KONSELOR

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Original Article

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Abstract: Career is an important aspect of human life and its stability is determined by Career Decision-making Self Efficacy (CDSE). This study aims to compare high school students' CDSE between those living in industrial and agrarian areas. Subjects in this study were 309 high school students and 309 vocational students from both areas. Data were collected using the CDSE-SF instrument developed by Nancy E. Betz. Mann Whitney comparative test was used to analyze the data in this study. The results show that there were differences in the CDSE significance level of students from both areas. Accordingly, the results find that three of the five aspects of senior high school students' CDSE show their The results of data analysis showed significant differences in the five aspects of student CDSE in industrial and agricultural areas.The different value between both students occurs due to the difference in goal and career directions which is highly possible because of several factors that were not discussed in this study.

Keywords: Career decision making self-efficacy; Agricultural district; Industrial city

INTRODUCTION

The Industrial Revolution 4.0 era and society 5.0 demand all elements of society to adapt in various fields including careers. Making career decisions is an important action that needs to be carefully understood by students in order to ensure their future success. Various studies have been conducted and most of them discussed careers from various aspects, such as parental support in influencing career exploration and career decision making (Jiang et al., 2019). Based on data findings from previous research, it shows that 48.36% of respondents agree that parents influence their career choices (Olaosebikan & Olusakin, 2014). As well as students' self-confidence and parents' acceptance (Akosah-Twumasi et al., 2018). The determinants of individual career development in a triadic causal system combine three central variables, namely 1) self-efficacy, 2) outcome expectations, and 3) personal goals (Bandura, 2017) Career Decision-making Self Efficacy (CDSE) and career exploration (CE) are considered important factors for developing a sustainable career. Self-efficacy, contextual factors, and individual attributes influence individuals in selecting their careers (Winga, 2021).

Although research and studies on careers have been widely conducted, there are many issues related to careers that remain questionable and arguable. Data from the Indonesian Statistics Agency stated that in February 2021, the agency recorded that the unemployment rate was at 8.75 million people (Indonesia, 2022). According to data statistics, male workforces have less absorption rate than female workforces. Aside from sex, another factor that influences the labor absorption rate is the level of educational background. The data show that 37.41% of labor absorption is dominated by elementary school graduates and below and only 12.92% of the workforce graduated from college or higher education qualifications (Indonesia, 2022). In Indonesia, vocational school graduates contribute a fairly high unemployment rate compared to high school graduates Wijaya & Utami, 2021 which is mostly

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due to the quality of vocational schools' graduates. According to Finch & Crunkilton, the quality of vocational education applies double measurement such as school-based standards and community-based standards (González-Herrera & Márquez-Domínguez, 2018; Msibi, 2021). School-based quality covers aspects regarding the academic curricula which are designed according to the demands from the working world, community-based quality includes students' performances according to either national or international competency standards for the working world.

Prior research and studies on careers revealed that CDSE was moderately and positively associated with individual attitudes in Career Decision Making (CDM), however in this research age (p < 0.01) was excluded in the factors that probably influence the result (Betz & Luzzo, 1996; Darrell A Luzzo, 1993; Darrell Anthony Luzzo, 1996). In addition, Luzzo, 1993 using regression analyses revealed that CDM attitudes were significantly predicted by CDM skills, CDM self-efficacy, and age; while CDM skills are significantly predicted by CDM attitudes, mean scores, and gender (Ting & Datu, 2020; Wang et al., 2022) On the contrary, in the research conducted for the undergraduate level, Career Decision Making (CDM) was mostly (55.08%) influenced by the counseling and guidance given during their study (Harerimana, 2020). He found that most students had poor CDSE, and only 10.6% of them understood the decision in selecting future careers Winga, 202. Furthermore, according to Lee (2015), there are relationships of career stress and commitment to career choice and CDSE (Lee, 2015). In this study, he found that career-related stress had a negative correlation with a commitment to career choices (r=-.731, p<.001) and career decision self-efficacy (r=-.449, p<.001). Lee conducted his study in city P with 293 students as his participants. From his study, he concluded that factors influencing career-related stress were the level of CDSE (β = 0.99, p < 0.017) and commitment to career choice (β = -0.707, p < 0.001) (Penn & Lent, 2019).

Facts regarding the lack of absorption rates of vocational school graduates represent the students' immaturity in planning their careers. This is in line with Falco & Summers (2019) who mention that the success of career construction is supported by the level of career self-efficacy (Falco & Summers, 2019). CDSE is able to influence the emergence of motivation in individuals, choice of interests, and self-satisfactionc (Komarraju et al., 2014). Another fact shows that students from urban schools have significantly higher CDSE and CE than those from rural schools (Hsu et al., 2022). This condition is caused by several factors, such as the types of jobs offered and social support. Furthermore, according to (Sampson Jr & Toh, 2021), readiness to make career decisions is related to independent career management, age, marital status, health, employment, industry, and education continuation (Sampson Jr & Toh, 2021). Subjective career success stems from the need for recognition referring to the urban status (Montanari et al., 2021). In contrast to urban areas, the jobs offered in rural areas are fewer jobs and less challenging/interesting (such as farming). However, Shen et al. (2021) find that self-efficacy positively predicts career vocations, yet self-efficacy and career vocations negatively predict career decision-making difficulties (Shen et al., 2021). Meanwhile the most important factor influencing career choice and life goals is previous work experience (Özek & Ferraris, 2020).

Many career interventions have been developed to assist students in designing career decisions, such as the ad hoc method (Oigo & Kaluyu, 2016). This method was employed for career guidance, yet it did not affect students' career decision-making. One of the reasons why career interventions became unsuccessful is due to the lack of attention from school counselors to the psychological aspects of the students, such as their career decision self-efficacy (Chiesa et al., 2016). As previously mentioned, prior studies have discussed factors that influence career development. However, few studies compared the students' CDSE levels with different cultural or environmental backgrounds, such as industrial areas and agrarian areas. The industrial area provides more large companies with a large number of employees, while the agricultural area provides a lot of land that can be used as a place to work. The aim of the research is to analyze differences in students' levels of self-efficacy in determining careers with area background indicators. The area is categorized as industrial and agricultural areas.. Researchers tested the CDSE differences between high school students in industrial and agrarian areas and also tested vocational students in industrial and agrarian areas. The aim of the research is to make an analogy between CDSE of high school and vocational school students located in industrial and agricultural areas. Researchers tested the differences in CDSE between high school students in industrial and agricultural areas and also tested vocational school students in industrial and agricultural areas.

METHOD

This research is quantitative analytic research using a comparative approach in order to draw a comparison picture of two different sample groups. The data obtained were tested using comparative statistics to answer the hypotheses of the study.

Participants

The sampling was obtained from the senior high schools and vocational schools located in industrial and agrarian areas. The schools that represent industrial areas were State Senior High School 1 Gresik and State Vocational High School 1 Cerme. Meanwhile, schools that represent agrarian areas were State Senior High School 4 Bojonegoro and State Vocational High School1 Bojonegoro. The respondents were 309 senior high school students and 309 vocational high school students. Researchers have obtained approval from the school so that students can fill out the CDSE instrument with letter number 0218/UN38.1/TU.00.01/2022.

Sampling

This research is a quantitative analytical research using a comparative approach with the aim of drawing a comparative picture of two different sample groups. Research samples were taken based on certain criteria in accordance with the research objectives. The sampling technique was carried out by purposive sampling. The following sampling method was used: (1) Determination of industrial and agricultural areas is determined based on their characteristics. The industrial area chosen was Bojonegoro because this area is an agricultural area that produces the second largest amount of food in Java. Meanwhile, Gresik is an industrial area because of its inherent trading city background from colonial times until now, it is a large industrial area in Indonesia. This is proven by the establishment of very high minimum wages for employees. (2) Distribute questionnaires to high school students and vocational school in industrial and agricultural areas. (3) Group the data based on school type and location, namely high schools, industrial areas and agricultural areas. (4) Analyze the data descriptively using tabulation to find out a comparative picture of the frequency distribution of levels of differences between groups. (5) Test the data using comparative statistical tests to answer the hypothesis.

Instrumentation

Research data collection was carried out using the CDSE-Short Form @2001 instrument, Nancy Betz & Karen Taylor. The use of this instrument has received approval from the developer. This instrument consists of 25 question items. The indicators for this research are: Self Appraisal, occupation information, goal setting, planning, and problem solving. The assessment score uses a Likert scale, namely 1 to 4. The validity and reliability of the instrument are high and it is recommended by the developer to use a short-form (SF) or long-form (LF) continuum (Betz et al., 2005)

Data Analysis

Data obtained were grouped based on the types and location of the schools, namely senior high school and vocational school as well as industrial areas and agrarian areas. Data were analyzed descriptively using tabulations to find out a comparative picture of the frequency distribution of level of differences among the groups. Further, Data were tested using a comparative statistical test to answer the hypotheses. A normality test using the Shapiro Wilk test was carried out in order to determine the normality of the data as a condition for the parametric statistical test. The result of the normality test shows that the data in this study were not normally distributed, so the comparative statistical test employed for this study was the Mann-Whitney test.

RESULTS

The results present the data analysis that was carried out and describe the statistical analysis from all variables discussed which are five aspects of students' CDSE for senior high school and vocational schools located in industrial and agrarian areas. In the first part of the results describe the data distribution which is presented in the CDSE data distribution chart and the frequency distribution table for each aspect in the CDSE. In the next section, data on the comparison of CDSE of high school and vocational high school students are presented and discussed.

Distrbution data of CDSE

Researchers describe the distribution of data for each aspect of CDSE through scatter diagrams. This is to determine the probability function that distributes the variables being analyzed. According to Kotz et al. (2001), data is considered normally distributed if it forms a symmetric graph called a bell curve (Punzo & Bagnato, 2021). Meanwhile, the curve shows the value of the variable (indicated by the peak, middle and slope) (Wilks, 2011).
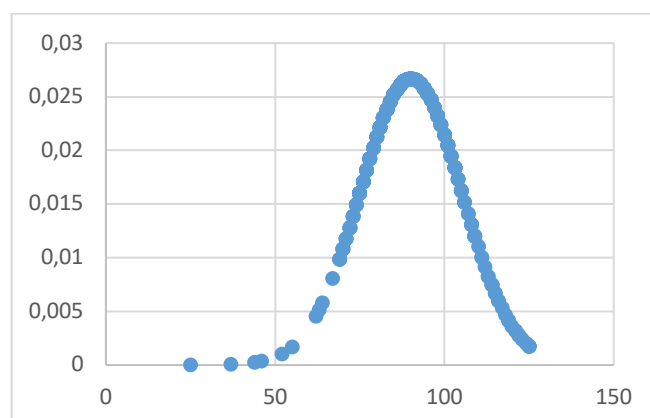
Mean = 90,12
Std. Dev = 14,95
N = 309

Figure 1. Data Distribution of High School Students' CDSE

The distribution of CDSE data in high schools located in industrial and agricultural areas is considered adequate (quite good). From the histogram, it can be seen that the standard deviation is 14.95 and the mean is 90.12 (see Figure 1).
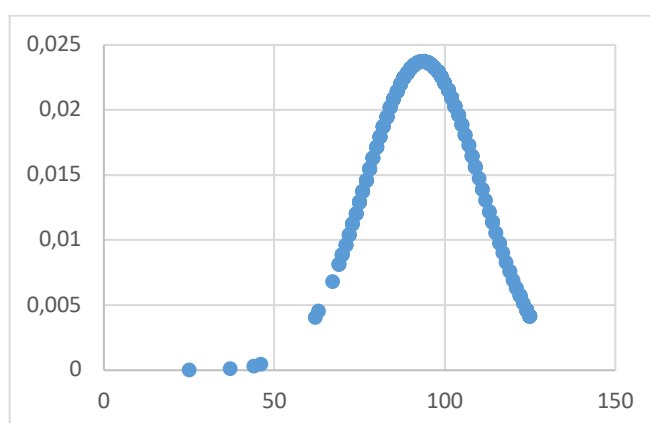
Mean = 93,59
Std. Dev = 16,81
N = 309

Figure 2. Data Distribution of Vocational schools Students' CDSE

The distribution of CDSE data in high schools located in industrial and agricultural areas is considered adequate (quite good). From the histogram, it can be seen that the standard deviation is 16.81 and the mean is 93.59 (see Figure 2).

Overview of CDSE level

Table 1. Distribution of the CDSE frequency

| CDSE level | Senior high schools location | | | | Vocational schools location | | | |
| | Industrial area | | Agrarian area | | Industrial area | | Agrarian area | |
	%	n	%	n	%	n	%	n
Self appraisal								
Perfect CDSE	15.1	23	29.9	47	34.9	53	26.8	42
High CDSE	60.5	92	45.9	72	57.2	87	49.7	78
Moderate CDSE	22.4	34	21.7	34	7.9	12	21.0	33
Low CDSE	2.0	3	1.9	3	0	0	1.9	3
Zero CDSE	0	0	1	1	0	0	0.6	1
Occupational information								
Perfect CDSE	17.1	26	27.4	43	36.2	55	25.5	40
High CDSE	59.9	91	47.8	75	55.9	85	50.3	79
Moderate CDSE	21.1	32	22.9	36	7.9	12	21.7	34
Low CDSE	2.0	3	1.9	3	0	0	1.9	3
Zero CDSE	0	0	0	0	0	0	0.6	1
Goal selection								
Perfect CDSE	17.1	26	31.8	50	36.2	55	26.8	42
High CDSE	58.6	89	45.9	72	55.3	84	49.7	78
Moderate CDSE	22.4	34	21.0	33	8.6	13	21.0	33
Low CDSE	2.0	3	1.3	2	0	0	1.9	3
Zero CDSE	0	0	0	0	0	0	0.6	1
Planning								
Perfect CDSE	17.8	27	26.1	41	34.2	52	24.8	39
High CDSE	57.2	87	47.8	75	56.6	86	51.0	80
Moderate CDSE	24.3	37	24.2	38	8.6	13	21.7	34
Low CDSE	0.7	1	1.9	3	0.7	1	1.9	3
Zero CDSE	0	0	0	0	0	0	0.6	1
Problem solving								
Perfect CDSE	13.8	21	28.0	44	34.9	53	24.8	39
High CDSE	59.9	91	46.5	73	58.6	89	51.0	80
Moderate CDSE	25.7	39	23.6	37	6.6	10	21.0	33
Low CDSE	1	1	1.9	3	0	0	2.5	4
Zero CDSE	0	0	0	0	0	0	0.6	1

Distribution of students' CDSE for the self-appraisal aspect for senior high schools located in both industrial and agrarian areas. The results show that the highest percentage is seen in the high CDSE level, such as 60.5% in industrial areas and 45.9% in agrarian areas. In contrast, there is no occurrence (0%) for zero CDSE level in industrial areas. The description of the analysis can be seen as the perfect CDSE for senior high schools in both industrial and agrarian areas is 15.1% and 29.9% respectively, the moderate CDSE in both areas is 22.4% and 21.7% respectively, the low CDSE level for senior high schools in both industrial and agrarian areas is 2.0% and 1.9% respectively, yet the zero CDSE level for

senior high school only occurs in agrarian area (1%). Regardless the results, the analysis shows that the CDSE level in industrial areas is higher than in agrarian areas.

The CDSE aspects of self-appraisal show that there is no occurrence in both low level and zero level of CDSE in the students of vocational schools located in industrial areas. Moreover, the highest level of CDSE level is in the high CDSE level found in industrial areas (57.2%) and in agrarian areas (49.7%). The other levels were described as: the perfect CDSE for vocational schools in both industrial and agrarian areas is 34.9% and 26.8% respective and the moderate CDSE in both areas is 7.9% and 21% respectively. Meanwhile, the low and zero CDSE levels as 1.9% and 0.6% respectively only occur in the vocational schools located in agrarian areas.

The distribution of CDSE for occupational information in senior high schools located in both industrial and agrarian areas shows that the highest percentage is seen in the high CDSE level, such as 59.9% in industrial areas and 47.8% in agrarian areas. On the contrary, there is no occurrence (0%) for zero CDSE level in both areas. For the meantime, the description of the analysis can be seen as the perfect CDSE for senior high schools in both industrial and agrarian areas is 17.1% and 27.4% respectively, the moderate CDSE in both areas is 21.1% and 22.9% respectively, and the low CDSE level for senior high schools in both industrial and agrarian areas is 2.0% and 1.9% respectively. These results indicate that most senior high school students have good awareness or information regarding their future career possibilities.

For the aspect of CDSE of occupational information, the results of statistical data analyses show that there is no occurrence in both low level and zero level of CDSE in the students of vocational schools located in industrial areas. Moreover, the highest level of CDSE level is in the high CDSE level found in industrial areas (55.9%) and in agrarian areas (50.3%). The remaining levels were described as: the perfect CDSE for vocational schools in both industrial and agrarian areas is 36.2% and 25.5% respective and the moderate CDSE in both areas is 7.9% and 21.7% respectively. Meanwhile, the low and zero CDSE levels as 1.9% and 0.6% respectively only occur in the vocational schools located in agrarian areas.

The frequency distribution of CDSE for goal selection aspects in senior high schools located in both industrial and agrarian areas shows that the highest percentage is seen in the high CDSE level, such as 58.6% in industrial areas and 45.9% in agrarian areas. In contrast, there is no occurrence (0%) for zero CDSE level in both areas. Whereas, the description of the remaining levels can be seen as the perfect CDSE for senior high schools in both industrial and agrarian areas is 17.1% and 31.8% respectively, the moderate CDSE in both areas is 22.4% and 21% respectively, and the low CDSE level for senior high schools in both industrial and agrarian areas is 2.0% and 1.3% respectively.

From the result of CDSE for goal selection aspects, it can be seen that vocational schools located in industrial areas have a higher CDSE level than vocational schools located in agrarian areas, yet in the industrial area, it is found that there is no low and zero CDSE level. These descriptions are explained as the perfect CDSE for vocational schools in both industrial and agrarian areas is 36.2% and 26.8% respectively, the high CDSE in both areas is 55.3% and 49.7%, respectively, and the moderate CDSE in both areas is 8.6% and 21% respectively. Meanwhile, the low and zero CDSE levels as 1.9% and 0.6% respectively only occur in the vocational schools located in agrarian areas.

The distribution of CDSE for the planning aspects in senior high schools located in both industrial and agrarian areas shows that the highest percentage is seen in the high CDSE level, such as 57.2% in industrial areas and 47.8% in agrarian areas. In contrast, there is no occurrence (0%) for zero CDSE level in both areas. For the meantime, the description of the analysis can be seen as the perfect CDSE for senior high schools in both industrial and agrarian areas is 17.8% and 26.1% respectively, the moderate CDSE in both areas is 24.3% and 24.2% respectively, and the low CDSE level for senior high schools in both industrial and agrarian areas is 0.7% and 1.9% respectively.

The CDSE aspects of planning at various levels are depicted as in the table. It can be seen that vocational schools located in industrial areas have a higher level of CDSE than vocational schools located in agricultural areas. This figure explains that perfect CDSE for vocational schools in industrial and agricultural areas is 34.2% and 24.8% respectively, high CDSE in both regions is 56.6% and 51% respectively, medium CDSE in both regions is 8.6% and 21.7 %, the low CDSE in the two regions is 0.7% and 1% respectively, and the zero CDSE rate in the two regions is 0% and 0.6% respectively.

Of the statistical analysis, the distribution of CDSE for the problem-solving aspects in senior high schools located in both industrial and agrarian areas shows that the highest percentage is seen in the high CDSE level, such as 59.9% in industrial areas and 46.5% in agrarian areas. On the contrary, there is no occurrence (0%) for zero CDSE level in both areas. Meanwhile the description of the analysis can be seen as the perfect CDSE for senior high schools in both industrial and agrarian areas is 13.8% and 28% respectively, the moderate CDSE in both areas is 25.7% and 23.6% respectively, and the low CDSE level for senior high schools in both areas is 1% and 1.9% respectively.

From the statistical analysis of vocational school students, the CDSE distribution for the problem solving aspect shows that of the five levels, the highest percentage is seen at the high CDSE level. However, in industrial areas, low and zero levels of CDSE were not found. Meanwhile, the analytical picture can be seen that perfect CDSE in vocational schools in both industrial and agricultural areas is 34.9% and 24.8% respectively, high CDSE in both areas is 58.6% and 51% respectively, and CDSE medium on both. regions are 6.6% and 21% respectively. There are no low CDSE and zero CDSE levels in industrial areas; however, there are also those in agricultural areas, for example 2.5% for a low CDSE level and 0.6% for a zero CDSE level.

Table 2. Mann Whitney Comparative Statistical Test on CDSE's Aspects of Senior high schools and Vocational Schools in Industrial Areas and Agrarian Areas.

	Aspect analyzed				
	Self appraisal	Occupational information	Goal selection	Planning	Problem solving
Senior high schools					
Mann-Whitney U	10.317.000	10.932.000	10.046.000	10.943.500	10.335.500
Z	-2.069	-1.281	-2.415	-1.267	-2.046
Asymp. Sig. (2-tailed)	.039	.200	.016	.205	.041
Vocational schools					
Mann-Whitney U	9.856.000	9.383.500	9.875.500	9.670.000	9.516.500
Z	-2.658	-3.263	-2.632	-2.896	-3.092
Asymp. Sig. (2-tailed)	.008	.001	.008	.004	.002

The results of statistical tests show that of the five aspects of Senior high schools, three aspects of CDSE have Asymp. Sig value. (2-tailed) less than 0.05. These aspects are the first aspect of self-assessment (0.039), the third aspect of goal selection (0.016), and the fifth aspect of problem solving (0.041). These results mean that the three aspects are less than significant (0.05), which shows that the three aspects have significant differences (0.039 < 0.05; 0.016 < 0.05; and 0.041 < 0.05). Meanwhile, the remaining two aspects, the second aspect (work information) and the fourth aspect (planning) show Asymp. Sig value. (2-tailed) is higher than 0.05 where it is 0.20 for job information and 0.205 for planning. These results mean that there is no significant difference in student CDSE for both aspects.

The results of statistical test on students' CDSE of vocational school show that their Asymp. Sig (2-tailed) as 0.008, 0.001, 0.008, 0.004, and 0.002 (respectively for self-appraisal, occupational information, goal selection, planning, and problem-solving) are less than their significance (0.05). In addition, these significant differences similarly occur in the previous statistical test for senior high school as well, although, in the previous statistical test, only three of five show their significant differences.

DISCUSSION

The results showed significant differences in the three CDSE aspects for senior high schools located in industrial areas and those located in agrarian areas. These three aspects are aspects of self-appraisal, goal setting, and problem-solving. Meanwhile, the other two aspects had no significant

difference between the two areas. These aspects are occupation information and planning. On the contrary, different conditions occur in vocational schools. CDSE aspects of vocational schools in industrial and agrarian areas show significant differences. Comparing the conditions of senior high school and vocational schools, three CDSE aspects overlap on both, namely self-appraisal, goal setting, and problem-solving. These significant differences (in the level of students' CDSE) in the industrial and agrarian areas indicate that culture is an important factor in building CDSE. However, another study has different results from this study. Career choice is a dual process within individuals, including: what people know about themselves and the vocational world, how they reconcile information, the extent to which they experience ambiguity, and how they mitigate these threats (Valverde-Moreno et al., 2020).

In contrast to Valverde-Moreno et-al, Nader found that acculturation affects the self-efficacy of career decisions through networking (Nader, 2019). The relationship between acculturation, networking, and career decision-making self-efficacy shows a moderate to large effect size (Nadermann & Eissenstat, 2018). These findings suggest that career counselors should collaboratively address acculturation issues, such as stress and identity development, and provide opportunities for networking skills development. If macro-culture influences career self-efficacy, other studies discuss the influence of culture from a more specific point of view. There are differences in career decision-making self-efficacy between male and female students, career counseling programs for this population should also take these findings into account (Abidin et al., 2019). The fact that female students usually mature faster than male students, any program should focus more on strengthening career decision-making self-efficacy among male students(Abidin et al., 2019). Similar results also show that gender differences affect CDSE aspects of accurate self-assessment and differences by year of study affect information gathering (Wu et al., 2020).

This research takes the background of industrial and agrarian areas as comparison material. There is a significant difference between students' CDSE in both senior high school and vocational school. Another study explains that industrial background can affect students' career self-efficacy. The results of an online survey of hospitality students in the Western United States (n = 315; response rate 79.9%) indicate that students' previous industry exposure is a factor in self-efficacy and career attitudes Shroder, 2020 The results also show that the elements of students' socioeconomic status and race are factors in student attitudes, and self-efficacy (Shroder, 2020). Historical variables (individual cultural background) can slowly affect self-efficacy (McKelway, 2019). Human capital, information and technology, material resources and infrastructure, wealth and financial capital, and institutions and rights all play important roles in shaping self-efficacy (Burnham & Ma, 2017).

This research is limited to studying only the indicators on the CDSE SF instrument. Researchers measure each indicator to look for aspects that have more influence on students' careers. However, basically CDSE is a unity of five aspects so readers must also look at other aspects that are not discussed in this research.Another study finds on how students' interest in non-agricultural industries. In this study, 406 university students and 198 high school students in Bali served as respondents. The results show that more than half of youngsters in Bali, Indonesia selected the tourism industry as a career choice. Working in Tourism is a realistic dream for students . In general, career decision-making between high school and vocational high school students has differences, if vocational students choose more jobs and further study majors lead to majors in vocational schools. In contrast to high school, which has more options than he can choose and determine in further studies. This will affect students' CDSE in certain aspects. Research conducted by Mardiyati & Yuniawati, shows t-value of -5.491 and p-value of 0.000 (p<0.01). This data shows a significant difference between the career adaptability of high school and vocational high school students. The mean score for career adaptability of high school students is 116.5, which is lower than that of vocational students of 127.3. This study concludes that there is a difference in the career adaptability of high school and vocational high school students. SMK students have higher career adaptability than high school students (Mardiyati & Yuniawati, 2015).

Penelitian ini tidak The different backgrounds of students are one of the things that need to be considered in determining and directing students' careers. The results of this study will have implications for student guidance and career counseling services. Guidance and Counseling teachers need to design specific programs to improve students' CDSE. Other researchers can also conduct in-depth analyzes of other variables of a career in other cultural settings.

CONCLUSION

There are significant differences in all aspects of students' CDSE between vocational schools located in industrial and agrarian areas. Meanwhile, in senior high schools, these differences only occur in three aspects, namely self-appraisal, goal selection, and problem-solving. Therefore, these results are indicated the need for counseling teachers to intervene in improving students' CDSE due to differences (unequal) conditions among individuals caused by environmental factors as well as cultural backgrounds. This study is limited to a small sample so it is not representative for all agrarian and industrial areas. The researcher hopes that further research will expand the sample with different characteristics.

ACKNOWLEDGEMENTS

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