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Key Factors In Character Education

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Abstract

This study successfully identified key factors in character education, involving 34 variables assumed to have a strong correlation with character values. The testing was conducted through various methods, including the Kaiser Meyer Olkin (KMO) test, Bartlett's test, MSA, and confirmation of eigenvalues greater than 1, as well as based on the emerging factor loadings. This research uses explanatory factor analysis to identify key character factors that influence the successful implementation of character education at SMK Negeri 1 Gunungsitoli. This type of research is applied research that applies explanatory factor analysis methods. data obtained by carrying out the dissemination of quesioner to respondents, namely students of SMK State 1 Gunungsitoli of 60 students. The factor analysis results revealed that out of 43 variables, eight main factors were identified to explain the key aspects of character education. The first factor encompasses the ethics and personality of students, while the second factor involves the ethics and discipline of students. The third factor highlights the obedience and communication of students, while the fourth factor focuses on social ethics and student involvement. The fifth factor includes self-ethics and social interaction among students, while the sixth factor is related to academic ethics and the discipline of student learning. The seventh factor emphasises honesty and communication among students, and the eighth factor involves team collaboration and student participation.

Keywords: Character Education, Explanatory Factor Analysis, KMO and Bartlett Test, Ethics, Discipline, Collaboration

INTRODUCTION

The importance of character values in education has been the subject of extensive research and discussion in various fields such as psychology, education, ethics, and literature. Character education is seen as an important element in shaping the moral and ethical development of children and students. Characters education includes the cultivation of values, virtues, and moral reasoning, which are vital to their personal and social development (Maholmes, 1999). Integration of character education into various educational environments has been shown to have a positive impact on students, affecting their character and moral actions. (Han, 2014). Besides, character education is not limited to traditional classroom settings but extends to folk narrative literary materials, and even animated films, which emphasize a diverse approach to instilling character values (Mulyono et al., 2021; Ediwarman et al., 2018; Astuti dkk., 2019; Sari dkk., 2021).

The importance of character education is underlined by its potential to cultivate positive characteristics such as empathy, responsibility, and tenacity, which are essential to creating a conducive learning environment and encouraging harmonious social interaction. (Sutarman et al., 2017). Moreover, character education is not only about instilling moral values but also about developing the emotional intelligence of students, which plays an important role in their overall success and well-being (Nurhayati et al., 2018). Integration of character education has been shown to contribute to the academic success of students and their ability to manage emotions and build positive relationships (Hadi et al. 2019), in the journal "Character Education in the Era of the Industrial Revolution 4.0", in the magazine "Caracter education in the era of the industrial revolution 4.0," in the Journal of the Age of the Industry Revolution 4,020, 2020). The role of teachers and schools in character education is very important, because they play an important

role in giving example and in giving examples and instilling character values to students. (Hanafi, 2021). The implementation of character education is not limited to academic institutions but extends to schools of inclusion, where character education plays an important role in encouraging acceptance and preventing negotiations and violence against children with special needs. (Mubarak & Syamsi, 2019). Furthermore, character education is also closely linked to the cultural and religious values of the community, as it aims to integrate local wisdom and religion values into the educational process. (Sukirno et al., 2023; Sukardi, 2016).

The holistic nature of character education is evident in its emphasis on moral knowledge, moral feelings, and moral actions, which collectively contribute to student character development. (Izzati et al., 2019). Besides, character education is not limited to cognitive development but also includes the development of spiritual intelligence, spiritual intelligences, emotional intelligence and stamina. (Kesi, 2023). The importance of further character education is highlighted by its potential to contribute to the social and environmental goals of open-air adventure education, which emphasizes the wider social impact (Stonehouse, 2020).

In conclusion, research on the importance of character values in education reflects education that highlights the multifaceted nature and its potential to shape the moral, emotional, and social development of students. The integration of character education into a variety of educational environments, including literature, folk stories, and religious teachings, reflects a diverse and inclusive approach. Furthermore, the important role of teachers, schools, and society in example and instilling highlights the collaborative efforts needed to instill these values in students. In the end, character education is not only about nurturing morality, but also about cultivating emotional intelligence, emotional stamina, resilience, and social responsibility, which is vital for their holistic development.

The importance of the analysis of character education factors in a school cannot be ignored. Character education plays an important role in forming a qualified and integrated personality for the student. In this context, the implementation of character education in schools requires a deep understanding of the role of the educational ecosystem (Perdana, 2018). The head of school strategy also plays a crucial role in strengthening the character education of pupils, both through intra- and extra-curricular activities. (Carlyna et al., 2022). In addition, the orphanage also plays a role in instilling character education on religious values and gotong royong childcare. (Afriani et al., 2021). The implementation of character education in schools can also be done through equality and cultivation, which is an important factor in the realization of a nation's civilization. (Hendriana & Jacobus, 2017). The learning process also plays an important role in the development of early childhood character values. (Cahyaningrum et al., 2017).

In addition, functional structural analysis can also be used to understand character education efforts in elementary schools. (Sulistiawati & Nasution, 2022). Supporting and inhibiting factors in the implementation of character education programmes in schools should also be taken into account (Ahmadi et al., 2020). Implementing character education on honesty values also requires appropriate strategies in improving the quality of schools (Anjani et al. 2022). (Makrifah & Ciptaningsih, 2023). Besides, the importance of digital character learning is also a concern in facing the educational challenges of the digital age. (Triyanto, 2020). Character education should also be instilled in children with special needs in inclusion schools. (Asdaningsih & Erviana, 2022).

Education management also has an important role in student character formation. (Indriyani et al., 2023). Character education also involves all interests in education, both family, school, school environment, and the wider community (Ismail, 2021). Characters education can also be implanted from an early age, and is the character and moral shaping of pupils in their interaction in society (Masithoh & Anintyawati, 2022). (Fatimah & Pratikno, 2022). Determining

factors in student character formation also need to be taken into account (Sulaeman et al., 2021). In this context, the implementation of extracurricular education programmes can also support the strengthening of independent and creative character education in pupils. (Sulkifli et al., 2022). SMK State 1 Gunungsitoli is one of the schools that applies character education. Implementation is carried out integrated in learning and through extracurricular activities of pupils. The information obtained through one of the teachers of the subject, that the implementation of character education is more emphasized through guidance and counselling activities by teachers to students who commit behaviour that violates the rules of the school. This research uses explanatory factor analysis to identify any key character factors that influence the successful implementation of character education in the State SMK 1 Gunungsitoli.

RESEARCH METHODS

This type of research is applied research that applies explanatory factor analysis methods. The data used is primary data, i.e. data obtained by carrying out the dissemination of angket/quesioner to respondents, namely students of SMK State 1 Gunungsitoli of 60 students. Sampling techniques used are purposive sampling, i.e. samplings based on certain criteria or considerations, namely students in the major OTKP (Office Automation and Management) and UPW (Tourism Travel Operations). There are 34 statements that are used to find any character factors that influence the implementation of character education.

RESULT AND DISCUSSION

Kaiser Meiyer Olkin (KMO) and Bartlett's Test The KMO test is a test to show whether the sampling method used qualifies or not, which implies whether the data can be further analyzed using factor analysis or not. While the Bartlett's test is the test technique performed to see if the variable used is correlated with other variables. If the variables used have no correlation with the other variable at all, then the factor analysis can not be performed. The results of the KMO and Bartlett's test are shown in Table 1 as follows:

Table 1. KMO values and Bartlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.715
Bartlett's Test of Sphericity	Approx. Chi-Square	2034.417
	df	561
	Sig.	.000

In Table 1 above, the MSA KMO value of 0.715 is greater than 0.50 so that the factor analysis technique can be performed. Bartlett's test value is 0.00 smaller than 0.05, meaning the sample is sufficient, and the variables are correlated with other variables, so that factor analysis techniques can be carried out.

The Anti Image Matrices

The Anti Image Matrices are used to identify and determine which variables are worthy to be used in factor analysis. By taking into account the anti image corelation value (letter a as a sign for MSA) then the requirement must be met: if the MSA value is > 0.50 then factor analysis can be performed.

Table 2. MSA values

Component	**MSA Value**	Component	**MSA Value**	Component	**MSA Value**	Component	**MSA Value**
X_1	0.580	X_{10}	0.626	X_{19}	0.774	X_{28}	0.839
X_2	0.620	X_{11}	0.815	X_{20}	0.719	X_{29}	0.783
X_3	0.641	X_{12}	0.661	X_{21}	0.771	X_{30}	0.704
X_4	0.547	X_{13}	0.565	X_{22}	0.733	X_{31}	0.750
X_5	0.686	X_{14}	0.759	X_{23}	0.754	X_{32}	0.680
X_6	0.744	X_{15}	0.786	X_{24}	0.742	X_{33}	0.723
X_7	0.631	X_{16}	0.582	X_{25}	0.784	X_{34}	0.800
X_8	0.725	X_{17}	0.748	X_{26}	0.746		
X_9	0.649	X_{18}	0.619	X_{27}	0.717		

From Table 2 above, each component has an MSA value > 0.5 so that factor analysis can be performed.

Comunalities

The higher the value of the communalities, the better the factor analysis. Requirements Value communalities on each variable, presented in Table 3 as follows:

Table 3. Value Communalities

Component	**Extraction Value**	Component	**Extraction Value**	Component	**Extraction Value**	Component	**Extraction Value**
X_1	0.880	X_{10}	0.794	X_{19}	0.704	X_{28}	0.772
X_2	0.739	X_{11}	0.778	X_{20}	0.811	X_{29}	0.871
X_3	0.728	X_{12}	0.830	X_{21}	0.757	X_{30}	0.841
X_4	0.739	X_{13}	0.806	X_{22}	0.888	X_{31}	0.770
X_5	0.644	X_{14}	0.847	X_{23}	0.750	X_{32}	0.815
X_6	0.846	X_{15}	0.817	X_{24}	0.660	X_{33}	0.715
X_7	0.780	X_{16}	0.842	X_{25}	0.799	X_{34}	0.783
X_8	0.691	X_{17}	0.697	X_{26}	0.806		
X_9	0.807	X_{18}	0.813	X_{27}	0.699		

From Table 3 above, the extraction value of each component is > 0.5 so that the component examined is able to explain the factor, then the testing can continue.

Total Variance Explained

Total Variance Explained shows the value of each variable analysed by looking at the initial eigenvalues and extraction sum of squared loading. The second criterion for determination is based on the percentage value of the total variance that can be explained by the number of factors to be formed. The eigenvalue and extraction sum of squared loading of each variable are shown in Table 4 as follows:

Table 4. Total Variance Explained Value

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %

1	14.605	42.955	42.955	14.605	42.955	42.955	7.821	23.004	23.004
2	2.994	8.806	51.760	2.994	8.806	51.760	3.788	11.142	34.146
3	2.039	5.996	57.757	2.039	5.996	57.757	3.105	9.133	43.279
4	1.799	5.292	63.048	1.799	5.292	63.048	2.689	7.909	51.188
5	1.519	4.468	67.516	1.519	4.468	67.516	2.594	7.630	58.818
6	1.319	3.879	71.395	1.319	3.879	71.395	2.211	6.503	65.321
7	1.172	3.448	74.842	1.172	3.448	74.842	2.190	6.440	71.761
8	1.071	3.150	77.993	1.071	3.150	77.993	2.119	6.231	77.993
9	0.942	2.772	80.765						
10	0.829	2.439	83.204						
11	0.761	2.237	85.441						
12	0.634	1.865	87.305						
13	0.560	1.648	88.954						
14	0.516	1.516	90.470						
15	0.478	1.405	91.874						
16	0.422	1.242	93.116						
17	0.349	1.025	94.141						
18	0.329	0.966	95.108						
19	0.269	0.792	95.900						
20	0.252	0.741	96.641						
21	0.225	0.663	97.304						
22	0.190	0.558	97.863						
23	0.152	0.446	98.309						
24	0.120	0.353	98.662						

25	0.111	0.325	98.987						
26	0.089	0.261	99.248						
27	0.069	0.202	99.450						
28	0.054	0.159	99.610						
29	0.041	0.121	99.731						
30	0.025	0.073	99.804						
31	0.021	0.061	99.864						
32	0.020	0.058	99.922						
33	0.016	0.047	99.969						
34	0.011	0.031	100.000						

Extraction Method: Principal Component Analysis.

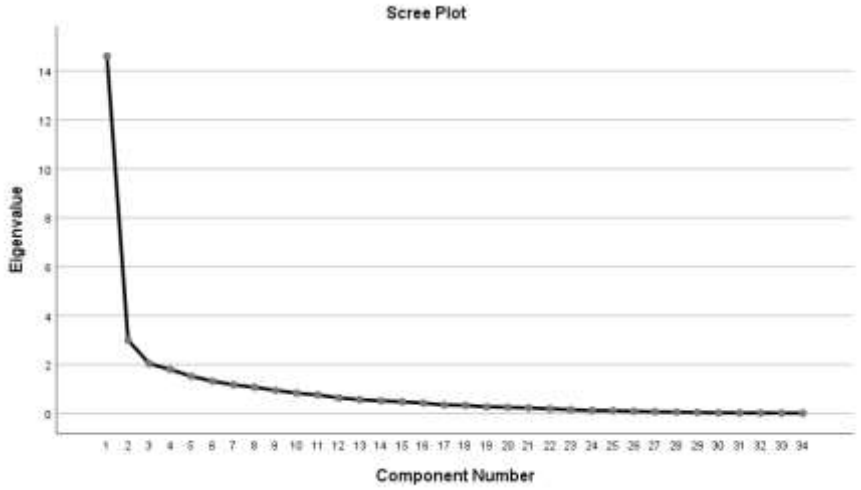
From Table 4 above it can be seen that the initial Eiegen values of the components 1 to 8 > 1, so that the factor analysis process is only carried out on 8 (eight) factors, i.e. the number of factors formed and analysed is only 8 factors. The second criterion is that an interpretation can be made in relation to the total cumulative variance of the sample. When the variables are grouped into factors, the total variance that can be explained is as follows

1. If the 34 variables are extracted into 1 factor, the total variance that can be explained is 14.605/34 x 100% = 42.955%.
2. If the 34 variables are extracted into 2 factors, the total variance that can be explained is 2.994/34 x 100% = 8.806%.
3. If the 34 variables are extracted into 3 factors, the total variance that can be explained is 2.039/34 x 100% = 5.996%.
4. If the 34 variables are extracted into 4 factors, the total variance that can be explained is 1.799 / 34 x 100% = 5.292%.
5. If the 34 variables are extracted into 5 factors, the total variance that can be explained is 1.519/34 x 100% = 4.468% 6.
6. If the 34 variables are extracted into 6 factors, the total variance that can be explained is 1.319/34 x 100% = 3.879% 6.
7. If the 34 variables are extracted into 7 factors, the total variance that can be explained is 1.172/34 x 100% = 3.448% 8.
8. If all 34 variables are extracted into 8 factors, the total variance that can be explained is 1.071/34 x 100% = 3.150% 8.

The cumulative total variance for the 8 factors is 77.993%, which means that the 8 factors formed can already represent 34 character variables, explaining approximately 77.993% of the character values. Therefore, the extraction of the 8 factors obtained can be stopped and the second criterion has been fulfilled.

The scree plot of the factors formed is presented in Figure 1 below.

Figure 1. Scree Plot



Rotated Componen Matrix

Rotated Componen Matrix aims to ensure that a variable is included in which factor by looking at the largest correlation value between the variable and the factor (component) formed. Good factors have a factor loading value> 0.30. The Rotated Matrix value is shown in Table 5 as follows:

Table 5. Rotated Componen Matrix Value

Rotated Component Matrix[a]

	Component							
	1	2	3	4	5	6	7	8
X_1							0.853	
X_2							0.568	
X_3								
X_4						0.688		
X_5					0.488			
X_6		0.829						
X_7						0.672		
X_8				0.634				
X_9						0.478		
X_{10}			0.768					
X_{11}		0.720						
X_{12}			0.801					
X_{13}		0.842						
X_{14}					0.562			
X_{15}	0.514							
X_{16}					0.678			
X_{17}	0.594							
X_{18}		0.706						
X_{19}	0.658							
X_{20}	0.606							
X_{21}	0.664							
X_{22}				0.795				
X_{23}								0.737
X_{24}	0.620							
X_{25}	0.707							
X_{26}	0.694							

X_{27}								0.517
X_{28}	0.605							
X_{29}	0.663							
X_{30}	0.791							
X_{31}	0.775							
X_{32}	0.702							
X_{33}					0.558			
X_{34}	0.846							

In Table 5 if the factor loading value is more than 0.3 and a variable clusters on the same factor, it can be concluded that the indicator can measure a variable. Conversely, if the factor loading value is less than 0.3 then the indicator cannot measure a variable and must be removed.

Component Transformation Matrix

After it is known that 8 factors are the most optimal number, the component matrix table shows the distribution of the 34 variables on the eight factors formed while the numbers in the table are factor loadings, which show the amount of correlation between a variable and factor 1, factor 2, factor 3, and so on up to factor 8. The process of determining which variables will be included in which factor, is done by comparing the amount of correlation of each row. The value of the 8-factor matrix component is shown in Table 6 as follows:

Table 6. Matrix Transformation Components

Component Transformation Matrix

Component	1	2	3	4	5	6	7	8
1	.671	.335	.331	.292	.290	.209	.216	.260
2	-.459	.748	-.012	-.182	.003	.437	.018	.071
3	-.421	-.260	.596	-.170	.275	-.113	.470	.248
4	-.271	.221	-.341	.579	.418	-.424	.238	-.124
5	.128	.009	-.432	-.141	-.431	-.022	.720	.270
6	-.230	-.080	.287	.684	-.588	.177	-.039	.109
7	.132	.413	.386	-.155	-.355	-.551	.109	-.444
8	.029	-.187	.024	.072	.092	.487	.379	-.754

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Factor Interpretation

Interpretation of the results is done by looking at the factor loading value contained in the factor matrix. Factor loading is a number that shows the magnitude of the correlation between a variable and factors one, two, four, five, six, seven or factor eight formed. The process of determining which variables will enter the factor is done by looking at the comparison of the correlation magnitude on each line in each factor matrix table. Based on the interpretation of the factor matrix, the following results are obtained:

Factor 1

The variables that support factor 1 are x_3 = Suggesting to stick to honesty even though other students do not like it, x_{15} = Instilling students not to precede the teacher when walking in front of him, x_{17} = Suggesting students to always provide assistance to friends in need, x_{19} = Giving advice to apologise immediately when making mistakes, x_{21} = Suggesting students to forgive friends who do wrong, x_{24} = Educating to dare to bear the risks of all behaviours carried out, x_{25} = Educating to dare to take the best attitude, x_{26} = Implementing a group learning system, x_{28} =

Directing to show the talents of their students, x_{29} = Understanding the tendency of their students' talents, x_{30} = Educating students to use the sharpness of intuition "feeling" when solving problems, x_{31} = Directing students to be able to analyse problems quickly, x_{32} = Educating students to try to make new things from something that has existed, and x_{34} = Ordering students to do things in a different way from others. Factor 1 is hereafter referred to as the "Student Ethics and Personality" factor.

Factor 2
The variables that support factor 2 are x_6 = Directing students to pay attention when learning is taking place, x_{11} = Asking students to obey all school rules, x_{13} = Educating students to speak well, politely when meeting teachers/students, and x_{18} = Educating students not to go against teacher orders and respect all school residents. Factor 2 is then named as the "Student Ethics and Discipline" factor.

Factor 3
The variables that support factor 3 are x_{10} = Suggesting to perform religious worship on time, x_{12} = Directing students to submit a letter of permission when absent from school. Factor 3 is hereinafter referred to as the "Student Obedience and Communication" factor.

Factor 4
The variables that support factor 4 are x_8 = Giving advice to students to do actions that please others, x_{22} = Applying students to help each other. Factor 4 is hereinafter referred to as the "Social Ethics and Student Engagement" factor.

Factor 5
The variables that support factor 5 are x_5 = Giving advice not to expect praise when doing the right thing in the eyes of all friends and teachers at school, x_{14} = Directing students to pray for mothers, fathers after worship, x_{16} = Educating students to greet the father, mother teacher when passing by, and x_{33} = Directing students to take advantage of all opportunities that exist in any case. Factor 5 is hereinafter named as the "Students' Self-Ethics and Social Interaction" factor.

Factor 6
The variables that support factor 6 are x_4 = Educating not to cheat when taking exams, x_7 = Ordering students to carry out assignments given by the teacher, x_9 = Telling students to submit assignments on time. Factor 6 is then named as the "Academic Ethics and Student Learning Discipline" factor.

Factor 7
The variables that support factor 7 are x_1 = Educating students to say the right thing if it is true, x_2 = Advising not to tell lies to achieve a desire. Factor 7 is hereinafter referred to as the "Student Honesty and Communication" factor.

Factor 8
The variables that support factor 8 are x_{23} = Implementing students' mutual cooperation in extracurricular football, basketball, volleyball, and other sports teams in order to win, and x_{27} = Giving students the opportunity to express their opinions during discussions. Factor 8 is then named as the "Team Collaboration and Student Participation" factor.

CONCLUSION

The key factors in character education found were students' ethics and personality, students' ethics and discipline, students' obedience and communication, students' social ethics and engagement, students' self-ethics and social interaction, students' academic ethics and learning discipline, students' honesty and communication, and students' team collaboration and participation. The variables that support factor are x_3 = Suggesting to stick to honesty even though other students do not like it, x_{15} = Instilling students not to precede the teacher when walking in front of him, x_{17} = Suggesting students to always provide assistance to friends in need, x_{19} = Giving advice to apologise immediately when making mistakes, x_{21} = Suggesting students to forgive friends who do wrong, x_{24} = Educating to dare to bear the risks of all behaviours carried out, x_{25} = Educating to dare to take the best attitude, x_{26} = Implementing a group learning system, x_{28} = Directing to show the talents of their students, x_{29} = Understanding the tendency of their students' talents, x_{30} = Educating students to use the sharpness of intuition "feeling" when solving problems, x_{31} = Directing students to be able to analyse problems quickly, x_{32} = Educating students to try to make new things from something that has existed, and x_{34} = Ordering students to do things in a different way from others. The variables that support factor 8 are x_{23} = Implementing students' mutual cooperation in extracurricular football, basketball, volleyball, and other sports teams in order to win, and x_{27} = Giving students the opportunity to express their opinions during discussions

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