

Integrated Curriculum: Optimizing the Multiple Intelligences of Senior High School Students in Indonesia

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Abstract

Aim: With the goal of maximizing students' Multiple Intelligences (MI), this study aims to describe curricular integration in the senior high school context and explores how it is applied as the main curriculum strategy in senior high schools.

Methodology: An international boarding school is the context of the case study methodology. Using a Triangulation method technique, direct observation, interviews, and documentation are all part of the data collection process. Reducing, organizing, and extrapolating conclusions from data with content analysis was performed.

Findings: According to the research findings, the "Holistic and Balanced Education" curriculum is made up of four condensed components that are used to carry out curriculum integration. In order to improve students' learning competencies, an interdisciplinary curriculum and the Contextual Teaching and Learning (CTL) methodology are used in every learning activity. Character development entails establishing the key qualities of RECODING (Religious, Caring, Open-minded, Inspiring). Class programs that focus on specialization help students develop their skills. An assessment is then carried out for every curricular element that has been put into practice.

Implications/Novel Contribution: The study uniquely contribute towards bridging research gap of MI in curriculum and teaching. All of these elements are intended to optimize students' MI and fulfill the curriculum's objective of generating graduates who are ethically superior, motivating leaders, and internationally minded, which makes this subject intriguing. To improve the curriculum and provide evaluative metrics targeted at attaining interdisciplinary insights, we advise teachers to receive further training and direction.

Keywords: Curriculum Integration, Senior High school, Multiple Intelligences, CTL

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INTRODUCTION

Learning models in the world are developing rapidly, as well as educational technology which is also increasingly advanced. This is experienced by every developed and developing country because advanced education indicates that the country is increasingly developing (Brooks, Gupta, Jayadeva, & Abrahams, 2021; Rauber, Zimmermann, Bethge, & Brendel, 2020). Each stage of a child's development requires a different curriculum model, different learning management, and different learning strategies (Ayçiçek, 2021). This is because the learning outcomes achieved by children must be by the stages of their cognitive, moral, and social development (Chan, 2020). This is in line with Ollila's opinion which explains the development of children's cognition through social recognition (Ollila & Macy, 2019). Educators need to pay attention to various aspects of designing curriculum models for interesting learning, such as philosophical aspects, psychological aspects, and environmental aspects (Boon, Orozco, & Sivakumar, 2022). So that the curriculum model used can be effective in developing students' abilities.

This discussion is very interesting because the integrated curriculum model was formed due to the failure of the partial curriculum model in the process of bringing students closer to their needs (Hyun et al., 2020). Partial

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learning studies each subject separately, making students less likely to understand the meaning and relationship between subjects. This makes students separated from the real environment, studying only for the sake of tests without understanding the true meaning of learning (Xie, Vongkulluksn, Justice, & Logan, 2019). This is different from the integrated learning model which emphasizes that every field of study, idea, and topic is always related (Kneen, Breeze, Davies-Barnes, John, & Thayer, 2020). The philosophy of integrated education has deep assumptions about the philosophy of education in the world, that everything in the universe is interconnected (Pardede, 2020). Supported by Roehrig's opinion, the integrated learning model gives children the freedom to be creative through a network of connections between study fields designed by the teacher (Roehrig, Dare, Ring-Whalen, & Wieselmann, 2021). Thus, the integration model continues to strive to create a learning environment that can stimulate children to develop creativity and high curiosity about the world.

The purpose of the learning process is to develop the potential and multiple intelligences of students. A curriculum that can develop children's multiple intelligences is an integrated learning model (Dong & Huang, 2020). Curriculum integration offers an effective way to optimize students' multiple intelligences by educational competency standards in the 21st century, known as the 4 Cs (Creativity, Critical thinking, Communication, and Collaboration) (Cigdemoglu & Köseoğlu, 2019). This shows the importance of applying the theory of multiple intelligences in the integrated learning model. In line with Maharani's opinion that with curriculum integration students can optimally develop their multiple intelligences, and students can do investigations and explorations for in-depth learning (Maharani, Marsigit, & Wijaya, 2020). Then, student character is also developed by building potential spiritual values and honing emotional and intellectual intelligence through a complete and integrated education (Perveen, 2018). Through this curriculum, students learn to socialize, work together in groups, develop their way of thinking, learn to solve problems, negotiate, manage time, and do other social activities that are beneficial for their future.

Research on curriculum integration has been done by many researchers from around the world. The following is research on curriculum integration from various worlds: in London, conducted by Pluim entitled Curriculum integration and the semicentennial of Basil Bernstein's Classification and Framing of Educational Knowledge (Pluim, Nazir, & Wallace, 2020), in New Zealand entitled Curriculum integration in the senior secondary school: A case study in a national assessment context (McPhail, 2018), in Australia with the title Curriculum integration in the twenty-first century: Some reflections in the light of the Australian curriculum (Mockler, 2018), in America with title Examining the effectiveness of a professional development program: integration of educational robotics into science and mathematics curricula (You, Chacko, & Kapila, 2021), in Turkey entitled Improving science teachers' views about scientific inquiry: reflections from a professional development program aiming to advance science center-school curriculum integration (Winarti, Ichsan, Listyarini, & Hijriyanti, 2019), in Brunei with the title The Integration of a Problem-Solving Framework for Brunei High School Mathematics Curriculum in Increasing Student's Affective Competency (Chew, Shahrill, & Li, 2019). That research contains much discussion of curriculum integration that focuses on certain subjects, but there is still little research discussing the integration of multiple intelligences theory-based curriculum in Indonesia. Therefore, it is important to do this research to examine more deeply about curriculum integration in Indonesia. The purpose of this study is to explain how the implementation of an integrated curriculum optimizes the multiple intelligences of senior high school students in Indonesia.

LITERATURE REVIEW

Curriculum Integration

The integrated curriculum combines two or more fields of study in one topic or theme of learning (Garcia-Huidobro, 2018). The integrated curriculum is designed to enhance student learning and attention because it combines objectives from several subject areas (Leifler & Dahlin, 2020; Tabrizi & Kabirnejat, 2017; GATPANDAN, ROSAS, & Dasig Jr, 2017). In curriculum integration, a teacher can combine several fields of study by making logical connections in them known as holistic. A holistic approach focuses on developing creativity, goodwill, and wisdom in children (Kneen et al., 2020). The holistic approach gives children the freedom to be creative through a network of connectedness between fields of study designed by the teacher (Ayçiçek, 2021). Thus, teachers who teach in teams or individually can formulate a lesson plan by integrating several fields of study that have been

designed in separate lesson plans into one integrated curriculum lesson plan.

The basis for the integrated curriculum learning model in the context of senior high school includes a philosophical basis, a psychological basis, and a juridical basis. According to the philosophical basis, the emergence of curriculum integration is strongly influenced by the following three philosophical streams: (1) progressivism, (2) constructivism, and (3) humanism (Kyr, 2015). The flow of progressivism views the learning process as emphasizing the formation of creativity, providing several activities, a natural atmosphere, and paying attention to student experiences (Su & Cheng, 2015). In the learning process, students are faced with problems that demand solutions. To solve these problems, students must select and rearrange the knowledge and learning experiences they already have.

Based on psychological foundations, especially in the psychological context of student development and psychological learning, it is important to note. The psychological development of students is needed in finding out the material as an integrated learning theme given to students so that the level of breadth and depth is by the developmental stages of students (Nilson, 2016). Learning psychology contributes in terms of how the integrated learning material is delivered to students and how students must learn it (Burckhardt, Nugent, & Genovese, 2021). Based on juridical grounds in Indonesia, Law No. 23 of 2002 concerning Child Protection states that every child has the right to receive education and teaching in the context of personal development and the level of intelligence according to their interests and talents (Article 9) (Moeljatno, 2021). So based on these various foundations, through an integrated curriculum model it is hoped that there will be changes in student behavior toward maturity, both physically, mentally, intellectually, morally, and socially.

The purpose of curriculum integration is to help students see the connection between education and science with its application to the reality of the social environment as they understand it (You et al., 2021). Supported by Kneen's opinion that holistic education emphasizes the development of each individual's unique and characteristic potential, not the preservation of cultural belief systems and social institutions (Kneen et al., 2020). Therefore, it is concluded that curriculum integration seeks to create a learning community that can stimulate students to develop their creativity and curiosity about the world.

The integration approach is hierarchical and has four levels, namely Fusion, Multidisciplinary, Interdisciplinary, and Transdisciplinary (Glänzel & Debackere, 2022). Through the identification of problems and needs, the curriculum level used in this research is interdisciplinary. An interdisciplinary curriculum makes connections more explicit across subject areas (Garcia-Huidobro, 2018). Curriculum concepts develop around shared themes, issues, or problems, but interdisciplinary concepts or skills are emphasized throughout subject areas (VanTassel-Baska & Wood, 2023). Curriculum integration is a model that integrates skills, themes, concepts, and topics between each scientific discipline or collaboration between the two (Akib et al., 2020; Liu, Watabe, & Goto, 2022; Winarno, Rusdiana, Susilowati, Afifah, et al., 2020).

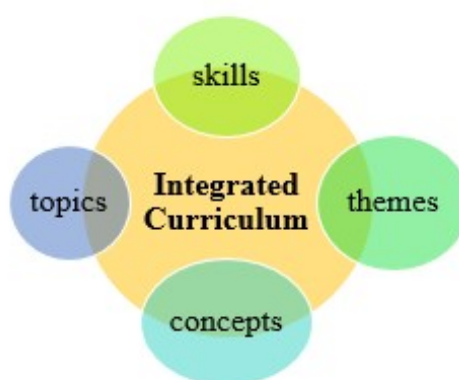


Figure 1. Framework of integrated curriculum

Based on this explanation, the implementation of the integrated curriculum in Indonesia seeks to connect each subject, so that students understand the meaning of a learning theme with a deep understanding, then it is

hoped that students can optimize multiple intelligences well.

Multiple Intelligences Theory in Learning Process

The theory of Multiple Intelligences was developed by Howard Gardner. According to Gardner, there are eight types of intelligence that everyone has, but the levels are not always the same (Maharani et al., 2020). Supported by Yaumi's opinion, that each student has different intelligence, so the task for a teacher is to develop students' intelligence (Yaumi, Sirate, & Patak, 2018). Intelligence can be sufficiently developed and enhanced so that it can function for its owner (Chen, Chiang, & Lin, 2013). Therefore, the role of the professor is to help develop student intelligence. It is also important for teachers to understand the theory of Multiple Intelligences so that learning takes place effectively.

Monotonous learning will make students less interested. Separate learning models tend to be monotonous and will make students pay less attention to learning material (Charsky & Ressler, 2011). Students tend to pay more attention to what is related to the intelligence they have (Lou & Noels, 2019). Supported by Karaduman's opinion, that students will more easily understand lessons if the material is presented by the intelligence that is prominent in them (Karaduman & Cihan, 2018). For example, if a student excels in spatial intelligence, he or she will easily understand certain subjects, such as biology, if it is explained by associating the image elements of a shape with it. So, every teacher needs to know the intelligence of students and then relate it to each lesson.

Students' multiple intelligences also need to be optimized with a variety of learning models. According to Hwang, different teaching models will help students stimulate their intelligence (Hwang, Xie, Wah, & Gašević, 2020). If the teacher is prominent in linguistic intelligence, then every time he teaches he always uses that intelligence model, such as giving lectures, telling stories at length, with poetry, reading, and so on. As a result, students who do not have the same intelligence as that used by the teacher are less well-assisted in their learning process (Al-zoubi & Al-adawi, 2019). Thus, teachers must continue to do self-development by learning and practicing to use of interesting learning models, such as linking several different and integrated subjects.

RESEARCH MODEL

This research uses a qualitative approach with a case study type of research. This research is a study that will reveal, find, and explore information about the implementation of curriculum integration to optimize students' multiple intelligences, by paying attention to the concept of Contextual Teaching and Learning (CTL) and the scientific approach at Thursina IIBS Indonesia, using a qualitative approach. This method is the best to achieve the aim of this study. Qualitative approaches often try to provide more knowledge by describing in detail realities that have not been fully described (Yin, 2009). Meanwhile, case studies are qualitative research in which researchers conduct an in-depth exploration of programs, events, processes, and activities with one or more people (Creswell & Tashakkori, 2007).

Data collection was done in the field including direct observation, interviews, and documentation. Data analysis was done by reducing data, organizing data, and inferring data (Seawright & Gerring, 2008). The results of the data analysis are then checked for validity by examining data triangulation and referential adequacy. The data sources in this research are school management, principal, deputy principal for curriculum, academic studies teachers, Islamic studies teachers, language learning teachers, students, parents, and other reference sources. The process of implementing this research has been done for about 1 year, starting at the beginning of the odd semester and finishing in the even semester. Thus, the data collected for research needs have been fulfilled.

RESULT

Integrated Curriculum as Basic Education

Thursina IIBS (International Islamic Boarding School) Indonesia is an institution that has implemented an integrated curriculum since 2015. The curriculum at Thursina IIBS aims to become a superior Islamic boarding school-based educational institution with international standards, by producing morally excellent graduates, inspiring leaders, and being internationally-minded. The characteristic of the curriculum used is that curriculum development is done through a strategic management process based on the vision, mission, and objectives of the curriculum to give birth to a generation of Muslims who are devout, intelligent, and independent. Combining the Islamic boarding school curriculum, national education curriculum, Cambridge International curriculum,

and Islamic studies curriculum. Curriculum development and implementation not only emphasizes mastery of curriculum content but also Islamic values by integrating these values into every learning activity.

The basis of the curriculum used is to develop holistic learning according to the principles of an integrated curriculum which was later named the Holistic and Balanced Education curriculum. Unlike the education system which is dogmatic, conservative, and less balanced which then creates a generation that is less competent and less self-confident. So, they don't have the skills and abilities to compete in various sectors of life. Then the concept of balance in question is a principle in Islamic religious teachings. The principle of balance provides aspects of comprehensive curriculum content that are proportional to the learning objectives. This curriculum is an educational process that facilitates students to be able to think interdisciplinarily in overcoming problems that develop in the community.

The dynamic education curriculum development model is the reason for Thursina IIB to always innovate to develop a curriculum that is holistic, balanced, relevant, and adheres to institutional values and principles. The concept of education developed is oriented towards scientific value in an aspect of learning and is integrated with religious values by the concept of Islamic teachings. The Al-Qur'an and Hadith as the main basis of all existing educational processes are also integrated with the scientific values contained in every aspect of the lesson and are based on a clear theory. In every learning process, the process of conditioning and character formation, and the process of developing skills, students will follow a comprehensive and balanced learning concept. Thus, the multiple intelligences possessed by students will continue to develop during the learning process, and with a dynamic and varied educational concept, students will develop the intelligence possessed by each student.

The basic principles that are important in the development of the Holistic and Balanced curriculum are based on educational foundations, namely religious foundations, philosophical foundations, socio-cultural foundations, and psychological foundations. This aspect is the basis for developing the educational concept curriculum developed by Thursina IIBS. Integrating the paradigm of a concept of Islamic teachings (al-Qur'an and Hadith) and the concept of scientific teaching of science is the main foundation of the process of implementing learning.



Figure 2. Basic concepts of the education curriculum

In implementing the curriculum, the learning process is done through learning activities that are designed comprehensively and proportionally. The process of implementing character building or manners through daily habituation activities that have been programmed. Implementation of skill development through specialization class programs. And then an evaluation is done on each curriculum component that has been implemented. The integrated curriculum is expected to be able to optimize students' multiple intelligences and produce morally excellent graduates, who are inspiring leaders, and internationally, minded so that they can compete globally and overcome problems in society, according to the curriculum objectives that have been designed.

Implementation of an Integrated Curriculum in the Learning Process

Based on the identification of learning objectives that have been explained, the integrated curriculum with an interdisciplinary level is considered suitable to be used as a basis for implementing the learning process. Interdisciplinary is a curriculum model that has a continuous and complex relationship by mixing several subjects and in this concept, the teacher determines the curriculum for all scientific disciplines. The role of the teacher is

very influential at this stage because teachers are required to design integration between subjects in each learning plan so that they can achieve the learning objectives in each learning plan created. And in the process of designing the learning plan, must be done as a team to avoid misunderstandings between scientific disciplines. The learning plan contains learning activities at each meeting, and each meeting must contain integration between disciplines. Therefore, the process of designing lesson plans is very important to note at this stage.



Figure 3. Interdisciplinary learning activities]

In the process of designing a learning plan, several things need to be considered. Based on the concept of interdisciplinary level curriculum integration, the concept of multiple intelligences theory, and the concept of 21st century learning, namely CTL (Contextual Teaching and Learning), the things that need to be considered are; 1) attention to the integration between the paradigm of an Islamic teaching concept (the Qur'an and Hadith) and the concept of scientific teachings because this is the main foundation of the learning implementation process. 2) must pay attention to the multiple intelligences possessed by each student, because each student has different intelligence. For example, by appreciating students' talents and work, then using different and interesting methods at each meeting. To increase a student's intelligence, teachers must discuss and describe activities that involve these things. In this context, teachers only accompany their students in learning, not to impose certain intelligence on students. 3) Finally, in every learning activity you must pay attention to the categories of levels of thinking according to the levels of thinking called Bloom's Taxonomy, starting from the lowest to the highest. Bloom's Taxonomy is learning objectives that are divided into three domains, namely: Cognitive, Affective, and Psychomotor. The Taxonomy concept also helps to determine the learning objectives of a learning process. So, after doing a certain learning process, students are expected to be able to adopt new skills, knowledge, and attitudes.

Table 1: Example of integration value in each lesson

Lesson Theme	Integration Description	Information
Interpretation Theme: Growth and Development of Living Creatures (QS. Al-Mu'minun 12-14)	According to science incident, man started from fertilization. The ovum is in the fallopian tube for up to 12 hours. If during time was not fertilized by sperm, then he died and was expelled together with blood menstruation. Both sperm and ovum experience capacity inside the fallopian tube, i.e. both of them obtain ability fertilization.	Integration between Interpretation and Biology (Islamic Studies and Academic Studies)
Physics Theme: The Creation of the Universe	And do those who disbelieve do not know? that heaven and earth That both of them formerly are solid, then We separate it between both. And from the water, We made it all something alive . So why? don't you have faith? (QS. Al-Anbiya' 30)	Integration between Physics and Monotheism (Academic Studies and Islamic Studies)

The learning methods used in the learning process also vary. Based on the theory of multiple intelligences which focuses on the intelligence of each student, and based on the concept of the CTL approach. The concept of designing learning methods is to link the intelligence of each student to produce maximum results. Because there is cooperation to perfect the weaknesses and strengths of each intelligence. The intelligence of a child is of course different, and of course, every child has more than one intelligence. Then combined with the concept of CTL learning. Thus, a HOTS learning design was created that was used in the learning process.

The learning process of the scientifically loaded CTL approach involves seven main components. The components of the CTL approach are constructivism, questioning, learning community, inquiry, modeling, reflection, and authentic assessment. This form of constructivism activity is applied at the beginning of every lesson. At the beginning of learning, the teacher asks students questions related to the material to be studied. Based on these questions, students are directed to think and conclude for themselves about what material they will study that day. All students participate actively in answering questions asked by the teacher. Then, it continued with group discussions and presentations. In this way, students can build on the new information obtained.

The second component is questioning. The teacher provides a stimulus for students to ask questions so that students can develop their cognitive and affective abilities. By asking, it means showing a person's mindset, and asking questions can also encourage students' ability to think. From the questions asked by students, the teacher can confirm the students' understanding. The third component is the learning community which is done in learning using the CTL approach using discussion groups in the learning. Through discussion activities, students are trained to express opinions in front of many people in a polite manner and language.

The fourth component is inquiry. In this component, students are required to be able to search for and find their answers to a problem in question. This thinking process is usually done through question-and-answer activities between teachers and students or discussion activities in class. Students will find it easier to understand difficult concepts if they discuss them with their friends. The fifth component is modeling. This component is done to avoid theoretical and abstract learning and to raise students' curiosity. In research, modeling is done by giving practice questions to students that contain simple experimental activities related to the material being studied. By doing simple experiments that are used as models in learning, students can understand and interpret the concepts they obtain.

The sixth component is reflection, where students are guided by the teacher to remember and think about what they have learned. Reflection is a response to events, activities, or newly received knowledge. This means how much and to what extent students can receive and capture the knowledge provided by the teacher. Then, from the results of this reflection, the teacher can see again whether the learning done was what was planned. In addition, students will be able to revise previously held misconceptions into scientific concepts. The seventh component is authentic assessment. Authentic assessment is a process of collecting information done by teachers about students' learning progress. The assessment done in this learning is the assessment of cognitive aspects and psychomotor aspects. Based on the treatment given to the sample class, students' attitudes and skills were assessed using affective sheets and psychomotor sheets by observers.

Holistic and Balanced Curriculum as a Process of Character Education

The aim of character education using the Holistic and Balance Education curriculum is that every graduate is morally excellent, an inspiring leader, and internationally minded. Then, the implementation of the Holistic and Balance Education curriculum in the student character education process is summarized in the core values RECODING concept (religious, caring, open-minded, and inspiring). These core values form the basis for designing activities for developing student character. With the application of RECODING values, it is hoped that students will be able to face every problem or do a problem-solving process by considering various interdisciplinary aspects. Therefore, students do the character development process by optimizing the multiple intelligences they have.

The application of RECODING values is divided into 2 institutional units, The first is the school institutional unit and the second is the boarding school institutional unit referred to as Islamic boarding school. The two units have different programs that have a major influence on the character education process for students. However, the percentage in the Islamic boarding school institutional units is greater in the application of RECODING to the student character education process. In the school institutional unit, the value of RECODING lies in the process of

getting used to congregational prayers, eating together, daily life in the school environment, and every planned learning activity. Then in the Islamic boarding school institutional unit, the value of RECODING lies in many aspects of habituation, such as: starting from a night's rest, waking up at night to pray tahajud or what is called qiyamul lail, fardhu congregational prayers, memorizing the Qur'an (tahfidz) eating together, going to school on time. , sports and art programs, learning the book of the Salaf, and various other habits.



Figure 4. Implementation of character education core values]

Explanation of each aspect of RECODING is as follows: 1) Religious, every student is faithful, virtuous, and committed, in this case, the values of 3 Islamic sciences are very influential, namely, monotheism, sharia, and morality. With this value-based habituation process, it is hoped that each student will experience a good character development process and be able to achieve moral excellence. 2) Caring, Each student has personalized, fast, empathy, and love. The word love in this context means having a feeling of friendship that cares for each other. Students are in the same place for several years and are given a habituation process based on these values, so it is hoped that the value of caring among fellow students can grow well. 3) Open-minded, every student is knowledgeable, moderate, and rahmatan lil alamin. The word moderate here is being a Muslim who does not only pay attention to textual Islamic law but also looks at the context so that it can be easily accepted and implemented properly by the environment. Students are given the habit of being broad-minded, respecting the opinions of others, and giving peaceful values to every environment, and then they become internationally-minded students. 4) Inspiring, students are innovative, excellent, and inspiring. Students are given the habit of organizing an organization that is honest, trustworthy (trustworthy), and intelligent. So, it is hoped that students will become future leaders who can be trusted and become inspiring leaders.

Skill Development Program Based on Multiple Intelligences Theory

This skills development program is designed based on the theory of multiple intelligences. By paying attention to several aspects, such as identifying learning objectives, level of needs, and level of specialization based on the intelligence possessed by students, a skills development program is formulated that must be followed by all students. The process of planning a skill development program starts from the drafting of a detailed and measurable educational curriculum development model concept to a clear implementation stage and a continuous process of evaluating results. Curriculum planning will provide clear direction and goals along with effective achievement strategies. According to the principles of institutional management, an error in planning is a failure and a loss.

This multiple intelligences-based skill development program requires the cooperation of several parties to achieve program objectives. The following are the stages in this program: first stage, all students take an intelligence test conducted by the Student Service Center (SSC) and assisted by an Academic Advisor (AA). AA is the teacher's task besides teaching, all students each have 1 AA, and then 1 AA has around 20 assisted students. The intelligence data is important for the classification of skill development programs at a later stage. In the second stage, all students are required to choose 1 program among several programs that are marketed. At this stage students with AA and SSC guidance will choose 1 program based on their intelligence. In the last stage, AA and SSC will confirm and consult with parents of students regarding the choice of student programs and whether they are appropriate or not. If the student's intelligence data states that the student is not suitable for participating in the selected program, and parents also feel that their child is not suitable for participating in the program, then the student must replace it with an appropriate program. So, at this stage, a final data check is done from various data to avoid mistakes in selecting programs that result in students not being serious about participating in skill development programs and other bad consequences.

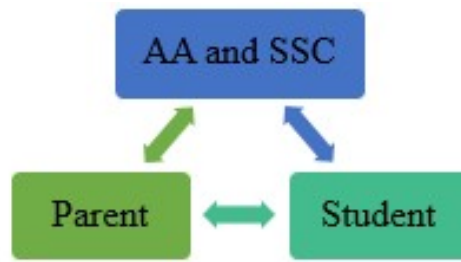


Figure 5. Skill development program coordination flow

The skills development program aims to prepare students to become future leaders who are morally excellent, inspiring leaders, and internationally minded, and as a forum for developing the intelligence possessed by each student. The skill development program is called the Specialization Class and consists of Muslim scholars, entrepreneurs, sciencepreneurs, and professionals.

Table 2: Classification based on multiple intelligences

Class	Kind of Intelligence	Some Learning Outcomes
Moslem Scholar	Intrapersonal and Spatial	Students should trust themselves, be brave enough to disclose the idea up front other moment activities together, and be brave enough to disclose their feelings with appropriate moments sad or happy.
Entrepreneur	Musical and Kinesthetic	Student's own reflective behavior attitude aesthetic, creativity with my ideas, happy singing songs, and students show work art through various media later own mark sell.
Scien- cepreneur	Naturalist and Logical-mathematical	Students can recognize natural surroundings and observe the process of change, then the student can analyze it with qualitative data or quantitative.
Professional	Interpersonal and Linguistic	Student can show Language the recipe with fine, understand several given commands at the same time, and can use sentences simply To disclose his wish.

The detailed content in each class is as follows: Moslem Scholar Class, the Moslem Scholar Class aims to produce ulama cadres who have broad and deep scientific qualities, high moral integrity, and can inspire so that they can become the honey of civilization in society. Material in the Muslim Scholar class: 1) Study of the Development of Islamic Law, This subject explains the history of the formation of Islamic law (tasyri') and its development. 2) Prophetic Leadership and Da'wah Management, This subject explains the foundations of da'wah in the Al-Quran and Hadith, musthalahat in da'wah, and methods of da'wah. 3) History of the Development of Madhhabs, This subject explains the history of the birth of Islamic jurisprudence schools, especially the four madhhabs in Islamic history along with the foundations used by each madhhab. 4) Contemporary Da'wah Strategy and Communication, This subject explains the challenges and strategies of da'wah from the prophetic period to the modern era. 5) Renewal of Islamic Law, This subject explains the renewal of methodology in finding out Islamic law with the formation of fatwa institutions.

Entrepreneur Class, the learning objective is to produce entrepreneurs who have entrepreneurial values & beliefs with competency advantages, creativity, the desire to make changes, and the ability to work with other people. Entrepreneurship material includes: 1) Entrepreneurial Mindset, the transformation of the way of thinking, mindset is a way of looking at life's independence. This subject instills the importance of an Entrepreneurial Mindset in

students. Students are taught how to build the character of an entrepreneur who can think creatively, solve problems, and think innovatively. 2) Technology And Innovation 1, this subject provides a broad spectrum for students regarding the role of technology and innovation in various areas of life as well as important issues related to the development of innovation. Technological trends and innovations in various sectors (ICT, biotechnology, renewable energy, nanotechnology, and others) are provided to equip students to become technology-based entrepreneurs. Through group projects, students are trained to be able to identify and analyze systematically and critically technological innovations in a product. 3) Technology And Innovation 2, This subject provides students with an overview of the ideal processes in developing a new product, starting from the idea generation stage to the product launching stage. 4) Creativity and Innovation, This subject will explore the broad perspective of creativity and innovation and be applied to individuals, organizations, businesses, and society. Students will learn techniques and methods to improve their creative and innovative thinking abilities. 5) Social Entrepreneurship and Innovation, Social entrepreneurship focuses on alleviating social problems with an entrepreneurial approach. This field is developing rapidly and attracting the attention of many people. This module is designed to inspire students and increase awareness of the role and importance of social entrepreneurship, especially in Indonesia.

Sciencepreneur Class, the learning objective is to create Muslim scientists with global insight who have collaborative competence, critical thinking, logical thinking, and scientific knowledge in solving problems. Sciencepreneur class materials include: 1) Sciencepreneur Mindset, this subject is taught to build student character such as caring, critical, and sensitive to the problems around (intrapreneur). Students' abilities will be honed in terms of mindset, skillset, and toolset as a sciencepreneur. Students will be instilled that a scientist not only creates discoveries but is also able to share benefits with others. 2) Systems Thinking, This subject will explore how students learn techniques and methods to improve systemic thinking skills. With Systems Thinking students will see systems from a broader perspective. So that students' thinking patterns are more accurate and realistic in analyzing a problem. 3) English for Science, This subject will develop students' ability to understand and use specific terms or vocabulary used in the branch of science. Students will learn and understand the vocabulary, structure, and use of the English language which can be found in academic textbooks, articles, and science courses. 4) Science and Technology, This subject is structured to provide historical insight and the latest discoveries in both the fields of science and technology, starting from the simplest to the most advanced. Students will also be asked to thoroughly explore and present existing discoveries in the fields of science and technology. This is a means of motivation and development of "scientific thinking" for students. 5) Science Literacy, This subject will build awareness and develop students' ability to be critical of the truth of news, analyze data, and review scientific articles. This lesson will also teach how to communicate in the form of written works, posters, and oral presentations scientifically and interestingly.

Professional Class, the learning objective is to create Muslim professionals who uphold work ethics and culture, have high internal motivation, and collaboration skills, and are adaptable to the latest technology so that they can inspire. Professional class materials include: 1) Intrapreneurial Mindset, This subject will teach you how to build the character of an intrapreneur who can solve problems creatively and innovatively. Students' abilities will be honed in terms of mindset, skillset, and toolset as an intrapreneur. 2) Systems Thinking, This subject will explore how students learn techniques and methods to improve systemic thinking skills. With systems thinking, students will see systems from a broader perspective (Holistic). So that students' thinking patterns are more accurate and realistic in analyzing a problem. Students will be given case studies by learning from professionals in certain fields to practice systemic thinking skills according to the profession. 3) Muslim Professional and Business Ethics, This subject will explore the ethics of being a Muslim professional and the work ethic of a Muslim. Maintaining ethics and professionalism will foster trust, making it easier for someone to communicate and behave in doing a profession. Students will be given case studies by learning from professionals in certain fields to recognize the ethical codes of various professions. 4) Teamwork and Collaboration, This subject will explore how students build a team, the stages in building a team, and working together in a team. 5) Personal Marketing, This subject will guide students to introduce, influence, and convince community groups that they have the required competencies and abilities through various media.

Curriculum Evaluation Process

Curriculum evaluation conforms to integrated curriculum standards between the pesantren curriculum, the national education curriculum, the Cambridge International curriculum, and the Islamic studies curriculum. Evaluation is done thoroughly starting from input, process, output, and outcome by involving all directors, management, teachers, staff, parents, and some alumni as suggestions in curriculum development. Curriculum evaluation is done in 3 divisions. First: monthly curriculum evaluation, This evaluation is done every month and is attended by the board of directors, school management, and coordinators between institutional units. In this section, the purpose of the monthly evaluation is to discuss the achievements and obstacles in implementing 3 important components in the Holistic and Balance curriculum, namely: the learning process, character education, and skill development. Another goal is in the framework of program improvement. The role of evaluation is more constructive because the information resulting from the evaluation is used as input for the necessary improvements in the curriculum program being developed.

Second: annual curriculum evaluation, attended by all directors, management, teachers, staff, parents, and some alumni. Apart from aiming to improve the program, this annual evaluation aims to determine the follow-up to development results. Follow-up to the results of curriculum development can take the form of answers to two possible questions. First, how is the development of students after the implementation of the new curriculum and after the curriculum is disseminated into the existing system? Second, whether the new curriculum is by various aspects of the conditions of the existing system. The following are the results of the summative assessment evaluation of the learning process with an integrated curriculum:

Table 3: Average result of summative assessment

Class	A	B	C	D	E
10th Grade	88	91	93	93	94
11th Grade	89	93	93	94	95
12th Grade	87	90	92	92	93

The average score for all classes is above the minimum completeness score of 80. So based on this, the learning process for the 2022/2023 school year has been successful in achieving the learning target and has been proven to optimize student intelligence. Then the last stage is the submission of suggestions from various parties present, these suggestions are used as notes in the curriculum development process.

Third: evaluation based on certain problems, followed by certain parties related to problems that are happening and need to be resolved immediately. Apart from aiming to follow up on problems, the purpose of this part of the evaluation is accountability to various parties. During the curriculum development phase and when there are urgent problems that need to be resolved immediately, there needs to be some kind of accountability from the curriculum developer to various interested parties. The parties in question include the coordinator of each unit and its members, or every employee who is given responsibility for certain issues. Likewise, parties who sponsor curriculum development activities and parties who are consumers of the curriculum that has been developed.

DISCUSSION

Based on the integrated curriculum concept that has been implemented through 4 educational components, it can be concluded that the integrated curriculum is designed so that students are morally excellent, inspiring leaders, and internationally minded. These components have been designed and are by the basic principles of holistic education which assume that education for children is comprehensive between mind, body, and spirit (Cigdemoglu & Köseoğlu, 2019). Supported by Gajek, that everything that is interconnected and related to student growth and development must be handled as a whole as well as in the educational process (Gajek, 2017). In Morton's opinion, an integrated curriculum changes the way students think from being separate to being holistically connected (Morton, 2023). Thus, the basic principles of an integrated curriculum have been fulfilled.

According to Fogarty's integration theory, there are ten integration models (Akib et al., 2020). Then, the integration model used is the integration model across several disciplines, which is divided into several models, namely the sequential model, the joint model, the webbed model, the thread model, and the integrated model.

Discussing the first component of the learning process, the important thing to note is at the interdisciplinary level integrated curriculum planning stage. The teacher's role is very influential at this stage because the teacher is required to design integration between subjects in each lesson plan. The interdisciplinary curriculum is designed to increase student learning and attention because it combines objectives from several fields of study (Gajek, 2017). In an integrated curriculum, the interdisciplinary teacher discusses with each other to combine several fields of study by making logical connections between them (VanTassel-Baska & Wood, 2023).

However, at this stage some aspects have not been considered, namely related to the teacher's ability to integrate between scientific disciplines. The teacher must pay attention to several aspects in linking subjects, several fields of knowledge must be mastered by the teacher to seek interdisciplinarity between subjects (You et al., 2021). Teachers need to take part in special training so that they can relate to different disciplines so that there are no mistakes in understanding the logical similarities between each discipline (Garcia-Huidobro, 2018). So, it can be concluded that teachers need further training and assistance to develop programs and determine evaluative indicators that aim to achieve interdisciplinary insights.

The CTL approach in each learning activity is considered to be able to assist students in developing cognitive, affective, and psychomotor, as well as optimizing students' intelligence. A learning model that is logical and allows the development of local cultural values in improving students' cognitive, affective, and psychomotor abilities is a learning model using the CTL approach (Haerazi, Prayati, & Vikasari, 2019). The CTL approach invites students to interact directly with local culture and explore knowledge that exists in the local culture (Johar, Ikhsan, Zaura, et al., 2018). With the objective of the integrated curriculum, students can recognize the meaning of a lesson and then be able to get to know their environment well (Garcia-Huidobro, 2018). It also affects students' intelligence, students' multiple intelligences develop with the response stimulus from interesting and varied learning activities (Karaduman & Cihan, 2018).

The discussion of the second component is about character education, the application of RECODING core values in repetitive student habituation activities. Habitual activities are something that is done routinely and continuously so that it becomes a habit. Character cultivation must be habituated and practiced repeatedly so that it becomes a habit and forms the desired character (Giddens, 2023). The behavioral psychology view states that habits can be formed due to conditioning or providing stimulus. The stimulus given must be done repeatedly so that the desired reaction (response) appears (Budiman, 2017). A behavior that is initially very difficult to do, but because it is often repeated will eventually get used to mastering and doing this behavior (Barnard, Bradley, Hodgson, & Lloyd, 2013). Therefore, habituation is an effective teaching method.

The third discussion is about developing skills, The program is designed based on several aspects, such as identifying learning objectives, level of needs, and level of specialization based on students' intelligence. In Yaumi's opinion, the identification of program objectives is an important aspect in the formulation of an effective skill development activity and also influences student intelligence (Yaumi et al., 2018). Apart from identifying goals, a survey of the level of student needs has a big influence on achieving targeted skill development targets. By surveying the level of student needs for several skill development program options, students can provide information about what intelligence they have (Maharani et al., 2020). The program choices designed must also be by student interests. The formulation of skill development program options must pay attention to the multiple intelligences possessed by students because each student has different intelligences (Al-zoubi & Al-adawi, 2019). After fulfilling several of these aspects and by existing theory, it is hoped that the goals of the skills development program can be achieved.

The fourth discussion is about integrated curriculum evaluation, curriculum evaluation is done on all educational components and is divided into 3 types of evaluation with different discussions for each type. Judging from the results of the evaluation of the learning process, students obtained summative assessment results above minimum completeness. Summative assessment aims to assess the achievement of learning objectives or student learning achievements, as a basis for finding out student success and the curriculum used (Akib et al., 2020). The curriculum is considered successful if student learning targets can be achieved (You et al., 2021). This data also concludes that an integrated curriculum can optimize students' multiple intelligences.

According to Hoang, curriculum evaluation which aims to improve the program aims to develop a curriculum

based on case studies that occurred (Hoang et al., 2020). Then curriculum evaluation which aims to be accountable to various parties is not seen as a necessity, but is a necessity. This issue includes moral responsibility which is a logical consequence of educational reform activities (Biesta, 2009). In taking responsibility for the results they have achieved, the curriculum developers and coordinators involved as curriculum implementers need to state the strengths and weaknesses of the curriculum being developed as well as further efforts needed to overcome weaknesses that may occur in the future.

CONCLUSION

This study aims to examine more deeply how to implement curriculum integration to optimize the multiple intelligences of senior high school students in Indonesia. Curriculum integration combines several themes from several fields of study by creating logical relationships within them known as holistic. Then the principle of balance provides aspects of comprehensive curriculum content that are proportionately to the learning objectives. Thus, the integrated curriculum is called the Holistic and Balanced Education Curriculum. The curriculum is designed to achieve the objectives of the curriculum, namely to become a superior and international standard Islamic boarding school-based educational institution, by producing morally excellent graduates, being an inspiring leader, and being internationally-minded.

In its implementation, there are 4 components discussed, namely: learning process, character education, skill development, and evaluation. In the learning process, the level of curriculum integration used is interdisciplinary. Then, the important thing to pay attention to is at the interdisciplinary level integrated curriculum planning stage. The teacher's role is very influential at this stage because the teacher is required to design integration between topics in the subjects in each lesson plan. The twenty-first-century learning model is used with a CTL approach in every learning activity. This is considered to be able to help students develop cognitive, affective, and psychomotor, as well as to optimize the intelligence that students have.

Character education is programmed by applying RECODING core values. This is implemented by doing repeated student habituation activities. This habituation activity is considered to be effective learning for the character education program. Then develop skills that are part of the Specialization Class program. The program is designed based on several aspects, such as identification of learning objectives, level of needs, and level of specialization based on students' intelligence.

The curriculum evaluation is done for all educational components and is divided into 3 types of evaluation with different discussions on each type. Judging from the results of the evaluation of the learning process, students obtained summative assessment results above minimum completeness. Based on these data, it can be concluded that an integrated curriculum can help achieve learning goals and optimize students' multiple intelligences.

However, in the implementation of an integrated curriculum, some problems need attention, namely related to the teacher's ability to integrate between topics in different disciplines. This is important to note so that there is no misunderstanding of the meaning of certain topics during the interdisciplinary integration process which adversely affects the understanding received by students. So, it can be concluded that teachers need further training and assistance to develop programs and determine evaluative indicators that aim to achieve interdisciplinary insights. This research is still not perfect and needs to be supplemented in every discussion. Researchers hope that there will be other research that complements the discussion in this research.

REFERENCES

- Akib, E., Imran, M. E., Mahtari, S., Mahmud, M. R., Prawiyogy, A. G., Supriatna, I., & Ikhsan, M. H. (2020). Study on implementation of integrated curriculum in Indonesia. *IJORER: International Journal of Recent Educational Research*, 1(1), 39-57.
- Al-zoubi, S., & Al-adawi, F. A. (2019). Effects of instructional activities based on multiple intelligences theory on academic achievement of Omani students with dyscalculia. *Journal for the Education of Gifted Young Scientists*, 7(1), 1-14.
- Ayçiçek, B. (2021). Integration of critical thinking into curriculum: Perspectives of prospective teachers. *Thinking Skills and Creativity*, 41, 100895.

- Barnard, Y., Bradley, M. D., Hodgson, F., & Lloyd, A. D. (2013). Learning to use new technologies by older adults: Perceived difficulties, experimentation behaviour and usability. *Computers in Human Behavior*, 29(4), 1715-1724.
- Biesta, G. (2009). Good education in an age of measurement: On the need to reconnect with the question of purpose in education. *Educational Assessment, Evaluation and Accountability (formerly: Journal of Personnel Evaluation in Education)*, 21(1), 33-46.
- Boon, M., Orozco, M., & Sivakumar, K. (2022). Epistemological and educational issues in teaching practice-oriented scientific research: roles for philosophers of science. *European Journal for Philosophy of Science*, 12(1), 16.
- Brooks, R., Gupta, A., Jayadeva, S., & Abrahams, J. (2021). Students' views about the purpose of higher education: A comparative analysis of six European countries. *Higher Education Research & Development*, 40(7), 1375-1388.
- Budiman, A. (2017). Behaviorism and foreign language teaching methodology. *ENGLISH FRANCA: Academic Journal of English Language and Education*, 1(2 December), 101-114.
- Burckhardt, P., Nugent, R., & Genovese, C. R. (2021). Teaching statistical concepts and modern data analysis with a computing-integrated learning environment. *Journal of Statistics and Data Science Education*, 29(sup1), S61-S73.
- Chan, C. W. (2020). Moral education in Hong Kong kindergartens: An analysis of the preschool curriculum guides. *Global Studies of Childhood*, 10(2), 156-169.
- Charsky, D., & Ressler, W. (2011). "Games are made for fun": Lessons on the effects of concept maps in the classroom use of computer games. *Computers & Education*, 56(3), 604-615.
- Chen, H.-R., Chiang, C.-H., & Lin, W.-S. (2013). Learning effects of interactive whiteboard pedagogy for students in Taiwan from the perspective of multiple intelligences. *Journal of Educational Computing Research*, 49(2), 173-187.
- Chew, M. S. F., Shahrill, M., & Li, H.-C. (2019). The integration of a problem-solving framework for brunei high school mathematics curriculum in increasing student's affective competency. *Journal on Mathematics Education*, 10(2), 215-228.
- Cigdemoglu, C., & Köseoglu, F. (2019). Improving science teachers' views about scientific inquiry: Reflections from a professional development program aiming to advance science centre-school curricula integration. *Science & Education*, 28(3), 439-469.
- Creswell, J. W., & Tashakkori, A. (2007). Developing publishable mixed methods manuscripts. *Journal of Mixed Methods Research*, 1(2), 107-111.
- Dong, J., & Huang, Z. (2020). Design of art interactive teaching system based on multiple intelligence theory. *International Journal of Information and Communication Technology*, 16(3), 191-202.
- Gajek, E. (2017). Curriculum integration in distance learning at primary and secondary educational levels on the example of etwinning projects. *Education Sciences*, 8(1), 1.
- Garcia-Huidobro, J. C. (2018). Addressing the crisis in curriculum studies: Curriculum integration that bridges issues of identity and knowledge. *The Curriculum Journal*, 29(1), 25-42.
- GATPANDAN, P. H., ROSAS, M. F., & Dasig Jr, D. (2017). Microsoft office specialist and microsoft technology associate certification: An integrated curriculum for technical skills validation. *Journal of Advanced Research in Social Sciences and Humanities*, 2(5), 277-283.
- Giddens, A. (2023). Modernity and self-identity. In *Social theory re-wired*. Routledge.
- Glänzel, W., & Debackere, K. (2022). Various aspects of interdisciplinarity in research and how to quantify and measure those. *Scientometrics*, 127(9), 5551-5569.
- Haerazi, H., Prayati, Z., & Vikasari, R. M. (2019). Practicing contextual teaching and learning (ctl) approach to improve students' reading comprehension in relation to motivation. *English Review: Journal of English Education*, 8(1), 139-146.
- Hoang, A.-D., Pham, H.-H., Nguyen, Y.-C., Nguyen, L.-K.-N., Vuong, Q.-H., Dam, M. Q., ... Nguyen, T.-T. (2020). Introducing a tool to gauge curriculum quality under Sustainable Development Goal 4: The case of

- primary schools in Vietnam. *International Review of Education*, 66(4), 457-485.
- Hwang, G.-J., Xie, H., Wah, B. W., & Gašević, D. (2020). Vision, challenges, roles and research issues of artificial intelligence in education. *Computers and Education: Artificial Intelligence*, 1, 100001.
- Hyun, C. C., Wijayanti, L. M., Asbari, M., Purwanto, A., Santoso, P. B., Igak, W., ... Pramono, R. (2020). Implementation of Contextual Teaching and Learning (CTL) to improve the concept and practice of love for faith-learning integration. *International Journal of Control and Automation*, 13(1), 365-383.
- Johar, R., Ikhsan, M., Zaura, B., et al. (2018). The development of learning materials using contextual teaching learning (ctl) approach oriented on the character education. In *Journal of physics: Conference series*.
- Karaduman, G. B., & Cihan, H. (2018). The effect of multiple intelligence theory on students' academic success in the subject of geometric shapes in elementary school. *International Journal of Higher Education*, 7(2), 227-233.
- Kneen, J., Breeze, T., Davies-Barnes, S., John, V., & Thayer, E. (2020). Curriculum integration: The challenges for primary and secondary schools in developing a new curriculum in the expressive arts. *The Curriculum Journal*, 31(2), 258-275.
- Leifler, O., & Dahlin, J.-E. (2020). Curriculum integration of sustainability in engineering education—a national study of programme director perspectives. *International Journal of Sustainability in Higher Education*, 21(5), 877-894.
- Liu, J., Watabe, Y., & Goto, T. (2022). Integrating sustainability themes for enhancing interdisciplinarity: A case study of a comprehensive research university in Japan. *Asia Pacific Education Review*, 23(4), 695-710.
- Lou, N. M., & Noels, K. A. (2019). Promoting growth in foreign and second language education: A research agenda for mindsets in language learning and teaching. *System*, 86, 102126.
- Maharani, R., Marsigit, M., & Wijaya, A. (2020). Collaborative learning with scientific approach and multiple intelligence: Its impact toward math learning achievement. *The Journal of Educational Research*, 113(4), 303-316.
- McPhail, G. (2018). Curriculum integration in the senior secondary school: A case study in a national assessment context. *Journal of Curriculum Studies*, 50(1), 56-76.
- Mockler, N. (2018). Curriculum integration in the twenty-first century: Some reflections in the light of the Australian curriculum. *Curriculum Perspectives*, 38, 129-136.
- Moeljatno, S. (2021). *Kuhp (kitab undang-undang hukum pidana)*. Bumi Aksara.
- Morton, T. (2023). Afterword: Sfl, theoretical pluralism and content and language integration at the levels of curriculum, pedagogy and assessment. *International Journal of Bilingual Education and Bilingualism*, 26(3), 363-368.
- Nilson, L. B. (2016). *Teaching at its best: A research-based resource for college instructors*. John Wiley & Sons.
- Ollila, J., & Macy, M. (2019). Social studies curriculum integration in elementary classrooms: A case study on a Pennsylvania Rural School. *The Journal of Social Studies Research*, 43(1), 33-45.
- Pardede, P. (2020). Integrating the 4Cs into EFL integrated skills learning. *Journal of English Teaching*, 6(1), 71-85.
- Perveen, A. (2018). Facilitating multiple intelligences through multimodal learning analytics. *Turkish Online Journal of Distance Education*, 19(1), 18-30.
- Pluim, G., Nazir, J., & Wallace, J. (2020). Curriculum integration and the semicentennial of Basil Bernstein's classification and framing of educational knowledge. *Canadian Journal of Science, Mathematics and Technology Education*, 20, 715-735.
- Rauber, J., Zimmermann, R., Bethge, M., & Brendel, W. (2020). Foolbox native: Fast adversarial attacks to benchmark the robustness of machine learning models in pytorch, tensorflow, and jax. *Journal of Open Source Software*, 5(53), 2607.
- Roehrig, G. H., Dare, E. A., Ring-Whalen, E., & Wieselmann, J. R. (2021). Understanding coherence and integration in integrated STEM curriculum. *International Journal of STEM Education*, 8, 1-21.
- Seawright, J., & Gerring, J. (2008). Case selection techniques in case study research: A menu of qualitative and quantitative options. *Political Research Quarterly*, 61(2), 294-308.

- Su, C.-H., & Cheng, C.-H. (2015). A mobile gamification learning system for improving the learning motivation and achievements. *Journal of Computer Assisted Learning*, 31(3), 268-286.
- Tabrizi, S., & Kabirnejat, M. (2017). Smart school: A comparative research between two Islamic countries, Malaysia and Iran. *Journal of Advances in Humanities and Social Sciences*, 3(1), 58-68.
- VanTassel-Baska, J., & Wood, S. M. (2023). The integrated curriculum model. In *Systems and models for developing programs for the gifted and talented*. Routledge.
- Winarno, N., Rusdiana, D., Susilowati, E., Afifah, R. M. A., et al. (2020). Implementation of integrated science curriculum: A critical review of the literature. *Journal for the Education of Gifted Young Scientists*, 8(2), 795-817.
- Winarti, A., Ichsan, A., Listyarini, L., & Hijriyanti, M. (2019). The effectiveness of collaborative strategy based on multiple intelligences in chemistry learning to improve students' problem-solving skill and multiple intelligences. In *Journal of physics: Conference series*.
- Xie, K., Vongkulluksn, V. W., Justice, L. M., & Logan, J. A. (2019). Technology acceptance in context: Preschool teachers' integration of a technology-based early language and literacy curriculum. *Journal of Early Childhood Teacher Education*, 40(3), 275-295.
- Yaumi, M., Sirate, S. F. S., & Patak, A. A. (2018). Investigating multiple intelligence-based instructions approach on performance improvement of indonesian elementary madrasah teachers. *Sage Open*, 8(4), 2158244018809216.
- Yin, R. K. (2009). *How to do better case studies*.
- You, H. S., Chacko, S. M., & Kapila, V. (2021). Examining the effectiveness of a professional development program: Integration of educational robotics into science and mathematics curricula. *Journal of Science Education and Technology*, 30(4), 567-581.