

The Creative Process in Music Composition of Higher Level Music Students in the International Baccalaureate Diploma Program at Pradita Dirgantara High School

Vinsensia Gunita Putri, Mulyanto, Endang Widiyastuti

Universitas Sebelas Maret
vinsensia.putri@student.uns.ac.id

Article History

accepted 1/11/2024

approved 1/12/2024

published 1/2/2025

Abstract

This qualitative research explores the creative process in music composition among Higher Level (HL) students in the International Baccalaureate (IB) diploma program using art practice as research methodology. Data were collected through observation and interviews involving three HL students. Guided by Jean Piaget's cognitive theory, the study examines four stages: musical practice (composition creation), informed musical practice (knowledge acquisition), informed-reflective practice (structured reflection), and final composition. Descriptive analysis reveals that students start with prior knowledge (assimilation) and adapt through accommodation during composition, facing challenges in achieving equilibrium. The final compositions, reflecting musical elements like structure, motifs, rhythmic patterns, and melodies, highlight the students' creative characteristics, as evidenced by their IB music assessment results.

Keywords: *Music composition, cognitive development, creative process, international baccalaureate curriculum*

Abstrak

Penelitian ini menyelidiki proses kreatif dalam komposisi musik siswa musik *Higher Level (HL)* pada program diploma kurikulum *International Baccalaureate (IB)*. Penelitian ini merupakan penelitian kualitatif dengan metode penelitian *art practice as research*. Penelitian ini melibatkan observasi dan wawancara. Jumlah subjek dalam penelitian ini adalah tiga siswa yang mengambil musik *Higher level*. Dengan memanfaatkan teori perkembangan kognitif Jean Piaget, penelitian ini bertujuan untuk menganalisis proses kreatif melalui empat tahap : *Musical practice* (Pembuatan komposisi), *Informed Musical Practice* (memperoleh pengetahuan yang relevan), *Informed-Reflective in and Through Practice* (refleksi terstruktur), dan *final composition* (hasil akhir komposisi). Teknik analisis data yang digunakan adalah analisis deskriptif. Hasil penelitian dianalisis menggunakan teori perkembangan kognitif Jean Piaget menunjukkan bahwa siswa memulai dengan pengetahuan sebelumnya (asimilasi), dan beradaptasi melalui proses akomodasi selama pembuatan komposisi musik. Mereka menghadapi tantangan untuk mencapai keseimbangan (ekuilibrisasi) yang bervariasi, hal ini dibuktikan dengan hasil nilai asesmen musik dalam kurikulum IB. Simpulan penelitian ini adalah melalui hasil komposisi yang meliputi unsur musik (bentuk lagu, motif lagu, pola ritme, melodi, dan kalimat tanya lagu, dan kalimat jawab lagu) menjadi gambaran karakteristik karya komposisi yang diciptakan oleh siswa *HL*, hal ini dibuktikan melalui hasil nilai asesmen *IB* yang dilakukan oleh siswa musik *HL*.

Kata kunci: *Komposisi musik, perkembangan kognitif, proses kreatif, kurikulum International Baccalaureate*



INTRODUCTION

Art education, specifically music education, is important for holistic student development. In the context of international education, the International Baccalaureate (IB) curriculum initiated in Geneva, Switzerland in 1968 was created to prepare students for university based on their passions and talents. This research will specifically address this curriculum in the Diploma Program. According to data gathered by the IB Organization, the number of schools applying for IB has increased since 2007, with a visible rise in programs for primary and middle years. However, the Diploma Program remains the most favored. This program is intended for students aged 16 to 19. During this age, students tend to develop abstract thinking and high idealism due to their transition to adulthood, while also shaping their morals to keep up with the times (Enloe, 2019). Research has shown positive outcomes in students' cognitive development through participation in the IB Curriculum. IB students demonstrated enhanced critical thinking, problem-solving abilities, and creativity over the course of a school year (Realyvásquez : 2020). Additionally, improved social skills, emotional intelligence, and self-efficacy have been associated with Middle Year Program's collaborative and holistic approach (Conger : 2021).

IB, a private global organization dedicated to lifelong learning for a peaceful world, often emphasizes international mindedness rather than global citizenship. As a result, the IB'S Diploma Program (DP) doesn't usually focus directly on global citizenship (Edwards : 2020). In Diploma Program, students are given the freedom to choose six subjects, three of them at the Higher Level (HL) and the rest at the Standard Level (SL). All six subjects should be selected from the six subject groups: Language and Literature, Language Acquisition, Individuals and Societies, Sciences, Mathematics, and the Arts (Visual Arts, Music, Theatre, and Film). This research will focus on one of the subjects from the sixth group, Music. Within the Music course of the IB Curriculum, students are taught to become researchers, creators, and performers who will learn about the variety of music from different regions, countries, and around the world. Eventually, all the things they have learned will be connected to four Areas of Inquiry (AOI): AOI 1, Music for Sociocultural and Political Expression; AOI 2, Music for Listening; AOI 3, Music for Movement and Dramatic Impact; and AOI 4, Music Technology. Students will engage in several activities that real musicians would do, such as conducting in-depth analyses of specific songs, creating musical compositions, and experimenting with musical works. In this context, their musical compositions become an essential element reflecting the implementation and success of the curriculum (IBO Diploma Program Music Guide : 2022). Students will act as a researcher, creator, and also performer.

When creating music, we deal with the aspect of "knowledge", assuming that everyone has 'talent'. Other aspects like 'experience' and 'aesthetic sensibility' are highly dependent on each individual's initiative, effort, and patience. A musical composition can be considered a complete work that meets compositional criteria or limiting factors technically referred to as parameters. These basic parameters include rhythm, melody, harmony, and Timbre (Kusumawati : 2010). Composing doesn't have to stick to traditional forms and styles. With digital technologies becoming more common in classrooms, teachers encourage students to explore how they might include some technique in their work (Norman : 2023). After understanding the essential elements of music composition, the composer then starts thinking about the most effective medium to express their thoughts (Yudana : 2021). Music plays a significant role in human life. In this context, it serves not only as entertainment but also, more importantly, as a tool for education that is connected to intellectual and cognitive development, as well as emotional intelligence. As time progresses, each composer has their own unique way of creating musical work (Putra : 2019).

The objective of this research is to study students who took the music course at Pradita Dirgantara Senior High School in the 2022/2023 school year. This school is a boarding school established in 2018 and located in Boyolali Regency. It is the only school that uses the IB Curriculum in Central Java. Based on the subject choice, these students chose the music course out of interest, without knowing what they would be learning. One of the topics they covered in this course is music theory. Music theory is fundamental, and without it, composers would be lost when writing their music (Jati, 2024). The music theory is a fundamental subject that serves as an initial gateway for constructing students' understanding of various musical phenomena and their relevance to educational science at a basic level (Putra : 2018). Music theory examines the components that form a musical piece, including notations, keynotes, time signatures, and chord progressions. Many teachers firmly believe that understanding music theory is an essential foundation in a balanced music education and often incorporate it as an integral part of the curriculum. In composition learning process, we realize that while studying music theory can be somewhat challenging, it remains the fundamental aspect that we must master in music (Yuniar : 2022).

Moreover, learning to play musical instruments impacts intellectual development, particularly spatial thinking (Hallam : 2010). When linked to a cognitive development theory, learning music and delving into music theory may have a significant influence on students. Cognition generally refers to what we know and think about. In simpler terms, cognitive abilities are linked to how the brain's neural connections work, as the brain functions as our thinking organ (Leny : 2020). Pradita Dirgantara Senior High School gives its students the freedom to understand their educational needs and to determine the path of further studies they will pursue. Through a well- designed curriculum, students can have the freedom to express their opinions, solve problems, and make decisions-key elements that significantly contribute to their growth and development, ultimately benefiting them greatly in their future lives (Supriyoko :2022). This school implemented a mixed curriculum, combining the national curriculum with the IB curriculum, Cambridge, and ASPnet. Schools that apply a mixed curriculum are more efficient compared to those that only use the national curriculum (Akuba, 2021).

Pradita Dirgantara adopts a mixed curriculum, combining the national curriculum with IB, Cambridge, and ASPnet frameworks, providing students with a unique educational experience. This study addresses a gap in understanding how HL music students with varied musical backgrounds navigate the creative process and achieve IB assessment standards. Using an "art practice as research" methodology, this research examines the stages of music composition and their connection to Jean Piaget's cognitive development theory. By analyzing the students' creative processes and final compositions, this study offers valuable insights into the intersection of music education, creativity, and cognitive development within the IB framework. This research contributes to the growing body of literature on music education and cognitive development by highlighting the practical application of music theory and composition in an IB setting. It underscores the importance of structured creative processes and their impact on students' academic and artistic growth, offering a novel perspective on the integration of global curricula in fostering creativity.

METHOD

This study uses a qualitative research method, employing art practice as research approach. In *Art Practice as Research: Inquiry in the Visual Arts*, Sullivan (2010) views art composition as a research activity. This method combines educational research techniques with visual art composition methods. In this research, the researcher actively participates in the music composition process. The study focuses on the creative processes of HL music students, which are then analyzed using Jean Piaget's cognitive theory.

According to Murwanti (2017), the basic concept of art practice as research, as outlined by Carole Gray (1996), suggests that research occurs when an artist creates or presents art during the creative process, leading to the accumulation of knowledge from the art and research. The authentic practice, along with the entire process of idea preparation, implementation, and theory examination through field practice and documentation, are substantial aspects of this study (Murwanti, 2017).

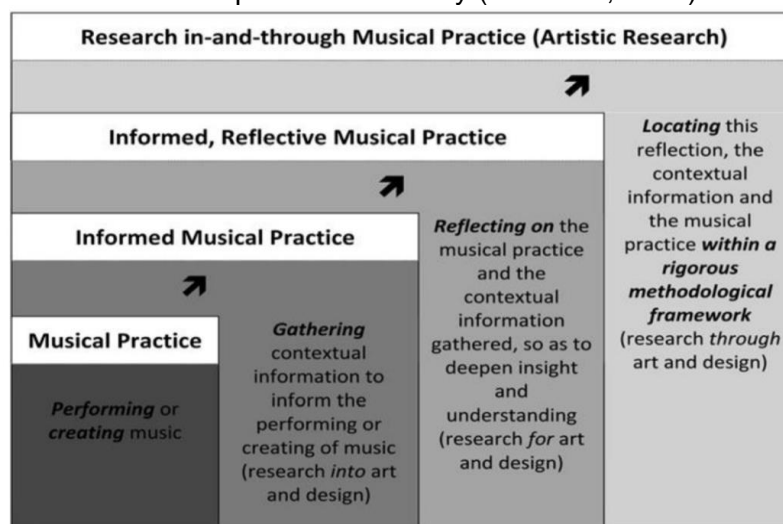


Figure 1. Creative Process in art practice as research

The creative process in art practice as research involves four stages. The first stage is musical practice, where HL students perform or create music. This is followed by the second stage, informed musical practice, which involves students gathering contextual information to aid in their composition. Then, the third stage, informed reflective musical practice, requires students to reflect on their practice and the contextual information to gain deeper insights. Lastly, the fourth stage, research in and through musical practice, involves students creating a structured reflection based on their contextual knowledge and practical music experience.

Consequently, all of the above creative processes will be analyzed using Jean Piaget's cognitive perspective theory, which will be divided into three phases; assimilation, accommodation, and equilibration. Jean Piaget was a psychologist and philosopher who became renowned in Geneva, Switzerland. He was a significant inspiration in the field of education, particularly influencing the development of international curricula (IB School Discover Hong Kong). Born on August 9, 1896, Jean Piaget was the first psychologist to research child development. He had a special focus on understanding the extent of children's comprehension and was recognized as a pioneer in psychology in the 20th century (Britannica:2023). Assimilation is the process of integrating new information into cognitive structures that already exist in the child's mind or background of the student. Accommodation is namely the adjustment of structures to new situations or how students are formed or directed, and continuous adjustment between assimilation and accommodation. If the stage is successful, balance of thought will be achieved.

This study examines the outcomes and creative processes of four HL music students during their IB lessons. Three students are enrolled in the higher level and one in the standard level. Data were collected through observations, interviews, and exploration. Sources of data include interviews with SL and HL students, dorm supervisors, homeroom teachers, and guidance counselors. Additionally, IB Music assessment scores were analyzed to provide further insights. Data collection is conducted to recognize the process of art development. The data includes the

background of the art, the reference, and elements affecting the composition. The next step is to identify the problem, which enables the creator to determine the message that will be conveyed through their art medium, designing a solid foundation for the next development.

RESULTS AND DISCUSSION

1. Art Reference

The During the second year, the lesson became more enjoyable for the students. The three students began to explore more interesting topics within the realm of music, such as music analysis, encountering challenges to perform in front of audiences, and drafting work for contemporary music maker assessment (for the HL students). They felt they were given the freedom to create projects and explore diverse musical tastes based on their references. Moreover, the assessment involved composing which has and an internal assessment only for the HL students. Below is the data gathered during the assessment.

Tabel 1. Contemporary Music Maker Assessment (HL only)

Name	Outcome	Composition and Reference
HL Student A	Contemporary	Soft music for studying / Lo Fi
HL Student B	Contemporary	Soundtrack for Si Pitung / DPR Musikal by Skinnyindonesia24
HL Student C	Contemporary	Land of Verdant / Mother earth by Wuauquikuna

This study talk about equilibrium or balancing for students setting goals, finding motivation, seeking self-fulfillment, and helping others (Kosherbayeva : 2024). The researcher identifies the problem that were intended to be addressed through art. The identified problem are as follows :

- Student felt that there was insufficient time to meet the lesson's goals. It is important to note that SMA Pradita Dirgantara is a boarding school with a fixed schedule that must be adhered to within the dormitory.
- Students experienced difficulty in understanding the syllabus because it is written in English. They also found limited material sources on music theory. It should be highlighted that the majority of the research sample are senior high students whose previous schools used the national curriculum, while only one student had the Cambridge curriculum, albeit with a regular art and culture class.
- Students struggled to determine which area of inquiry to apply to their project song. Understanding the area of inquiry was time-consuming, as each area comprises many aspects to be learned.
- Students are unfamiliar with the process of music exploration
- Students had difficulty understanding terms within the IB syllabus, such as global, personal, and local context. This curriculum divides music into three categories; personal, local, and global music.
- Students were confused while working on the external assessment due to the diverse templates provided. As a point of reference, the music curriculum includes two external assessments for the HL students, two internal assessments for HL students. Each assessment has its own template, but students are allowed to develop their own writing style, with no specific requirements for style or formatting, such as font or size.

2. Contemporary Music Maker Composition Analysis with Art Practice as Research

a. Musical Practice – Art Practice as Research

HL Student A

HL Student A envisioned creating a piece of audiovisual music that would inspire students to view studying as a fun activity rather than a stressful one. They aimed to explore and produce lo-fi music using the GarageBand application. The purpose of this project is to create a harmonious flow between the visual and musical elements, which will be achieved through a time-lapse study video. The student designed this piece to complement the study process depicted in the video, making studying feel relaxing and enjoyable rather than boring and stressful.

In this project, the student was tasked with producing and combining audio with visual elements. They collaborated with their friends to create a study activity, which would later be integrated with the audio. The final output is a time-lapse video that features the study activity arranged by HL Student A and their friends, accompanied by the composed audio.

Achieving this involved using the DAW GarageBand with the following plugins: 80s Sine Synth, Mysterious Synth Lead, Mellow Vibe Piano, Muted Bass, and 808 Flex (electronic drum kit). The student also utilized various audio samples, including click-sound samples, riser SFX, and brown noise.

HL Student B

In this contemporary music maker project, HL Student B aimed to introduce Indonesia's traditional culture to senior high students to enhance their knowledge and awareness. HL Student B intended to perform a musical adaptation of the Si Pitung folktale, incorporating traditional cultural elements and composing the music for piano. The composition is based on AOI 3.

During this process, the student used several sound effects on the cast dialogue songs and background music. They utilized a camera to film from multiple angles, a condenser microphone, and a dynamic microphone for the piano. The student collaborated with peers from the theatre arts and recording team.

In the planning phase, the student conducted several steps, including creating a program, proposing a collaboration with the theatre club, writing scripts, researching, and composing music. This was followed by the practice phase, which involved individual practice (solo piano) and rehearsals with the theatre club.

HL Student C

In this composition, HL Student C aimed to use music as a medium to raise awareness about nature conservation.

b. Informed Musical Practice – Art Practice as Research

HL Student A

In the process of building the composition, the student initially overlooked requesting the lo-fi music references that the collaborator frequently listened to. Instead of addressing this at the beginning, they did so in the middle of the composition process.



Figure 2. The outcome of Soft Music for Studying. [Link](#)



Figure 3. QR code The outcome of Soft Music for Studying

HL Student B

After completing the original dialogue composition, the student rehearsed the musical roles with the theatre team. Below is the live performance of HL Student B's composition:



Figure 4. Musical Live Performance. [Link](#)



Figure 5. QR Code Musical Live Performance

The following is the live performance of the original dialogue's sound effects:



Figure 6. Musical Live performance. [Link](#)



Figure 7. QR Code Musical Live performance

HL Student C

This composition is played in the C major scale with a C-G-Am-F chord progression. After creating the chord progression using plug-in keys, the student added a layer of strings.



Figure 8. *Composition process for "Land of Verdant"*

HL Student C used frequency to create the layering strings.



Figure 9. Adding the layer strings

In this process, the student referenced Wuauquikuna's piece entitled "Mother Earth". Below is the result of the composition:



Figure 10. The composition result from HL Student C. [Link](#)



Figure 11. QR Code The composition result from HL Student C

c. Informed, Reflective Musical Practice – Art Practice as Research

HL Student A

During the reflection phase, the student felt that the project was a success. However, there are still areas for improvement, particularly in communication and teamwork between the composer and the collaborator, as they overlooked the reference to lo-fi music. Despite this, the student noted that the project was satisfactory and accountable.

HL Student B

In the reflection phase, the student noted that their musical successfully conveyed the message to preserve and raise awareness of traditional folktales, particularly among senior high students as the primary target audience. They also received a warm welcome from the theatre collaborators for composing a song related to folktales.

Below is the interview record between HL Student B with an interviewee: [Link](#)

HL Student C

Student did not complete this step

d. Research In and Through Musical Practice

The HL music students conducted their external and internal assessments on July 5, 2024. The external assessment for HL students was the presenting music course, while the contemporary music maker project served as the internal assessment exclusively for HL students. These assessments were submitted to the examiner, and the students received scores based on their performance throughout the process.

International Baccalaureate					
<i>Component results</i>					
Session	MAY 2024				
School	062035 SMA Pradita Dirgantara				
MUSIC HL THE CONTEMPORARY MUSIC-MAKER in ENGLISH			Grade boundaries based on moderated mark		
			Grade	Minimum	Maximum
			1	0	3
			2	4	7
			3	8	12
			4	13	17
			5	18	23
			6	24	28
			7	29	32
			Raw mark	Moderated mark	Scaled mark
062035 0075 (lcm134) (DIPLOMA)	Siswa HL A	30	19	17.813	5
062035 0088 (lcm147) (DIPLOMA)	Siswa HL B	31	22	20.625	5
062035 0084 (lcm143) (DIPLOMA)	Siswa HL C	26	8	7.5	3

Figure 12. Scoring for contemporary music maker from the HL IB student in 2024

The highest score for this assessment is 5, and the lowest is 3. HL Student A received a raw mark (predicted mark) of 30, but their moderated mark (final mark) is 19, earning them a Grade 5. Meanwhile, HL Student B received a raw mark of 31 and a moderated mark of 22, resulting in a Grade 5 as well. Lastly, HL Student C received a raw mark of 26 and a moderated mark of 8, placing them in Grade 3. Based on the moderated marks, HL Student B held first place, followed by HL Student A, with HL Student C in third place.

3. Jean Piaget’s Analysis

Tabel 2. Jean Piaget Analysis

Criteria	Jean Piaget Cognitive Development	Description
A	Cognitive Skills	The samples are in their formal operational phase (12 years old to adult). They begin to develop abstract thought, base their compositions on deductive reasoning (general to specific), develop scientific thinking, create identities and characters that influence their musical compositions, and start moral development.
B	Adaptation	Findings: confirming the norms and values of society.

Below is the research analysis scheme on Jean Piaget’s cognitive development :

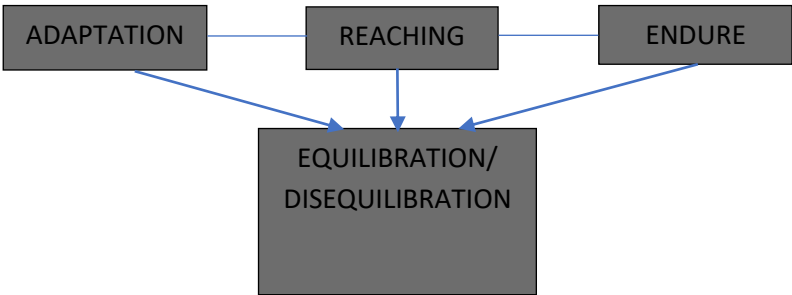


Figure 13. Jean Piaget's cognitive development scheme

In Jean Piaget's cognitive process, students begin with assimilation (prior knowledge). During the assessment process in music composition, they adapt through accommodation, making various adjustments to reach their goals. Students endure challenges to achieve their own sense of equilibrium. However, this cannot be called a complete equilibrium because each student reaches their unique balance, which is reflected in the results they obtain from the IB assessment. Jean Piaget's cognitive development theory serves as the foundation for analyzing the creative process in music composition among HL students. According to Piaget, cognitive development involves two key processes: assimilation and accommodation. Assimilation refers to the integration of new experiences into existing knowledge frameworks, while accommodation involves modifying these frameworks to adapt to new experiences (Piaget, 1972).

In this study, students began the music composition process with assimilation, leveraging their prior knowledge and musical skills. For instance, foundational understanding of music theory, rhythm, and harmony served as the starting point for their creative process (Jati, 2024). As the students progressed, they encountered challenges that required significant adjustments. This stage aligns with accommodation, where students adapted their methods and approaches to meet the demands of the IB music composition assessment.

Throughout the process, students faced difficulties in achieving equilibrium, a state where cognitive structures are adjusted to balance assimilation and accommodation. While Piaget emphasized the importance of achieving equilibrium for cognitive growth, this research revealed that the equilibrium achieved by students was partial and unique to each individual. This can be attributed to the subjective nature of artistic creation, where personal preferences, experiences, and problem-solving strategies play a crucial role (Putra, 2019).

Moreover, the findings resonate with Hallam's (2010) assertion that learning music stimulates intellectual development, particularly through spatial and abstract thinking. By engaging in composition, students not only developed their technical skills but also honed their ability to reflect, critique, and revise their work. This reflective practice is in line with Schön's (1983) concept of "reflection-in-action," where students think critically about their creative decisions during the process.

The assessment results further revealed that while students demonstrated creativity and technical proficiency, some compositions lacked consistency and depth. This finding supports Norman's (2023) notion that creativity in music composition is a dynamic interplay between structured knowledge and individual exploration.

In conclusion, the application of Piaget's theory to the creative process in music composition highlights the dynamic nature of learning and adaptation. While students strive for equilibrium, the challenges they face and the adjustments they make are instrumental in fostering their cognitive and artistic growth. The findings underscore the importance of providing structured guidance and reflective opportunities to help students navigate the complexities of composition effectively.

CONCLUSION

Based on the discussion of the creative process conducted by HL music students, it can be concluded that Jean Piaget's cognitive theory benefits students by guiding them through the processes of assimilation (recognizing prior knowledge), accommodation (understanding new knowledge), and reaching equilibrium (balance). The quality of the balance each student achieves is reflected in their IB scores. This study provides further evidence that Piaget's cognitive theory is not only relevant in general education but also has significant applications in music education.

The experiences of HL music students in going through assimilation, accommodation, and achieving equilibrium during the composition process demonstrate that this cognitive theory provides a theoretical foundation for developing creative skills in music. Additionally, the integration of cognitive aspects into the composition process aligns with Piaget's stages of cognitive development, suggesting that music education can be improved by focusing on students' cognitive development stages.

For future research, it is suggested that the scope of research be expanded, including students from various educational levels (elementary, junior high, and higher education) or students from diverse cultural backgrounds. This would help to determine whether Piaget's cognitive theory in the music creative process is also relevant in different educational and cultural contexts. Another suggestion for future research is to explore specific aspects of the music creative process, such as the relationship between musical elements (melody, rhythm, harmony) and cognitive development in the assimilation and accommodation stages. This could provide more detailed insights into how each musical element can enhance students' creative thinking abilities.

REFERENCES

- Akuba, F. S., Sinaga, P., Ugut, G. S. S., Budiono, S. (2021). Factor Affecting School Performance : Does a Mixed Curriculum Make a Difference ?. Education Cakrawala : Jurnal Ilmiah Pendidikan, 40 (3), 1-2.
- Encyclopedia Britannica. 2023. Jean Piaget Biography. Britannica
- Conger, D., Kennedy, A. I., Long, M. C., & McGhee, R. (2021). The effect of advanced placement science on student's skills, confidence, and stress. *Journal of Human Resources*, 56 (1), 93-124.
- Edwards, S.L. (2020). IB Diploma programme core as a supplier of global citizen education. *Journal of Supranational Policies of Education (JoSPoE)*, (12), 59-75.
- Enloe, Water. (2019). The Development of Hiroshima Internasional School-The Influence of Jean piaget. Hamline University : *Journal Uchichago*
- Hallam, S. (2010). The power of music : its impact on the intellectual, social, and personal development of children and young people. *International Journal of Music Education : ResearchGate*, 28 (3), 1.
- IB School-Discovery College Hong Kong. Introduce to be International Baccalaureate School.
- International Baccalaureate Organization. Diploma Program Music Guide. (2022). Peterson House, Malthouse Avenue, Cardiff Gate Cardiff, Wales GB CF23 8GL United Kingdom.
- Jati, Wicaksono,M., Bramantyo, T., Tyasrinestu., F. Hug M. (2023). Learning Music Theory with Ensamble Media for Class VIII Students of State 1 Wates Junior High School. Yogyakarta Indonesian Art Institute : *IDEA Jurnal Ilmiah Seni Pertunjukan*, 17 (2), 502-514
- Jati, A. (2024). Music Theory as a Gateway to Creativity. Yogyakarta: Universitas Negeri Yogyakarta Press.
- Kusumawati, Heni. (2010). Music composition lecture diktat 1. Department of Music Arts Education Faculty of languages and Arts Yogyakarta State University.

- Kosherbayeva, A. N., Issaliyeva, S., Begimbetova, G. A., Kassymova, G. K., Kosherbayev, R., Kalimoldayeva, A. K. (2024). An overview study on educational psychological assessment by measuring students' stress levels. *Cakrawala Pendidikan : Jurnal Ilmiah Pendidikan*, 43(1), 1-18.
- Leny, Marinda. (2020). Jean Piaget's Theodry of Cognitive Development and Its Problems in Primary School Age Children. *An-Nisa' : Journal of Women & Islamic Studies*, 13 (1), 33-34.
- Murwanti, A. (2017). The Practice-led Research Approach is a Fundamental Effort to Overcome the Inequality between Fine Art Creation Practices and Academic Publications in Indonesia. *Art and Language Faculty. UNESA. National Seminar Art and Desain 2017*, 16-23.
- Norman, T.D. (2023). Experimenting with music : soundscape composition in the International Baccalaureate Diploma program. *Journal of General Music Education*, 36(2), 49-53.
- Norman, R. (2023). *Innovative Approaches to Music Education*. Cambridge: Academic Press.
- Piaget, J. (1972). *The Principles of Genetic Epistemology*. Basic Books.
- Putra, D. (2019). *Individual Variations in Music Composition*. Surabaya: Harmony Publishing.
- Putra, I Putu, A, S, S. (2019). Analysis of the musical composition of "Kuasa Tanah". *Journal of Music Science, Technology, and Industry*, 2(1), 49-84.
- Putra, Irdhan E, D., Putra, Agung, D., Ferdian, R. (2018). Development of music theory learning module in the music education program faculty of languages and arts padang state university. *INA-Rxiv Papers*, 1.
- Schön, D. A. (1983). *The Reflective Practitioner: How Professionals Think in Action*. Basic Books.
- Supriyoko. (2022). The nature-based school curriculum: a solution to learning-teaching that promotes students freedom. *Cakrawala Pendidikan : Jurnal Ilmiah Pendidikan*, 41 (3), 10.
- Realyvásquez-Vegas, A., Maldonado-Macias, A. A., Arredondo-Soto, K.C., Baez-Lopez., Carrilo-Gutierrez, T., & Hernandez-Escobedo, G. (2020). The impact of environmental factors on academic performance of university students taking online classes during the COVID-19 Pandemic in Mexico. *Sustainability*, 12(21), 91-94.
- Yudana, Gede I., Haryanto, Tri., (2021). Contemporary music composition "embryo". *Ghurnita : Jurnalistik Seni Musik Nusantara*, 1(1), 3.
- Yuniar, P., Sitoena, J. K., Matius, D, M., Obed, G. B. (2022). History of music as a basic knowledge in learning music theory. *Clef : Jurnal Musik dan Pendidikan Musik*, 3(2), 141-150.