

2022

Curriculum 2013: Addressing the Needs of High Ability Learners in Indonesian Secondary Schools

Lismawati Lapasi
University of Central Florida



Part of the [Teacher Education and Professional Development Commons](#)

Find similar works at: <https://stars.library.ucf.edu/etd2020>

University of Central Florida Libraries <http://library.ucf.edu>

This Doctoral Dissertation (Open Access) is brought to you for free and open access by STARS. It has been accepted for inclusion in Electronic Theses and Dissertations, 2020- by an authorized administrator of STARS. For more information, please contact STARS@ucf.edu.

STARS Citation

Lapasi, Lismawati, "Curriculum 2013: Addressing the Needs of High Ability Learners in Indonesian Secondary Schools" (2022). *Electronic Theses and Dissertations, 2020-*. 1037.
<https://stars.library.ucf.edu/etd2020/1037>

CURRICULUM 2013: ADDRESSING THE NEEDS OF HIGH ABILITY LEARNERS IN
INDONESIAN SECONDARY SCHOOLS

by

LISMAWATI LAPASI
B.Ed. Universitas Negeri Gorontalo, 2014

A thesis submitted in partial fulfillment of the requirements
for the degree of Master of Education
in the Department of Learning Science and Education Research
in the College of Community Innovation and Education
at the University of Central Florida
Orlando, Florida

Spring Term
2022

ABSTRACT

High ability learners are students with outstanding abilities in one domain or more and have varying learning abilities, interests, and needs. Due to their diversity, these students require curriculum and instruction that can address their needs and facilitate them to reach their full potential. In Indonesia, high ability education is rare to be found as the curriculum is oriented to meet the needs of students of all abilities. However, Indonesia's current national curriculum, *Curriculum 2013*, has the potential to address the needs of high ability learners in the regular classroom. Using the qualitative literature review method, this study analyzed the content of *Curriculum 2013* and its ability to address the needs of high ability learners. It also examined the strengths and weaknesses of *Curriculum 2013*. The results revealed that this curriculum has the ability to meet the needs of high-ability learners in the regular classroom. All four critical components (objectives, learning materials, instructional strategies, and learning assessments) of *Curriculum 2013* contain essential aspects to educating high ability learners, such as 21st century skills, higher order thinking skills, differentiation, and mastery of cognitive and non-cognitive skills. Its ability to address the needs of high-ability learners demonstrates that this curriculum has several strengths in terms of its objectives, learning materials, instructional strategies, and learning assessments. This curriculum also has weaknesses that inhibit it from addressing the needs of high ability learners, such as the provision for high ability learners is not clearly stated in the objectives, there is no acceleration at all grades, differentiation only occurs at higher grades (11 and 12), limited learning time, and orientation of high-stakes examinations.

Keywords: Curriculum 2013, high ability learners

ACKNOWLEDGMENTS

Alhamdulillahirabbil'alamiin. First and foremost, I want to express my biggest gratitude to the Almighty God, Allah SWT, who has granted me countless blessings so that I can finally reach the end of my master's journey.

My deepest gratitude to my family for their tremendous support and prayers from the beginning of this master's journey all the way to the end. Mama and Papa, your support and prayers are my strength and energy. Thank you for allowing me to pursue my dream and to do what I love doing.

My sincere appreciation to all my wonderful professors who tirelessly assisted me throughout my study at UCF. To Dr. Biraimah, I cannot thank you enough for what you have done to ensure that I can make it to this point and finish on time. My family and I are forever grateful for you. To the committee members of my thesis, Dr. Eriksson and Dr. Wolford, thank you very much for your great deal of support and assistance to my work.

My special thanks to all my colleagues and friends in Indonesia and the United States for always helping me in any way possible and sending me good vibes.

TABLE OF CONTENT

CHAPTER ONE: INTRODUCTION.....	1
Background.....	1
Problem Statement.....	5
Purpose of the Study.....	6
Research Questions.....	6
Nature of the Study.....	6
Significance of the Study.....	7
Definition of Terms and Acronyms.....	8
Summary.....	9
CHAPTER TWO: LITERATURE REVIEW.....	10
Introduction.....	10
Definitions of Curriculum.....	10
Curriculum Components.....	12
The History of Curriculum Development in Indonesia.....	13
High Ability Learners.....	17
Definitions of High Ability Learners.....	17
Characteristics of High Ability Learners.....	20
Diverse Populations of High Ability Learners.....	21
Identification of High Ability Learners.....	23
Best Practices of Curriculum that Addresses the Needs of High Ability Learners.....	25
CHAPTER THREE: METHODOLOGY.....	29
Research Method and Design.....	29

Research Context	30
Research Documents.....	31
Data Collection Method.....	31
Data Processing and Analysis.....	32
Assumptions.....	33
Limitations	33
Delimitations.....	34
CHAPTER FOUR: RESULTS AND DISCUSSION.....	35
Introduction.....	35
Results.....	35
Addressing the Needs of High Ability Learners.....	35
Objectives	36
Learning Materials	36
Instructional Strategies.....	38
Learning Assessments.....	39
The Strengths of <i>Curriculum 2013</i>	40
The Weaknesses of <i>Curriculum 2013</i>	41
Discussion.....	41
Addressing the Needs of High Ability Learners.....	42
Objectives	42
Learning Materials	44
Instructional Strategies.....	46
Learning Assessments.....	47

The Strengths of Curriculum 2013	48
The Weaknesses of Curriculum 2013	50
Summary	51
CHAPTER FIVE: CONCLUSION.....	52
Introduction.....	52
Summary of Results.....	53
Research Question 1: Does <i>Curriculum 2013</i> Have the Ability to Address the Needs of High Ability Learners in the Regular Classroom in Indonesia?	53
Research Question 2: What Are the Strengths of <i>Curriculum 2013</i> that May Enable It to Address the Needs of High Ability Learners and What Are the Weaknesses that May Inhibit It from Addressing the Needs of High Ability Learners in the Regular Classroom in Indonesia?	53
Summary of Discussion	54
Research Question 1: Does <i>Curriculum 2013</i> Have the Ability to Address the Needs of High Ability Learners in the Regular Classroom in Indonesia?	54
Research Question 2: What Are the Strengths of <i>Curriculum 2013</i> that May Enable It to Address the Needs of High Ability Learners, and What Are the Weaknesses that May Inhibit It from Addressing the Needs of High Ability Learners in the Regular Classroom in Indonesia?	56
Recommendations.....	57
For School Personnel	57
For Future Research	59
Conclusions.....	60

APPENDIX A – IRB NOT HUMAN RESEARCH DETERMINATION.....	63
APPENDIX B – TABLE OF CORE COMPETENCIES FOR GENERAL HIGH SCHOOLS OR ISLAMIC HIGH SCHOOLS.....	65
APPENDIX C – TABLE OF CORE COMPETENCY NO. 3 AND ITS BASIC COMPETENCIES FOR BIOLOGY SUBJECT OF GRADE 10.....	68
REFERENCES	70

CHAPTER ONE: INTRODUCTION

Background

Every learner has unique learning abilities, interests, and needs. This is also the case with high ability learners who demonstrate abilities, interests, and needs in various areas. Marland (1972) noted that high ability learners possess outstanding abilities in six areas: general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts, and psychomotor ability. In Australia, Canada, Finland, Korea, Singapore, the United Kingdom, the United States, and other countries, these high achieving children are usually known as ‘*gifted and talented*’ or ‘*highly able*’ (Bhatt, 2011; Kim et al., 2009; Lo & Porath, 2017; McClain & Pfeiffer, 2012; NAGC, 2010; Neihart & Teo, 2013; Rasmussen & Lingard, 2018; Reid, 2015; Reid & Boettger, 2015; Subotnik et al., 2011; Tirri, 2021). In Indonesia, they are known as ‘*anak berbakat*’ (Setiawan & Septiarti, 2019; Suhendri et al., 2020; Syasli et al., 2020; Ummi, 2017). According to Indonesian law No. 20/2003 on the National Education System, Article 5 Paragraph 4, *anak berbakat* (high ability learners) are “citizens who demonstrate outstanding potential in both intelligence and talent and are entitled to special education” (The Republic of Indonesia, 2003, p. 4).

Due to their diversity of abilities and interests, *anak berbakat* (hereinafter referred to as high ability learners) have educational needs that vary from one student to another (Akgul, 2021). In the same way as their regular peers, high ability learners’ educational needs are diverse and range from intellectual to social and emotional needs. Consequently, they require flexible learning experiences that offer chances to foster their abilities and interests (Hockett, 2009). For high ability learners, their learning experiences need to be accelerated, enriched for depth and complexity, and differentiated from their peers (Bondie et al., 2019; Callahan & Hertberg-Davis,

2018; Hockett, 2009; Sharp & Clemmer, 2015; Tomlinson et al., 2003). Providing accommodations for learning differences to these learners is vital as they will likely become bored and disinterested when they are not receiving the education they need. When this occurs, they may eventually become underachievers who do not reach their full potential and are at risk of failure or dropping out (Boehler, 2019; George, 2003).

Curricular content is of critical importance when addressing the varying needs of learners, as it is a central guide for educators to implement their teaching practices in the classroom (Agustin & Sugiyono, 2019). It provides teachers with outlines of the learning objectives, materials to be taught, instructional strategies, and learning assessments (Su, 2012). It also functions as a measurable plan and structure enabling teachers, administrators, and related stakeholders to deliver quality education. An effective curriculum must accommodate students' learning abilities, needs, and interests. In the regular classroom, where students of different abilities are placed in the same learning space, curriculum and instruction should be differentiated to meet their unique academic needs (Benny & Blonder, 2016; Bondie et al., 2019; Callahan & Hertberg-Davis, 2018; Hockett, 2009; Pomortseva, 2014; Sharp & Clemmer, 2015; Tomlinson et al., 2003). Learning differentiation helps teachers to focus on individual students' abilities and needs and to increase their chances of success. Furthermore, the existence of differentiated instructions can accommodate high ability learners whose learning needs are sometimes ignored within the regular classroom. Thus, differentiated learning experiences can help them to excel and to reach their highest potential in the regular classroom.

This study focused on Indonesia because even though its current curriculum does not mandate a specific provision for high ability education, it has the potential to address the needs of high ability learners. Every public and private school in Indonesia, whether under the

supervision of the Ministry of Education and Culture or the Ministry of Religious Affairs, utilizes this curriculum from elementary education through secondary education. These two separate government ministries control different sets of schools (Faisal & Martin, 2019; Nasir, 2021; Sukmayadi & Yahya, 2020). The Ministry of Education and Culture's name was changed to the Ministry of Education, Culture, Research, and Technology in 2021, when two ministries were integrated: the Ministry of Education and Culture and the Ministry of Research and Technology. This new ministry is responsible for all education levels ranging from early childhood education to higher education, except for the religiously affiliated schools, which are supervised by the Ministry of Religious Affairs.

Since independence in 1945, Indonesia's curriculum has changed numerous times (Mukminin et al., 2019). These alterations were made to meet various needs and to address different challenges over time (Pajarwati et al., 2021). Recent curricula that were implemented in Indonesian schools included *Kurikulum Berbasis Kompetensi* or KBK 2004 (Competency-based Curriculum) and *Kurikulum Tingkat Satuan Pendidikan* or KTSP 2006 (School-based Curriculum Development). The Competency-based Curriculum, or KBK, was implemented from 2004 to 2006. This curriculum emphasized the complex outcomes of the learning process, such as learners' knowledge, skills, and attitudes. In 2006, this curriculum was replaced with the School-based Curriculum Development or KTSP 2006. This curriculum encouraged schools to develop their own curriculum. The government replaced KTSP 2006 with *Curriculum 2013* due to its unsuccessful implementation in most schools in Indonesia (ACDP, 2017).

Currently, the curriculum in use is *Kurikulum 2013* (*Curriculum 2013*). *Kurikulum 2013*, hereon referred to as *Curriculum 2013*, has been in effect since July 2013. According to regulation No. 59/2014 of *Curriculum 2013* for Senior High School/Islamic Senior High Schools

from the Minister of Education and Culture of the Republic of Indonesia, this curriculum aims to prepare Indonesian citizens to have life skills both as an individual and citizen who is devout, productive, creative, innovative and one who can contribute to the community, the people, the nation, and the world. Agustin & Sugiyono (2019) elucidated that this curriculum is an improvement as well as an integration of the previous curricula, including the competency-based curriculum (KBK 2004) and the school-based curriculum development (KTSP 2006).

As *Curriculum 2013* is an outgrowth of two previous curricula (KBK 2004 and KTSP and 2006), it provides several improvements over its predecessors. According to the Education Sector Analytical and Capacity Development Partnership (ACDP, 2017), this curriculum has an emphasis on critical and creative learning that is based on higher order thinking skills which enable students of different abilities to learn subject-specific knowledge at varying levels of complexity (ACDP, 2017). For these reasons, although *Curriculum 2013* is not explicitly designed for high ability learners, it has the prospective to address the academic needs of high ability learners in the regular classroom. Therefore, analyzing *Curriculum 2013* will help to determine whether Indonesia's national curriculum is appropriate to meet the academic needs of high ability learners who attend the regular classroom. Additionally, exploring its strengths is crucial so that administrators, teachers, and other related stakeholders can understand the aspects of the curriculum that may address the needs of high ability learners, so they are able to utilize these strengths to satisfy the needs of high ability learners in the regular classroom. Further, understanding the weaknesses of the curriculum can help school personnel to determine how these weaknesses might prevent the curriculum from addressing the needs of high ability learners. Thus, school personnel can determine future steps to reinforce the curriculum's strengths while overcoming its weaknesses.

Problem Statement

Mandated curricula are often stigmatized as being inflexible and centralized (Gul & Khilji, 2021), focusing more on the product than the process and resulting in student learning outcomes that lack critical and creative thinking, problem-solving, and other essential skills. However, this is not always the case. Although Indonesia's curriculum has certain requirements for the schools to fulfill, its implementation at all school levels is decentralized (ACDP, 2017). This means that, in an effort to meet the curriculum's objectives, schools have flexibility in delivering education to their students. This gives teachers space to create learning activities that can accommodate the varying abilities, interests, and needs of all students in the regular classroom. Hence, it is more likely that teachers have the opportunity to accommodate high ability learners' educational needs in the regular classroom.

Curriculum 2013 is Indonesia's current national curriculum and has been implemented at all formal education levels since 2013, except in higher education. It suggests the use of instructional strategies that are student-centered and that give students the opportunity to acquire more profound knowledge and skills by exploring or engaging with real-world issues and challenges, such as through discovery or inquiry-based learning, project-based learning, or problem-solved learning (Ministry of Education and Culture of the Republic of Indonesia (2014). This signifies that *Curriculum 2013* may address the needs of high ability learners in the regular classroom as it promotes critical and creative thinking skills with different complexities (ACDP, 2017). Further, like other national curricula not designed for high ability learners, *Curriculum 2013* also has weaknesses, such as lacking acceleration and a tendency for high-stakes examinations. These weaknesses may restrain it from catering to students' needs, especially that of high ability learners in the regular classroom.

Purpose of the Study

This qualitative literature review study aimed to analyze the content of Indonesia's national *Curriculum 2013* and its ability to address the needs of high ability learners in the regular classroom. It examined the strengths of *Curriculum 2013* that may enable it to satisfy the needs of high ability learners. In addition, it investigated the weaknesses of *Curriculum 2013* that may obstruct it from catering to the needs of high ability learners. In this study, the components of the curriculum being explored included the objectives, content/learning materials, methods, and assessments. The study aimed to provide information to school personnel regarding the portion of the curriculum that addresses the academic needs of high ability learners who attend the regular classroom. It also presented data to school personnel regarding the strengths and weaknesses of the curriculum in respect to its provisions for high ability learners in the regular classroom.

Research Questions

The following research questions guided this qualitative literature review study:

1. Does *Curriculum 2013* have the ability to address the needs of high ability learners in the regular classroom in Indonesia?
2. What are the strengths of *Curriculum 2013* that may allow it to address the needs of high ability learners, and what are the weaknesses that may inhibit it from addressing the needs of high ability learners in the regular classroom in Indonesia?

Nature of the Study

This study utilized the qualitative literature review method. It aimed to analyze the content of Indonesia's national *Curriculum 2013* and its ability to meet the needs of high ability

learners in the regular classroom. It also examined the strengths of *Curriculum 2013* that may enable it to satisfy the needs of high ability learners. In addition, it investigated the weaknesses of *Curriculum 2013* that may obstruct it from catering to the needs of high ability learners. The qualitative literature review was chosen because this study analyzed a particular curriculum document and synthesized research findings relevant to the topic in order to answer the research questions (Nassaji, 2015; Snyder, 2019). The study collected various data relevant to the topic from books, e-books, journal articles, and government documents. The main source of data was the document of *Curriculum 2013* of Senior High School/Islamic Senior High School issued by the Ministry of Education and Culture of Indonesia.

Significance of the Study

This study provided information to teachers, principals, parents, and related stakeholders regarding the portion of *Curriculum 2013* that can address the needs of high ability learners in the regular classroom in Indonesia. It also informed school personnel regarding the strengths and weaknesses of *Curriculum 2013*. This should assist educators in reflecting upon their own educational practices in the school while reinforcing the strengths of the curriculum to serve high ability learners in the regular classroom setting. The weaknesses of the curriculum identified in this study could also help educators to determine any future actions that need to be taken in order to revise portions of the curriculum that inhibit it from addressing the needs of high ability learners. This study also provided stakeholders with recommended practical solutions that may overcome the weaknesses of *Curriculum 2013*. Finally, the study could enlighten teachers and other related stakeholders on the best applications of high ability curriculum and instruction that have been used successfully in other countries. These best practices could help teachers,

administrators, parents, and other related stakeholders to establish specific educational programs and services for high ability learners in Indonesian high schools.

Definition of Terms and Acronyms

- *Anak berbakat* or gifted and talented student or high ability learner –“a citizen who demonstrates outstanding potential in both intelligence and talent and is entitled to special education.” (The Republic of Indonesia, 2003, p. 4)
- Curriculum – “a set of planning and organization of aim, content, learning material and method as the guide to teaching and learning activities to achieve particular educational goals” (The Republic of Indonesia, 2003, p. 2).
- *Kurikulum 2013* or *Curriculum 2013* – Indonesia’s national curriculum issued in 2013 that aims to “...prepare Indonesian citizens to have life skills both as an individual and citizen who is devout, productive, creative, innovative and affective as well as one who can contribute to the community, the people, the nation, and the world civilization” (The Republic of Indonesia, 2003, p. 2).
- Ministry of Education, Culture, Research, and Technology – an Indonesian government ministry that supervises education, cultural, research, and technology affairs. It administers all general education systems from early childhood education, elementary, lower secondary, upper secondary, to higher education, except for the religiously affiliated schools. This ministry was formed in 2021 as an integration of two ministries: the Ministry of Education and Culture and the Ministry of Research and Technology.
- Ministry of Religious Affairs – an Indonesian government ministry that manages religious and education affairs. It administers all religiously affiliated schools from early childhood education, elementary, lower secondary, upper secondary, to higher education.

- NAGC – National Association for Gifted Children, an organization of parents, teachers, educators, other professionals, and community leaders established to address the unique needs of gifted children and youth in the United States.
- Regular or heterogeneous classroom – a class where students of diverse abilities are grouped together.
- Senior high school – the upper secondary level of education that serves students before entering college/university. In Indonesia, it consists of grades 10 through 12.
- UNESCO – the United Nations Educational, Scientific and Cultural Organization. A United Nations agency that promotes world peace and security through international cooperation in education, arts, sciences, and culture.

Summary

This study analyzed the content of *Curriculum 2013* and its ability to address the needs of high ability learners in the regular classroom in Indonesia. It also examined the strengths of *Curriculum 2013* that may address the needs of high ability learners, as well as the weaknesses of *Curriculum 2013* that may hinder it from addressing the needs of high ability learners in the regular classroom. The research was conducted by employing the qualitative literature review method, which collected information relevant to the research topic from books, e-books, journal articles, and government documents.

CHAPTER TWO: LITERATURE REVIEW

Introduction

This chapter provides reviews of literature regarding curriculum and high ability learners. The chapter begins with a section focused on the various definitions of curriculum, followed by sections that include descriptions regarding the components of the curriculum, the historical development of curriculum in Indonesia, a review of theories on high ability learners, and best practices of curriculum that addresses the needs of high ability learners.

Definitions of Curriculum

The curriculum is one of the critical elements of education that bridges the delivery of quality teaching and learning. The term curriculum has numerous definitions, but basically, it can be defined as a systematic plan for teaching and learning. It guides the teaching and learning process in the classroom by providing teachers with plans and outlines of learning objectives, what to be taught in the class, how to teach the materials, and how to evaluate students' learning achievement and performance. The International Bureau of Education of the United Nations Educational, Scientific and Cultural Organization (UNESCO IBE, 2016) described the curriculum as a planned package of competencies that students should obtain through learning activities both in formal and non-formal learning spaces. This definition focused more on the learning competencies or skills that students should attain in different educational settings. In addition, UNESCO IBE (2013) provided a simplified definition of curriculum in which it is described as an explanation of what, why, how, and how well students should learn in an orderly way. This second definition mentions critical components of the curriculum, including material, purpose, method, and assessment of learning.

According to the Indonesian Law No. 20/2003 on National Education System, Article 1 Paragraph 19, curriculum refers to “a set of planning and organization of aim, content, learning material and method as the guide to teaching and learning activities to achieve particular educational goals” (The Republic of Indonesia, 2003, p. 2). In this definition, Indonesia’s government emphasized essential elements that a curriculum should have, such as learning objectives, materials to be taught, and instructional strategies. While Indonesia’s definition of curriculum does not explicitly mention learning assessment as part of the curriculum, it still maintains that assessment should be part of syllabi.

Similarly, New Zealand, a country in the Pacific that implements a national curriculum with good provision for high ability education, has a formal definition of curriculum. New Zealand Ministry of Education (2007) expounded that curriculum is “a statement of official policy relating to teaching and learning in English-medium New Zealand schools” (p. 6). As a national curriculum, its main purpose is to “set the direction for student learning and to provide guidance for schools as they design and review their curriculum” (p. 6). Both Indonesia’s and New Zealand’s definitions of curriculum share a similarity in which curriculum is perceived as a guide for teaching and learning that is utilized across the country.

Different from Indonesia and New Zealand, the United States does not have a national curriculum, though it does set standards for each state that are called “Common Core State Standards” (Clack, 2007; Green, 2019). The U.S. Network for Education Information (USNEI, 2008) defined the curriculum as standards to be used as a guide for school instruction. These standards are required for all states, school districts, and national associations that receive federal funding (USNEI, 2008).

Considering all the different definitions of curriculum exemplified above, it may be concluded that curriculum is an organized plan of teaching and learning that is utilized in different learning settings as a means to achieve educational objectives. It contains desired knowledge, skills, values, and attitudes that students should learn and demonstrate, and what they can create as a result of these learning activities. The curriculum facilitates educators in planning their lessons, including materials to be taught, instructional strategies to be implemented, and how to assess students' learning outcomes. It is designed to ensure that teaching and learning activities in the classroom can be carried out as planned for the purpose of achieving educational objectives, which eventually lead to students' success.

Curriculum Components

As a systematic guide for teaching and learning, the curriculum has several critical components. According to UNESCO IBE (2007), a formal curriculum should consist of at least three components. The first component is a curriculum framework. This is a set of documents that contain standards for curriculum and that elucidate the context to facilitate the development of syllabi. The second component is the syllabus. A syllabus is a document that describes the objectives, contents, outcomes, and other related information regarding the subject or learning area. The elements of syllabi include the rationale for the subject, aims and objectives of the subject, student learning outcomes for the subject, contents to be covered and requirements for teaching the contents, teaching strategies appropriate to the subject, and strategies for evaluating students' achievement in the subject. Lastly, textbooks and other teaching or learning resources are included and serve as resources and the basis of teachers' lessons and classroom activities.

In Indonesia, the national curriculum has four components (Setiana & Nuryadi, 2020). The first component contains the objectives. Objectives are considered essential to guide

learning activities and influence other components. These objectives are divided into three segments: institutional objectives or graduate competencies; curricular objectives or standard of competencies; and instructional objectives or basic competencies. The second component contains content/learning materials which include topics, concepts, behaviors, and facts that students learn in a particular subject. The third component contains instructional strategies. These are techniques or methods that teachers utilize to deliver learning content in the classroom. The fourth and final component contains learning assessments. These assessments are approaches to measure students' learning outcomes and to create feedback designed to improve students' learning. Correspondingly, New Zealand's curriculum components are similar to Indonesia's, though New Zealand narrows their curriculum components into three segments (New Zealand Ministry of Education, 2009). These segments include school aims (what schools want for their students to achieve), school planning (how they design learning for their students), and evaluative processes (how well schools meet their students' learning needs).

To sum up, UNESCO IBE elucidated that a curriculum consists of three components: curriculum framework; syllabi; and textbooks and other learning resources. Whereas Indonesia and New Zealand's curriculum components contain objectives, content/learning materials, instructional strategies, and learning assessments.

The History of Curriculum Development in Indonesia

Indonesia has implemented different types of curricula since its independence in 1945 (Mukminin et al., 2019). Curricula alterations in this country occurred to improve the quality of education, to adjust to the changing world, to meet the needs of students, and to address the educational challenges in each period (Pajarwati, 2021). The following is a brief, chronological history of curriculum development in Indonesia.

1. Curricula in the Old Order Period (1945-1965)

In the Old Order Period, Indonesia's curricula had changed three times. The first was Curriculum 1947. This curriculum was known as *Rencana Belajar* (Learning Plan). It emphasized character education and instilled an awareness of nationhood and statehood in students. Learning materials were firmly related to students' daily routines, and emphasis was given to subjects such as arts and physical education. The second was Curriculum 1952. This curriculum was named *Rencana Pembelajaran Terurai 1952* (Detailed Learning Plan 1952) because the content of this curriculum was more elaborate than the previous one (Mukminin et al., 2019). This curriculum focused on the *Pancawardana* (five principles of development) program, which included creativity, taste, initiative, work, and ethics. The third was Curriculum 1964. This curriculum aimed to develop a society that instilled *Pancasila* (the five principles underlying the state ideology of Indonesia), practiced socialism, and had a high sense of nationalism and patriotism. This curriculum was better than its predecessor as it had three important aspects in learning development such as cognitive, affective, and psychomotor (Wahyuni, 2016). The implementation of the curriculum was also more practical rather than theoretical.

2. Curricula in the New Order Period (1966-1998)

In the New Order Period, the curricula were altered four times. The first was Curriculum 1968, which replaced the *Pancawardana* program from the earlier curriculum with the development of *Pancasila's* spirit, basic knowledge, and special skills (Wahyuni, 2016). The orientation of the curriculum was focused on intellectual development, while other learning developments were ignored. The second was Curriculum 1975. This curriculum was designed to actualize the government's development program at the time, which included *Repelita* (five-year

plan) and *Pelita* (five-year development). This curriculum was organized around several principles that were objective-oriented, used an integrative approach, was efficient and effective, implemented procedures in instructional development, and enacted stimulus-response and practice (Wahyuni, 2016). The third was Curriculum 1984. This curriculum had a significant change from the previous curriculum in terms of the learning approach. In this curriculum, students were encouraged to be active in the classroom (Alhamuddin, 2014). Field-based learning was utilized to achieve learning objectives. Additionally, universal, comprehensive, and integrative were the three design principles of the curriculum. Lastly, Curriculum 1994 was developed based on Indonesian Law No.2/1989 about National Education System (Insani, 2019). In this curriculum, schooling was changed from a semester into a quarter system, resulting in a compact schedule each quarter. Learning objectives were focused on conceptual understanding and problem-solving skills.

3. Curricula in the Reform Period (1999-present)

In the Reform Period, Indonesia's curricula were changed three times. First, the Competency-based Curriculum was implemented in 2004. In this curriculum, schools were given the liberty to develop their curriculum based on their own needs. The curriculum was centered around processes and results, as well as achieving students' competence in accomplishing assignments based on particular performance standards. It aimed to develop students' knowledge, understanding, competence, value, attitude, and interest and to generate graduates who can complete tasks responsibly (Insani, 2019). Second, the School-based Curriculum Development in 2006. The implementation of this curriculum was different from the previous curricula, as schools could develop their own syllabi. The national government only provided competency standards and basic competencies as the base for teachers to develop their own

syllabi and assessments (Alhamuddin, 2014). Lastly, *Curriculum 2013* is the most current curriculum and is still used in schools throughout Indonesia. This curriculum is a refinement of the previous curriculum, School-based Curriculum Development. It is oriented toward character development which aims to improve the quality of the processes and outcomes of education. There are four learning models proposed by this curriculum: thematic-integrative, scientific, active, and authentic learning; these models aimed to prepare future generations who are creative, innovative, and productive for the betterment of Indonesia (Wahyuni, 2016).

Reviewing the history of curriculum development in Indonesia helps to describe how Indonesia's curriculum has changed from one period to another. The national curriculum has been changed ten times within three significant periods after the country declared its independence from the Dutch and Japanese in 1945. These alterations in the curriculum were considered critical to Indonesia's educational system as they were meant to refine educational quality, to adapt to the evolving world, to cater to students' needs, and to address challenges in different periods.

High Ability Learners

After briefly defining the term high ability learners, this section reviews literature that focuses on the characteristics of high ability learners, diverse populations of high ability learners, and the identification of high ability learners.

Definitions of High Ability Learners

Various nations have developed unique definitions for high ability learners. Understanding how experts, organizations, and countries define high ability learners is important as these definitions have significant control over students' access to high ability programs. The definitions of high ability that any school uses also influence the types of high ability identification and programs being offered. Therefore, it is crucial to understand the definitions of high ability in order to appropriately serve the needs of high ability learners. Several countries, such as the United States, Canada, Australia, and New Zealand, use the term '*gifted*' and '*high ability*' interchangeably to describe a child of exceptionally high intelligence, talent, or ability in one or more areas.

Marland (1972) defined high ability children as:

... those identified by professionally qualified persons who, by virtue of outstanding abilities, are capable of high performance. Further, it was expounded that children capable of high performance include those with demonstrated achievement and/or potential ability in any of the following areas, singly or in combination, general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts, and psychomotor ability. (p. 10)

This definition of high ability has been widely used in the United States as it delineates a wider view of the areas of high ability. However, in 1993, the U.S. Department of Education revised their definition of high ability by acknowledging that high ability children also come from culturally and socio-economically disadvantaged groups and communities. The new definition noted that high ability learners are:

Children and youth with outstanding talent perform or show the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience, or environment. These children and youth exhibit high performance capacity in intellectual, creative, and/or artistic areas, and unusual leadership capacity, or excel in specific academic fields. They require services or activities not ordinarily provided by the schools. Outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor. (p. 19)

The National Association for Gifted Children (NAGC, 2010), an organization of parents, teachers, educators, other professionals, and community leaders established to address the unique needs of high ability children and youth in the United States, also proposed their own definition of high ability. They described high ability as “students with gifts and talents that perform - or have the capability to perform - at higher levels compared to others of the same age, experience, and environment in one or more domains” (p. 1). In addition, they explicated that these high ability learners come from different races, ethnicities, cultures, languages, genders, and economic statuses. These diverse populations of high ability learners also include those with exceptionalities and learning disorders (known as ‘*twice exceptional*’), thus requiring individual educational planning, specialized interventions, modifications, and accommodations. Further, all

high ability learners need adequate and appropriate learning opportunities based on their individual profiles of strengths and weaknesses in order to reach their highest potential.

Similarly, UNESCO IBE (2013) noted that high ability learners are "... those whose potential is distinctively above average in one or more of the following domains: intellectual, creative, social, and physical" (p. 29). UNESCO IBE (2013) also exemplified that because of their abilities, these students require educational activities to build on their personal best.

The Indonesian Law No. 20/2003 on National Education System, Article 5 Paragraph 4 defined *anak berbakat* (high ability learner) as "a citizen who demonstrates outstanding potential in both intelligence and talent and is entitled to special education" (The Republic of Indonesia, 2003, p. 4). Different from Indonesia, New Zealand combined high achievement capabilities in different areas, including cultural abilities and qualities, and emotional and spiritual qualities. According to the New Zealand Ministry of Education (2012), the high ability learner is "a wide range of students with many different abilities and qualities" (p. 23). In this definition, New Zealand recognized that high ability is not always associated with high intelligence but may also be associated with a range of different abilities such as general intellectual abilities, specific academic aptitude, cultural abilities and qualities, creative abilities, social and leadership abilities, physical abilities, emotional and spiritual qualities, and abilities in the visual and performing arts. It is obvious that New Zealand acknowledges the existence of diverse populations of high ability learners when they include cultural abilities and qualities, and emotional and spiritual qualities.

To conclude, the definition of high ability learners is different from one country to another. While most definitions are likely to focus on high capability and achievement as identifiers of high ability, some include a variety of abilities such as academic, cultural,

emotional, and spiritual abilities. It is crucial to understand the definition of high ability learners because it has a significant role to determine students' access to high ability programs and services and to appropriately serve the needs of diverse populations of high ability learners.

Characteristics of High Ability Learners

High ability learners have varying characteristics that distinguish them from one to another. Due to their diversity, their characteristics differ from one student to another depending on the subject area or domain in which they excel. Nevertheless, there are several characteristics that high ability learners have in common. George (2003) listed some traits of high ability learners, including having high curiosity, having the ability to engage in intense conversation, being able to critically question things, being observant towards different things, having extraordinary ideas, having a great interest in learning, being critical, having an interest in complicated and challenging things, having preferences to socialize with adults or older students, and being adventurous.

Correspondingly, Coleman (2018, as cited in Callahan and Hertberg-Davis, 2018) explicated that some characteristics of students with high general intellectual aptitude include high ability to memorize a great deal of information, profound understanding of different concepts, high level of curiosity, progressive level of language development, and great sense of humor. Cathcart (2020) also noted some characteristics of high ability learners that contain similarities with George and Coleman, such as having a rapid understanding of various concepts, having a high level of curiosity, possessing high comprehension of abstract ideas, having a profound understanding of complex ideas, possessing a great interest in asking difficult questions, and being highly observant.

In addition, the New Zealand Ministry of Education (2012) divided the characteristics of high ability learners into five main categories: learning characteristics (e.g., demonstrating logical and analytical thinking, recognizing complex patterns and relationships, and comprehending information rapidly); creative thinking characteristics (e.g., creating unusual ideas, exhibiting intellectual playfulness, and discovering new things); motivational characteristics (e.g., having profound achievements, having high motivation, and being able to set personal goals); social leadership characteristics (e.g., having the ability to socialize with peers and the community, and having excellent communications skills); and self-determination characteristics (e.g., being critical toward authoritative administrations, and requiring teachers and adults for detailed explanation).

On the whole, the characteristics of high ability learners can vary from one student to another. Their different characteristics make them unique in their own ways. Although their characteristics are diverse, there are some similarities shared among them. Among others, their similarities include having a high level of curiosity, having the ability to ask unusual questions, being highly critical, preferring to interact with adults rather than their peers, and having an unusual sense of humor. It is essential for these characteristics to be understood by educators and other stakeholders so they can identify high ability learners and ensure that they get the proper educational services in the high ability programs.

Diverse Populations of High Ability Learners

As exemplified in the characteristics of high ability, high ability learners have different characteristics. These varying characteristics might be influenced by many factors, such as socioeconomic status, linguistics, culture, race, ethnicity, gender, age, and disability. High ability

learners who come from different backgrounds are known as diverse populations in high ability education. Due to their exceptional circumstances, these students are often overlooked and unidentified (Castellano, 2003; Castellano & Frazier, 2010; Fugate et al., 2021). Many of these high ability learners are not educated in the high ability program in general education settings as they are not identified as possessing high ability in the early years of school (Pauley & Johnstone, 2009). Previous studies have indicated that most unidentified high ability children come from diverse populations (Brulles, 2018; Callahan, 2005; Peters & Gentry, 2010; Sayekti, 2013), and they continue to be underserved and underrepresented in the high ability programs (Ayoub et al., 2021).

According to the National Association for Gifted Children (n.d.-a), special populations in high ability education refer to those with “...additional circumstances or characteristics that can interfere with academic achievement, social/emotional growth, and optimal development of their potential” (para. 1). These students are historically underrepresented and have not had a fair chance to participate in high ability education programs. They come from various backgrounds, be it culturally, ethnically, or linguistically. NAGC (n.d.-a) provided a list of the types of special populations, including those from culturally/linguistically/ethnically diverse backgrounds; Gay/Lesbian/Bisexual/Transgendered/Questioning (GLBTQ); twice-exceptional (2e) or high ability learners with disabilities; highly and profoundly gifted; those experiencing the impact of gender issues; those from low Socio-Economic Status (SES) backgrounds; and those impacted by geographic issues, such as urban and rural settings. Similar to NAGC, Wallace and Eriksson (2006) listed the special populations of high ability learners into several categories, including culture, ethnicity and race, socio-economic class, language, gender, religion and ethics, age, and exceptionality.

However, Baska and VanTassel-Baska (2018) summarized the high ability special populations into three types: twice-exceptional students: students who are identified with learning, behavioral, or social problems that lead to a dual diagnosis for these conditions and giftedness; students of low socioeconomic status: students who are identified as having high ability who come from low-income families. Students of ethnic/racial minorities (African American, Hispanic, American Indian/Alaska Native, and Pacific Islanders) also fall in this category since definitions of poverty are comingled with race; and English Language Learners (ELLs): students who are identified as possessing the high ability and English language learners needing support for language development in English.

Overall, high ability learners come from varying backgrounds, such as low-socioeconomic status, and culturally/linguistically/ethnically diverse backgrounds. Their diverse backgrounds often hinder their high ability traits, thus, their chances of getting identified are lower than their peers. These students are less likely to participate in the high ability education program because they are not identified as having the high ability. Eventually, even if they are admitted into a high ability program later in their schooling, they continue to be underrepresented and underserved.

Identification of High Ability Learners

Identifying high ability learners is considered crucial as this is a part that determines the participation of every high ability learner and is especially vital for the underrepresented populations in high ability educational programs and services. School personnel can use several guiding principles to identify the high ability learners, such as prioritizing equity, expanding high

ability identification, and moving beyond classifications linked to race, ethnicity, socio-economic status, gender, and age.

There are various procedures that can be utilized in order to identify high ability learners. Each identification procedure possesses its own strengths and weaknesses. For this reason, there is no one identification procedure for high ability learners that fits all. Richert et al. (1982) specified six principles to establish identification procedures (as cited in Smutny, 2003). The criteria include: advocacy: students' interests are honored and prioritized; defensibility: identification procedures should be adapted from best practices; equity: every student should be treated equally; pluralism: various definitions of high ability should be taken into account; comprehensiveness: identification should accommodate every high ability learner including diverse populations; and pragmatism: allowing modifications toward procedures when necessary.

Another study by Callahan and Hertberg-Davis (2018) introduced more comprehensive guiding principles of identification which incorporate six axioms:

- 1) there is no such thing as a perfect identification system;
- 2) what is good for the goose is not necessarily good for the gander;
- 3) both objective and subjective instruments can and should provide useful data in the identification process;
- 4) people, not instruments, make decisions, so it is critical that decision-makers have the knowledge and skills to make appropriate choices;
- 5) avoid the multiple criteria smokescreens and the matrix mirage;
- and 6) the screening and identification process is not for labeling. (pp. 86-90)

In summary, the two proposed guiding principles of identification procedures for high ability learners covered broad principles to guide school personnel in crafting their model of high ability learners' identification. Every school can combine and modify these principles to suit high ability educational programs and services they want to offer.

Best Practices of Curriculum that Addresses the Needs of High Ability Learners

No one curriculum can effectively and appropriately address the needs of all high ability learners due to their diverse needs, interests, preferences, and backgrounds (Callahan & Davis-Hertberg, 2018). However, there are some best practices that have been used in high ability education for years. Gubbins (2018) presented criteria of the curriculum of high ability learners, which include various emphasis on:

Big ideas or deep conceptual understandings; advanced discipline-based or multi-disciplinary content; essential questions in advanced content areas; accelerated and enriched curricula; the development of creative, critical, research, metacognitive, and problem-solving skills; process skills (learning-how-to-learn skills), and product skills; “ascending intellectual demand” (i.e., advanced material and technology resources; multiple perspectives on issues and problems); variable pacing; tasks and products of greater depth, breadth, abstractness, or complexity; application of learning to other contexts; reflections on personal, sociological, economic, and practical implications of resolved problems; high quality written, oral, and visual products to document the growth in learning; the development of skills related to self-directed, independent, and small group learning; and the development of expertise, as students assume the roles of practicing professionals, as they investigate and resolve real problems. (p. 485)

For the diverse populations of high ability learners, Ford et al. (2020) proposed some criteria for effective curriculum, which include: infusing culturally relevant curriculum and instruction; integrating authentic and multicultural content and resources in all content areas; incorporating rigorous multicultural curriculum and materials that reflect their cultural, racial, and linguistic background and heritage; including rigorous and authentic multicultural literature and authentic historical content reflective of all cultures; promoting cultural, racial, and linguistic

pride in curricula; placing students' views as a priority; preparing students to be globally competitive and knowledgeable of world cultures; and allowing virtual engagement among students across the globe.

Nebraska Department of Education (1997), one of the state departments of education in the US that has a comprehensive guide of curriculum and instruction for high ability learners, exemplified several aspects of the educational programs and services that can cater to the needs of high ability learners, including differentiation (modifying content, process, and product of the curriculum based on students' unique needs); compacting (adapting regular curriculum by reforming work that students have already mastered at a faster rate than their peers); enrichment (providing more opportunities that extend student's learning in their specific areas of interests); acceleration (being flexible and giving students work that is commensurate with their abilities or allowing students to proceed at a more advanced/quicker rate); cooperative learning and flexible grouping; mentoring; and social/emotional development.

Hocket (2009) suggested some principles of a high-quality curriculum for high ability learners that can be used in the regular classroom. These principles include: a conceptual approach to organize or explore content; advanced levels of understanding beyond the general education curriculum; processes and materials that approximate those of experts; emphasis on real problems, products, and performances; and flexibility to accommodate students' interests.

Renzulli (1976) established the Enrichment Triad Model as a guide for developing educational programs of high ability. This model consists of three types of enrichment (National Research Center on the Gifted and Talented (NRCGT), n.d.). First, type I enrichment is intended to orient students to different kinds of learning activities that are not typically implemented in the regular curriculum. Second, type II enrichment includes learning materials and instructional

strategies which are intended to improve students thinking and feeling processes, such as creative thinking, critical thinking, problem-solving, and affective processes. Third, type III enrichment engages students who have self-commitment to pursue an advanced content acquisition in their specific area of interest by becoming the leading investigator. Among the three types of enrichment, type III enrichment demonstrates the most crucial goal and activity for high ability learners as it emphasizes students' involvement in independent investigations of real problems that impact a real audience.

Several studies have indicated some essential skills that should be part of the curriculum for high ability learners. These essential skills are 21st century skills and higher order thinking skills (Beasley, 2013; Chandler & Dullaghan, 2013; Coxon, 2013; Dixon, 2013; Firmender, 2013; Housand, 2013; Olszewki-Kubilius, 2013; Troester). According to NAGC, (n.d.-b), these skills have always been a part of high ability education since it was first established. It is necessary for these skills to be taught to high ability learners in order to ensure their needs and interests are met. Further, NAGC explicated that 21st century skills are innovative skills of higher order thinking, critical reasoning, creative production, problem finding and solving, and decision making. These skills also include effective practices in communication and collaboration; life, career, and self-regulation skills; and practices of practical information, media, and technology strategies

In conclusion, as with regular students, high ability learners also require a curriculum and instruction that can address their needs and abilities. Although there is no single curriculum that can effectively and appropriately address high ability learners' diverse needs, some studies have proposed that there are best practices that have been successfully used for a long time. These best practices included the criteria of a good curriculum for high ability learners in general and

diverse populations; aspects of promising curriculum and instruction for high ability learners; principles of high-quality curriculum for high ability learners; a model to guide the development of educational programs for high ability learners, and essential skills that should be part of the curriculum for high ability learners.

CHAPTER THREE: METHODOLOGY

This chapter explains the methodology used in this study. The first part of this chapter contains the research method and design employed. The second part provides information regarding the research context, and the focus of this study. The third part describes the main instrument used in this study. The fourth part clarifies the method used in collecting data from various sources. The fifth part illustrates how the data were processed and analyzed. The sixth part represents assumptions that were held by the researcher in conducting this study, while the seventh part includes the constraints of the study that the researcher could not control. Finally, the eighth part states the restrictions that have been set for the study. Before conducting this study, the researcher acquired a Not Human Research Determination (NHRD) letter from the Institutional Review Board (IRB) of the University of Central Florida on February 11, 2022 (see Appendix A).

Research Method and Design

This study employed the qualitative literature review method. This method was selected as this study aimed to examine a curriculum document and to synthesize research findings relevant to the study's research questions (Nassaji, 2015; Snyder, 2019). This qualitative literature review study involved a meticulous and extensive method for identifying, assessing, and integrating various sources of data or knowledge from previous research (Fink, 2020; Jesson et al., 2011; Ridley, 2012). It collected data qualitatively from various sources both online and offline, including books, e-books, journal articles, and government documents. The primary source of data was the document of *Kurikulum 2013 Sekolah Menengah Atas/Madrasah Aliyah* (*Curriculum 2013* of Senior High School/Islamic Senior High School). The components of the

curriculum that were analyzed included the objectives, content/learning materials, instructional methods, and learning assessments.

Research Context

The study focused on the analysis of *Curriculum 2013* of senior high schools in Indonesia. Indonesia is an archipelagic country situated in the Southeast Asia region. It lies between two oceans (the Indian and the Pacific Ocean) and two continents (the Asian and Australian continents). It consists of five large islands (Sulawesi, Sumatra, Kalimantan, Papua, and Java) and over 17,000 islands in total. According to the 2020 census, Indonesia's population was over 270 million (Central Bureau of Statistics, 2021). Its population is spread over 34 provinces, from Sabang (the northernmost tip of Sumatra Island) to Merauke (the far south of Papua Island). Indonesia proclaimed its independence on August 17, 1945, marking the end of more than 300 years of Dutch colonialization and more than three years of Japanese occupation (Faisal & Martin, 2019; Trang, 2021). It is among the five original member countries which founded the Association of Southeast Asian Nations (ASEAN) on August 8, 1967 (Artner, 2017; Benny & Abdullah, 2011; Ishikawa, 2021).

The school systems in Indonesia are supervised by two ministries, the Ministry of Education, Culture, Research, and Technology (formerly known as the Ministry of Education and Culture), and the Ministry of Religious Affairs (Faisal & Martin, 2019; Nasir, 2021; Sukmayadi & Yahya, 2020). The Ministry of Education, Culture, Research, and Technology manages all regular education levels from *taman kanak-kanak* (kindergarten), *sekolah dasar* (elementary school level from grade 1 to 6), *sekolah menengah pertama* (junior high school level from grade 7 to 9), *sekolah menengah atas* (senior high school level from grade 10 to 12) to *perguruan tinggi* (tertiary education level).

On the other hand, the Ministry of Religious Affairs oversees all religiously affiliated schools from *raudhatul athfal* (Islamic kindergarten), *madrasah ibtidaiyah* (Islamic elementary school from grade 1 to 6), *madrasah tsanawiyah* (Islamic junior high school level from grade 7 to 9), *madrasah aliyah* (Islamic senior high school level from grade 10 to 12), to *perguruan tinggi Islam* (Islamic tertiary education level). Since 2013, Indonesia has restructured the 9-year compulsory education program into a 12-year compulsory education program (Kusumah, 2021; Sukmayadi & Yahya, 2020). This 12-year compulsory education program consists of elementary, junior, and senior high school levels.

Research Documents

The main document in this study was *Curriculum 2013* of Senior High School/Islamic Senior High School, which is a part of the Regulation of Minister of Education and Culture of the Republic of Indonesia No. 59/2014 on *Curriculum 2013* of Senior High School/Islamic Senior High School. This document consists of the following:

1. *Kerangka dasar dan struktur kurikulum* or the basic framework and curriculum structure.
2. *Silabus mata pelajaran* or syllabi for all subjects.
3. *Pedoman mata pelajaran* or guidelines for all subjects.

Data Collection Method

While the main data source remained the document of *Curriculum 2013*, other sources included books, e-books, journal articles, and government documents related to the topic discussed. There were several steps involved in gathering the data for this study. First, the researcher determining the topic to be examined, which was formulated into research questions. These research questions then guided the study. Second, other data sources pertinent to the

research questions were located. This data collection search was conducted both online (e-books, peer-reviewed, and government documents) and offline (printed books). Third, relevant literature and other sources that made a significant contribution to the topic were identified. Lastly, the relevant data was synthesized. In this last phase, the data acquired from different sources were integrated and organized for later analysis.

Data Processing and Analysis

In this study, data processing and analysis were conducted with the qualitative data analysis procedure proposed by Miles and Huberman (1994). This procedure included three steps: data reduction, data display, and conclusion drawing/verification.

1. Data reduction

While initial data collection involved the process of identifying relevant data, the final data collected still needed to be condensed in order to be more presentable, manageable, and relevant. Miles and Huberman (1994) designated that data reduction involved focusing and simplifying the data obtained from various sources. In this first step, data collected from the document of *Curriculum 2013* focused on the study's research questions. All data that did not significantly contribute to the research questions or were irrelevant were discarded.

2. Data display

In this second step, data display, data that have been reduced were presented in narrative forms to facilitate data interpretation. This phase was vital as it helped the researcher with the following step, conclusion drawing and verification.

3. Conclusion drawing/verification

The last step was conclusion drawing and verification. This step explained the conclusions that were derived from the data displayed. The researcher drew conclusions about how data illustrated the topic of interest, particularly regarding how data answered each research question. After drawing conclusions, the researcher verified the overall data to ensure that they were relevant and valid.

Assumptions

There were several assumptions that the researcher held prior to conducting this qualitative literature review study. First, it was assumed that *Curriculum 2013* had portions that could address the needs of high ability learners in the regular classroom. It was also assumed that since *Curriculum 2013* was not purposely designed for high ability learners, it had weaknesses that might hinder its ability to address the learning needs of high ability learners in the regular classroom in Indonesia.

Limitations

This study had several limitations that influenced the outcomes and findings. First, the study would have been more effective and comprehensive if it had involved surveys and interviews with teachers, administrators, and other related stakeholders to support data obtained from the document of *Curriculum 2013*. However, because of the time constraint, the option of conducting a survey and interviews was not possible. Second, as the researcher analyzed and interpreted the data, there was a potential bias from the researcher's perspectives that might have influenced the findings. The researcher might also have presented some data or outcomes as more significant than what was actually indicated from other data.

Delimitations

Several delimitations in this study included:

1. A focus on analyzing the current curriculum in Indonesia, which is *Curriculum 2013*, and not previous curricula.
2. It was limited to *Curriculum 2013*'s implementation in senior high schools, and not in other school levels.
3. This study only examined four main components of curriculum: the objectives, content/learning materials, methods, and assessments.

CHAPTER FOUR: RESULTS AND DISCUSSION

Introduction

This qualitative literature review study was designed to answer the following research questions: (1) does *Curriculum 2013* have the ability to address the needs of high ability learners in the regular classroom in Indonesia? And (2) what are the strengths of *Curriculum 2013* that may enable it to address the needs of high ability learners, and what are the weaknesses that may inhibit it from addressing the needs of high ability learners in the regular classroom in Indonesia? This chapter is divided into three segments. The first section is results. It describes the results obtained from an analysis of the document *Curriculum 2013*. The second section contains a discussion of these results. It provides a discussion of the results based on the two research questions. The third section contains a summary of the results and discussion.

Results

The data analysis revealed that the portions of *Curriculum 2013* that can address the needs of high ability learners in the regular classroom include: objectives, content or learning materials, instructional strategies, and learning assessments. Additionally, it was also found that *Curriculum 2013* has some strengths and weaknesses.

Addressing the Needs of High Ability Learners

Curriculum 2013 can address the academic needs of high ability learners because its four main components contain essential skills that are specifically relevant for high ability learners. First, the objectives of the curriculum. Second, content or learning materials. Third, instructional strategies. Lastly, learning assessments.

Objectives

This portion of *Curriculum 2013* includes essential skills which are directed to all learners but are particularly relevant for high ability learners, such as 21st century skills and higher order thinking skills. The 21st century skills are encapsulated in the objectives of *Curriculum 2013*, which are to prepare students who have life skills as individuals and citizens who are devout, productive, creative, innovative, as well as able to contribute to the life of society, the people, the nation, and the world. In addition, higher order thinking skills are integrated into both core competencies (see Appendix B) and basic competencies (see Appendix C), which are derived from the objectives of *Curriculum 2013*.

Curriculum 2013 indicates that teachers should infuse the 21st century skills throughout the class's core competencies (competencies that students should possess in each grade level or program), especially core competencies-3 (KI-3) (see Appendix B) and core competencies-4 (KI-4). These skills include being honest, disciplined, responsible, caring, well mannered, responsive, proactive, creative, curious, and having an interest in problem-solving. In addition, teachers are recommended to integrate higher order thinking skills in each grade level. The core competencies 3 and 4 (KI-3 and KI-4) with foci on knowledge and skills are designed based on higher order thinking skills, including understanding, applying, analyzing, evaluating, and creating. The higher the grade level, the higher the level of thinking skills that students should achieve.

Learning Materials

While learning materials are designed to meet the needs of all learners, this portion of the curriculum contains skills and contents that are relevant for high ability learners. These skills and contents include higher order thinking skills, differentiation in higher grades (grades 11 and 12),

and the foci on both cognitive and non-cognitive skills. Teachers, as the facilitators of learning in the classroom, may adjust these learning materials to address the varied academic needs of learners.

First, basic competencies (competencies that students should acquire in each subject) of each learning material are created based on higher order thinking skills. For example, basic competencies of the biology subject of grade 10 include understanding, applying, and analyzing (see Appendix C).

Second, learning materials are differentiated based on the academic specializations when students reach higher grades (grades 11 and 12). For academic specialization in mathematics and natural sciences, students' learning is focused on subjects such as mathematics, biology, physics, and chemistry. For social sciences specialization, students' learning is focused on subjects such as geography, history, sociology, and economics. Lastly, for the language and culture specialization, students' learning is focused on Indonesian language and literature, English language and literature, other foreign languages, and anthropology.

Third, every subject is not only centered around the mastery of cognitive skills but also non-cognitive skills. For example, in the English subject of grade 10, the scope of learning materials includes: (1) short texts in interpersonal, transactional, and specific functional discourses such as descriptive, recount, narrative, factual report, analytical exposition, news item, and procedure texts in the level of informational literacy; (2) mastery of each type of text which includes three aspects: social functions, text structures, and language features, in which these three aspects are determined and selected based on the objective and context of communication; (3) attitudes which consist of appreciating and practicing of being honest, disciplined, responsible, caring (mutual assistance, collaboration, tolerance, peace), well-

mannered, responsive and proactive and demonstrating these attitudes as a part of the solution to the varying problems; (4) skills comprised of listening, speaking, reading, writing, and watching effectively within social and natural environments and in global society; (5) language features which includes discourse's mark, vocabulary, intonation, word stress, spelling, punctuation, and the neatness of handwriting.

Instructional Strategies

This component of the curriculum can address the needs of high ability learners as it provides scientific approaches that can improve the necessary skills of all learners, including high ability learners. These essential skills include creativity, critical thinking, and problem-solving. In the classroom implementation, teachers may adjust instructional strategies in accordance with students' needs, strengths, and abilities. The learning process places emphasis on students as the center of learning while the teacher acts as the facilitator.

It is recommended that teachers implement learning models that can accommodate students' different needs, strengths, and abilities, such as discovery/inquiry-based learning, project-based learning, and problem-based learning. Each of these learning models can facilitate the varying development of students' attitudes, knowledge, and skills. For instance, in the English subject of grade 10, teachers can select discovery learning to teach factual and conceptual knowledge. Whereas for procedural knowledge, teachers can incorporate project-based learning and problem-based learning. For the skills related to capturing meaning, composing, and editing texts, teachers can utilize discovery learning and problem-based learning. Moreover, for the concrete skills, teachers can use project-based learning.

Learning Assessments

Curriculum 2013 utilizes authentic assessment, ensuring that high ability learners' cognitive (knowledge) and non-cognitive (skills and attitude) accomplishments are evaluated, thus accommodating their different interests and abilities. For example, in the English subject of grade 10, students' knowledge, skill, and attitude are assessed in the forms of assignments, such as speaking, listening, reading, and writing, both in school and out of school. The assessments also include students' socialization, presentation, observation, survey, project, multimedia work, report, class discussion, portfolio, and written test.

Some proposed techniques of authentic assessments that can be used to evaluate the diversity of students' abilities and strengths in the English subject of grade 10 include, first, an assessment of attitude which aims to assess students' attitudes. Teachers can conduct this assessment by utilizing techniques such as observation, self-evaluation, and peer evaluation. Instruments to be used include a checklist, rating scale, and teacher's journal. Second, assessment of knowledge which aims to assess students' knowledge through teachers' application of techniques such as written or oral tests; observations of discussions, ask and answer sessions, and conversations; and homework. Finally, assessment of skills which aims to assess students' practical skills. In the assessment of skills, teachers can employ various techniques such as: work performance (ask and answer session, role play, simulation, monolog, and presentation). Instruments that can be utilized to evaluate work performance are a checklist and a rating scale; a portfolio (the collection of data that shows students' progress in a certain period); and written tests (this technique does not only evaluate students' knowledge but also skills such as essay, report, and letter writing skills).

The Strengths of *Curriculum 2013*

Based on its main components, *Curriculum 2013* contains some strengths that may address the needs of high ability learners in the regular classroom. These strengths are elaborated in four main components of the curriculum: the objectives, learning materials, instructional strategies, and learning assessments. First, objectives of the curriculum infuse critical skills that are particularly relevant for high ability learners, such as 21st century and higher order thinking skills. The integration of these skills into students' learning activities can be accustomed based on their needs and abilities. Second, learning materials in each subject, which are based on the higher order thinking model, have the potential to be adjusted in accordance with students' varied abilities and needs. Academic specializations are provided for higher grades (grades 11 and 12), which can accommodate students' different academic abilities, interests, and needs. Learning materials also cover not only cognitive but also non-cognitive skills, which are crucial for the development of the intellectual and talents of high ability learners.

Third, the instructional strategies may facilitate the varying needs, abilities, and interests of students in the regular classroom as they consist of different learning activities such as discovery/inquiry-based learning, project-based learning, and problem-based learning, as well as are oriented toward student-centered learning. These different learning models are relevant and effective for use to address the needs of high ability learners since they develop students' creativity, communications, collaboration, self-awareness, critical thinking, problem finding and solving skills, and many more. Finally, students' learning progress and outcomes are evaluated using different kinds of authentic assessments. These authentic assessments are relevant for measuring high ability learners' progress as they cover all aspects of learning (cognitive and non-cognitive).

The Weaknesses of *Curriculum 2013*

Aside from the strengths, *Curriculum 2013* also has some weaknesses that may hinder it from addressing the needs and interests of high ability learners. First, *Curriculum 2013* is designed to meet the needs and interests of students of all abilities, but the provision to address the needs of high ability learners is not particularly stated in the curriculum. Therefore, it mainly depends on the teachers to provide differentiation and acceleration for high ability learners. Second, every student learns the same subjects with the same learning materials in grade 10 and only has the opportunity to deepen their interests and abilities in three academic specializations in higher grades (grades 11 and 12). In each class of high schools (grades 10-12), there is no acceleration in learning materials for high ability learners. Despite the fact that there are academic specializations at higher grades (11 and 12), high ability learners who can learn faster than their peers may not be provided with more advanced and challenging learning materials which correspond to their abilities. Consequently, they learn at the same rate as their regular peers. The instructional hour is also limited if compared to the learning materials that teachers should cover in one class session. Lastly, even though there are various types of authentic learning assessments, students learning assessment is ultimately accustomed to the high-stakes examinations (e.g., school-level examinations, national examinations, and international tests).

Discussion

Curriculum 2013 is the current national curriculum that is being implemented in all formal education levels in Indonesia. While it has the potential to address the needs and interests of high ability learners in the regular classroom, it is not specifically designed for high ability learners. The aspects of the curriculum that can address the needs of high ability learners

comprised four critical components: objectives, learning materials, instructional strategies, and learning assessments. *Curriculum 2013* also indicates some strengths that may address the needs of high ability learners in the regular classroom. On the other hand, this curriculum has weaknesses that may inhibit it from addressing the needs of high ability learners.

Addressing the Needs of High Ability Learners

Curriculum and instruction are critical parts of educational provisions that can facilitate the delivery of quality teaching and learning for high ability learners while simultaneously addressing their needs. Despite the fact that *Curriculum 2013* is not specifically created for high ability learners, its four main components (objectives, learning materials, learning instructions, and learning assessments) have the potential to address the needs of high ability learners in the regular classroom in high schools in Indonesia.

Objectives

The main purpose of *Curriculum 2013* is to prepare students who have life skills as individuals, and citizens who are devout, productive, creative, innovative, as well as being able to contribute to society, the people, the nation, and the world. This signifies the incorporation of 21st century skills which include vital life skills, knowledge, and traits necessary for students' success in the future (Alismail, 2015; Ball, 2016; Handajani, 2018; Stehle, 2019; Tight, 2020; Van Laar et al., 2020). These skills need to be taught to high school students because when they graduate, they will utilize these skills when they continue their study in higher education or to enter the workforce.

The 21st century skills are crucial skills to be infused into high ability education (Beasley, 2013; Chandler & Dullaghan, 2013; Coxon, 2013; Dixon, 2013; Firmender, 2013; Housand, 2013; Olszewki-Kubilius, 2013; Troester). These skills have always been a part of high ability education since it was first established (NAGC, n.d.-b). They are necessary to ensure that the needs and interests of high ability learners are met. Additionally, possessing these skills will help these students to succeed in the future. In Indonesia, high ability education includes the infusion of 21st century skills within students' learning activities.

The core competencies derived from *Curriculum 2013* objectives are developed from the higher order thinking model (Purnomo et al., 2021). Higher order thinking skills are a part of 21st century skills. Thus, similar to 21st century skills, high-order thinking skills are also a part of the skills that are necessary for high ability learners (Callahan & Hertberg-Davis, 2018; Kaufman & Baer, 2016). Higher order thinking skills support a breadth of knowledge and skills development which maintain the complexity of the subjects taught in the curriculum. These skills are manifested in the core competencies 3 and 4 of general high schools and Islamic high schools (KI-3 and KI-4). For instance, in grade 10, the core competencies 3 include: understanding, applying, and analyzing. The core competencies 3 for grade 11 also include: understanding, applying, and analyzing. At a glance, it seems that both grades 10 and 11 have similar skills to be acquired by students. Nevertheless, there is a difference between the core competencies of these two grades. In grade 11, students learn more complex materials than in grade 10. For grade 12, the complexity is the highest among the other two grades. In this grade, the core competencies include understanding, applying, analyzing, and evaluating. In addition, the core competencies 4 of grade 10 include processing, reasoning, and presenting. The core competencies 4 for grade 11 also include processing, reasoning, and presenting with more complex skills embedded in this

grade. For grade 12, the core competencies include processing, reasoning, presenting, and creating. From a review of these core competencies, it is clear that the complexity of the knowledge and skills is increasing with each grade level. The higher the grade, the more complex the knowledge or skills to be acquired by learners.

The inclusion of 21st century skills and higher order thinking skills in the objectives of *Curriculum 2013* is indicative of its potential to address the needs of high ability learners in the regular classroom. Previous studies have also revealed the effectiveness of high ability programs that included the 21st century skills and higher order thinking skills in order to cater to the needs of every high ability individual in the regular classroom (Beasley, 2013; Chandler & Dullaghan, 2013; Coxon, 2013; Dixon, 2013; Firmender, 2013; Housand, 2013; Olszewki-Kubilius, 2013; Troester).

Learning Materials

Learning materials in *Curriculum 2013* have different complexities in different grades. All learning materials are based on higher order thinking skills such as understanding, applying, analyzing, evaluating, and creating. Students are also provided with academic specializations in higher grades (grades 11 and 12). Moreover, they are encouraged to master cognitive and non-cognitive skills at all grades.

In grade 10, learning materials have less complexity when compared to grade 11, while grade 12 has the most complex learning materials of all three grades. For example, in grade 10, the higher order thinking skills that students must achieve include understanding, applying, and analyzing. While in the higher grades, they should master even higher order skills, such as understanding, applying, analyzing, evaluating, and creating.

In grade 10, students learn general subjects with no differentiation. The general subjects taught in grade 10 include: religion and moral education; *Pancasila* (the five principles underlying the state ideology of Indonesia) and civics education; Indonesian language, mathematics; history of Indonesia; English; arts and culture; physical, sports, and health education; and crafting and entrepreneurship. Differentiation in learning subjects and materials occurs when students enter grades 11 and 12. In these two higher grades, students can decide on the classes they want to attend based on their interests and needs. For grades 11 and 12, the academic specializations are divided into three categories. First, students who have strong interests in exact sciences can choose mathematics and natural sciences specialization. The mathematics and natural sciences specialization have main foci in mathematics, biology, physics, and chemistry. Second, students who have strong interests in social studies can select social sciences specialization. This specialization is focused on subjects such as geography, history, sociology, and economics. Third, students who have strong interests in the linguistic and cultural field can choose the language and culture specialization. This specialization is focused on Indonesian language and literature, English language and literature, other foreign languages, and anthropology. Additionally, students from each of these three different academic specializations can take cross major electives that accommodate their interests.

Every subject in *Curriculum 2013* is not only centered around the mastery of cognitive skills (thinking/intellectual ability) but also the non-cognitive skills (feeling/attitudes, values, and interest toward learning; and doing/perceptual ability to interpret appropriately act/react to environment and situation). All learning materials in each subject are designed to develop four competencies which include spiritual, social, knowledge, and skill. This is demonstrated, for instance, in the learning material's scope for the English subject of grade 10, which includes: the

mastery of different texts, mastery of various attitudes, and mastery of varying academic and social skills.

Learning materials of *Curriculum 2013* cover three important perspectives that should be taught to high ability learners. These include higher order thinking skills, differentiation in higher grades (grades 11 and 12), and cognitive and non-cognitive skills. Incorporating higher order thinking skills is necessary for high ability learners to develop their critical thinking, problem finding, and problem-solving skills (Callahan & Hertberg-Davis, 2018; Kaufman & Baer, 2016). Additionally, academic specializations are critical in high ability programs as these provisions ensure that academic needs and interests of high ability learners are being met. This is consistent with the findings of previous research that emphasized the importance of learning differentiation to meet the needs of high ability learners, as well as their peers in the regular classroom. (Benny & Blonder, 2016; Bondie et al., 2019; Callahan & Hertberg-Davis, 2018; Hockett, 2009; Pomortseva, 2014; Sharp & Clemmer, 2015; Tomlinson et al., 2003). Lastly, learning materials cover both cognitive and non-cognitive aspects of learning to ensure that students' different abilities and strengths are being accommodated.

Instructional Strategies

As noted in *Curriculum 2013*, teachers' main instructional strategy to facilitate students' learning is the scientific approach. The scientific approach aims to improve students' creativity, critical thinking, problem-solving, and other skills. Moreover, it emphasizes students' role as the center of learning and teachers as facilitators of learning. It includes the following steps that are arranged in order from the beginning to the end of the class session: to observe, to ask a question, to experiment, to reason, to create, and to communicate. Some learning models that are suggested include (1) discovery/inquiry learning, which includes several learning activities such

as creating stimulus, preparing problem statements, collecting data, processing data, verifying data, and drawing conclusions; (2) project-based learning which consists of preparing questions for project learning, designing project planning, setting time table, monitoring activity, project development, examining result, and evaluating activity/experience; and (3) problem-based learning which comprised of orienting students on the problem, organizing learning activity, guiding independent and group investigation, developing and presenting the result, analyzing and evaluating problem-solving process.

In high ability education, various instructional strategies are vital to ensure that students' needs, abilities, and interests are accommodated (Tomlinson et al., 2003). Discovery learning, project-based learning, and problem-based learning are some of the effective instructional strategies that can address the needs of high ability learners in the regular classroom (Callahan & Hertberg-Davis, 2018; VanTassel-Baska, 2017). These learning models are relevant and effective in meeting the needs of high ability learners since they emphasize the students' active role in the class, develop students' creativity, communication, collaboration, self-awareness, critical thinking, problem finding and solving skills, and many more. Therefore, instructional strategies that are utilized in *Curriculum 2013* can address the needs of high ability learners in the regular classroom.

Learning Assessments

Curriculum 2013 recommends that teachers utilize authentic assessments to evaluate students' learning outcomes. Authentic assessments are particularly relevant for students with different interests and abilities. This type of assessment is also used in the identification of high ability learners since it gathers information about students' performance from different sources (Nebraska Department of Education, 2015). In *Curriculum 2013*, authentic assessments are used

to measure students' performance and achievement during the learning process and at the end of a lesson or grade. Authentic learning assessments are effective tools in measuring high ability learners' performance and achievement because these types of assessments test learners' cognitive and non-cognitive knowledge and skills in realistic situations. Moreover, these assessments are relevant not only for high ability learners, but also for their peers in the regular classroom, as they assess students' learning outcomes using various techniques.

The following is how these varied assessment techniques are used in the English subject of grade 10: for affective assessments, teachers utilize observation techniques to examine students' religious and social attitudes. Additionally, students are given the opportunity to assess themselves. They are also evaluated by their peers. For knowledge assessment, students are tested through written or oral tests, observations, ask and answer sessions, and homework. Lastly, for skill assessment, teachers evaluate students' work performance, portfolio, and written tests. To summarize, the variation of techniques in authentic learning assessments can accommodate the needs of high ability learners as they evaluate different performance and achievement that high ability learners demonstrate in learning activities.

The Strengths of Curriculum 2013

The document of *Curriculum 2013* indicates that this curriculum has several strengths that may benefit high ability learners and cater to their needs and interests. In terms of the objectives, *Curriculum 2013* has the ability to develop the essential skills that high ability learners should possess, such as 21st century skills and higher order thinking skills. The incorporation of these skills into students' learning activities can be accustomed in order to meet students' varied abilities, needs, and interests.

The next component of the curriculum that displays strengths is content/learning materials. Learning materials in every subject taught in high schools can also be adjusted to meet learners' needs. Each subject is oriented on higher order thinking skills according to each grade (the higher the grade, the higher the learning materials' complexity). Besides, students can choose specializations based on their interests, and needs when they enter grades 11 and 12. There are three options for academic specializations: mathematics and natural sciences (mathematics, biology, physics, and chemistry); social sciences (geography, history, sociology, and economics); and language and culture (Indonesian language and literature, English language and literature, other foreign languages, and anthropology). Learning materials are oriented toward cognitive and non-cognitive skills to facilitate learners' varying needs and interests in the regular classroom.

For the instructional strategies, teachers are suggested to utilize several learning models that emphasize students' active role in learning and facilitate varying learning needs of learners, such as discovery learning, project-based learning, and problem-based learning. These learning models can effectively develop students' critical thinking, problem-solving, creativity, teamwork, leadership, self-awareness, social, and communications skills. Learning assessments in *Curriculum 2013* can benefit high ability learners as they consist of a variety of authentic assessments models, such as observation, self-evaluation, peer evaluation, written or oral tests, work performance, and portfolio. These assessments can also evaluate various abilities and strengths of high ability learners, thus accommodating their needs in the regular classroom.

The Weaknesses of Curriculum 2013

As a national curriculum that is not specifically designed for high ability learners, *Curriculum 2013* has some weaknesses that may inhibit it from addressing the needs of high ability learners in the regular classroom. This curriculum is designed for the education of students of all abilities. It means that the provision of this curriculum targets all students with different abilities, strengths, needs, and strengths. However, the provision to address the needs of high ability learners is not explicitly specified in the curriculum, which result in no mandate to provide acceleration for high ability learners in the regular classroom. Thus, it is essentially contingent on the teachers' initiative to provide differentiation and acceleration for high ability learners. Accordingly, every student may learn at the same pace despite their various learning rates.

Regarding differentiation, students can only explore their interests and abilities in three academic specializations when they enter higher grades (grades 11 and 12). While in grade 10, there is no differentiation at all, especially for high ability learners. Even though there are academic specializations for higher grades (11 and 12), high ability learners who can learn at a quicker rate than their regular peers may not be provided with more advanced and complex learning materials that are commensurate with their abilities. Subsequently, they may learn at a similar pace as their regular peers regardless of their advanced learning capabilities.

The allocated instructional time is insufficient for the teachers to complete learning materials in one class session. ACDP (2017) revealed that the time allocation is not enough to cover assigned learning contents in every class session. Lastly, although various types of authentic learning assessments are utilized to ensure students' unique abilities and strengths are equally assessed, evaluation of students' independent investigations is not provided. On top of

that, students' learning is oriented more toward high-stakes examinations (e.g., school-level examinations, national examinations, and international tests such as TIMMS and PISA), which is contradictory to the essence of authentic assessments (ACDP, 2017).

Summary

The analysis of *Curriculum 2013* demonstrates that it has the ability to meet the needs of high ability learners in the regular classroom. All four critical components (objectives, learning materials, instructional strategies, and learning assessments) of *Curriculum 2013* contain essential aspects to educating high ability learners in the regular classroom. These include 21st century skills, higher order thinking skills, differentiation, and mastery of cognitive and non-cognitive skills. Its ability to address the needs of high ability learners in the regular classroom indicates various curricular strengths, including its objectives, learning materials, instructional strategies, and learning assessments.

Nonetheless, this curriculum also has weaknesses that may inhibit it from addressing the needs of high ability learners. For example, its provision for high ability learners is not clearly indicated in the curriculum; there is no acceleration at all grades; differentiation only occurs at higher grades (11 and 12), there is limited learning time, and the disproportionate emphasis on high-stakes examination results.

CHAPTER FIVE: CONCLUSION

Introduction

This study aimed to analyze the content of Indonesia's national *Curriculum 2013* and its ability to address the needs of high ability learners in the regular classroom. It also investigated the strengths and the weaknesses of *Curriculum 2013*. The qualitative literature review method was employed in this study as it examined curriculum documents and synthesized research findings pertinent to the study's research questions. Qualitative data were collected from different sources, such as books, e-books, journal articles, to government documents. The main source of data was *Curriculum 2013* for Senior High School/Islamic Senior High School. The curriculum components analyzed included the objectives, content/learning materials, methods, and assessments. The limitations of this study included the lack of field data from school personnel that could have supported the data obtained from the document of *Curriculum 2013*, and the potential bias from the researcher's perspectives that might have influenced data interpretation.

This last chapter is divided into four sections. The first section is the summary of the results. The second section is the summary of the discussion. The third section is recommendations, followed by concluding thoughts.

Summary of Results

Research Question 1: Does *Curriculum 2013* Have the Ability to Address the Needs of High Ability Learners in the Regular Classroom in Indonesia?

Based on the analysis of the four main components of *Curriculum 2013*, it appears that this curriculum can address the needs of high ability learners. First, the objectives of the curriculum promote different skills that are crucial in high ability education, such as 21st century skills and higher order thinking skills. Second, learning materials cover skills and contents that are effective for high ability learners, such as higher order thinking skills, differentiation in higher grades (grades 11 and 12), and the focus on both cognitive and non-cognitive skills. Third, instructional strategies provide various instructional models that can improve high ability learners' skills, such as creativity, critical thinking, and problem-solving. Lastly, teachers mainly utilize different authentic assessments, which ensure that high ability learners' cognitive (knowledge) and non-cognitive (skills and attitude) accomplishments are evaluated, thereby accommodating their different interests and abilities.

Research Question 2: What Are the Strengths of *Curriculum 2013* that May Enable It to Address the Needs of High Ability Learners and What Are the Weaknesses that May Inhibit It from Addressing the Needs of High Ability Learners in the Regular Classroom in Indonesia?

Curriculum 2013 has some strengths that may enable it to meet the needs of high ability learners in the regular classroom, such as the incorporation of 21st century skills and higher order thinking skills in its objectives; orientation of each subject on higher order thinking skills according to each grade; differentiation in higher grades; development of both cognitive and

non-cognitive skills; various instructional strategies and learning materials that promotes students' critical thinking, problem-solving, creativity, teamwork, leadership, self-awareness, social, and communications skills; and a variety of authentic learning assessments. Conversely, *Curriculum 2013* has several weaknesses that may inhibit it from addressing the needs of high ability learners in the regular classroom. For instance, the provision for high ability learners is not explicitly exemplified in the curriculum, differentiation only occurs at higher grades, there is no acceleration at all grades, there is a limited allocation of learning time, and a tendency for high-stakes examinations and international tests to take precedence in the assessment.

Summary of Discussion

Research Question 1: Does *Curriculum 2013* Have the Ability to Address the Needs of High Ability Learners in the Regular Classroom in Indonesia?

Curriculum 2013 can address the needs of high ability learners in the regular classroom since its four components contain the necessary provision for high ability education. First, the objectives of the curriculum explicitly include some 21st century skills such as productive, creative, innovative, social, and responsibility (contribution to society, the country, and the world). The 21st century skills have always been a part of high ability education since it was first initiated. Hence, these skills are effective in the accommodation of high ability learners' needs. Additionally, the curriculum's core competencies and basic competencies are developed based on the higher order thinking model (understanding, applying, analyzing, evaluating, and creating). These higher order thinking skills are a part of 21st century skills. Accordingly, higher order thinking skills are also a part of the necessary skills for high ability learners.

Second, learning materials incorporate higher order thinking skills (understanding, applying, analyzing, evaluating, and creating). Differentiation, an essential program for high ability learners to accommodate their varied needs, interests, and abilities, is also provided to high school students. In grades 11 and 12, students can choose a specialization based on their interests and needs. These specializations consist of mathematics and natural sciences, social sciences, and language and culture. Learning materials also promote a balance between students' cognitive and non-cognitive abilities. A balance between cognitive and non-cognitive abilities is necessary to accommodate the varying needs and interests of high ability learners in the regular classroom, considering that while some high ability learners might be good at cognitive ability, others might not.

Third, instructional strategies utilized in learning activities accommodate high ability learners' different learning preferences. The scientific approach is a primary instructional strategy that teachers use to facilitate students' learning. It is recommended that teachers encourage students' active participation in each learning activity, while teachers guide them throughout the teaching and learning process. The curriculum also suggests some learning models, such as discovery/inquiry-based learning, project-based learning, and problem-based learning. These learning models are particularly relevant for use in meeting the needs of high ability learners as they develop students' creativity, communications, collaboration, self-awareness, critical thinking, problem finding, and problem-solving skills.

Lastly, as with the instructional strategies, learning assessments utilized in the classroom also address the varied learning preferences, needs, and strengths of high ability learners. Through authentic learning assessments, teachers ensure that every competency that students demonstrate in and outside the classroom is evaluated. Assessments of students' learning

progress and achievement cover affective, knowledge, and skill competencies. Authentic learning assessments can effectively measure high ability learners' performance and achievement because these types of assessments test learners' cognitive and non-cognitive knowledge and skills in real situations.

Research Question 2: What Are the Strengths of *Curriculum 2013* that May Enable It to Address the Needs of High Ability Learners, and What Are the Weaknesses that May Inhibit It from Addressing the Needs of High Ability Learners in the Regular Classroom in Indonesia?

The strengths of *Curriculum 2013* that may address the needs of high ability learners in the regular classroom are demonstrated in its four critical components. The objectives of this curriculum encourage the mastery of skills that have been a part of high ability education and are included within 21st century and higher order thinking skills. Learning materials for each subject in high schools are built upon higher order thinking skills. Additionally, differentiation is provided for students in higher grades (grades 11-12). This differentiation enables high ability learners to build on their strengths in a particular field, while simultaneously meeting their needs and interests. Learning materials are also centered on developing human resources with cognitive and non-cognitive abilities, which accommodate the varying abilities and needs of students in the regular classroom.

The instructional strategies facilitate high ability learners' different learning preferences. Through scientific approaches which incorporate discovery/inquiry learning, project-based learning, and problem-based learning, teachers can help to improve students' creativity, critical thinking, problem-solving, and other skills. Students' active participation is also encouraged in every learning activity. Similar to the instructional strategies, learning assessments are also

varied. The variation in learning assessments clearly accommodates the different learning preferences and strengths of high ability learners. Through authentic learning assessments, teachers ensure that every competency that students demonstrate in and outside the classroom is measured. Authentic learning assessments are effective when measuring high ability learners' academic performance and achievement because these types of assessments test learners' cognitive and non-cognitive knowledge and skills in realistic situations.

Aside from the strengths, *Curriculum 2013* also has some weaknesses that may hinder it from addressing the needs of high ability learners in the regular classroom. First, *Curriculum 2013* is designed to meet the needs and interests of students of all abilities, but the provision to address the needs of high ability learners is not stated in the curriculum. Consequently, acceleration for high ability learners is not required in the regular classroom. For this reason, every student from grades 10 to 12 is learning at the same pace irrespective of their ability to learn at different rates. Moreover, students only have the opportunity to develop their interests in three academic specializations in higher grades (grades 11 and 12). Learning duration is insufficient for teachers to cover the materials in a class session. Finally, even though there are different types of learning assessments, students' learning is directed toward succeeding in high-stakes examinations.

Recommendations

For School Personnel

Since *Curriculum 2013* has the potential to address the needs of high ability learners in the regular classroom, it is recommended that the school personnel reinforce the strengths of the curriculum, which are indicated in its objectives, learning materials, instructional strategies, and

learning assessments, so that the individual need of high ability learners can be accommodated in the regular classroom. The school personnel should advocate for the provision for high ability education to be a part of the national curriculum. It is crucial to have that provision specifically included in the curriculum to ensure that educational programs and services for high ability learners are mandated in high schools. This provision should also have certain standards that guide the school personnel to carry out the educational programs and services for high ability learners. Schools can adopt high ability programming standards from other countries with advanced high ability education programs, such as the United States. This country has the “*pre-K to grade 12 gifted education programming standards*,” which were developed based on diverse insights, research, and best practices of high ability education programs and services throughout the country (NAGC, n.d.-c).

Additionally, schools should make more effort to provide not only acceleration and differentiation to the existing learning materials in each subject and grade level, but also incorporate compacting and enrichment programs for high ability learners at all grades. Moreover, schools should include non-academic specializations in the curriculum. At the moment, non-academic specializations are provided in the forms of extracurriculars such as sports, theatre/drama, journalism, dance, and the art clubs. Adding non-academic specializations to the curriculum is crucial in order to accommodate students’ interests in non-academic subjects and develop their outstanding talents in different fields. More attention needs to be provided to allow students to conduct advanced, individualized, and independent research on actual problems that impact real audiences. Teachers should also be given flexibility to decide their teaching and learning duration and to modify learning materials and instruction to be used in the class, which are commensurate with students’ needs, interests, and abilities.

Aside from incorporating authentic assessments, teachers should also promote, integrate, and assess students' independent investigations or research outcomes. This assessment can be done using Renzulli and Reis' instrument entitled the Student Product Assessment Form (SPAF), which evaluates individual aspects and overall excellence of products (Renzulli Center for Creativity, Gifted Education, and Talent Development, n.d.). Moreover, the teachers' roles in addressing the needs of high ability learners are crucial since they are the ones who deal with students in the classroom on a regular basis. Therefore, teachers should be educated through teacher training and continued professional development, aiming to equip educators with skills on how to effectively and appropriately utilize curriculum and instruction to meet the needs of high ability learners.

For Future Research

It would be valuable for future research to include surveys and interviews with teachers, administrators, and other related stakeholders to support data obtained from *Curriculum 2013*. This study focused on four main curriculum components (the objective, learning materials, instructional strategies, and learning assessments). Future studies should look further into the details of the curriculum, such as syllabi and lesson plans, in order to find out more information about the potential of this curriculum to meet the needs of high ability learners in the regular classroom. Moreover, this study focused on the analysis of *Curriculum 2013*. Future studies might review teaching practices in the regular classroom that will help teachers and other school personnel to find practical solutions regarding differentiation, compacting, enrichment, and acceleration programs that are vital for high ability learners.

Conclusions

High ability learners are children who demonstrate outstanding abilities and talents in various areas such as intellectual, creative, cultural, artistic, physical, social, and leadership. (Marland, 1972; National Association for Gifted Children, 2010; New Zealand Ministry of Education, 2012; The Republic of Indonesia, 2003; UNESCO IBE, 2013; U.S. Department of Education, 1993). As a consequence of their outstanding abilities and talents, these students require special educational services and activities to accommodate their learning needs and interests, as well as to develop their personal best. They need to be provided with advanced and differentiated learning experiences that match their learning capacity. In Indonesia, curricular content, programs, and services are centered around meeting the needs of students of all abilities. Nevertheless, the current curriculum also has the potential to address the needs of high ability learners in the regular classroom.

Curriculum 2013 is Indonesia's curriculum that was created in 2013 and is still in effect throughout the country's school systems. This curriculum has the ability to address the needs of high ability learners because its objective and learning materials clearly promote the inclusion of 21st century and higher order thinking skills. These skills and abilities are a part of high ability learning and should be included in the educational programs and services for high ability learners. Differentiation, an essential program that schools should incorporate to accommodate high ability learners' varied needs, interests, and abilities, is also provided in the forms of academic specializations when students enter higher grades (11 and 12). Additionally, learning materials can facilitate the mastery of cognitive and non-cognitive skills to accommodate students' different interests and needs.

Instructional strategies utilized in learning activities can accommodate high ability learners' different learning preferences. The scientific approach that teachers use to facilitate

students' learning aims to expand students' creativity, critical thinking, problem-solving, and other skills. Students' active participation is also encouraged in every learning activity. The curriculum also suggests some learning models such as discovery/inquiry learning, project-based learning, and problem-based learning. These models are some of the effective teaching methods that can address the needs of high ability learners in the regular classroom. Additionally, they are particularly relevant in addressing the needs of high ability learners since they can improve students' different skills such as communications, collaboration, self-awareness, problem finding and solving skills, and many more. Lastly, a variety of authentic learning assessments ensures that students' different competencies are equally assessed. Thus, addressing the varying learning preferences and strengths of learners.

Curriculum 2013 also has some strengths that may address the needs of high ability learners, such as the incorporation of 21st century skills and higher order thinking skills, differentiation in grades 11 and 12, the inclusion of cognitive and non-cognitive skills, a variety of instructional strategies and learning assessments that can accommodate the varying learning preferences and strengths of high ability learners in the regular classroom. Aside from the strengths, *Curriculum 2013* also has some weaknesses that may inhibit it from addressing the needs of high ability learners, which include: there is no mandate for high ability learners' education in the curriculum. Hence, teachers are not obligated to provide differentiation and acceleration for high ability learners in the regular classroom. Moreover, every student learns the same learning materials in grade 10, and they can only explore their interests in three academic specializations in higher grades (11 and 12). Additionally, there is no acceleration in all grades (10-12) for high-ability learners. There is also a problem of learning duration, which limits the amount of learning materials that teachers can cover in one class session. Finally, students

learning is oriented more toward high-stakes examinations, such as school-level examinations, national examinations, and international tests.

All in all, even though *Curriculum 2013* is not designed particularly for high ability learners, it has the potential to address the needs of high ability learners in the regular classroom. However, because there is no mandate to provide differentiated programs and services for high ability learners, it will depend on the teachers and other school personnel to accommodate and meet the educational needs of these learners in the regular classroom. As with other regular curricula, this curriculum also has weaknesses that may hamper it from addressing the needs of high ability learners in the regular classroom. This requires more effort from school personnel and related stakeholders to advocate for specific support and programs for these learners to achieve their personal best. Modifications and accommodations are still needed, particularly regarding acceleration, differentiation, enrichment, and compacting of learning materials in each grade. These modifications will facilitate high ability learners to excel and reach their full potential.

APPENDIX A – IRB NOT HUMAN RESEARCH DETERMINATION



UNIVERSITY OF CENTRAL FLORIDA

Institutional Review Board
FWA00000351
IRB00001138, IRB00012110
Office of Research
12201 Research Parkway
Orlando, FL 32826-3246

NOT HUMAN RESEARCH DETERMINATION

February 11, 2022

Dear [Lismawati Lapasi](#):

On 2/11/2022, the IRB reviewed the following protocol:

Type of Review:	Initial Study
Title of Study:	Curriculum 2013: Addressing the Needs of High Ability Learners in Indonesian Secondary Schools
Investigator:	Lismawati Lapasi
IRB ID:	STUDY00003963
Funding:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none"> • HRP-251- FORM - Faculty Advisor Scientific-Scholarly Review fillable form.pdf, Category: Faculty Research Approval; • HRP-250-FORM- Request for NHR.docx, Category: IRB Protocol; • Points that will be analyzed.docx, Category: Other;

The IRB determined that the proposed activity is not research involving human subjects as defined by DHHS and FDA regulations.

IRB review and approval by this organization is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities are research involving human in which the organization is engaged, please submit a new request to the IRB for a determination. You can create a modification by clicking **Create Modification / CR** within the study.

If you have any questions, please contact the UCF IRB at 407-823-2901 or irb@ucf.edu. Please include your project title and IRB number in all correspondence with this office.

Sincerely,

Gillian Bernal
Designated Reviewer

**APPENDIX B – TABLE OF CORE COMPETENCIES FOR GENERAL
HIGH SCHOOLS OR ISLAMIC HIGH SCHOOLS**

Grade 10	Grade 11	Grade 12
(1). Appreciating and practicing religious teachings of religion professed	(1). Appreciating and practicing religious teachings of religion professed	(1). Appreciating and practicing religious teachings of religion professed
(2). Appreciating and practicing being honest, disciplined, responsible, caring (mutual assistance, collaboration, tolerance, peace), well-mannered, responsive, and proactive and demonstrating these attitudes as a part of the solution to the varying problems in order to effectively interact with the social and natural environment as well as to put oneself as a reflection of the nation in the global context.	(2). Appreciating and practicing being honest, disciplined, responsible, caring (mutual assistance, collaboration, tolerance, peace), well-mannered, responsive, and proactive and demonstrating these attitudes as a part of the solution to the varying problems in order to effectively interact with the social and natural environment as well as to put oneself as a reflection of the nation in the global context.	(2). Appreciating and practicing being honest, disciplined, responsible, caring (mutual assistance, collaboration, tolerance, peace), well-mannered, responsive, and proactive and demonstrating these attitudes as a part of the solution to the varying problems in order to effectively interact with the social and natural environment as well as to put oneself as a reflection of the nation in the global context.
(3). Understanding, applying, analyzing factual, conceptual, and procedural knowledge based on students' curiosity about science, technology, art, culture, and humanity with the conception of humanity, people and nation, and civilization in relation to the cause of a phenomenon and event, and applying procedural knowledge on the specific field of study in accordance with talent and interest to solve a problem.	(3). Understanding, applying, and analyzing factual, conceptual, procedural, and metacognitive knowledge based on students' curiosity about science, technology, art, culture, and humanity with the conception of humanity, people and nation, and civilization in relation to the cause of a phenomenon and event, and applying procedural knowledge on the specific field of study in accordance with talent and interest to solve a problem.	(3). Understanding, applying, analyzing, and evaluating factual, conceptual, procedural, and metacognitive knowledge based on students' curiosity about science, technology, art, culture, and humanity with the conception of humanity, people and nation, and civilization in relation to the cause of a phenomenon and event, and applying procedural knowledge on the specific field of study in accordance with talent and interest to solve a problem.
(4). Processing, reasoning, presenting in the concrete and abstract realm in	(4). Processing, reasoning, presenting in the concrete and abstract	(4). Processing, reasoning, presenting, and creating in the concrete and

<p>relation to the development of what has been learned independently at school, and having the ability to utilize methods in accordance with scientific rules.</p>	<p>realm in relation to the development of what has been learned independently at school, acting effectively and creatively, and having the ability to utilize methods in accordance with scientific rules.</p>	<p>abstract realm in relation to the development of what has been learned independently at school, acting effectively and creatively, and having the ability to utilize methods in accordance with scientific rules.</p>
---	---	--

Note. Retrieved from *the document of Curriculum 2013 of Senior High School/Islamic Senior High School*, 2014, Ministry of Education and Culture of the Republic of Indonesia.

**APPENDIX C – TABLE OF CORE COMPETENCY NO. 3 AND ITS BASIC
COMPETENCIES FOR BIOLOGY SUBJECT OF GRADE 10**

Core Competency	Basic Competencies
(3). Understanding, applying, analyzing factual, conceptual, and procedural knowledge based on curiosity about science, technology, art, culture, and humanity with the conception of humanity, people and nation, and civilization in relation to the cause of a phenomenon and event, and applying procedural knowledge on the specific field of study in accordance with talent and interest to solve a problem.	(3.1) Understanding the scope of biology (issues in different biological objects and levels of life organization), scientific methods, and the principles of job safety based on daily life observation. (3.2) Understanding observation data about different levels of biodiversity (genes, types, and ecosystem) in Indonesia. (3.3) Applying the understanding of virus related to characteristics, replication, and the roles of virus in the aspect of community health. (3.4) Applying classification principles to classify archaeobacteria and eubacteria based on characteristics and shapes through a thorough and systematic observation. (3.5) Applying classification principles to classify protists based on their class' general characteristics and roles in life through a thorough and systematic observation. (3.6) Applying classifications principles to classify fungi based on their characteristics and reproductive method through a thorough and systematic observation. (3.7) Applying classifications principles to classify plants into a division based on morphological and metagenesis observation of plants and linking their roles to life sustainability on earth. (3.8) Applying classifications principles to classify animals into a phylum based on anatomical and morphological observation and linking their roles to life. (3.9) Analyzing information/data about the ecosystem and all interactions that occurred in it from various sources. (3.10) Analyzing data about environmental changes and their impacts to life.

Note. Retrieved from *the document of Curriculum 2013 of Senior High School/Islamic Senior High School*, 2014, Ministry of Education and Culture of the Republic of Indonesia.

REFERENCES

- Agustin, E. W., & Sugiyono. (2019). Development of curriculum 2013 as an effort to improve the quality of education in Indonesia. *Advances in Social Science, Education and Humanities Research*, 326, 178-182. DOI:[10.2991/iccie-18.2019.32](https://doi.org/10.2991/iccie-18.2019.32)
- Akgül, G. (2021). Teachers' metaphors and views about gifted students and their education. *Gifted Education International*, 37(3), 273–289.
<https://doi.org/10.1177/0261429421988927>
- Alhamuddin. (2014). *Sejarah kurikulum di Indonesia: Studi analisis kebijakan pengembangan kurikulum* [History of curriculum in Indonesia: A study on analysis of curriculum development policy]. *Nur El-Islam*, 1(2), 48-58.
- Alismail, H. A., & McGuire, P. (2015). 21st century standards and curriculum: Current research and practice. *Journal of Education and Practice*, 6(6), 150-154.
- Artner, A. (2017). Role of Indonesia in the evolution of ASEAN. *The Journal of East Asian Affairs*, 31(1), 1-38.
- Ayoub, A. E. A., Alabbasi, A. M. A., & Plucker, J. A. (2021). Closing poverty-based excellence gaps: Supports for gifted students from low-income households as correlates of academic achievement. *Journal for the Education of the Gifted*, 44(3), 286-299.
<https://doi.org/10.1177/01623532211023598>
- Ball, A., Joyce, H. D., & Anderson-Butcher, D. (2016). Exploring 21st century skills and learning environments for middle school youth. *International Journal of School Social Work*, 1(1), 1-15. <https://doi.org/10.4148/2161-4148.1012>
- Baska, A., & VanTassel-Baska, J. (2018). *Interventions that work with special populations in gifted education*. Sourcebooks, Inc.

- Beasley, J. (2013). Curriculum for the 21st century: Making the connection in the gifted classroom. *Teaching for High Potential: National Association for Gifted Children*. Retrieved on February 1, from <https://www.nagc.org/sites/default/files/Publication%20THP/THP%202013%20Summer.pdf>
- Benny, G., & Abdullah, K. (2011). Indonesian perceptions and attitudes toward the ASEAN community. *Journal of Current Southeast Asian Affairs*, 30(1), 39-67. <https://doi.org/10.1177/186810341103000102>
- Benny, N., & Blonder, R. (2016). Factors that promote/inhibit teaching gifted students in a regular class: Results from a professional development program for chemistry teachers. *Education Research International*, 1-11. <http://dx.doi.org/10.1155/2016/2742905>
- Bhatt, R. (2011). A review of gifted and talented education in the United States. *Education Finance and Policy*, 6(4), 557–582. https://doi.org/10.1162/EDFP_a_00048
- Boehler, J. T. (2019). Preparing gifted students for college success within the high school science classroom. *Learning to Teach*, 8(1), 105-110. Retrieved on January 26, 2022, from <https://openjournals.utoledo.edu/index.php/learningtoteach/article/view/304>
- Bondie, R. S., Dahnke, C., & Zusho, A. (2019). How does changing “One-Size-Fit-All” to differentiated instruction affect teaching? *Review of Research in Education*, 43, 336–362. DOI: 10.3102/0091732X18821130
- Brulles, D. (September 19, 2018). Identifying and supporting gifted students from underserved communities. Retrieved on February 1, 2022, from <https://www.nagc.org/blog/identifying-and-supporting-gifted-students-underserved-communities>

- Callahan, C. M. (2005). Identifying gifted students from underrepresented populations. *Theory into practice*, 44(2), 98-104. <http://www.jstor.org/stable/3497028>
- Callahan, C. M., & Hertberg-Davis, H. L. (2018). *Fundamentals of gifted education: Considering multiple perspectives*. Routledge: New York and London.
- Castellano, J. A. (2003). *Special populations in gifted education: Working with diverse gifted learners*. Pearson Education, Inc.
- Castellano, J. A., & Frazier, A. D. (2010). *Special populations in gifted education: Understanding our most able students from diverse backgrounds*. Prufrock Press Inc.
- Cathcart, R. (2020). *Understanding and working with gifted learners: "They're not bringing my brain out"*. Routledge Taylor & Francis Group.
- Central Bureau of Statistics. (2021). *Hasil sensus penduduk 2020* [The result of population census 2020]. Retrieved on January 26, 2022, from <https://www.bps.go.id/pressrelease/2021/01/21/1854/hasil-sensus-penduduk-2020.html>
- Chandler, K., & Dullaghan, B. (2013). Bringing awe and wonder into 21st century skills. *Teaching for High Potential: National Association for Gifted Children*. Retrieved on February 1, from <https://www.nagc.org/sites/default/files/Publication%20THP/THP%202013%20Summer.pdf>
- Clack, G. (2007). A diverse educational system: Structure, standards, and challenges. *American Studies Journal*, 49. DOI 10.18422/49-10
- Coxon, S. V. (2013). The four cs in 21st century science education. *Teaching for High Potential: National Association for Gifted Children*. Retrieved on February 1, from

<https://www.nagc.org/sites/default/files/Publication%20THP/THP%202013%20Summer.pdf>

Dixon, F. A. (2013). More strategies that raise the ceiling for high ability students. *Teaching for High Potential: National Association for Gifted Children*. Retrieved on February 1, from <https://www.nagc.org/sites/default/files/Publication%20THP/THP%202013%20Summer.pdf>

Faisal, & Martin, S. N. (2019). Science education in Indonesia: Past, present, and future. *Asia Pacific Science Education*, 5(4), 1-29. <https://doi.org/10.1186/s41029-019-0032-0>

Fink, A. (2020). *Conducting research literature reviews: From the internet to paper* (4th ed.). SAGE Publications Ltd.

Firmender, J. M. (2013). Become an educreator!. *Teaching for High Potential: National Association for Gifted Children*. Retrieved on February 1, from <https://www.nagc.org/sites/default/files/Publication%20THP/THP%202013%20Summer.pdf>

Ford, D. Y., Davis, J. L., Dickson, K. T., Scott, M. F. T., Grantham, T. C., Moore III, J. L., & Taradash, G. D. (2020). Evaluating gifted education programs using an equity-based and culturally responsive checklist to recruit and retain under-represented students of color. *Journal of Minority Achievement, Creativity, and Leadership*, 1(1), 119–146. doi: <https://doi.org/10.5325/minoachicrealead.1.1.0119>

Fugate, M., Behrens, W. A., Boswell, C., & Davis, J. L. (2021). *Culturally responsive teaching in gifted education: Building cultural competence and serving diverse student populations*. Routledge.

George, D. (2003). *Gifted education: Identification and provision* (2nd ed.). David Fulton Publishers.

- Green, B. (2019). Introduction – National curriculum: international perspectives. *Curriculum Perspective*, 39, 179–180. <https://doi.org/10.1007/s41297-019-00078-0>
- Gubbins, E. J. (2018). Evaluating curriculum models used in gifted and talented programs. In Callahan, C. M., & Hertberg-Davis, H. L. (Eds), *Fundamentals of gifted education: Considering multiple perspectives* (pp. 482-495). Routledge.
- Gul, R., & Khilji, G. (2021). Exploring the need for a responsive school curriculum to cope with the Covid-19 pandemic in Pakistan. *Prospects*, 1–20. Advance online publication. <https://doi.org/10.1007/s11125-020-09540-8>
- Handajani, S., Pratiwi, H., & Mardiyana. (2018). The 21st century skills with model eliciting activities on linear program. *Journal of Physics: Conference Series*, 1008, 1-7. doi:10.1088/1742-6596/1008/1/012059
- Hockett, J. A. (2009). Curriculum for highly able learners that conforms to general education and gifted education quality indicators. *Journal for the Education of the Gifted*, 32(3), 394-440. <https://doi.org/10.4219/jeg-2009-857>
- Housand, B. C. (2013). The 21st century is so yesterday. *Teaching for High Potential: National Association for Gifted Children*. Retrieved on February 1, from <https://www.nagc.org/sites/default/files/Publication%20THP/THP%202013%20Summer.pdf>
- Insani, F. D. (2019). *Sejarah perkembangan kurikulum di Indonesia sejak awal kemerdekaan hingga saat ini* [History of curriculum development in Indonesia since the independence until the present]. *As-salam*, 8(1), 43-64.
- Ishikawa, K. (2021). The ASEAN economic community and ASEAN economic integration. *Journal of Contemporary East Asia Studies*, 10(1), 24-41. <https://doi.org/10.1080/24761028.2021.1891702>

- Jesson, J. K., Matheson, L., & Lacey, F. M. (2011). *Doing your literature review: Traditional and systematic technique*. SAGE Publications.
- Kaufman, J. C., & Baer, J. (2016). *Creativity and reason in cognitive development*. Cambridge University Press.
- Kim, K. H., Shim, J. Y., & Hull, M. (2009). Korean concepts of giftedness and the self-perceived characteristics of students selected for gifted programs. *Psychology of Aesthetics, Creativity, and the Arts*, 3(2), 104–111. <https://doi.org/10.1037/a0013324>
- Kusumah, C. K. (2021). 12-years compulsory education policy and education participation completeness: Evidence from Indonesia. *The Journal of Indonesia Sustainable Development Planning*, 2(2), 187-201. DOI: 10.46456/jisdep.v2i2.138
- Lo, C. O., & Porath, M. (2017). Paradigm shifts in gifted education: An examination vis-à-vis its historical situatedness and pedagogical sensibilities. *Gift Child Quarterly*, 61(4), 343–360. DOI: [10.1177/0016986217722840](https://doi.org/10.1177/0016986217722840)
- Marland, S. P. (1972). *Education of the gifted and talented: Report to the Congress of the United States by the U.S. Commissioner of Education and background papers submitted to the U.S. Office of Education*. 2 vols (Government Documents, Y4.L 11/2: G36). Washington, DC: U.S. Government Printing Office. Retrieved on February 1, 2022, from <https://files.eric.ed.gov/fulltext/ED056243.pdf>
- McClain, M. C., & Pfeiffer, S. (2012). Identification of gifted students in the United States today: A look at state definitions, policies, and practices. *Journal of Applied School Psychology*, 28(1), 59-88. <https://doi.org/10.1080/15377903.2012.643757>
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis* (2nd ed.). SAGE Publications Ltd.

Ministry of Education and Culture of the Republic of Indonesia. (2014). *Peraturan Menteri Pendidikan dan Kebudayaan Republik Indonesia Nomor 59 Tahun 2014 Tentang Kurikulum 2013 Sekolah Menengah Atas/Madrasah Aliyah* [Regulation of Minister of Education and Culture of the Republic of Indonesia No. 59 of 2014 on Curriculum 2013 of Senior High School/Islamic Senior High School]. Retrieved on February 1, 2022, from <https://jdih.kemdikbud.go.id/arsip/Permendikbud%20Nomor%2059%20Tahun%202014.pdf>

Mukminin, A., Habibi, A., Prasajo, L. D., Idi, A., & Hamidah, A. (2019). Curriculum reform in Indonesia: Moving from an exclusive to inclusive curriculum. *Center for Educational Policy Studies Journal*, 9(2), 53-72. DOI:10.26529/cepsj.543

Nasir, M. (2021). Curriculum development and accreditation standards in the traditional Islamic schools in Indonesia. *Journal of Curriculum Studies Research*, 3(2), 37-56. <https://doi.org/10.46303/jcsr.2020.3>

Nassaji, H. (2015). Qualitative and descriptive research: Data type versus data analysis. *Language Teaching Research*, 19(2), 129–132. <https://doi.org/10.1177/1362168815572747>

National Association for Gifted Children (NAGC). (2010). *Position statement: A definition of giftedness that guides best practice*. 1-4. Retrieved on January 25th, 2022, from <https://www.nagc.org/sites/default/files/Position%20Statement/Definition%20of%20Giftedness%20%282019%29.pdf>

National Association for Gifted Children (NAGC). (n.d.-a). *Special Populations*. Retrieved on January 20, 2022 from <https://www.nagc.org/get-involved/nagc-networks-and-special-interest-groups/networks-special-populations>

National Association for Gifted Children (NAGC). (n.d.-b). *Gifted education, common core standards, and 21st century skills*. Retrieved on February 2, 2022, from <https://www.nagc.org/sites/default/files/administrators/GT%20and%20Common%20Core.pdf>

National Association for Gifted Children (NAGC). (n.d.-c). *Pre-K to grade 12 gifted programming standards*. Retrieved on February 2, 2022, from <https://www.nagc.org/resources-publications/resources/national-standards-gifted-and-talented-education/pre-k-grade-12>

National Research Center on the Gifted and Talented (NRCGT). (n.d.). *An overview of the enrichment triad model*. Retrieved on February 1, 2022, from https://nrcgt.uconn.edu/underachievement_study/curriculum-compacting/cc_section2/

Nebraska Department of Education. (1997). *Promising curriculum and instruction practices for high ability learners manual*. Retrieved on February 1, 2022, from <https://www.education.ne.gov/wp-content/uploads/2017/07/promisCURR.pdf>

Nebraska Department of Education. (2015). *Procedures or the identification of high ability learners*. Retrieved on January 26, 2022, from <https://cdn.education.ne.gov/wp-content/uploads/2017/07/Procedures20Manual.pdf>

Neihart, M., & Teo, C. T. (2013). Addressing the needs of the gifted in Singapore. *Journal for the Education of the Gifted*, 36(3) 290–306. DOI: 10.1177/0162353213494821

New Zealand Ministry of Education. (2007). *The New Zealand Curriculum*. Retrieved on February 2, 2022, from <https://nzcurriculum.tki.org.nz/The-New-Zealand-Curriculum#:~:text=The%20New%20Zealand%20Curriculum%20identifies,come%20to%20know%20and%20do>

New Zealand Ministry of Education. (2009). *Components of a school curriculum (archived)*:

Curriculum tools. Retrieved on February 2, 2022, from

<https://nzcurriculum.tki.org.nz/Archives/A-school-curriculum/What-is-a-school-curriculum/Starting-the-process/Components-of-a-school-curriculum>

New Zealand Ministry of Education. (2012). *Gifted and talented students: Meeting their needs in*

New Zealand schools. Retrieved on February 2, 2022, from

<https://gifted.tki.org.nz/assets/Gifted-and-talented-students-meeting-their-needs-in-New-Zealand-Schools.pdf>

Olszewski-Kubilius, P. (2013). Highlighting the worth of gifted education. *Teaching for High*

Potential: National Association for Gifted Children. Retrieved on February 1, from

<https://www.nagc.org/sites/default/files/Publication%20THP/THP%202013%20Summer.pdf>

Pajarwati, D., Mardiah, H., Harahap, R. P., Siagian, R. O., Ihsan, M. T. (2021). Curriculum

reform in Indonesia: English education toward the global competitiveness. *Indonesian*

Journal of Research and Educational Review, 1(1), 28-36.

<https://doi.org/10.51574/ijrer.v1i1.51>

Pauley, G., & Johnstone, K. (2009). Addressing underrepresentation of student populations in

gifted programs: Best practices for student selection, service delivery models, and

support structures. Office of Superintendent of Public Instruction. Olympia, Washington.

1-30. Retrieved on February 1, 2022, from

<https://www.k12.wa.us/sites/default/files/public/highlycapable/pubdocs/2010/underrepresentationgiftedprograms.pdf>

- Peters, S. J., & Gentry, M. (2010). Multigroup construct validity evidence of the HOPE scale: Instrumentation to identify low-income elementary students for gifted programs. *Gifted Child Quarterly*, 54(4), 298–313. <https://doi.org/10.1177/0016986210378332>
- Pomortseva, N. P. (2014). Teaching gifted children in regular classroom in the USA. *Procedia - Social and Behavioral Sciences*, 143, 147-151. DOI: 10.1016/j.sbspro.2014.07.377
- Rasmussen, A., & Lingard, B. (2018). Excellence in education policies: Catering to the needs of gifted and talented or those of self-interest? *European Educational Research Journal*, 17(6), 877-897. DOI: 10.1177/1474904118771466
- Reid, E. (2015). Development of gifted education and an overview of gifted education in the USA, Canada, Equator and Mexico. *Slavonic Pedagogical Studies Journal*, 4(2), 241-247. DOI: 10.18355/PG.2015.4.2.241-247
- Reid, E., & Boettger, H. (2015). Gifted education in various countries in Europe. *Slavonic Pedagogical Studies Journal*, 4(2), 158-171. DOI: 10.18355/PG.2015.4.2.158-171
- Renzulli Center for Creativity, Gifted Education, and Talent Development. (n.d). *Procedures for evaluating type III enrichment*. Retrieved on February 1, 2022, from <https://gifted.uconn.edu/schoolwide-enrichment-model/spaf/text/>
- Renzulli, J. S. (1976). The enrichment triad model: A guide for developing defensible programs or the gifted and talented. *Gifted Child Quarterly*, XX(3), 303-326. DOI: 10.1177/001698627602000327
- Ridley, D. (2012). *The literature review: A step-by- step guide for students* (2nd ed.) SAGE Publications Ltd.

- Sayekti, S. (2013). *Permasalahan anak berbakat di Indonesia* [Issues facing gifted students in Indonesia]. *Majalah Ilmiah Pawiyatan*, XX(3), 16-23.
<https://adoc.pub/queue/permasalahan-anak-berbakat-di-indonesia.html>
- Setiana, D. S., & Nuryadi. (2020). *Kajian kurikulum sekolah dasar dan menengah* [The study of curriculum of elementary and secondary school]. Gramasurya.
- Setiawan, R., & Septiarti, S, W. (2019). A review on Indonesia policy in supporting gifted students education. *Advances in Social Science, Education and Humanities Research*, 296, 133-139. <https://doi.org/10.2991/icsie-18.2019.25>
- Sharp, L. A., & Clemmer, P. (2015). The neglected readers: Differentiating instruction for academically gifted and talented learners. *The Journal of Balanced Literacy Research and Instruction*, 3(1), 17-21.
- Smutny, J. F. (2003). *Gifted education: Promising practices*. Phi Delta Kappa Education Foundation.
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333-339.
<https://doi.org/10.1016/j.jbusres.2019.07.039>
- Stehle, S. M., & Peters-Burton, E. E. (2019). Developing student 21st century skills in selected exemplary inclusive STEM high schools. *International Journal of STEM Education*, 6(39), 1-15. <https://doi.org/10.1186/s40594-019-0192-1>
- Su, S. W. (2012). The various concepts of curriculum and the factors involved in curricula-making. *Journal of Language Teaching and Research*, 3(1), 153-158.
DOI:10.4304/jltr.3.1.153-158

- Subotnik, R. F., Olszewski-Kubilius, P., & Worrell, F. C. (2011). Rethinking Giftedness and Gifted Education: A Proposed Direction Forward Based on Psychological Science. *Psychological Science in the Public Interest*, 12(1), 3–54. DOI: 10.1177/1529100611418056
- Suhendri, Maryanah, S., & Ediyanto. (2020). Indonesian teachers' attitudes towards gifted students with low SES from Malay background. *Indonesian Journal of Disability*, 7(1), 110-118. DOI: dx.doi.org/10.21776/ub.ijds.2019.007.01.14
- Sukmayadi, V., & Yahya, A. H. (2020). Indonesian education landscape and the 21st century challenges. *Journal of Social Studies Education Research*, 11(4), 219-234.
- Syasli, D., Agustina, Basri, I. (2020). *Mengenal gifted pada anak melalui perkembangan bahasa* [Identifying gifted children through language development]. *Jurnal Edukasi Khatulistiwa Pembelajaran Bahasa dan Sastra Indonesia*, 3(1), 8-15. DOI: 10.26418/ekha.v3i1.34424
- The Education Sector Analytical and Capacity Development Partnership (ACDP). (2017). *Rapid review of curriculum 2013 and textbooks*. Retrieved on January 26, 2022, from <http://repositori.kemdikbud.go.id/7005/1/135-Rapid-Review-of-Curriculum-2013-Textbooks.pdf>
- The Republic of Indonesia. (2003). *Undang-undang Republik Indonesia Nomor 20 Tahun 2003 Tentang Sistem Pendidikan Nasional* [Law No. 20/2003 on National Education System]. Ministry of Education and Culture. Retrieved on February 1, 2022, from https://pmpk.kemdikbud.go.id/assets/docs/UU_2003_No_20_-_Sistem_Pendidikan_Nasional.pdf

- The U.S. Network for Education Information. (2008). *Structure of U.S. education: Curriculum and content standards*. Retrieved on February 2, 2022, from <https://www2.ed.gov/about/offices/list/ous/international/usnei/us/edlite-structure-us.html>
- Tight, M. (2021). Twenty-first century skills: meaning, usage and value. *European Journal of Higher Education*, 11(2), 160-174. DOI: 10.1080/21568235.2020.1835517
- Tirri, K. (2021). Giftedness in the Finnish educational culture. *Gifted Education International*, 0(0), 1–4. DOI: 10.1177/02614294211054204
- Tomlinson, C. A., Brighton, C., Hertberg, H., Callahan, C. M., Moon, T. R., Brimijoin, K., Canover, L. A., & Reynolds, T. (2003). Differentiating instruction in response to student readiness, interest, and learning profile in academically diverse classrooms: A review of literature. *Journal for the Education of the Gifted*, 27(2/3), 2003, 119–145. <https://doi.org/10.1177/016235320302700203>
- Trang, P. T. H. (2021). Educational and historical lessons via achievements and limitations in the process of struggle for and consolidation of national independence in Indonesia (1927 - 1965). *Laplace em Revista (International)*, 7(3B), 9-23. DOI: <https://doi.org/10.24115/S2446-6220202173B1480p.9-23>
- Troester, J. S. (2013). Future focused in Illinois. *Teaching for High Potential: National Association for Gifted Children*. Retrieved on February 1, from <https://www.nagc.org/sites/default/files/Publication%20THP/THP%202013%20Summer.pdf>
- U.S. Department of Education, Office of Educational Research and Improvement. (1993). *National excellence: A case for developing America's talent*. Washington, DC: U.S. Government Printing Office.

- Ummai, F. V. (2017). *Anak berbakat dan dunia Pendidikan* [Gifted children and education world]. *SCHOULID: Indonesian Journal of School Counseling*, 2(2), 1-5.
<https://doi.org/10.23916/08437011>
- UNESCO IBE. (2007). *Training Tools for Curriculum Development*. Retrieved on February 2, 2022, from
http://www.ibe.unesco.org/fileadmin/user_upload/COPs/Pages_documents/Resource_Packs/TTCD/sitemap/resources/3_1_1_P_ENG.pdf
- UNESCO IBE. (2013). *IBE glossary of curriculum terminology*. Retrieved on February 2, 2022, from <http://www.ibe.unesco.org/sites/default/files/resources/ibe-glossary-curriculum.pdf>
- UNESCO IBE. (2016). *Curriculum*. Retrieved on February 2, 2022, from
<http://www.ibe.unesco.org/en/geqaf/core-resources/curriculum>
- Van Laar, E., Van Deursen, A. J. A. M., Van Dijk, J. A. G. M., & De Haan, J. (2020). Determinants of 21st century skills and 21st century digital skills for workers: A systematic literature review. *SAGE Open*, 10(1), 1-14. DOI: 10.1177/2158244019900176
- VanTassel-Baska, J. (2017). Selecting instructional strategies for gifted learners. *Focus on Exceptional Children*, 36(3). DOI: 10.17161/fec.v36i3.6801
- Wahyuni, S. (2016). Curriculum development in Indonesian context: The historical perspectives and the implementation. *Universum*, 10(1), 73-82.
- Wallace, B., & Eriksson, G. (2006). *Diversity in gifted education: International perspectives on global issues*. Abingdon, Oxon: Routledge Taylor & Francis.