



**NOTA KESEPAHAMAN
ANTARA
UNIVERSITAS NEGERI YOGYAKARTA
DENGAN
UNIVERSITAS MUHAMMADIYAH YOGYAKARTA
TENTANG**



**PENDIDIKAN, PENELITIAN, PENGEMBANGAN, DAN PENGABDIAN
KEPADA MASYARAKAT**

NOMOR: T/8/UN34/HK.06/2022

NOMOR: 545/C.3-VIII/I/2022

Pada hari ini Senin, tanggal Dua puluh empat bulan Januari tahun Dua ribu dua puluh dua (24 – 01 – 2022) bertempat di Yogyakarta, kami yang bertandatangan di bawah ini:

Prof. Dr. Sumaryanto, M.Kes.	: Selaku Rektor Universitas Negeri Yogyakarta yang diangkat dan ditetapkan berdasarkan Surat Keputusan Menteri Pendidikan dan Kebudayaan Nomor 5723/MPK/RHS/KP/2021 tanggal 27 Januari 2021 tentang Pemberhentian dan Pengangkatan Rektor Universitas Negeri Yogyakarta, dalam hal ini bertindak untuk dan atas nama serta sah mewakili Universitas Negeri Yogyakarta, yang berkedudukan di Jl. Colombo Yogyakarta No.1, Karang Malang, Caturtunggal, Kec. Depok, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55281, Indonesia selanjutnya disebut sebagai PIHAK PERTAMA.
Prof. Dr. Ir. Gunawan Budiyo, M.P., IPM.,	: Selaku Rektor Universitas Muhammadiyah Yogyakarta, yang diangkat dan ditetapkan berdasarkan Surat Keputusan Pimpinan Pusat Muhammadiyah Nomor: 4396/KEP/I.O/D/2020 tentang Pengangkatan Rektor Universitas Muhammadiyah Yogyakarta Masa Jabatan 2020 – 2024, dalam hal ini bertindak untuk dan atas nama serta sah mewakili Universitas Muhammadiyah Yogyakarta, yang berkedudukan di Kampus Terpadu Universitas Muhammadiyah Yogyakarta, Jalan Brawijaya, Tamantirto, Kasihan, Bantul, Daerah Istimewa Yogyakarta, Indonesia selanjutnya disebut sebagai PIHAK KEDUA.

PIHAK PERTAMA dan **PIHAK KEDUA** untuk selanjutnya secara bersama-sama disebut **PARA PIHAK**. Dengan ini **PARA PIHAK** setuju mengadakan Nota Kesepahaman tentang Pendidikan, Penelitian, Pengembangan, dan Pengabdian kepada Masyarakat, dengan ketentuan sebagai berikut:

Pasal 1
MAKSUD DAN TUJUAN

- (1) Maksud Nota Kesepahaman ini adalah sebagai landasan dalam rangka pelaksanaan Kerja Sama dalam mengembangkan sumber daya kampus melalui kegiatan Tri Darma Perguruan Tinggi, yaitu bidang Pendidikan, Penelitian, dan Pengabdian pada masyarakat.
- (2) Tujuan Nota Kesepahaman ini adalah untuk membangun Kerja sama di bidang Pendidikan, Penelitian, dan Pengabdian pada Masyarakat.

Pasal 2
RUANG LINGKUP

Ruang lingkup Nota Kesepahaman ini meliputi :

- a. Pendidikan dan Pengajaran;
- b. Penelitian;
- c. Pengabdian kepada Masyarakat; dan
- d. Kerja Sama bidang lain yang disepakati **PARA PIHAK**.

Pasal 3
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- (1) **PARA PIHAK** sepakat untuk mengambil langkah-langkah secara optimal guna mewujudkan kegiatan sebagaimana dimaksud dalam Pasal 2 Nota Kesepahaman ini dengan membangun kerja sama yang saling menguntungkan bagi **PARA PIHAK**.
- (2) **PARA PIHAK** sepakat bahwa pelaksanaan kerja sama sebagaimana dimaksud dalam Pasal 1 ayat (1) Nota Kesepahaman ini akan diatur lebih lanjut dalam Perjanjian Kerja Sama berdasarkan prosedur dan ketentuan peraturan perundang-undangan.

Pasal 4
PEMBIAYAAN

Segala biaya yang timbul sebagai akibat dari pelaksanaan Nota Kesepahaman ini dibebankan pada **PARA PIHAK**, yang diatur lebih lanjut dalam Perjanjian Kerja Sama.

Pasal 5
JANGKA WAKTU

Nota Kesepahaman ini berlaku selama 5 (lima) tahun terhitung sejak tanggal ditandatangani dan dapat diperpanjang sesuai kesepakatan **PARA PIHAK**.

Pasal 6
PEMANTAUAN DAN EVALUASI

Pemantauan dan Evaluasi atas Nota Kesepahaman ini dilaksanakan paling sedikit satu tahun satu kali.

Pasal 7
PENDELEGASIAN/PELIMPAHAN WEWENANG

PARA PIHAK dapat mendelegasikan wewenangnya kepada unit-unit fungsional di bawahnya untuk menindaklanjuti Nota Kesepahaman ini dengan dilengkapi dokumen Perjanjian Kerja Sama.

Pasal 8
PENGAKHIRAN NOTA KESEPAHAMAN

- (1) Pemutusan Nota Kesepahaman ini dapat dilaksanakan berdasarkan kesepakatan **PARA PIHAK**.
- (2) Nota Kesepahaman ini berakhir dengan sendirinya atau batal demi hukum apabila ada ketentuan perundang-undangan dan atau kebijakan pemerintah yang tidak memungkinkan berlangsungnya Nota Kesepahaman ini tanpa terikat waktu seperti dimaksud dalam Pasal 5 ayat (1).
- (3) Dalam hal Nota Kesepahaman ini berakhir dan atau diakhiri sebagaimana dimaksud pada ayat (1), pengakhiran tersebut tidak menyebabkan berakhirnya perjanjian-perjanjian yang dibuat secara tersendiri apabila Hak dan Kewajiban belum selesai dilaksanakan.

Pasal 9
PEMBERITAHUAN

- (1) Setiap dokumen dan atau pemberitahuan yang berhubungan dengan Nota Kesepahaman ini harus dibuat secara tertulis dan dapat disampaikan secara langsung, melalui pos tercatat dan cara-cara lain yang memungkinkan.
- (2) Alamat yang akan dipergunakan untuk komunikasi PARA PIHAK sebagaimana dimaksud pada ayat (1) adalah sebagai berikut :

a. PIHAK PERTAMA

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Pasal 10
ADDENDUM DAN/ATAU AMANDEMEN

Hal-hal yang belum diatur dalam Nota Kesepahaman ini akan diatur di kemudian hari oleh **PARA PIHAK** yang akan dituangkan dalam Addendum (tambahan) dan/atau Amandemen (perubahan) yang merupakan satu kesatuan yang tidak terpisahkan dari Nota Kesepahaman ini.

Pasal 11
PENUTUP

Nota Kesepahaman ini dibuat dalam rangkap 2 (dua) dan bermeterai cukup, yang masing-masing mempunyai kekuatan hukum yang sama.

PIHAK PERTAMA,
Rektor
Universitas Negeri Yogyakarta



Prof. Dr. Sumaryanto, M.Kes.

PIHAK KEDUA,
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Universitas Muhammadiyah Yogyakarta



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SAKSI PIHAK KEDUA,
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Emotional and social intelligence assessment model for student character reinforcement

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Emotional and
social
intelligence
assessment

789

Received 1 February 2020

Revised 20 July 2020

24 September 2020

9 November 2020

2 December 2020

Accepted 5 February 2021

Abstract

Purpose – The purpose of this study is to help teachers resolve the difficulties in assessing the students' characters through the development of valid, reliable, goodness-of-fit statistic instrument of emotional and social intelligence assessment for elementary school students.

Design/methodology/approach – This study used a research and development model from Plomp with five phases, such as investigation, design, realization, testing and implementation. The research subjects were 345 students of class IV amongst 20 elementary schools in Yogyakarta. Data collection used questionnaires, documentation, interviews, Forum Group Discussion and an observation. Data analysis used descriptive analysis, Aiken's V, exploratory factor analysis and confirmatory factor analysis formulae.

Findings – The research study helps solve the difficulties of teachers in assessing emotional and social intelligence, which have previously been in only one area of psychomotor. The design of emotional and social intelligence assessment instruments is made from three domains of character, namely, cognitive, affective and psychomotor. The form of the instrument is non-test in three variations. The construct of social and emotional intelligence assessment for a character reinforcement has met the validity, reliability and goodness-of-fit statistic.

Research limitations/implications – This study explains that the Emotional and Social Intelligence (ESI) model is applied for measuring cognitive, affective and psychomotor in children. This study proves that the ESI model is a comprehensive assessment model for evaluating the children's soft skills, includes (1) personal abilities: the ability to make rational decisions, the ability to design the future and (2) social skills: the ability to work together and the ability to understand other people.

Practical implications – Teachers can measure and determine the condition of children's soft skills by operating the ESI model. Based on the knowledge of the correct soft skill conditions, the teacher can adjust the teaching materials and teaching methods that would improve the child's soft skills regarding to their respective conditions. Mastering these soft skills will affect the children's capability in facing the challenge in the upcoming society's life.

Originality/value – The novelty of this study is the design model of the emotional and social intelligence assessment instrument developed comprehensively and practically as it is created from three domains of character and three forms of non-test questions, so that the assessment is not mechanical, and easily practiced by users.

Keywords Character reinforcement, Emotional and social intelligence, Assessment model

Paper type Research paper

Introduction

The development of social and emotional intelligence is highly necessary. It is in line with the result of Schwarz's research (Schwarz and Comer, 2018), stating that 70% of successful people in life is not necessarily due to intellectual and vocational intelligence. It is precisely due to the generic intelligence, namely personal ability to manage emotions and work together as well as understanding other people. Other studies also revealed that there are positive influences between assessment and affective education on personality development (Tolchah and Arfan Mu'ammad, 2019). They take the view that the religious and spiritual



International Journal of
Educational Management
Vol. 35 No. 4, 2021
pp. 789-802

© Emerald Publishing Limited
0951-354X
DOI 10.1108/IJEM-02-2020-0046

This work was supported by LP3M (Research, Service and Publication Institute) University of Muhammadiyah Yogyakarta, through the 2019 Research Grant.

education teacher in such situations is positioned better when seeing such teaching as a special vocation. They use Italy as the case study by which to explore a religious and spiritual education approach to teaching in disability situations (Friso and Caldin, 2014).

Social cognitive ability is a significant determinant of functional outcome, and deficits in social cognition are a disabling symptom of psychotic disorder (Ling *et al.*, 2019).

These positive influences manifest in several items such as the ability to respect others, to find alternative solutions to problems, to be creative, patient and self-sufficient (Wen *et al.*, 2019). This research is also supported by the opinion of several researchers (Astuti *et al.*, 2019), who found that to create the good successful personal character in life, it not only requires an intelligence (IQ), but also social and emotional intelligence.

However, the challenges experienced by most elementary school teachers nowadays are they have difficulty in assessing the affective aspects of the students related to character assessment. Although the Ministry of Education and Culture has provided a form of character education assessment in the observation sheet, the assessment process is considered to burden some teachers as it is not impractical, incomprehensive and not supported using technology since it only requires observation (the initial survey, 25/03/2018). As a result, teachers are not able to identify anybody the students who have a problem with social and emotional intelligence and do not understand how to accompany the students to conduct coaching character. Based on the result of the early survey, it is found that elementary school teachers desperately need the more practical and comprehensive instruments of social and emotional character assessment of elementary school students. In previous studies, it was discovered the methods of character assessment with the approach of PKIA (*Penilaian Karakter Intrapribadi dan Antarpribadi*) (Eng: The Intrapersonal and Interpersonal Character Assessment) (Khilmiyah, 2015). However, as the level of validity and reliability of the instrument has not yet been extensively tested, the PKIA assessment book has not been able to be applicable in all schools. Therefore, this study intends to incorporate all the elements of education fields such as cognitive, affective and psychomotor. Furthermore, they are tested on a wide scale in the primary school with 15 various cultures to enable the assessment to be applied thoroughly on all aspects of character and all types of schools. The comprehensive character assessment of emotional and social intelligence aspects is expected to be able to reinforce the students' characters. This research is intended to create valid, reliable, comprehensive instrument character assessment aspects of social and emotional intelligence, which can be useful for the elementary school student's character reinforcement (Tolchah and Arfan Mu'ammam, 2019).

Therefore, this extensive research is very important and strategic to be conducted to help resolve the difficulties experienced by elementary school teachers in assessing the students' characters. The implementation of the comprehensive noble character assessment is developed to respond to the effective abilities of students to become superior and independent human beings.

Literature review

One of the factors of the increase in moral decadence of elementary school children is because education does not profoundly touch the affective aspect and that most of the students do not reflect a good character. The abilities of students in the development of affective skills include social and emotional intelligence that are most likely to underlie the lack of good character building such as the lack of students' ability to overcome conflict, the low attitude of empathy and the low attitude of tolerance (Endalan *et al.*, 1823).

The result of Schwarz's research showed that 70% of successful people in life is not due to intellectual and vocational intelligence but also precisely due to generic intelligence. The generic ability is demonstrated through (1) personal ability (ability to make rational decisions,

ability to design the future) and (2) social ability (ability to co-operate, ability to understand others) (Schwarz and Comer, 2018).

Affective education significantly impacts the development of personality. These positive influences include being able to respect others, being able to find alternative solutions to problems, being creative, being patient and being independent (Ling *et al.*, 2019). (Tolchah and Arfan Mu'ammir, 2019)

Emotional intelligence is associated with improved management of stress and may improve clinical teaching effectiveness of nurse faculty members by modulating stressors in the clinical setting. The present study investigated the relationship between emotional intelligence and clinical teaching effectiveness of nurse faculty teaching at baccalaureate institutions in New York State. There was no statistically significant correlation between emotional intelligence and clinical teaching effectiveness, but there was a statistically significant relationship between faculty rank and clinical teaching effectiveness. Results from this study may be used to enhance understanding of the role emotional intelligence plays in clinical teaching effectiveness (Mosca, 2019).

The successful accomplishment of information systems development activities is reliant on the efforts of developers, who are largely responsible for creating the required system artefacts. Developers encounter numerous obstacles in their efforts to successfully complete activities, such as the need to develop software within highly complex broad-ranging projects. These problems increase levels of stress, which subsequently affect developers' ability to self-regulate their feelings and understanding (Rezvani and Khosravi, 2019).

To build a good successful personal character, it not only requires an intellectual intelligence (IQ) but also social and emotional intelligence. Both intelligences can affect a person's intelligence in determining the type of behaviour when it comes to interacting with themselves and others (Tao *et al.*, 2019).

Measuring personality is being used to improve non-human primate welfare. To expand its use, it is important to identify traits that are shared between species and that measures are reliable, easy to use and less time consuming. Combining personality and other indicators strong validation of the results can be obtained. In the present study, we sought to determine if there is a link between physiological stress response (fecal cortisol metabolites), personality (ratings made by animal keepers and reaction to novel objects) and lateralization of the brain (hand preferences) on eight species of non-human primates: *Callithrix jacchus*, *Callithrix geoffroyi*, *Cebuella pygmaea*, *Saguinus imperator*, *Saguinus oedipus*, *Leontopithecus rosalia*, *Pithecia pithecia* and *Nycticebus pygmaeus*. Personality assessments achieved good levels of interrater reliability (Fernández-Lázaro *et al.*, 2019).

Schools that seriously implement the character education have a tendency to obtain a higher academic score achievement compared to schools that do not implement the character education. The care of children in need of alternative care is a matter of concern to government, non-governmental organisations and international communities. Understanding the barriers to childcare and knowing the measures to overcome them are important in ensuring the safety and well-being of children in alternative care (Abdullah *et al.*, 2018).

There is a relationship between social adaptation behaviour and the duration of students' education (Berkowitz *et al.*, 2003).

The emotional intelligence is a constellation of characteristics and abilities, including intrapersonal and interpersonal skills (Petrides and Andrian, 2001). The development of emotional intelligence has an impact on stress, trust, and performance. Our empirical results show that emotional intelligence mitigates stress and fosters trust amongst software developers working on information system projects (Rezvani and Khosravi, 2019).

Emotional intelligence is the ability of an individual to assess and control emotions in oneself and others and also use this information in ongoing coping methods. Emotional

intelligence is known to have an effect on the success rate of an individual as well as job performance and satisfaction (Vasefi *et al.*, 2018). Spiritual well-being is reflected in the quality of relationships that people have with themselves, others, environment and/or God (Fisher, 2008)

Methodology

Research type

The type of this research is research and development by using a model of five (Plomp, 1997), which consists of five phases, namely, investigation, design, realization, test and implementation (Dudzik *et al.*, 2018).

Time and location of the research

This research was conducted for one year, starting in June 2019. The research was located in elementary school in Yogyakarta Special Region.

Research subject

The research subject was the students in the 4th grade of the elementary school in one city and three districts in Yogyakarta. The number of accumulative test subjects was 518 students, consisting of test subjects limited to 54 students from two elementary schools, and later the test subject was expanded to be 464 students from 15 elementary schools. The selection of the subjects of this research was conducted by using purposive sampling based on the consideration of the age of the students (10–12 years) and the ability to carry out moral reasoning autonomously. Furthermore, it is also considered based on the cultural variations that exist in schools.

Procedure

This research and development were carried out in two stages of activities, namely, the pre-development stage and the development stage. The pre-development activities of the emotional and social intelligence assessment model (PKES) consisted of three stages, namely, the investigation phase, the design phase and the realization stage. The investigation phase is identifying the weakness of the assessment model of character education in elementary school and assesses the needs of the PKES model for teachers and students. The design phase is the activities carried out by researchers in designing the PKES model, including formulating theoretical constructs, developing indicators, describing indicators and arranging instrument items. The realization phase includes the validation by experts and practitioners, the computation validity and the empirical reliability, the evaluation of test results, the revision, the validity and reliability analysis of the PKES model construct.

Data, instrument and data collection technique

The quantitative data were obtained from semi-open questionnaires, while qualitative data were obtained from focus group discussions, interviews and observations. The data collection was through technical documentation, interviews, observations, focus group discussions and questionnaires. The instruments were such as software and hardware documents, interview guidelines, observation sheets and semi-open questionnaires (Burr *et al.*, 2019).

The technique of data analysis

This study used quantitative and qualitative descriptive analysis to describe performance data of emotional and social intelligence. Aiken's V formula was used to test content validity. Cronbach's alpha analysis method was used to identify the level of instrument reliability. Exploratory factor analysis (EFA) technique was used to identify the eigenvalue formed into

a factor or dimension of latent variables. The second-order confirmatory factor analysis (CFA) was used to test the suitability of the PKES model (Endalan *et al.*, 1823).

Discussion/analysis

The result of the early investigation conducted for three months at 17 elementary schools in Yogyakarta revealed that there were differences in variation of culture implementation of character education in each school and a variety of course implementation of character education in elementary school. Furthermore, there are also seven variations of cultural implementation of character education in elementary school, namely: (1) the state elementary school that become the pilot area of character education from the government, (2) the state elementary school that does not become the pilot area of character education from the government, (3) Islamic-based state elementary school, (4) Christian Catholic-based state elementary school, (5) Spirit of nationalism-based private elementary school, (6) Islamic integrated elementary school that implement the full day school programme and (7) *Madrasah Ibtidaiyah* (Islamic school) under the Ministry of Religious Affairs.

The initial investigation also showed information about the procedure of the character education implementation undertaken in several schools through (1) line classroom learning, internalization of the character value given in each subject through teacher learning in the classroom; (2) the track of habituation routine in school activities, internalization of the character trained in religious and social activities organized in school; (3) the track of modelling in maintaining discipline, the internalization of the character modelled by teachers and employees in maintaining order and discipline in the schools and (4) the track of religious activities, internalization of character values taught in every programme of religious activities and extracurricular school, for instance, *peringatan hari-hari besar Islam* (PHBI) (Eng: commemoration of Islamic Holy Days).

The evaluation of character assessment implementation in elementary school level is conducted by using two assessment models, such as (1) the evaluation model on teachers' behaviour in class and (2) the moral monitoring model conducted by Islamic teachers. The assessment result of both assessment models in elementary school showed several weaknesses as follows, mechanical assessment, incomprehensive assessment limited to only behaviour aspect. The results of the assessment have not touched the skills needed to reinforce the personality of the students, and the students are not involved in assessing their own reasoning and moral feelings.

Based on the result of analysis on teachers' necessity, it reveals that teachers highly require guidebooks of social and emotional intelligence assessment to assess the student's character. This guide can be utilized as a standard guideline for teachers to measure the ability of *soft* skills mastered by the students as a fundamental principle in achieving success (Dudzik *et al.*, 2018).

The design of the instrument of the PKES model assessment

To design an instrument grid of the PKES model assessment, it begins with the formulation of the conceptual definition of emotional and social intelligence. Emotional intelligence is defined as an individual's ability to recognize emotions, appreciate the emotions, manage the emotions, control the feelings and feel the reality of spirituality to understand the self-existence and courageous to be responsible for private life, and thus it is able to build a noble personality (Bar-On, 2000). This definition was formulated as a result of the synthesis of five concepts of emotional intelligence theory (Chassignol *et al.*, 2018).

Social intelligence is defined as the ability to appreciate the perspectives of others, to be aware of social responsibility, to work together, to tolerate and to communicate with others (Zhao *et al.*, 2020). The definition was synthesized from five social theoretical concepts derived from five theory (Dudzik *et al.*, 2018).

Based on this conceptual definition, indicators can be formulated from emotional and social intelligence. Emotional intelligence has five indicators, namely, (1) recognizing one's own feelings, (2) respecting one's feelings, (3) managing one's feelings, (4) controlling one's feelings and (5) feeling the reality of one's spirituality (Salovey and Mayer, 1990). Meanwhile, social intelligence has five indicators, namely, (1) respect the perspectives of others, (2) become aware of social responsibility, (3) co-operate with others, (4) tolerance towards others and (5) communicate effectively with others (Monje Amor *et al.*, 2019).

Based on these indicators, the instrument grid of PKES models are divided into three areas of emotional and social intelligence assessment in character education, such as cognitive, affective and psychomotor as follows:

The design of the PKES model

PKES model is developed in this study as a set of non-test measurements consisting of three types of assessment models to assess emotional and social intelligence. The three types of assessment in the PKES model are as follows:

An assessment model of emotional and social intelligence in the cognitive aspects abbreviated as EKOG and SKOG.

The assessment model is used to identify the stage of moral reasoning of students about emotional and social intelligence. The EKOG and SKOG assessment models are arranged in the form of a projective test. The statements in the projective test are created in the form of a moral dilemma, which indicates that the case is about a moral dilemma. The assessment and grading system are conducted by identifying the reasons stated by students. Furthermore, the answers are assessed based on the classification of moral stages, according to Kohlberg's opinion, as shown in Table 1.

The examples of the question of non-test cognitive aspect

"If your teachers instruct you to buy food to a stall nearby the school with a hundred thousand rupiahs and there is the change. Meanwhile, you are extremely hungry since you have not had breakfast and is not having money with you. The only way to keep your stomach from getting sick is to take some of your teacher's money to buy some food. What would you do? Are you (a) going to use some of the change and not confess, or (b) just let your stomach feel hungry. Explain your answer!"

The assessment model of emotional and social intelligence on the affective aspect abbreviated as EFEK and SFEK.

This assessment model is used to find out one's feelings and sense of spirituality. This assessment model is created in the form of grading skills in the form of several levels of

Table 1.
The cognitive
moral level

Moral level	Score	Moral stages
Pre-conventional	1	Egocentric
	2	Individualist
Conventional	3	Majority approval
	4	Social rules preservation
Post-conventional	5	Social contract commitments
	6	Universal ethics

behavioural skills arranged randomly, and later students are asked to choose norms, feelings and behaviours that are most in accordance with their habits.
The examples of non-test affective aspects

1 When you feel happy

- a. When I am praised by others
- b. When you get a gift/good score
- c. When I manage to help friends
- d. When I can beat others

Emotional and social intelligence assessment model on psychomotor aspects abbreviated as ETOR and STOR.

This assessment model is used to identify the performance of the student's daily behaviour. This assessment model is created in the form of an observation sheet with an observation scale that moves from not appearing until consistently appearing. This assessment is carried out by the class teacher to identify the level of intensity of students' behaviour and attitudes on a daily basis.

The examples of non-test psychomotor aspects

- | | Never | Sometime | Frequent | Most frequent |
|---|-------|----------|----------|---------------|
| 1. Being courageous to apologize for the mistakes that have been made | | | | |
| 2. Being afraid to accept defeat in a competition | | | | |

The validation of PKES model

Validation of the contents of the PKES model is examined by three elements, namely, experts, practitioners and respondents. The result of the validation covered various fields such as psychometrics, character, psychology, languages and methodologies and that the advice of refinement of PKES model draft was obtained. The five experts also carried out a quantitative assessment of the draft PKES model, which included five aspects of assessment, namely, (1) assessment instructions, (2) scope of assessment, (3) use of language, (4) writing assessment and (5) thorough assessment. The expert assessment results were analysed by using the Aiken's V formula and the content validity coefficient was 0.88. The coefficient value is considered high for the item. It indicates that the item has good content validity and supports the overall test content (Ayc , 2019).

Based on the results of the content validation from practitioners, it was obtained the feedback in the form of a reduction in the number of the EKOG and SKOG scoring model from 30 to 10 questions, and the assessment scale from 1 to 4 into 1–6. It was due to several factors such as (1) to facilitate the drafting of dilemmatic moral case in the question appropriately, (2) to measure the ability of elementary school students' moral reasoning on each indicator of emotional and social intelligence, (3) to facilitate the conduct of scoring on each item, (4) to avoid duplication of items used to measure the elementary school students' moral reasoning stages, (5) to create the more practical words used to measure students' moral reasoning and (6) to facilitate the analysis process (Dudzik et al, 2018). The validation result of the students' contents was in the form of test readability of PKES models and it was obtained the feedbacks on the terms simplification and phrases to be able to be understood by students based on their reasoning level.

The test of the first phase of PKES model. The PKES model test was carried out in two stages. The first one was conducted on a small sample in two elementary schools with 54 students. The determination of the school was based on the differences of the culture of the character education applied to the school. The result of the first test showed that the psychomotor aspect of emotional and social intelligence is better than that of the cognitive

and affective aspects. It proves that character education does not have to be conducted in order from cognitive, affective to psychomotor. Therefore, the appropriate method used to implement character education is a constructivist approach. It indicates that the students can be simultaneously trained for the positive character, and can start from the habituation method and then proceed with the method of reasoning behaviour (Zeitlin *et al.*, 2019).

The result also showed that elementary school students have low emotional intelligence on the aspect of the ability to manage emotions, recognize emotions and appreciate the emotions. Meanwhile, the highest capability is the ability to feel a sense of spirituality. The students' lowest social intelligence is the ability to appreciate the perspectives and feelings of others, while the highest ability is the ability of social responsibility and the ability to be considerate towards others (Cellini and Mednick, 2019).

The result of the construct validity analysis by using an EFA, and the result of the reliability analysis by using the Cronbach's alpha formula for the PKES model:

Based on Table 2, it shows that the six instruments of the PKES model are in the satisfactory category, and most of the factors formed are unidimensional. At the ETOR aspect of the PKES model, there are two factors that have a >1 *eigenvalue*. However, there is only one factor chosen, namely the factor which has a close significance to the measured variable and has a greater variant value than the other two factors.

The good ability of the students in the aspect of emotional intelligence is the ability to appreciate and control their own emotions. Meanwhile, the ability of the students who still need guidance is the ability to manage and recognize their emotions (Davidson *et al.*, 2019). In the aspect of social intelligence, the good ability of the students includes the ability to communicate with others, the ability to work together and the ability to empathize with others, while the ability of students who still need guidance is the ability to be responsible and appreciate others.

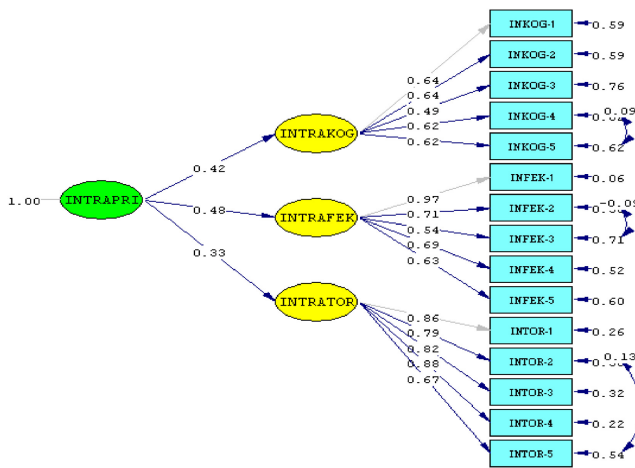
The second test of PKES model. The second test was carried out on samples expanded into 464 students from 15 elementary schools. The selection of the schools was based on the differences in the diversity of school culture in the implementation of character education. The test aims to test the assessment model revised both in the aspect of language, content and implementation procedures based on the feedbacks obtained from the first test (Davidson *et al.*, 2019).

The test of PKES model coherence was carried out by using second-order CFA. There are two measurement models, namely, emotional intelligence and a social intelligence model, with three aspects such as cognitive, affective and psychomotor. Based on the CFA second-order testing in the emotional intelligence construct, it was obtained the path diagram showed in Figure 1. The result of the testing of the goodness-of-fit (GOF) statistics in the emotional intelligence construct (Rijbroek *et al.*, 2019) is showed in Table 3. Based on the result, it was obtained nine GOF indicating the good coherence model and one GOF showing the fair coherence model. Therefore, it can be concluded that the model of measurement of emotional intelligence construct has met the provisions of the GOF statistics.

The test result of the second-order CFA of the emotional intelligence construct obtained 14 values, which has a greater value of t_{count} than 1.96, and the value of the coefficient of standardized factor is greater than 0,50. Thus, it can be concluded that the observed variable

Table 2.
The result of EFA and
reliability test

PKES model	KMO MSA	<i>Eigenvalue</i>	Reliability
EKOG	0.869	1 factor	0.823
SKOG	0.872	1 factor	0.818
EFEC	0.938	1 factor	0.779
SFEK	0.937	1 factor	0.776
ETOR	0.924	2 factors	0.775
STOR	0.902	1 factor	0.774



Chi-Square = 114.48, df = 84, p -value = 0.01518, RMSEA = 0.028

Figure 1.
The test result of
emotional intelligence
construct

Criteria of <i>Goodness of fit</i>	Coherence level	Estimated result	Results
P -value	>0.05	0.01518	Less
RMSEA	≤ 0.08	0.028	Good
RMR	<0.05	0.041	Good
NFI	≥ 0.90	0.97	Good
NNFI	≥ 0.90	0.99	Good
CFI	≥ 0.90	0.99	Good
IFI	≥ 0.90	0.99	Good
RFI	≥ 0.90	0.97	Good
GFI	≥ 0.90	0.97	Good
AG FI	≥ 0.90	0.95	Good

Source(s): Results of LISRE Analysis L

Table 3.
The result of the
coherence model of
social intelligence

(indicator) has good validity for its latent variables. Meanwhile, 1 value of the observed variable (EKOG-3) has a greater t_{count} value than 1.96. However, the standardized factor of coefficient value (λ) is smaller than 0.50, and that it can be concluded that the observed variable (EKOG-3) has sufficient validity for the latent cognitive variable (EKOG). Furthermore, it can be concluded that the 14 indicators used to measure cognitive, affective and psychomotor aspects of emotional intelligence have good validity, while one indicator has sufficient validity. The result of the second-order CFA test of emotional intelligence construct is showed in Table 4.

The result also showed that the value of the coefficient of composite reliability (*construct reliability*: CR) is greater than 0.7, and the coefficient value of extract variance (*variance extracted*: VE) is greater than 0.5 for the three latent variables of the emotional intelligence construct. It indicates that the reliability of all latent variables is good. Thus, it can be concluded that the reliability of the measurement model of all latent variables on the emotional intelligence construct is good (Svensson and Hällgren, 2018).

Based on the *second-order* CFA test on the social intelligence construct, it was obtained the path diagram as showed in Figure 2. The result of the test of the coherence model on the GOF statistics in the social intelligence construct is shown in Table 5.

Table 4.
The result of the
second-order CFA test
the construction of
emotional intelligence

Variable	Stand loading factors	<i>T</i> value	CR	Reliability	VE
<i>EKOG</i>					
EKOG-1	0.64	—	0.74		0.52
EKOG-2	0.64	9.74			
EKOG-3	0.49	8.15			
EKOG-4	0.62	9.06			
EKOG-5	0.62	9.04			
<i>EFEK</i>					
EFEK-1	0.97	—	0.84		0.59
EFEK-2	0.71	17.96			
EFEK-3	0.54	12.48			
EFEK-4	0.69	17.61			
EFEK-5	0.63	15.46			
<i>ETOR</i>					
ETOR-1	0.86	—	0.90		0.65
ETOR-2	0.79	20.29			
ETOR-3	0.82	21.67			
ETOR-4	0.88	24.11			
ETOR-5	0.67	16,10			

Source(s): LISREL analysis result

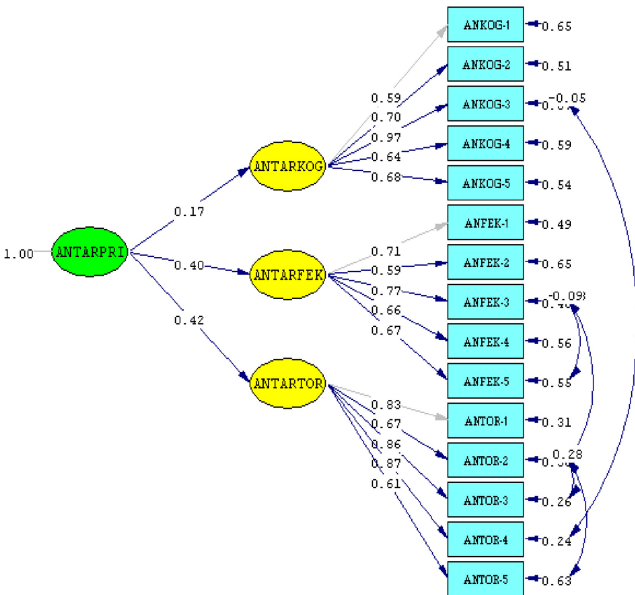


Figure 2.
The result of the test on
social intelligence
construct

The result of the coherence model test obtained nine GOF that showed a good coherence model and one GOF that showed a fair coherence model. Thus, it can be concluded that the measurement model of the social intelligence construct has met the provision of the GOF statistic.

Criteria of <i>Goodness of fit</i>	Coherence level	Estimated results	Results	Emotional and social intelligence assessment
<i>P</i> -value	>0.05	0.00000	Less	
RMSEA	≤0.08	0.048	Good	
RMR	<0.05	0.040	Good	
NFI	≥0.90	0.96	Good	
NNFI	≥0.90	0.97	Good	
CFI	≥0.90	0.98	Good	
IFI	≥0.90	0.98	Good	
RFI	≥0.90	0.95	Good	
GFI	≥0.90	0.95	Good	
AGFI	≥0.90	0.93	Good	
Source(s): LISREL analysis result				<div>799</div> <div> Table 5. The result of the test of coherence model in social intelligence </div>

The result of the second-order CFA test of the social intelligence construct obtained 15 values, which has a greater value of t_{count} than 1.96, and the coefficient value of the standardized factor was greater than 0.50. Therefore, it can be concluded that the 15 observable variables have good validity on the latent variables. Furthermore, it also can be concluded that all indicators used to measure cognitive, affective and psychomotor aspects of emotional intelligence have good validity. The result of the *second-order CFA* test of the social intelligence construct is shown in [Table 6](#).

The result of the test showed that the coefficient value of the composite reliability (*construct reliability*: CR) is greater than 0.7, and the coefficient value of the extracts variance (*variance extracted*: VE) is greater than 0.5 for the three latent variables of the social intelligence construct. It indicates that the reliability of all latent variables is good. Thus, it can be concluded that the reliability of the measurement model of all latent variables of social intelligence construct is good.

Based on the result of the second-order CFA test, it can be perceived that the two models such as (1) the instrument model of emotional intelligence assessment (EPRI) consisting of the

Variable	Stand loading factors	<i>T</i> value	CR	Reliability	VE
<i>SKOG</i>					
SKOG-1	0.59	—	0.84		0.53
SKOG-2	0.70	12.30			
SKOG-3	0.97	14.11			
SKOG-4	0.64	11.48			
SKOG-5	0.68	12.01			
<i>SFEK</i>					
SFEK-1	0.71	—	0.81		0.50
SFEK-2	0.59	11.49			
SFEK-3	0.77	13.35			
SFEK-4	0.66	12.86			
SFEK-5	0.67	11.57			
<i>STOR</i>					
STOR-1	0.83	—	0.88		0.60
STOR-2	0.67	15.14			
STOR-3	0.86	21.36			
STOR-4	0.87	21.69			
SKOG	0.61	13.66			
Source(s): LISREL analysis result					

Table 6.
The result of the second-order *CFA* test of the social intelligence construct

aspects of cognitive emotional intelligence (EKOG), the aspect of affective emotional intelligence (EFEK), the aspect to psychomotor emotional intelligence (ETOR) and (2) the instrument model of social intelligence assessment (SPRI) consisting of the aspect of cognitive social intelligence (SKOG), the aspect of affective social intelligence (SFEK) and the aspect of psychomotor social intelligence (STOR) have met the statistical requirements and is categorized as a suitable measurement model. It indicates that the PKES model has met the GOF statistic, and thus the PKES can be determined as an assessment model to detect the achievements of emotional and social intelligence in character education in elementary school (Berenguer *et al.*, 2018).

Thus, it can be concluded that the result of the second phase of the test analysis on emotional intelligence showed the low students' abilities and that the guidance from the classroom teacher is still required through the habituation and school learning (Keenan *et al.*, 2019). Meanwhile, in social intelligence, all students' abilities are good and that the classroom teacher needs to maintain guidance through counselling and school learning.

Conclusion

The conclusions of this study can be formulated as follows: (1) The assessment model to measure the character education attainment in elementary school is the behavioural evaluation model and the monitoring model of religion based-students' character; (2) the weakness of both models is the incomprehensive mechanical assessment which has not yet assessed the aspect of personality, and does not involve students in the assessment process; (3) The construction of PKES model consists of cognitive, affective and psychomotor aspects. The assessment is comprehensive, which is in the form of a projective test, rating scale and checklist. The scale of the assessment is measured through cases of moral dilemmas, grading skills and performance assessment; (4) The PKES model instruments have fulfilled the content validity and reliability; (5) The PKES model is declared to be valid and reliable, and meet the criteria in GOF statistics; (6) The procedures of PKES models begin by summing all the assessment results of the students' self-report on the reasoning aspect and the moral feeling aspect with the teachers' assessment result through the students' moral behaviour observation in school. The results of the sum of the three aspects are arranged in a categorization, and that the students who need guidance and students who need enrichment can be identified; (7) The guidelines of the PKES model are considered comprehensive, feasible, practical and complete by the teachers as the users since they are equipped with the clear criteria and rubrics, as well as the examples of analysis. The reporting techniques are provided based on the assessment rules in the Curriculum of 2013.

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