IJAGC INTERNATIONAL JOURNAL OF APPLIED GUIDANCE AND COUNSELING Vol.5 No.2 78-88

Moral Intelligence Inventory: A Moral Intelligence Measurement Tool for Public Junior High School Students

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ARTICLE INFO

Article history:
Received 2 july 2024
Revised 20 July2024
Accepted 29 July2024

Keywords:
Moral intelligence
vocational school
students

ABSTRACT

Moral intelligence is the ability to differentiate between right and wrong, create exact choices, and behave ethically according to applicable norms and rules. This development is purposed to produce a moral intelligence inventory. This method applies Borg and Gall development model. The population of this research is students of junior high schools in Malang. Indeed, the sampling is decided through cluster random sampling, wherein 300 students were selected as the research sample. The data are analyzed using Product Moment Pearson analysis, Alpha Cronbach, normality test, and factor analysis. This development draws on a moral intelligence inventory product for junior high school students in Malang, which consists of 45 statement items. These met the criteria of moral intelligence inventory, validity test, and reliability test on a high scale with a 0.907 coefficient. Future research is suggested to improve moral intelligence inventory for elementary, senior high school, and vocational school students. They considered that these levels' development, age maturity, and learning process differ from junior high school. Additionally, the following researchers are expected to employ other theories that discuss moral intelligence to assist students in finding out their moral intelligence level.

ISSN: 2722-2365 (Online) 2722-2357 (Print)

Introduction

Schools, as educational institutions, not only provide students with academic knowledge but also equip students with moral knowledge so that in the future, students will have good moral intelligence to distinguish between good and bad. The purpose of education stated in the national education standards agency (BSNP) is to improve knowledge,

intelligence, personality, noble morals, and skills to live independently and follow further education according to the learning process (Syakrani et al., 2022). In response, building moral intelligence is very important to be taught from an early age. Schools should have an essential role in this because a student who is already in school will spend some of his time at school, which means that some of the students' time is the responsibility of the teacher at school, especially for understanding and instilling noble morals (S et al., 2023).

According to Borba, moral intelligence is understanding right and wrong. Everyone has solid ethical beliefs and acts based on those beliefs so that people can behave correctly and honorably. Such as the ability to understand other people's suffering, help each other, not act maliciously towards others, accept and respect differences of opinion, be empathetic, and show compassion and respect for others (Hadian Shirazi & Sabetsarvestani, 2021)

Moral intelligence underlies humans to do something useful and make human life better. Moral intelligence distinguishes right from wrong, determines the most appropriate, and behaves ethically according to applicable norms (Borba et al., 2008). In line with this, Lickona defines moral intelligence as the ability to build moral values such as honesty, responsibility, and justice, which are learned in human life. In instilling moral values, a sense of responsibility is needed so that moral intelligence can make the interaction between the environment and the individual functional in forming moral intelligence itself (Belohlavek. The critical goals of each student to have good morals are as follows: a). Increasing piety to God Almighty, formulated in the principle of Belief in the One Almighty God, b). Realizing behavior in speaking that is civilized, cultured, and respectful to each other as the principle of just and civilized justice; c). They were increasing a sense of unity and oneness in a challenging, solid, strong, steadfast, and never-give-up personality character; d). Increasing responsibility towards fellow society, e). Improving the mindset (mindset) to respect and appreciate each other's opinions by prioritizing the public interest, f). They were fair and wise when deciding on a problem . A deep understanding of moral values in real life, society, nation, and state should start from individuals, families, and communities to be more effective. Moral values are also greatly determined by a person's ability to respond to the environment in which they live so that new knowledge regarding morals will be formed (Laka et al., 2024)

The community environment where students are raised is currently one of the factors causing the decline in morality, such as parental supervision, spiritual and religious education, support from the community where they live, and proper parenting. With problems like this,

parents need more supervision so students have actions or manners that follow applicable norms and morality. Furthermore, Borba formulates moral intelligence into seven virtues: empathy, conscience, self-control, respect, kindness, tolerance, and fairness. These main virtues will protect children, help them stay on the right path, and encourage them to behave according to moral teachings (Pranoto et al., 2021)

Piaget based on his observations of several children aged 4-12 years, Piaget concluded that the ability to understand moral issues such as lying, theft, punishment, and justice takes place based on the first stage at the age of 4-7 years, called heteronomous morality, the second stage at the age of 7-10 years, called the transition stage, the third stage at the age of 10 years and 34 then called autonomous morality (Santrock et al., 2020) In addition, the more mature the child will realize that social groups are involved in various levels of seriousness in several actions. Social media often reports deviant events that students usually carry out. For example, A brawl between students that resulted in the loss of one student's life occurred again on Monday (24/9/2012).

A student of SMAN 6 South Jakarta, Alawy Yusianto Putra (15), died after he and his friends were attacked by a group of students from their neighboring school, SMAN 70. The police have already pocketed the names of ten students from SMAN 70 who were involved. The violent behavior was manifested through deviant behavior. In response to the incident above, guidance and counseling services are essential in increasing students' moral intelligence. If students experience problems that ultimately interfere with the learning process and development of their potential, then it is confident that there is a problem with the student's moral intelligence (Rahman & Yusra, n.d.). In response, it is essential to carry out guidance and counseling services to understand the importance of instilling morals in each student.

Based on the results of interviews with Counselors at one of Malang's Junior High Schools, students often do unexpected actions, such as skipping school, cheating on exams, speaking impolitely to teachers and peers, smoking in the school bathroom, fighting with friends at school, are often late, and are often absent, this illustrates that students do not understand moral intelligence. To overcome this problem, counselors need data in an inventory to determine students' ethical intelligence levels.

Inventory is a tool to estimate and assess the presence or absence of behavior, habits, attitudes, interests, and so on Rahardjo & Gudnanto. Inventory is a data collection instrument categorized as a typical test containing many statements selected and filled in by students

according to their condition (Loewenthal & Lewis, 2020). So, inventory can be said to be a measuring tool or instrument used to measure, identify, or reveal the presence or absence of behavior, interests, and attitudes possessed by a person, which contains a list of statements that must be answered by individuals according to their condition (Urbina, 2014). In the inventory, there are no right or wrong answers because each statement item is responded to according to the condition of each individual.

Moral intelligence inventory is one of the instruments counselors need to provide guidance and counseling services in schools. Counselors can find information about students through this moral intelligence inventory so that in providing guidance and counseling services in the personal and social fields, counselors can adjust their needs according to the results of the interview data distributed at school.

The reasons for the importance of developing this moral intelligence inventory include 1) the unavailability of an inventory, measuring tool, or instrument that can reveal the moral intelligence experienced by students, 2) the inventory is very effective, practical, efficient, and easy to use, 3) students fill out the moral intelligence inventory themselves so that students can find out the level of moral intelligence experienced so that counselors can provide services that are following the needs of students. The moral intelligence inventory is one of the instruments counselors need to provide appropriate guidance and counseling services that follow what students need. Counselors do not readily collect data to determine the level of moral intelligence experienced by students because there is no moral intelligence inventory available in schools. Therefore, researchers are interested in developing a moral intelligence inventory for junior high school students. Researchers hope that counselors can use the results of this moral intelligence inventory development research as a basis for providing guidance and counseling services.

Method

This moral intelligence inventory uses a development model/strategy developed by Borg and Gall. This strategy is called research and development (R&D). In this study, researchers develop new products through a series of trials, and each trial activity is revised and made accountable (Gall et al., 2014). In this case, the product developed is a moral intelligence inventory for junior high school students. A moral intelligence inventory is a statement related to moral intelligence that students must have and fill in according to their condition. This moral intelligence inventory was developed by following the inventory

development procedure, namely (1) identifying the objectives of the measuring instrument, (2) operationalizing aspects (compiling indicators, grids, blueprints), (3) reviewing items involving experts, (4) field trials (failed test), (5) extensive field trials/item analysis (validity test, reliability, factor analysis), (6) final format (Azwar, 2022). This moral intelligence inventory has product specifications, namely valid, reliable, and multiple benefits. It is said to be valid because this moral intelligence inventory has a composition of indicators or factors that can explain the concept to be measured, has a match between variables and indicators, indicators with descriptors, and descriptors with statements that have been assessed by the validator test (Bennett et al., 1984) While reliable means producing test scores that are relatively consistent or do not change (Zakariah & Zakariah, 2017). It has dual benefits; namely, this moral intelligence inventory can be used by school counselors to determine the level of moral intelligence possessed by each student and help junior high school counselors choose the suitable and appropriate guidance services to assess their students' moral intelligence level. The benefits for students are that they can find out their moral intelligence level so they can decide on the proper steps if their level is in the low category.

This study used a population of junior high school students in Malang City. To obtain a sample of schools categorized as high, medium, or low using the Cluster Random Sampling technique. The data is based on sources from the Ministry of Education and Culture Puspendik, reviewed from the 2019 national exam scores. The results selected 300 students from 3 junior high schools in the city, each school taking 100 students to be research subjects. Azwar, a sample of more than 60 people is sufficient to conduct a more comprehensive field test. The Likert scale of moral intelligence and expert test assessment sheets or validator tests are used to collect data in this study (Azwar, 2019)

There are two data analyses in this study, namely qualitative and quantitative data. Qualitative data is descriptive and evaluative data obtained from the results of expert tests in the form of input, responses, suggestions for the suitability of variables and indicators, indicators with descriptors, and descriptors with statements. Meanwhile, quantitative data in experiments were analyzed using statistical formulas to determine the validity coefficient, reliability coefficient, normality test, and factor analysis (Yuliani & Banjarnahor, 2021). Pearson Product Moment correlation was used to calculate the validity coefficient, and Cronbach's Alpha formula was used to calculate the reliability coefficient. The level of significance used to test the validity of the moral intelligence inventory can be considered valid, namely > 0.3, and if the results obtained are <0.3, it is stated that the statement item is

invalid. Furthermore, to find out the data is usually distributed using the normality test using the One-Sample Kolmogorov-Smirnov Test technique(Peyton et al., 2022) Data is normally distributed if it has a significant value greater than 0.05, then it can be said to be normally distributed, and vice versa. If the considerable value is less than 0.05, then the data is stated to be not normally distributed.

Factor analysis uses KMO-MSA (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) analysis to determine the adequacy of the sample or the feasibility of the entire moral intelligence inventory statement items. If the KMO-MSA value > 0.5 with $p < 0.05$, then the analysis can be continued (Amirrudin et al., 2020). This analysis determines factors to represent the variables based on the eigenvalue size and the percentage of total variance. Only factors with more than one eigenvalue are retained in the factor analysis model. All statistical calculation methods in this study use computer assistance with the SPSS 16.0 for Windows program

Findings and Discussion

Findings

This moral intelligence inventory is compiled based on the conformity grid between variables and indicators, indicators and descriptors, and descriptors and statements. The indicators used in this moral intelligence inventory are based on Borba's opinion (Borba et al., 2008) that moral intelligence is characterized by empathy, respect, tolerance, conscience, self-control, kindness, and justice. More details can be seen in Table 1. The next step that researchers have taken after determining the blueprint of the moral intelligence inventory and compiling statements that follow the descriptors is to review items by involving experts (expert judgment). This activity involves one BK expert and one psychology expert assessing the instrument's suitability with the theoretical construct and one Indonesian language expert assessing the grammar rules. Expert validation is carried out by providing a moral intelligence inventory assessment instrument, which the validator will then evaluate to determine the suitability of the characteristics of the statement items compiled with the Borba theoretical construct (Construct validity) (Azwar, 2022). Based on the results of the expert test, 126 statement items were feasible and suitable to be given to junior high school students in Malang City to be further tested in the field (failed test) to determine the level of validity and reliability of the initial stage of the moral intelligence inventory.

The results of the moral intelligence inventory development after conducting expert tests on psychology experts, guidance and counseling experts, and language experts produced moral intelligence inventory items in the initial field. This is evidenced by the results of the product trial conducted on 30 students at SMPN 8 Malang, which showed a reliability coefficient value of 0.916, with 65 items declared invalid from 126 total statement items. Then, the primary field test was conducted on 300 students at three junior high schools in Malang City, including SMPN 8 Malang, SMPN 23 Malang, and SMPN 24 Malang. The results of the primary field test obtained a reliability coefficient value of 0.907, with 16 items declared invalid from 65 total statement items. Based on the primary field test results with a reliability coefficient value of 0.907, it can be concluded that the moral intelligence inventory for junior high school students in Malang City is highly reliable.

After conducting validity and reliability tests, the next step is to conduct a normality test and produce a value of 0.200, which means that the number is higher than 0.05; it can be concluded that the moral intelligence inventory is normally distributed. As for the results of the factor analysis of the ethical intelligence inventory, the factors produced are 13 interrelated factors in each of its items and 45 statement items. The final result of the development of this moral intelligence inventory produces 45 statement items consisting of 8 favorable statement items and 37 unfavorable statement items, which have a high level of validity and reliability and can be used as a measuring tool to determine the level of moral intelligence students possess.

Table 1. Moral Intelligence Inventory Grid After Exploratory Factor Analysis and Cronbach's Alpha

Variables	Factor	No. Favorable Item	Loading Factor	No. Unfavorable Item	Loading Factor	Number of Items
Moral Intelligence	Tolerance			11	.737	4
				12	.606	
				9	.585	
				3	.522	
	Conscience			17	.671	20
				16	.539	
				18	.495	
				29	.487	
				21	.465	
				27	.445	
				4	.437	
				36	.666	
				23	.431	

				28	.393	
				34	.337	
				26	.321	
				20	.690	
		15	.674			
				10	.386	
				19	.603	
				6	.502	
				1	.474	
				22	.705	
		13	-.440			
	Justice			44	.727	7
				43	.612	
				39	.493	
				45	.434	
				38	.421	
				42	.658	
				41	.656	
	Empathy	2	.675			3
		5	.625			
		35	.417			
	Self-control	40	.548			5
		25	.448			
		24	.405			
				30	-.322	
				32	.154	
	Kindness			37	.593	4
				31	.376	
				33	.574	
				14	-.531	
	Respect			8	.659	2
				7	.629	
Total number of items		**8**		**37**		**45**

Discussion

Based on the results of this development research, a moral intelligence inventory product consisting of 45 items has good validity and reliability. This moral intelligence inventory statement is also worthy of being used as a data collection tool to determine the

level of ethical intelligence possessed by junior high school students in Malang City. Forty-five statement items consist of 8 favorable statements and 37 unfavorable statements.

Developing a moral intelligence inventory for junior high school students is a measuring tool that measures students' moral intelligence levels in the form of a list of statements answered by students according to their circumstances. The advantage of developing this moral intelligence inventory is its validity and reliability. According to Suharsimi Arikunto, a good instrument must meet two essential requirements: valid and reliable. This is emphasized by those who say that validity refers to the extent to which a tool can measure what should be measured (Arikunto, 2010)

So, the author must be able to control students and improve their ability to use moral intelligence instruments. The procedure for implementing the test administration also needs attention to reduce factors irrelevant to the test results. The method for administering the moral intelligence scale is almost the same as the procedure for administering other non-test instruments. Launching the moral intelligence scale must begin by establishing the attitude of the individual to be tested, namely the student. Especially concerning rapport, ego-involvement, and motivation, and then providing the scale and conveying instructions. Furthermore, the school counselor can score the student's answer choices by matching them with the available scoring guidelines, where the scores can later be totaled and transformed into the specified test result category criteria.

Conclusion

Based on the results of the study, it can be concluded that the development of a moral intelligence inventory for junior high school students has produced 45 valid items after going through statistical testing with the Product Moment Person correlation formula, at $p < 0.05$ and has an alpha coefficient (α) of 0.907 which means it is more significant than 0.6. Previously, an expert test stage was carried out, and then a product trial was carried out on 30 students at SMPN 8 Malang with 126 initial items, the main field trial with 61 items for students at SMPN 8 Malang, SMPN 23 Malang and SMPN 24 Malang. Then, a normality test was carried out, which produced a significance value of 0.200, more significant than 0.05 or normally distributed, and this social adjustment inventory produced 13 factors from testing on factor analysis. This is adjusted to the construct of moral intelligence, according to Borba et al., (2008), which is the basis for developing the inventory. Suggestions for school counselors: They hope to use the moral intelligence inventory researchers developed for junior high school students. The results can be used by school counselors to determine the level of moral

intelligence possessed by their students and can help in choosing the suitable and appropriate guidance services to determine moral intelligence in students; school counselors can assist with individual guidance or counseling and group counseling. Suggestions for further research are that further researchers can develop a moral intelligence inventory for elementary, high school, and vocational high school levels. Given the level of development, age maturity, and teaching and learning process of elementary, high school, and vocational high school students, they differ from junior high school students. This moral intelligence inventory can also be researched further with a larger sample to test the level of moral intelligence of junior high school students. Further researchers are expected to be able to use other theories that discuss moral intelligence so that students can better understand in depth the level of moral intelligence they have.

Acknowledgment

Thank you to the principals of SMP 8 23 Malang and SMP 24 Malang, who have facilitated the research location.

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