

## The Analysis of Counselor Personal Competence in the Era of Industry 4.0 in South Sulawesi

Abdul Saman<sup>1</sup>, Muhammad Arifin Ahmad<sup>2</sup>, Muhammad Ilham Bakhtiar<sup>3</sup>

<sup>1</sup>Guidance and Counseling, Universitas Negeri Makasar, Makasar, Indonesia  
Email: [abdulsaman@unm.ac.id](mailto:abdulsaman@unm.ac.id)

<sup>2</sup>Guidance and Counseling, Universitas Negeri Makasar, Makasar, Indonesia  
Email: [arifinahmad@unm.ac.id](mailto:arifinahmad@unm.ac.id)

<sup>3</sup>Guidance and Counseling, STKIP Andi Matappa, Indonesia  
Email: [ilhambakhtiar86@gmail.com](mailto:ilhambakhtiar86@gmail.com)

(Received: 12-08-2020; Reviewed: 29-10-2020; Accepted: 30-11-2020;  
Available online: 19-12-2020; Published: 20-12-2020)



This is an open access article distributed under the Creative Commons Attribution License CC-BY-NC-4.0 ©2020 by author (<https://creativecommons.org/licenses/by-nc/4.0/>).

**Abstract.** The aims of the study are (1) to explore the influence of years of service on the counselor personal competence in the Era of Industry 4.0 in South Sulawesi; (2) to investigate the influence of counselor age on their personal competence in the Era of Industry 4.0 in South Sulawesi; and (3) to explore the influence of education level on the counselor personal competence in the Era of Industry 4.0 in South Sulawesi. The study employed a survey method using a questionnaire and data were analyzed descriptively with Anova and Multivariate. The validity and reliability of the questionnaire and the homogeneity of variables were priorly tested. The study involved 215 teachers from Junior High School, Senior High School, and Vocational High School in South Sulawesi. The findings indicate that the years of service influences the counselor's personal competence in the Era of Industry 4.0. Based on the *Test of Between-Subjects Effect* analysis, the longer they work, the better their personal competence in providing guidance and counseling services. Results of *post hoc Test* Multiple Comparisons analysis between years of service and personal competence and competence of era 4.0 shows that productive service years results in good personal competence in implementing the service from the 2<sup>nd</sup> to the 20<sup>th</sup> years., and the ideal workers in the era of industry 4.0 is the new counselor. (2) Educational level influences the Counselor Personal Competence in the Era of Industry 4.0 according to the *Test of Between-Subjects Effect*. Thus, it is clear that the higher the educational level of the counselor, the better they are in providing guidance and counseling to students; (3) the age of Guidance and Counseling Teachers/ Counselor influences their personal competence in era 4.0. Based on the *Test of Between-Subjects Effect*, teachers' ages are highly influential to increase the service in the era 4.0.berarti which means that it is directly proportional to the years of service. In this case, the more years the counselor works, and the older they are, the better they provide guidance and counseling service.

**Keywords:** Analysis; Counselor Competence, Personality, Competence of Era 4.0

## INTRODUCTION

The presence of technology has addicted humans especially digital technology. Digital technology has been more widely used (Hasanah, 2015). The advancement of digital and information technology can bring a big change to education. Barnett Berry stated the current phenomenon is caused by the advancement of technology. Digital technology has been proved to cause the transfer of information more efficient (Hosnan, 2014). The transformation process is one of the indicators that the present era has entered the era of industry 4.0. The revolution of industry 4.0 quickly and radically changes human lives. The changes have caused uncertainty, anxiety, threat, and hopelessness, but they can also grow hopes, pleasure, opportunity, and challenge to innovate.

Changes in the industrial revolution 4.0 era greatly impacted the existence of the counselor profession. The counselor profession is a skill to provide personal development guidance and problem-solving which prioritizes the fulfillment of need and happiness of users considering the dignity, value, potential, and uniqueness of the individual based on the study and application of science and technology with the basic reference of education and psychology packaged in an applied study of counseling influenced by the culture of the parties concerned. To prevent the overlap with other professions, Prayitno (2015: 31) mentioned the specific objects of counselor professions practice which is to develop the personal positive condition and to handle the negative condition that can disrupt the effectiveness of daily lives.

In the personal and social lives, there are always differences in the personality, and changes of the condition can emerge problems that must be solved. Also, there is always a willingness to change themselves to be better. Problems and solutions, challenges and inhibitions, win and lose, sadness and happiness, are life dynamics indicating that life needs counselors as professions providing help to others because it is a profession for lives, which will be always demanded to adapt with the personal and social needs and changes due to the revolution of industry 4.0.

A counselor should master personal competence because he / she will become the role model to the counselee. Besides that, the ability of a counselor to well master the

personality will support him/her in providing guidance and counseling for students to help them solve their personal problems (Fatmawijaya, 2015). The personal competence of a counselor refers to steady, stable, and authoritative personality abilities so that they can become role models for students, and have noble character (Hikmawati, 2010). To provide a good service as the implementation of the counselor competence, they should understand the use of technology for counseling activities at school. Then, there should be various strategies to improve the competence like training, deepening the knowledge, and continuing the study at a higher level. After teachers in Semarang city trained with Motivational Interviewing (MI) counseling based on local wisdom, their competencies improved (Yuwono, Sugiharto, Hariyadi, Amin, & Konseling, 2019), developed the counselor competence by introducing archipelago based multicultural counseling (Umar, 2017). Counselors with mature personalities make them able to be good models for anyone, especially students at school because they must be able to display a personality that is attractive to anyone. If not, then their existence in society and in school will never be considered important (Yandri, 2016). Now, in line with developments, it appears that in order to have good competence, one is highly required to master technology. The demands and directions for standardization of counselors in Indonesia refer to the development of science and technology as well as the increasing public need for counseling guidance services. Competency standards are a measure of minimum ability that includes abilities, knowledge, skills, and attitudes that must be achieved, known, and mastered by the counselor/counseling teacher (Pandang & Anas, 2018).

The problem found in the field is that many counseling services do not meet the needs of students. Many students think that the counselor does not show a warm and pleasant personality attitude, such as being unfriendly and asking too many questions. Many students felt the questions embarrassed him. In addition, the statements addressed to them sometimes feel depressing. (Fatmawijaya, 2015), a study conducted by Rahmat Hidayat (2013) about the perception of students on the personality of the counselor that they expect shows that there is a problem with counselors' personality. This condition is not much different in South

Sulawesi. Especially at this time, in the development of the industrial era, there is a need for faster service to clients, collaboration and collaboration, and innovation is increasingly needed, service orientation must be higher, virtual work must be increased, process complexity must be grown, and climate change and resource scarcity must be resolved. (Hecklau, Galeitzke, Flachs, & Kohl, 2016). The aims of this study are: (1) to investigate the influence of years of service on the personal competence of counselors in the Era of Industry 4.0 in South Sulawesi; (2) To investigate the influence of counselor age on the personal competence of counselor in the Era of Industry 4.0 in South Sulawesi; (3) To investigate the influence of education level on the personal competence of counselor in the Era of Industry 4.0 in South Sulawesi; (4) To investigate the direct influence of teachers certification on their competence in the ear of industry Era Industri 4.0.

## METHODS

This study employed a descriptive design. In the study, we decided to describe the data we collected without any treatments. The purpose of the study was to investigate the personal competence of counselors in the era of industry in South Sulawesi.

The subjects of the study were 215 Guidance and counselor teachers in South Sulawesi teaching at Junior High School, Senior High School, and Vocational School. They were selected randomly. The research instrument used to collect data was a questionnaire. Data were analyzed using calculation by grouping indicators including educational level, teachers' age, gender, years of service, certification, and the location of school (in the urban or suburban areas) into low, medium, and good categories. To test the validity, product - moment formula was used, while reliability was tested using *alpha Cronbach*

Data were collected using a questionnaire. The questionnaires were distributed to the research subjects through online media (Google form) to get a description of the personal competence of counselors in the era of industry 4.0. the questionnaire. The questionnaire contains closed-ended questions developed from the indicators of core counselor personal competencies. They used the Gutman scale containing answer options.

Teachers' personal competencies are described in the questionnaire using a scale 1 - 4. Therefore, the teachers' personal competence can be illustrated in the score. Following are aspects and indicators of Guidance and Counseling teachers' personal competence:

**Table 1.** Aspects and Indicators of Guidance and Counseling Teachers' Personal Competence

Aspects	Indicators
Faith & Fear	Faithful & pious personality Morals
human values, individuality, and freedom of choice	application of views about spiritual, social, and individual moral beings development of individual positive potential Tolerance and respect for human rights freedom of consultation
personality integrity and stability	emotional and behavioral stability sensitivity and empathy high tolerance for the counselee
high-quality performance	actively participate in BK services
Counselor Personality Traits	show empathy express himself freely and deeply, the appearance of personal feelings, attitudes, opinions, and experiences
Competence Yang dibutuhkan Counselor in the Era of Industry 4.0	Mastering the operation of technology tools more varied counseling services using various media

do service collaboration  
Creating innovative, communicative services  
use, and evaluate information effectively,  
efficiently, and wisely

To collect data about the level of counselor personal competence, we distributed a questionnaire to the selected samples. It is to gather data about teachers' competence in implementing Guidance and Counselling service.

Data were analyzed with the RASCH model using the fits statistic method (Bond & Christine M. Fox, 2015; Sumintono & Wahyu Widhiarso, 2014, 2015; Tucker, 2007; Wirth, Houts, & Deal, 2016) Parameters measured in the analyses were infit and outfit of the mean square and standardized values, the score of the mean square was 1,0 while the Z-standardized values were 0,0. While at the level of each item level or respondent uses parameters showing the conformity or nonconformity (Sumintono dan Widhiarso,(2013). To investigate the influence of variables, we performed descriptive analysis, multivariant analysis, and ANOVA analysis

using the SPSS application. The results of the analysis were then described.

## RESULTS AND DISCUSSION

### Results

In discussing the research findings, a predicator test was performed. It is to evaluate the years of service, age, and educational level of the Guidance and Counseling teachers/ Counselor.

#### 1. The influence of Years of Service of the Counselor on their Personal Competence in the Era of Industry 4.0 in South Sulawesi

To identify the influence of counselors' years of service, we initially performed descriptive analysis as presented in the table 2.

**Table 2.** Descriptive Statistics of the of The Counselors' Years of Service

	Years of Service	Mean	Std. Deviation	N
Personal Competence	< 2 years	59.09	5.362	22
	2- 5 years	59.50	5.860	26
	6-10 years	60.02	6.089	54
	11-20 years	60.51	6.106	73
	21-30 years	59.32	6.407	40
	Total	59.90	6.026	215
	Competence 4.0	< 2 years	26.59	2.062
2- 5 years		25.85	2.949	26
6-10 years		25.20	3.049	54
11-20 years		26.63	2.138	73
21-30 years		25.42	3.493	40
Total		25.95	2.809	215

As per the analysis, the teaching period under 5 years got an average score of 3,99, with a standard deviation of 0,44, a maximum score of 2,76, and a minimum score of 4,65. For the teaching period between 5-10 years, the average score was 3.79 with a standard deviation of 0.48, a minimum score of 2.98, and a maximum score

of 4.69. teaching period above 10 years showed a mean score of 3.97, a standard deviation of 0.41, a minimum score of 3.19, and a maximum score of 4.69. To measure the homogeneity of the research variables, we performed a Homogeneity of variance test and the results are presented in the table 3.

Table 3. Results of Homogeneity of Variances Test of the Counselors Years of Service

Years of service			
Levene Statistic	df1	df2	Sig.
1.205 <sup>a</sup>	18	194	.260

a. Groups with only one case are ignored in computing the test of homogeneity of variance for years of service.

To test the homogeneity of variance test, there are two hypotheses proposed as below:

H<sub>0</sub> : The three population variants are identical (homogenous)

H<sub>a</sub> : The three variants are not identical

*Test of Homogeneity of variances* indicated that the score of Levene Statistic was 1.205 while the probability or significance level was 0,260. The probability value of 0.262 was higher than the significance level score which was 0,05 (5%), which means that the hypothesis null (H<sub>0</sub>) was accepted and the alternative

hypothesis (H<sub>a</sub>) was rejected so that it can be concluded that the three population variants are identical (homogenous). Results of ANOVA analysis of the influence of counselor years of service on their personal competence in South Sulawesi are presented in Table 4.

**Table 4.** Results of ANOVA analysis of the influence of counselor years of service on their personal competence

Sources of variants	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	51.152	20	2.558	1.881	.0016
Within Groups	263.807	194	1.360		
Total	314.958	214			

To test the ANOVA analysis, two hypotheses were proposed as below:

H<sub>0</sub> : There is no difference on the personal competence between counselors working <2 years, between 2- 5 years, 6-10 years, 11-20 years, 21-30 years

H<sub>a</sub> : There is a difference in the personal competence between counselors working <2 years, between 2- 5 years, 6-10 years, 11-20 years, 21-30 years

To examine the hypothesis presented above, we performed a probability or significance test using SPSS apps. The Anova table above shows the probability of significance score of 0.16 or bigger than 0.05 meaning that the hypotheses null (H<sub>0</sub>) was accepted while the alternative hypotheses (H<sub>a</sub>) were rejected. It shows if there is no real difference of personal competence between counselors with a duration of service <2 years, between 2- 5 Years, 6-10 Years, 11-20 Years, and 21-30 Years. Because the analysis did not

show a difference, to determine the group, we do not need to conduct *homogeneous subsets*.

#### **Analysis of the effect of years of service on the personal competence of the counselor in the era 4.0**

The results of analysis between the years of service and the personal competence of the counselor in era 4.0 using multivariate and *test of between-subjects effect* are shown in Table 5.

**Table 5.** Results of *Test of Between-Subjects Effect* between Years of Service and Counselor Personal Competence

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Personal Competence	59.428 <sup>a</sup>	4	14.857	.405	.805
	Competence 4.0	84.186 <sup>b</sup>	4	21.047	2.755	.029
Intercept	Personal Competence	631085.919	1	631085.919	17183.937	.000
	Competence 4.0	119185.447	1	119185.447	15601.641	.000
Years of service	Personal Competence	59.428	4	14.857	33.405	.005
	Competence 4.0	84.186	4	21.047	2.755	.009
Error	Personal Competence	7712.321	210	36.725		
	Competence 4.0	1604.251	210	7.639		
Total	Personal Competence	779134.000	215			
	Competence 4.0	146457.000	215			
Corrected Total	Personal Competence	7771.749	214			
	Competence 4.0	1688.437	214			

a. R Squared = .008 (Adjusted R Squared = -.011)

b. R Squared = .050 (Adjusted R Squared = .032)

Test on the effect of years of service on the counselors personal competence used *Test of Between-Subjects Effect*, with following hypotheses:

$H_0$  : Duration of teaching does not influence the personal competence level of Counselor in era 4.0

$H_a$  : Duration of teaching influences the personal competence level of Counselor in the era 4.0

From the *Test of Between-Subjects Effect*, it can be identified that the *F ratio* (F count) value of the years of service was 33.405 by confirming that the value of F count = 33.405 and the significance level of F table was 0,05 (5%) with dk for numerator 4 and dk denominator 210 obtained the F table of 3,02. Thus it can be seen that the F count (33,405) is higher than the F table (3,02) meaning that the alternative hypothesis ( $H_a$ ) stating that "Duration of teaching influences the personal competence level of Counselor in the era 4.0"

was accepted in the significance level of 5% and the null hypothesis stating that "Duration of teaching does not influence the personal competence level of Counselor in the era 4.0" was rejected. Thus, it is clear that the longer the years of service of a counselor at school, the more influential it is on their personal competence in providing guidance and counseling service. To identify which group of years of service was most influential, we performed analysis using a post hoc test, and the results are presented in the table 6.

**Table 6.** Results of Analysis using *post hoc Test* Multiple Comparisons between the Years of Service and the Personal Competence of Counselor In era 4.0

Multiple Comparisons							
Bonferroni							
Dependent Variable	(I) Years of service	(J) Years of service	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Personal competence	< 2 Years	2- 5 Years	-.41	1.756	1.000	-5.39	4.57
		6-10 Years	-.93	1.533	1.000	-5.28	3.42
		11-20 Years	-1.42	1.474	1.000	-5.60	2.77
		21-30 Years	-.23	1.609	1.000	-4.80	4.33
	2- 5 Years	< 2 Years	.41	1.756	1.000	-4.57	5.39
		6-10 Years	-.52	1.447	.020	-4.62	3.59
		11-20 Years	-1.01	1.384	.012	-4.93	2.92
		21-30 Years	.18	1.527	.000	-4.16	4.51
	6-10 Years	< 2 Years	.93	1.533	.000	-3.42	5.28
		2- 5 Years	.52	1.447	.000	-3.59	4.62
		11-20 Years	.49	1.088	.000	-3.57	2.60
		21-30 Years	.69	1.264	.000	-2.89	4.28
	11-20 Years	< 2 Years	1.42	1.474	.000	-2.77	5.60
		2- 5 Years	1.01	1.384	.000	-2.92	4.93
		6-10 Years	1.49	1.088	.000	-2.60	3.57
		21-30 Years	1.18	1.192	.000	-2.20	4.56
	21-30 Years	< 2 Years	.23	1.609	.000	-4.33	4.80
		2- 5 Years	-.18	1.527	1.000	-4.51	4.16
		6-10 Years	-.69	1.264	1.000	-4.28	2.89
		11-20 Years	-1.18	1.192	1.000	-4.56	2.20
Competence 4.0	< 2 Years	2- 5 Years	.74	.801	.000	-1.53	3.02
		6-10 Years	1.39	.699	.000	-.60	3.37
		11-20 Years	.04	.672	.000	-1.95	1.87
		21-30 Years	1.17	.734	.000	-.92	3.25
	2- 5 Years	< 2 Years	.74	.801	.000	-3.02	1.53
		6-10 Years	.64	.660	.000	-1.23	2.51
		11-20 Years	.78	.631	.000	-2.57	1.01
		21-30 Years	.42	.696	.000	-1.55	2.40
	6-10 Years	< 2 Years	1.39	.699	.002	-3.37	.60
		2- 5 Years	.64	.660	.000	-2.51	1.23
		11-20 Years	1.43*	.496	.003	-2.83	-.02
		21-30 Years	-.22	.577	.000	-1.86	1.41
	11-20 Years	< 2 Years	.04	.672	.000	-1.87	1.95
		2- 5 Years	.78	.631	.000	-1.01	2.57
		6-10 Years	1.43*	.496	.003	.02	2.83
		21-30 Years	1.21	.544	.003	-.34	2.75
	21-30 Years	< 2 Years	-1.17	.734	.000	-3.25	.92
		2- 5 Years	-.42	.696	1.000	-2.40	1.55
		6-10 Years	.22	.577	1.000	-1.41	1.86
		11-20 Years	-1.21	.544	.277	-2.75	.34

Based on observed means.

The error term is Mean Square(Error) = 7.639.

\*. The mean difference is significant at the,05 levels.

The analysis using the *Test of Between-Subjects Effect* showed that the value of *F ratio* (F count) for the years of service of 33.405 and

confirmed that the value of F count= 33.405 and the significance level of F table was 0,05 (5%) with dk for numerator 4 and dk for denominator

210 showed the F table of 3,02 so that it can be seen if the score of F count (33,405) was higher than F table (3,02) which means that the Alternative hypothesis ( $H_a$ ) stating that "Duration of teaching influences the personal competence level of Counselor in the era 4.0" was accepted in the significance level of 5% and the null hypothesis ( $H_0$ ) stating that "Duration of teaching does not influence the personal competence level of Counselor in the era 4.0" was rejected. It is clear that the years of service of the counselor influence their personal competence in providing counseling and guidance service. To identify which group of years of service was most influential, we performed analysis using a post hoc test, and the results are presented in the table 6. Table 6.

Results of Analysis using *post hoc Test* Multiple Comparisons between the Years of Service and the Personal Competence of Counselor In era 4.0. Based on table 6 above, we can identify the difference in the mean scores of counselors' personal competence. The ones who had worked for 6-10 years and 11-20

years had lower personal competence because the score is positive with the sig value of 0, 000 or smaller than the significance level of 0,05 which means that it is influential. Related to the indicators of competence in the era 4.0, years of service with the highest average value was at <2 years, 2-5 years, and 6-10 years because the average value was positive with the sig score of 0,000 or smaller than the sig level of 0,05 which means that the years of service influences the competence 4.0. Based on these findings, it is concluded that counselors in the productive age (2 – 20 years of service) have good personal competence in providing counseling service to clients, and the best ones are the counselors who have just entered the working world.

## 2. Effects of educational level on the personal competence of counselors in the Era of Industry 4.0 in South Sulawesi

Descriptive analysis performed on the influence of education level on the personal competence of counselor in the era of industry 4.0 in South Sulawesi is presented in the table 7.

**Table 7.** Results of Statistic Descriptive Analysis on Educational Background

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Personal competence	Undergraduate	150	59.39	5.841	.477	58.45	60.34	49	68
	Master	65	61.06	6.327	.785	59.49	62.63	48	68
	Total	215	59.90	6.026	.411	59.09	60.71	48	68
Competence 4.0	Undergraduate	150	25.51	3.060	.250	25.01	26.00	14	28
	Master	65	26.97	1.750	.217	26.54	27.40	21	28
	Total	215	25.95	2.809	.192	25.57	26.33	14	28

Table 7 explains that 150 undergraduate counselors got an average score of 59.39 with a deviation standard of 5,84 (personal competence) and an average score of 25.5 with a standard deviation of 3.06 for the competence needed in the era 4.0. Then 65 counselors finishing master's degrees had the mean score of 61.06 with the standard deviation of 6.32 in the indicators of personality and the indicators of

competence needed in the era 4.0 had the average value was 26.97 with the standard deviation of 1.75. It shows that counselors finishing the master's degree had the higher average score of personal competence and competence needed in era 4.0. After performing descriptive analysis, the homogeneity test was conducted to identify the homogeneity of educational level variables.

**Table 8.** Results of Test of Homogeneity of Variances

Education				
Levene Statistic	df1	df2	Sig.	
1.982 <sup>a</sup>	18	194	.061	

a. Groups with only one case are ignored in computing the test of homogeneity of variance for Pendidikan.

To test the results of homogeneity variance analysis, two hypotheses were proposed:

H<sub>0</sub> : The three population variants are identical (homogenous)

H<sub>a</sub> : The three population variants are not identical

From the analysis of the *Test of Homogeneity of variances*, it can be identified that the value of the Levene Statistic was 1.982 while the probability or the significance was 0,061. The probability value was 0,061 which was smaller than the significance level of 0,05 (5%), meaning that the alternative hypothesis (H<sub>a</sub>) was rejected while the null hypothesis (H<sub>0</sub>) was accepted so that it can be concluded that the three population variants were identical (homogenous). ANOVA analysis testing the influence between the years of service and the personal competence of the counselor in South Sulawesi is presented in the table 8.

**Table 9.** Results of ANOVA test on the indicator of Education Level

Pendidikan					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.560	20	.228	1.084	.003
Within Groups	40.789	194	.210		
Total	45.349	214			

To test the results of ANOVA analyses, there were two hypotheses proposed as below:

H<sub>0</sub> : There is no difference in the personal competence between counselors finishing an undergraduate degree and counselors finishing a master's degree.

To test the hypotheses proposed above, the probability or significance level was tested using the SPSS application. The ANOVA table above shows the value of probability or significance level was at 0.03 which was smaller than 0.05 meaning that the null hypothesis (H<sub>0</sub>) was rejected while the alternative hypothesis (H<sub>a</sub>) was accepted. It shows that there is a real difference between the personal competence of counselors finishing an undergraduate degree and counselors finishing a master degree.

H<sub>a</sub> : There is a difference in the personal competence between counselors finishing an undergraduate degree and counselors finishing a master degree

#### **Analysis of Effect of Educational Level on the Personal Competence of Counselors in the Era 4.0**

Results of analysis of effect obtained from carrying out multivariate analysis using the *test of between-subjects effect* between groups of educational level and the personal competence of counselors in the era 4.0. are presented in Table 10.

**Table 10.** Results of *Test of Between-Subjects Effect* between educational level and personal competence of counselors

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Personal Competence	126.202 <sup>a</sup>	1	126.202	3.516	.062	.016
	Competence 4.0	97.005 <sup>b</sup>	1	97.005	12.983	.000	.057
Intercept	Personal Competence	657983.337	1	657983.337	18330.990	.000	.989
	Competence 4.0	124877.991	1	124877.991	16713.888	.000	.987
Education	Personal Competence	126.202	1	126.202	3.516	.062	.016
	Competence 4.0	97.005	1	97.005	12.983	.000	.057
Error	Personal Competence	7645.547	213	35.895			
	Competence 4.0	1591.432	213	7.472			
Total	Personal Competence	779134.000	215				
	Competence 4.0	146457.000	215				
Corrected Total	Personal Competence	7771.749	214				
	Competence 4.0	1688.437	214				

a. R Squared = .016 (Adjusted R Squared = .012)

b. R Squared = .057 (Adjusted R Squared = .053)

1) The influence of educational background on the personal competence of counselors

To test the influence of educational background on the personal competence of the counselors, we performed the *Test of Between-Subjects Effect*, to the following two hypotheses:

Results of the *Test of Between-Subjects Effect* shows that the score of *F ratio* (F count) to the years of service factors was 35.16 confirming the F count = 35.16 and F table with the significance level of 0,05 (5%) with the dk for counter 1 and dk for denominator 213, F table was 3,02, and it can be seen that the F count (35,16) was bigger than the F table (3,02) which means that the alternative hypothesis ( $H_a$ ) stating that “Educational level influences the personal competence of Counselors in the Era 4.0” was accepted at the significance level of 5% and the null hypothesis ( $H_0$ ) stating that “Educational level does not influence the

$H_0$  : Educational level does not influence the personal competence of Counselors in Era 4.0

$H_a$  : Educational level influences the personal competence of Counselors in Era 4.0

personal competence of Counselors in the Era 4.0” was rejected. Then it is clear that a higher educational level influences the personal competence of counselors in providing guidance and counseling to students at school.

### 3. Influence of Teachers’ Age of the Personal Competence of Counselors in the Era 4.0 in South Sulawesi

The results of the descriptive analysis performed on the age of Guidance and Counselling teachers on their personal competence in the Era of Industry 4.0 in South Sulawesi is presented in the table 11.

**Table 11.** Results of Descriptive Analysis on the influence of teachers' age on the personal competence of Guidance and Counseling teachers

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Personal Competence	< 20-30	31	58.71	5.757	1.034	56.60	60.82	48	68
	31-40	77	60.13	5.782	.659	58.82	61.44	50	68
	41->	107	60.07	6.284	.607	58.87	61.28	50	68
	Total	215	59.90	6.026	.411	59.09	60.71	48	68
Competence 4.0	< 20-30	31	26.29	2.584	.464	25.34	27.24	19	28
	31-40	77	25.64	2.986	.340	24.96	26.31	17	28
	41->	107	26.07	2.743	.265	25.55	26.60	14	28
	Total	215	25.95	2.809	.192	25.57	26.33	14	28

The results of data analysis show that the group of under 20 – 30 years old got an average score of 58,71, a deviation standard of 5,75, a minimum score of 48, and a maximum score of 68, age between 31 – 40 got the average score of 60.13, deviation standard of 5,78, a minimum score of 50, and a maximum score of 68, and age over 41 got the average score of 59,90, deviation standard of 6,0, a minimum score of 50, and a maximum score of 68. The indicator of competence in era 4.0 also shows various scores. Age <20-30 Years got a mean score of 26,29, deviation standard of 2,58, a minimum score of 19, and a maximum score

of 28. Counselors between 31- 40 years old got an average score of 24.64, a deviation standard of 2.98, a minimum score of 17, and a maximum score of 28. While the group age of over 41 years old got an average score of 25.07, a deviation standard of 2.7, a minimum score of 14, and a maximum score of 28. Thus data showed that counselors in the productive age which is between 31 and 40 years old can give the best service of Guidance and COounseling with the highest score of deviation standard (68).

Homogeneity Test of Educational Level

**Table 12.** Results of Homogeneity of Variances test

Ages of Guidance and Counselling Teachers/Counselor			
Levene Statistic	df1	df2	Sig.
1.843	2	212	.001

To test the analysis of homogeneity of variance, two hypotheses were proposed as below:

H<sub>0</sub> : The three population variants are identical (homogenous)

H<sub>a</sub> : The three population variants are not identical

Based on the *Test of Homogeneity of variances*, the value of Statistic was 1.843 while the was 0.001. The probability value of 0.01 that was smaller than the score of significance level 0.05 (5%) means that the alternative hypothesis (H<sub>a</sub>) was rejected while the null hypothesis (H<sub>0</sub>) was accepted so that it can be concluded if the

three population variants are identical (homogenous). Results of ANOVA analysis on the influence of age on the personal competence of Guidance and Counseling Teachers / counselors in South Sulawesi are depicted in the table 12.

**Table 12.** Results of ANOVA analysis

Ages					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	8.490	20	.425	.802	.709
Within Groups	102.645	194	.529		
Total	111.135	214			

To test the results of ANOVA analysis, two hypotheses below were proposed.

$H_0$  : There is no difference in the personal competence of counselors aged << 20-30 Years, 31-40 Years, and 41 Years>

$H_a$  : There is a difference in the personal competence of counselors aged << 20-30 Years, 31-40 Years, and 41 Years>

To test the hypotheses proposed above, we found out the score of probability or significance value using the SPSS application. The Anova table above shows the value of probability or significance level was 0.709 which was bigger than 0.05 meaning that the null hypothesis ( $H_0$ ) was accepted while the alternative hypothesis ( $H_a$ ) was rejected. It

shows that there is no real difference in the personal competence of teachers who have worked <20-30 Years, 31-40 Years, 41 Years>. Because the results of the analysis showed no real difference, to identify different groups, *homogeneous subsets* analysis did not need to be conducted.

#### **Analysis of the test of the effect of Guidance and Counselling / Counselors' age on their personal competence in the era 4.0**

Results of the test of effect were obtained from multivariate analysis using the *test of between-subjects effect* between the age groups of guidance and counseling teachers / counselors and their personal competence in era 4.0 are presented in Table 13.

**Table 13.** Analysis results of the test of the effect of Guidance and Counselling / Counselors' age on their personal competence

Tests of Between-Subjects Effects							
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Personal competence	51.259 <sup>a</sup>	2	25.629	.704	.496	.007
	Competence 4.0	12.830 <sup>b</sup>	2	6.415	.812	.446	.008
Intercept	Personal competence	586367.842	1	586367.842	16101.307	.000	.987
	Competence 4.0	111451.354	1	111451.354	14100.974	.000	.985
Age	Personal competence	51.259	2	25.629	.704	.496	.007
	Competence 4.0	12.830	2	6.415	.812	.446	.008
Error	Personal competence	7720.490	212	36.417			
	Competence 4.0	1675.607	212	7.904			
Total	Personal competence	779134.000	215				
	Competence 4.0	146457.000	215				
Corrected Total	Personal competence	7771.749	214				
	Competence 4.0	1688.437	214				

a. R Squared = .007 (Adjusted R Squared = -.003)

b. R Squared = .008 (Adjusted R Squared = -.002)

2) Test of the effect of Guidance and Counselling / Counselors' age on their personal competence

To test the effect of Guidance and Counselling / Counselors' age on their personal competence, we performed the

analysis of the *Test of Between-Subjects Effect*, with the following hypotheses:

H<sub>0</sub> : The age of Guidance and Counselling / Counselors does not influence their personal competence level in era 4.0

H<sub>a</sub> : The age of Guidance and Counselling / Counselors influences their personal competence level in era 4.0

From the analysis of the *Test of Between-Subjects Effect*, it can be identified that the value of F ratio (F count) for the age factors was 25.62 confirming the F count = 25.62, and the significance level of the F table was at 0.05 or 5% with the dk four counter = 2 and dk for denominator = 212 showing the F table = 3.02 so that the F count = 25.62 bigger than the F table = 3.02 indicating if the alternative hypothesis (H<sub>a</sub>) stating that The age of Guidance and Counselling / Counselors influences their personal competence level in the era 4.0 was accepted at the significance level of 5% while the hypothesis null (H<sub>0</sub>) stating that The age of Guidance and Counselling / Counselors does not influence their personal competence level in the era 4.0 was rejected. Thus it is clear that The age of Guidance and Counselling / Counselors is highly influential on their personal competence level. In this case, the older they are, the better they serve the counselee. For the competence in era 4.0, the F ratio (F count) of the age factor was 6.14, confirming the F count = 6,14 with the significance level of the F table at 0,5 (5%). The dk for counter = 2 and dk for denominator= 212 showing the F table = 3,02 indicated that the F count (6,14) was bigger than the F table (3,02) which means that the alternative hypothesis (H<sub>a</sub>) was accepted while the H<sub>0</sub> was rejected, or it can be concluded that the age of Guidance and Counselling / Counselors highly influences their personal competence level in the era 4.0. It means that the more year the counselors working and the older they are, the better they provide service for guidance and counseling.

## CONCLUSIONS AND SUGGESTION

Based on the finding and discussion, it can be concluded that: (1) the counselors years of service are influential on their personal competence in the era of industry 4.0 based on the analysis of the *Test of*

*Between-Subjects Effect* indicating that the value of the F ratio (F count) of the years of service was 33.405 confirming the score of F count = 33.405 and the F table value with the significance rate at 0.05 (5%) with dk for counter = 4 and dk for denominator = 2010, the F table (3.02) so that it can be seen that the F count (33.405) was bigger than the F table (3.02) indicating that the alternative hypothesis stating that “years of service influence the Guidance and Counselling teachers’ competence in the era 4.0” was accepted at the significance level of 5% and the null hypothesis (H<sub>0</sub>) stating that “years of service do not influence the Guidance and Counselling teachers’ competence in the era 4.0” was rejected. Thus it is clear that the more years the counselors work, the better they provide guidance and counseling service. Based on the results of *post hoc Test Multiple Comparisons* analysis performed to evaluate the influence between the years of service and personal competence and competence needed in era 4.0., it is concluded that the counselors working in the productive age (2-20 years of working service) showed them best personal competence based on the competencies needed in the era 4.0 in providing service, and those groups refer to new workers. (2) The educational level has an influence on the Personal competence of counselors in the Era of Industry 4.0 as the *Test of Between-Subjects Effect* showed the value of F ratio (F count) for the years of service = 35.16, the F table with the significance level of 0,05 (5%), dk four counter = 1 and dk for denominator = 213 showed the F table = 3,02 so that it can be seen that the value of F count (35.16) was bigger than the F table (3.02) meaning that the alternative hypothesis (H<sub>a</sub>) stating that “the educational level influences the personal competence of counselors in di era 4.0” was accepted at the significance level of 5% while the null hypothesis (H<sub>0</sub>) stating that “the educational level influences the personal competence of counselors in di era 4.0” was rejected. Thus it is clear that the higher educational level will lead the counselors to show a better way in providing guidance and counseling service to students at school; (3) the age of Guidance and Counseling Teachers / counselors influence their personal competence in era 4.0 based on the *Test of Between-Subjects Effect* analysis indicating that the value of F ratio (F count) for the age factor was at 25.62 confirming the F count value = 25.62 and F table had the significance level at

0,05 (5%) with dk for counter = 2 and dk for denominator = 212 showing the F table = 3,02. Thus it can be seen that the F count (25,62) was bigger than the F table (3,02) meaning that the alternative hypothesis ( $H_a$ ) stating that “the age of guidance and counseling teachers/ counselors influences their personal competence in the era 4.0” was accepted at the significance level of 5% while the hypothesis null ( $H_0$ ) stating that “the age of guidance and counseling teachers/ counselors does not influence their personal competence in the era 4.0” was rejected. Then it is clear that the age of guidance and counseling teachers/ counselors is highly influential on the competence which in this case, the older they are, the better they serve the counselee. Related to the competence in the era 4.0, the F ratio (F count) of the age factors was 6.14 confirming the value of F count =6,14 and the F table was the significance level of 0,5 (5%), the dk for counter = 2 and dk for denominator = 212 shows the F table = 3,02 so that the F count (6,14) was higher than the F table (3,02) which means that the alternative hypothesis ( $H_a$ ) was accepted while the Null Hypothesis ( $H_0$ ) was rejected. Thus it can be concluded that the age of guidance and counseling teachers/ counselors influences their competence in era 4.0. Then, it is clear if the age of teachers is highly influential on the quality of service based on the need in di era 4.0 meaning that it is directly proportional with the years of service. In this case, the more years the counselors working and the older they are, the better they provide guidance and counseling service.

From the research results, it is suggested to the guidance and counseling teachers/ counselors to consider their personal competence in providing guidance and counseling service to students especially in era 4.0. Also, counselees need a more flexible personality in providing service since age and experience are not matter. Therefore, a good collaboration between teachers, students, and all school elements are needed to implement good guidance and counseling service at school.

## REFERENCES

- Fatmawijaya, H. A. (2015). Studi Deskriptif Personal competence Counselor yang Diharapkan Siswa. *PSIKOPEDAGOGIA Jurnal Bimbingan Dan Konseling*, 4(2), 124.
- Hecklau, F., Galeitzke, M., Flachs, S., & Kohl, H. (2016). Holistic Approach for Human Resource Management in Industry 4.0. *Procedia CIRP*, 54(June 2017), 1–6. <https://doi.org/10.1016/j.procir.2016.05.102>
- Pandang, A., & Anas, M. (2018). Analisis Permasalahan dan Kebutuhan Penguatan Competence Guru Bimbingan Konseling di Kota Makassar. *Indonesian Journal of Educational Science (IJES)*, 1(1), 1–16. <https://doi.org/10.31605/ijes.v1i1.135>
- Umar, N. F. (2017). Pengembangan Model Kepribadian Counselor Efektif Berbasis Budaya Siri na Pesse. *Penelitian Pendidikan Insani*, 20, 29–37.
- Yandri, H. (2016). Kepribadian Counselor Dan Pembentukan Karakter Siswa Di Sekolah. *Tarbawi*, 1(1).
- Yuwono, D., Sugiharto, P., Hariyadi, S., Amin, Z. N., & Konseling, B. (2019). Pengembangan Competence Counselor Melalui Pelatihan Konseling Motivational Interviewing ( MI ) Berbasis Local Wisdom Budaya Jawa, 1, 111–115.
- Bond, T. G., & Christine M. Fox. (2015). *Applying the Rasch Model Fundamental Measurement in the Human Sciences Third Edition*. New York: Routledge Taylor and Francis Group.
- Divayana, D.G.H. (2018). Pelatihan Pembuatan Buku Digital Berbasis Kvisoft Flipbook Maker Bagi Para Guru Di SMK TI Udayana. *Jurnal Abdimas Dewantara*, 1(2), 31-44
- Hosnan, M. (2014). *Pendekatan Saintifik dan Kontekstual dalam Pembelajaran Abad 21*. Bogor: Ghalia Indonesia

- Hasanah, Lukman Nulhakim Umrotul. (2015). Pengembangan Media Pembelajaran Film Animasi sebagai Media Pembelajaran Konsep Fotosintesis. *Jurnal Penelitian dan Pembelajaran IPA*, 1(1), 91-106.
- Hikmawati. (2010). *Bimbingan Konseling*. Jakarta: PT Rajagrafindo Persada
- Hecklau, F., et al. (2016). Holistic Approach for Human Resource Management in Industri 4.0. 1-6, Conference on Learning Factories. Diambil padatanggal 18 Februari 2020, dari [https://www.researchgate.net/publication/309341485\\_Holistic\\_Approach\\_for\\_Human\\_Resource\\_Management\\_in\\_Industry\\_40](https://www.researchgate.net/publication/309341485_Holistic_Approach_for_Human_Resource_Management_in_Industry_40)
- Sugiharni, G.A.D. (2018). Pengembangan Modul Matematika Diskrit Berbentuk Digital Dengan Pola Pendistribusian Asyn chrnous Menggunakan Teknologi Open Source. *Jurnal Nasional Pendidikan Teknik Informatika (JANAPATI)*, 7(1), 58-72
- Sumintono, B., & Wahyu Widhiarso. (2014). *Aplikasi Pemodelan Rasch untuk Penelitian Ilmu-ilmu Sosial*. Cimahi, Indonesia: Trim Komunikata Publishing House.
- Sumintono, B., & Wahyu Widhiarso. (2015). *Aplikasi Pemodelan Rasch pada Assesment Pendidikan*. Cimahi: Trim Komunikata Publishing House.
- Rahmat, Hidayat. Jurnal tentang “persepsi siswa tentang pribadi counselor yang diharapkan siswa di smp negeri 2 tersono”. di unduh pada Juni 2014
- Rosniati, Hakim. (2014) *Jurnal* tentang “Studi Islam Tentang Akhlak Counselor”.
- Roqib, M., & Nurfuadi. (2009). *Kepribadian Guru, Upaya Mengembangkan Kepribadian Guru yang Sehat di Masa Depan*. Yogyakarta: Grafindo Litera Media.
- Sagala, S. (2011). *Kemampuan Profesional Guru dan Tenaga Kependidikan*. Bandung: Alfabeta. Saudagar, F., & Idrus, A. (2011). *Pengembangan Profesionalitas Guru*. Jakarta: Gaung Persada Press.
- Sisrianti, Nurfarhanah, dan Yusri. *Jurnal* tentang “Persepsi Siswa tentang Personal competence Guru Bimbingan dan konseling/counselor di SMP Negeri 5 Pariaman”
- Sukardi, D.K. (2008). *Proses Bimbingan dan Konseling Di Sekolah*. Jakarta: Rineka Cipta.
- Mushaf, Jejen. ( 2011). *Peningkatan Competence Guru*. Jakarta: Kencana Media Group
- Tohirin. ( 2007). *Bimbingan Dan Konseling di Sekolah dan Madrasah*. Jakarta: PT Raja Grafindo Persada.
- Tucker, S. (2007). *Using Remark Statistics for Test Reliability and Item Analysis*. Baltimore.
- Wirth, R. J., Houts, C. R., & Deal, L. S. (2016). Rasch Modeling with Small Samples : A Review of the Literature have recently advocated for an early-stage quantitative analysis , using a small additional sample , during the scale items which may not appear problematic from qualitative results 2 ) Avoid. In *Vector Psychometrics Group* (p. 2). ISPO