influence the high unemployment rate of vocational school graduates above (**Figure 1**), including ineffective school-industry cooperation to strengthen student competencies ([Husnaini et al., 2020](#)). Many graduates of certain vocational schools, the number is greater than other majors and/or there is oversupply, the imbalance between education output and employment, the availability of formal employment is limited, while the number of the workforce continues to increase from year to year, and the quality of graduates does not meet DU/DI standards. The results of previous research conducted by [Nasution and Mardiyah \(2018\)](#) stated that the main problem is that the delivery of job vacancy information and socialization is sometimes late to graduates.

Because there are so many requests for graduates from DUDI, BKK must still strictly select which companies can be accepted to channel graduates. Then the dissemination of information that has been done openly is sometimes still not enough to graduates, this could be because graduates change telephone numbers or do not monitor the progress of the information provided by BKK. Other factors were also mentioned in previous research by [Pamungkas and Hanifa \(2020\)](#), that vacancy information is still in the form of a link that leads to a google form that is shared on a WhatsApp account or posted on the school notice board.

Looking at the previous research, the researcher feels that the role and function of BKK will be more effective if it maximizes information system services so that it can widely reach alumni from several batches rather than just posting job vacancies on the school notice board. In vocational high schools, BKK does have tasks that must be carried out based on the cooperation agreement between the Ministry of Education and Culture and the Ministry of Manpower No. 076 / U / 1993 and Kep-215 / MEN / 1993, it is stated that the implementation of the job fair aims to provide career selection guidance, job inter-services, workforce planning, labor market information and job analysis.

Article 2 paragraph 1 also states that "*The Job Exchange in secondary education units aims to provide job-seeking services for students and graduates of the relevant schools, including (1) providing job market information, (2) registering job seekers, (3) counseling and job guidance*". The three points mentioned in article 2 paragraph 1 can be maximized with the help of technology in the form of an information system (IS) as an improvement in services from the BKK. Because with the help of an information system in the form of social media or the BKK website, it can facilitate the role of the BKK in providing job market information, job seeker registration and counseling and guidance. The information system (IS) itself is a collection of organizational procedures that when implemented will provide information for decision makers and/or control the organization ([Rahman, 2020](#)). So that information system services are a series of activities and software designed to collect, store, process, and disseminate information. The main purpose of information system services is to support decision making, coordination, control, analysis, and visualization in an organization. This service covers various aspects such as hardware, software, data, procedures, and human resources.

The following is a scheme of the workforce distribution process according to [Muhardiansyah \(2010\)](#), et al. in his book entitled *Innovation in the Education System* which is illustrated in **Figure 1** as follows.

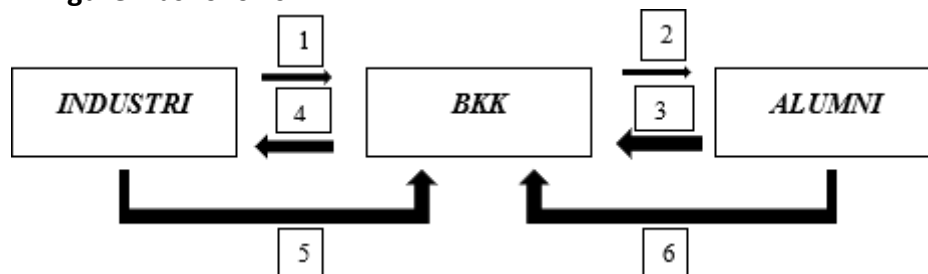


Figure 2. Schematic of the process of distributing graduates through BKK

The scheme in **Figure 2** explained by Muhardiansyah is the same as the process of distributing graduates through BKK carried out by BKK SMK Al-Manshuriyah, which if detailed is as follows: 1) BKK receives requests for workers from industry/companies that are partners in the BKK forum throughout the district; 2) BKK provides job vacancy information to alumni

through the BKK information system, namely the BKK website and Instagram and the alumni group of the device managed by BKK; 3) Alumni register themselves by filling in the initial registration form link from BKK which contains name, KK, age, height and weight. After that, prepare the application requirements and submit them as job application documents to BKK; 4) BKK conducts a selection through initial registration respondent data and application files. Then sends the job application data to the partner company; 5) The company receives the job application data along with the application files sent by BKK. If appropriate, a written test and interview will be called by the company. The selection results are submitted to BKK; 6) BKK announces the selection results to alumni. Alumni who pass and successfully get a work contract then provide feedback to BKK.

Of the six processes, the role of BKK as an intermediary between the business world/industry world (DU/DI) and alumni is very important. [Edmawati et al. \(2023\)](#) stated that there are several BKK services that can increase the absorption of graduates into the world of work, including the following, (1) job information services; (2) job fair; (3) recruitment; (4) assessment; (5) training, career and professional development; and (6) alumni relations. Information System Services as the first indicator in increasing the absorption of graduates and increasing the operational tasks of BKK are in accordance with previous research from research by [Putri and Dermawan \(2020\)](#), which shows that there are obstacles in terms of the widespread dissemination of information owned by BKK. So that information system media is needed to make it easier for BKK to convey and disseminate industry information and job vacancies to students and alumni. The results of a literature study conducted by Putri from several journals show that there are differences before and after the use of the job exchange information system. By using the job exchange information system by BKK in an effort to convey information to students and alumni, it can improve BKK's performance. So it can be concluded that there are many advantages if BKK uses an information system in its operational implementation of distributing workers.

To see the picture of the information system service itself, you can use indicators from the theory of the DeLone McLean model, namely system quality, information quality and service quality will affect the use and user satisfaction and will then affect the net benefit received. With this, this study intends to see the extent to which the information system service provided by BKK SMK Al-Manshuriyah influences the distribution of alumni as workers to the business world/industry world (DU/DI). So the hypothesis in this study is;

H₀: There is no influence between BKK information system services and the distribution of workers at SMK Al-Manshuriyah.

H_a: There is an influence between BKK information system services and workforce distribution at SMK Al-Manshuriyah.

This study offers novelty in the context of applying the DeLone and McLean model to the BKK information system at SMK Al-Manshuriyah, a vocational education context that has not been widely explored in previous literature. Most previous studies using this model have focused more on the business sector or general public services, so there is a gap in understanding how specific information systems in education, especially in vocational high schools, can play a role in workforce distribution. By exploring system quality, information quality, and service quality in the BKK context, this study contributes to a deeper understanding of the factors that influence the success of workforce distribution through educational institutions. In addition, this study will also provide practical insights for other

vocational schools that want to optimize the role of their BKK in increasing the employability of their graduates, through the implementation and improvement of the quality of the information systems used.

2. RESEARCH METHODOLOGY

The research method in this study is quantitative because this method is considered a scientific method because it meets scientific principles, such as concrete/empirical, objective, measurable, rational, and systematic. Quantitative methods are also often referred to as discovery methods, because by using this method, researchers can find and develop new knowledge. In this study, the research population was the Principal, BKK Staff, Teachers, Alumni of the last two years, namely from 2022-2023, and grade XII students who will become alumni later. Based on the population described above, the sampling technique can use the Slovin or Taro Yamane formula, the following is the Slovin formula.

$$n = \frac{N}{N \times d^2 + 1}$$

Because the population in this study was 855 people, the number of samples with a precision level of 5% was 162 respondents. With dimensions for information system service variables with the DeLone McLean model, namely 1) system quality; 2) information quality; 3) service quality; 4) usage; 5) user satisfaction; and 6) net benefits. Then the dimensions for the workforce distribution variable are 1) job information services; 2) job fair; 3) recruitment; 4) assessment; 5) career training and professional development; and 6) alumni relations.

The scale used is a Likert scale with five categories, namely "Strongly Agree", "Agree", "Neutral", "Disagree" and "Strongly Disagree". The data collection techniques in this study are: Questionnaires are data collection techniques carried out by giving a set of questions or statements in the form of a google form to respondents to answer. Interviews are used as data collection techniques by asking several questions related to the focus of the problem. Through this interview technique, data and information are obtained relating to the factual conditions of student data management and DUDI data in the BKK field. The instruments used must of course pass validity and reliability tests first. The basis for making decisions on whether or not an item is valid is, if $r_{count} > r_{table}$ then the question item is declared valid.

The results of the validity test of Information System Services (X1) show that the coefficient value of r_{yx} of all items is said to be valid because the calculated r value is greater than the r table with an alpha significance of 0.05. For r table from 162 respondents with the formula $df = n-2$ is 0.15. So all 23 items of Information System Services variables can be used as a data collection tool for Information System Services at SMK Al-Manshuriyah because its validity is stated to be able to produce accurate and relevant data. Furthermore, the results of the validity test of Manpower Distribution (Y) show that the coefficient value of r_{yx} of all items is said to be valid because the calculated r value is greater than the r table with an alpha significance of 0.05. For r table from 162 respondents with the formula $df = n-2$ is 0.15. So all 126 items of Manpower Distribution variables can be used as a data collection tool for Manpower Distribution carried out by BKK at SMK Al-Manshuriyah because its validity is stated to be able to produce accurate and relevant data. Furthermore, the questionnaire is said to be reliable if the Cronbach's Alpha value is > 0.60 . From the calculation results using SPSS, it was found that the questionnaire was said to be reliable because the Cronbach's Alpha

value was $0.97 > 0.60$. The data obtained in this study were processed using the Weighted Mean Score (WMS) formula to see the picture of the respondent's response tendencies to the variables. WMS is used because researchers are faced with a situation where there are a number of different sample averages and require an average measure of the entire sample. As for determining the assessment criteria based on WMS, an interval is needed which is obtained from subtracting the highest and lowest values and then dividing by the number of alternative answers. So that an interval of 0.8 is obtained for each level of answer category.

3. RESULTS AND DISSCUSION

3.1. Results

3.1.1. Overview of BKK Information System Services

By using six main indicators according to the theory of information system measurement using the DeLone and McLean model, namely system quality, information quality and service quality will affect the use and user satisfaction and will then affect the net benefit. With 162 samples that filled out the research questionnaire, a description table of the tendency of the score of variable X1 (Information System Services) was produced as **Table 1** below.

Table 1. Description of Information System Service Score Trends

NO.	INDICATOR	WEIGHTED MEAN SCORE	CATEGORY
1	System quality	4,21	Very good
2	Information quality	4,33	Very good
3	Service quality	4,27	Very good
4	Use	4,22	Very good
5	User satisfaction	4,24	Very good
6	Net benefit	4,4	Very good
AVERAGE OF VARIABLE X1		4,27	Very good

Based on **Table 1**, the Weighted mean score calculation produces an average score for the Information System Service variable of 4.27 with reference to the WMS calculation result category, namely Very Good.

3.1.2. Overview of Labor Distribution

The distribution of manpower carried out by BKK SMK Al-Manshuriyah can be described into six indicators which include: 1) Job Information Services; 2) Job fair; 3) Recruitment; 4) Assessment; 5) Career Training and Professional Development, and 6) Alumni Relations. The following is a description of the tendency of the Y variable score (Manpower Distribution) which can be seen in the **Table 2**.

Table 2. Description of the Workforce Distribution Score Trend

NO.	INDICATOR	WEIGHTED MEAN SCORE	CATEGORY
1	Job Information Services	4,19	Good
2	Job fair	4,13	Good
3	Recruitment	4,01	Good
4	Assessment	4,02	Good
5	Training career and professional development	3,9	Good
6	Alumni Relations	4,05	Good
AVERAGE OF VARIABLE Y		4,05	Good

Based on Table 2, the Weighted mean score calculation produces an average score for variable Y (Labor Distribution) of 4.05 with reference to the WMS calculation result category, namely getting the Good category.

3.1.3. The Influence of Information System Services on Labor Distribution

Classical Assumption Test

The results of the normality test using the Kolmogorov–Smirnov test in the **Table 3** below, obtained the Asymp. Sig. (2-tailed) value data of 0.33. From this it can be concluded that the p value is greater than the significance level of 0.05 (Sig. value = 0.33 > 0.05), then the data is said to be normally distributed. Thus, the assumption of normality is met.

Table 3. Uji Normalitas Kolmogorov Smirnov

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		162
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	14.52665541
	Most Extreme Differences	
	Absolute	.073
	Positive	.054
	Negative	-.073
Test Statistic		.073
Asymp. Sig. (2-tailed)		.033 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

The linearity test is intended to determine whether or not there is a linear relationship between the dependent variable and each independent variable to be tested. If a model does not meet the linearity requirements, the linear regression model cannot be used.

Tabel 4. Normality Test Results

		ANOVA Table					
			Sum of Squares	df	Mean Square	F	Sig.
Y *	Between Groups	(Combined)	9907.612	39	254.041	1.130	.302
		Linearity	3360.120	1	3360.120	14.946	.000
		Deviation from Linearity	6547.492	38	172.302	.766	.826
X1	Within Groups		27427.326	122	224.814		
	Total		37334.938	161			

From Table 4 above, it can be seen that the significance value of the Deviation from Linearity result is 0.826 > 0.05, so there is a linear relationship between the Information System Services (X) and Manpower Distribution (Y) variables.

Uji Hipotesis

Then a correlation test is conducted to measure the extent of the linear relationship between the independent variable (Information System Services) and the dependent variable (Labor Distribution). The purpose of this analysis is to determine whether there is a positive or negative relationship, and how strong the relationship is.

Tabel 5. Correlation Test Results

		Correlations	
		X1	Y
X1	Pearson Correlation	1	.300**
	Sig. (2-tailed)		.000
	N	162	162
Y	Pearson Correlation	.300**	1
	Sig. (2-tailed)	.000	
	N	162	162

** . Correlation is significant at the 0.01 level (2-tailed).

Based on the results of the Pearson correlation test in **Table 5** above, the Sig. value is 0.00 < 0.05, so it can be said to be correlated with the correlation value (r) between the two variables, namely 0.300 with a positive correlation relationship. For a clearer interpretation, the author uses the interpretation table guidelines according to Sugiyono, the correlation coefficient as **Table 6** below.

Table 6. Interpretation of Correlation Coefficient

CORRELATION COEFFICIENT INTERVAL	RELATIONSHIP LEVEL
0,00 – 0,199	Very Low
0,20 – 0,399	Low
0,40 – 0,599	Currently
0,60 – 0,799	Strong
0,80 – 1,000	Very strong

Referring to the interpretation **Table 6** of the correlation coefficient according to Sugiyono, it can be concluded that between the variables of Information System Services (X) and Labor Distribution (Y) has a positive correlation value with a low level of relationship because it has a Pearson calculation score result using SPSS of 0.300. This means that the higher the level of Information System Services provided, the higher the distribution of its workforce will tend to be, and vice versa. The lower the information system services provided, the lower the distribution of its workforce will tend to be.

Then the results of the regression analysis aim to measure the extent of the linear influence of the independent variable (Information System Services X1) on the dependent variable (Labor Distribution Y) partially. The purpose of this analysis is to determine how much the independent variable contributes to the dependent variable, as well as the direction of the relationship (positive or negative) and the strength of the relationship (strong or weak) between the two variables between the two. The results of the regression analysis can provide useful information in understanding the influence of Information System Services on Labor Distribution partially, so that it can assist in decision making and improvements in the field of Education, especially graduate standards.

Table 7. Simple regression test results

		ANOVA ^a				
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1986.434	1	1986.434	8.991	.003 ^b
	Residual	35348.504	160	220.928		
	Total	37334.938	161			

a. Dependent Variable: Y

b. Predictors: (Constant), X.1

From the calculation results using SPSS as seen in **Table 7**, it is known that the calculated F value is 8.991 with a significance level of $0.003 < 0.05$, so the regression model can be used to predict the Information System Service variable or in other words there is an influence of the Information System Service variable (X1) on Labor Distribution (Y).

Table 8. Simple regression test results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.231 ^a	.053	.047	14.864

a. Predictors: (Constant), X.1

From **Table 8**, the Model Summary table above can also be concluded that the magnitude of the correlation/relationship value (r) is 0.231. From these results, the coefficient of determination (r square) is 0.053, which means that the magnitude of the influence of the Information System Service variable on Labor Distribution is 5.3% with a positive relationship direction.

3.2. Discussion

The distribution of labor is influenced by the information system services provided by an organization. The importance of reliable information system services in improving the operational efficiency of BKK in distributing graduate labor is greatly felt because every year the number of applicants through BKK always increases along with the ease of accessing information via the internet.

The increasingly advanced era demands all digital information to facilitate organizational operations. The findings above also show that there is a significant relationship between information system services and labor distribution. Thus, it can be concluded that information system services have a significant influence on labor distribution.

This finding states that the better the information system services provided, the better the distribution of labor. This shows the importance of the role of BKK in managing and providing information system services to increase the quantity of labor distribution. Because the satisfaction of the information system services provided by BKK will also increase the trust of users, namely alumni, teachers, principals, and BKK company partners. So that the high interest of users will increase prospective workers who register through BKK. This increase in applicants will also have an impact on increasing labor distribution.

The influence of information system services on the distribution of labor is also explained by [Putri and Dermawan \(2020\)](#), that based on the process dimension there is an influence on the performance of BKK after using the job exchange information system application. BKK performance is better in terms of processing, storing and searching for alumni data and no less importantly, it is better in terms of distributing graduates and delivering job vacancy information widely.

The influence of information system services on the distribution of labor also proves the opinion of [Kureková et al. \(2015\)](#) who at that time stated that internet-based job searches would become an increasingly prominent tool for finding jobs, increasing the scope of the worker population and companies involved.

Compared to using traditional job vacancy announcement channels (newspapers, friends) job portals/websites are able to provide wider choices and increasingly sophisticated tools to evaluate the suitability of a job or prospective worker. Even [Keep and James \(2010\)](#), feels that the use of web-based data on the labor market minimizes aspects of discrimination and even suggests that online job vacancy information can be included in curriculum development. So it is true that the distribution of labor is influenced by the information system services provided by BKK, especially in terms of distributing job vacancy information.

4. CONCLUSION

Based on the results and discussion in this article, it can be concluded that there is a positive and significant influence between BKK information system services on the distribution of workers to the business world/industrial world (DU/DI) at SMK Al-Manshuriyah. Job vacancy information via the internet, especially the information system managed by BKK, increases the scope of graduates who register for the distribution of workers and is more efficient in assisting the operational distribution of workers by BKK.

This is expected to continue to be developed and improved so that the distribution of workers can continue to increase over time and become an achievement and selling point for SMK Al-Manshuriyah. In addition, the development of information system services is also expected to attract more company partners as BKK partners to increase the variety of types of job vacancies that can be included on the BKK website.

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