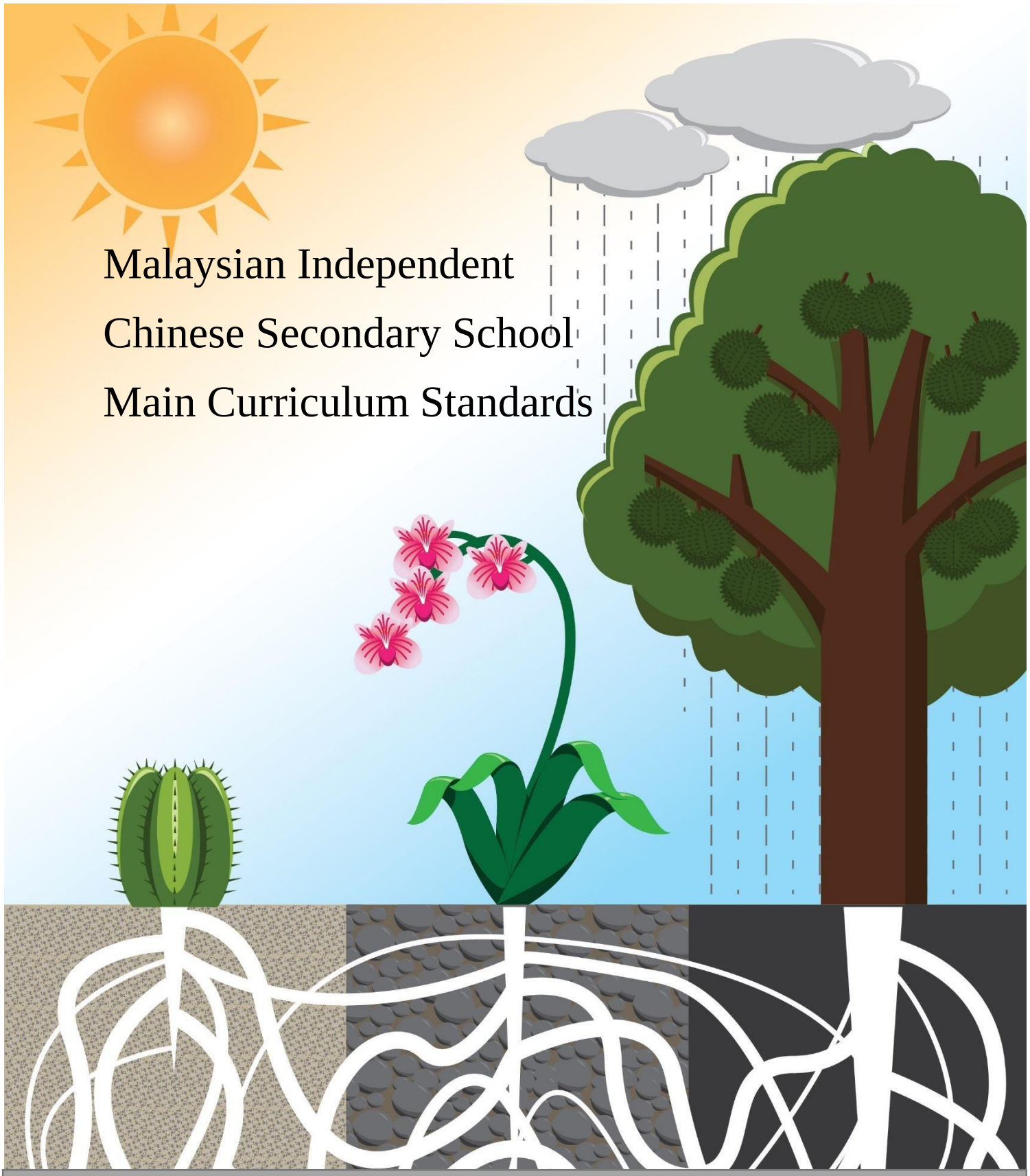
Malaysian Independent Chinese Secondary School Main Curriculum Standards



Malaysian Dong Jiao Zong MICSS Working Committee

The Unified Curriculum Committee

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1. INTRODUCTION

The Main Curriculum Standards henceforth termed as "the Main Standards" is forwarded in response to the implementation of the Malaysian Independent Chinese Secondary School (MICSS) Education Blueprint[1] which raises many educational concepts to ensure its vision and goals of reform to be in place within six years in independent Chinese secondary schools. The Main Standards as a referential document subsume curriculum background, principles, objectives, core competencies, curriculum structure, implementation strategies and other imminent follow-up issues.

Data collection was implemented in 2019 during the drafting of the Main Standards. Furthermore, opinions were collected during the trial phase from 2020 to 2022. The opinions were collected from committee members of the MICSS Working Committee, administrators, department heads and teachers from independent Chinese secondary schools and the administrative department of the United Chinese School Committees' Association of Malaysia (Dong Zong). The feedback included suggestions for curriculum objectives, core competencies, interdisciplinary components and curriculum structure. These Main Standards were amended according to all suggestions.

The Main Standards are used as the guidelines for MICSS curriculum (curriculum standards, teaching and learning materials, teachers, assessments and tertiary studies) development in the next 12 years (2023−2034). It served as the cornerstone and framework for Dong Zong administrative department and MICSS curriculum development. In the meantime, it also provides references and guidelines for the implementation of MICSS curriculum development. The curriculum arrangement listed in the Main Standards will be implemented gradually. It is necessary to ensure a transparent and healthy feedback mechanism and the flexibility of research and policy adjustments. The preparation, adjustment, deepening works, concerted cooperation, confirmation and enhancement for the curriculum development process will be going on continuously to ensure the MICSS curriculum is constantly revised
in response to the current situation.

Cover Illustration:
Artist: TEO Hur Yaw
Caption: The three plants in the illustration symbolise the multiple temperaments and capabilities of independent Chinese secondary school students; they exhibit individual characteristics in different living attributes. The soil of various colours indicates the multiplicity of the MICSS curriculum: each plant absorbs diverse nutrients to grow into a particular profession and also absorbs nutrients from other domains and thus the multiple constituencies of "seeking common ground while reserving differences with the existence of differences" is formed.

[1] Dong Zong. (2018). *Malaysian Independent Chinese Secondary Schools Education Blueprint*. United Chinese School Committees' Association of Malaysia (Dong Zong).

2. BACKGROUND

The curriculum development of MICSS can be traced back to the "MICSS Proposals" launched in 1973. "Four education missions and six education operational strategies" which affirmed the direction of education operation and laid the foundation of curriculum development for independent Chinese secondary schools were raised in the "MICSS Proposals". Independent Chinese secondary schools adapt "becoming a decent human being before being successful in life" as their education objective while safeguarding mother tongue education and Chinese culture, including the nurture of trilinguals and western-culture-entrenched polymaths corresponding to the demands of society. Yet attributed to the evolution of the era, the advancement in the trade war, Industry 4.0, artificial intelligence, global warming, etc. need to beaddressed with diverse strategies and approaches. Other than this, ever since the Malaysian government forwarded its latest secondary level curriculum in 2017, international schools mushroomed almost overnight. Issues like high demand from highly educated parents and Generation Alpha[2] will enter secondary schools in 2023 pose unprecedented challenges to MICSS. As such, Chinese education needs to be advanced in a macro approach that responds to the era change.

The first Unified Examination for Malaysian Independent Chinese Secondary Schools (henceforth the UEC) was held by the MICSS Working Committee in 1975, and the following year the Unified Curriculum Committee was established. It was responsible for the design and compilation of a unified curriculum as well as subject coursebooks. Formally, the MICSS working committee aimed to compile and redact sets of coursebooks in the Chinese language that were in consonant with national needs on one hand, and preserve, including disseminating Chinese culture, let alone redacting appropriate sets of unified coursebooks for MICSS use on the other. Due to the needs, the Unified Curriculum Committee dwelled in the writing and compilation of subject coursebooks in 1976 and continued to do so the next year. The learning materials provided by the committee have hitherto reached a total of 182 types, with some of them on their way to the fourth edition rewriting process.

1976 saw the launch of a unified curriculum and compilated unified learning materials. Since then, agendas like the formulation of the MICSS curriculum, compilation principles of coursebooks and unified learning materials reform have been raised; these proposals include the emphasis as well as putting in place the medium of instruction, the positioning of the three languages and their order of sequence, the launch of vocational curriculum and the implementation of the Five Competencies (Morality, Intelligence, Physical Health, Teamwork and Aesthetics). Calling for the reform of education was first raised in 1991 during the MICSS Principals Conference. In August of the following Year (1992), a forum entitled "Facing the 21stCentury MICSS Curriculum Formulation Camp" was held in Fraser's Hill by the Unified Curriculum Committee. In the camp, views and proposals from the participants on curriculum, curriculum objectives of senior and junior level, streaming of subjects and formation, curriculum objectives of subjects, inter alia, were collected and compiled into a book. This collection, in fact seminally inspired the design and development of the MICSS unified curriculum at a later stage.

[2] The generation born between 2010 to 2024, is termed the new generation after Generation Z (1995-2009). They are the generation growing up with digital technology and marked by realistically weak, high demand in the sense of experience, high loneliness tendency and emotionally fragile. McCrindle, M. (2009). *The ABC of XYZ: understanding the global generations.* UNSW Press.

In matters of MICSS education, the MICSS Working Committee raised both the "MICSS Education Reform Guidelines" and "Education Blueprint" respectively in 2005 and 2018 to push forward the reform of MICSS education as well as reinventing the vision of MICSS education. In the matter of curriculum development, the "Education Blueprint" proposes the curriculum-led concept to enforce "the kind of person MICSS wants to nurture".

Attributed to the mentioned backdrop, these Main Standards ensued. It is thus forwarded as a development reference. In response to the theme "enjoy teaching, love learning", the proposed strategies are innovative education, management and nurture, the formation of school ethos, implementation of the curriculum-led concept, reform in curriculum structure, forwarding of school-developed curriculum, optimisation of curriculum standards and the formation of brilliant school ethos; whereas on how to "empower children to attain achievement", the proposed strategies include taking self-directed learning, collaborative communication, societal participation as directing concepts to nurture life-long-learning MICSS students. They are expected to dedicate and shine on all domains no matter when and where for the prosperity ofthe general public.

3. FUNDAMENTAL PRINCIPLES

The mission and objectives of the Main Standards lie in the realisation of the motto "enjoy teaching, love learning" and "empower children to attain achievement" raised in the MICSS Education Blueprint. It is believed that every MICSS student will develop holistically with unique characteristics when all these are in place.

3.1. Enjoy Teaching, Love learning

In the development and reform of MICSS education, the concepts of "Innovative Education", "Management and Nurture" and "the Formation of School Ethos" are raised. They are thus forwarded to support curriculum reform and advancement from themanagerial aspect based on the vision "enjoy teaching, love learning".

3.1.1. Educational Innovation[3]

To realise Dong Zong-led curriculum design, each and every independent Chinese secondary school can develop its own curriculum in consonant with respective circumstances, unique community features and teachers' expertise. Creativity and innovation in learning are looked forward to forming a value-added mapping for the curriculum. Besides, in the matter of optimisation of subject curriculum standards, the emphasis is on teachers' curriculum awareness and the capability to apply the learning materials. As such, teachers will be able to grasp the objectives of the subject and to flexibly organise teaching contents and apply teaching approaches and consequently enjoy teaching to the fullest while practising individual teaching style and charisma. The MICSS curriculum corresponds to the demands of the era;

[3] It integrates the curriculum reform, school-developed curriculum implementation and curriculum standards optimisation in terms of curriculum development raised in the MICSS Education Blueprint.

it advances with the times and integrates technology, heads towards integrated practice knowledge and provides multiple options through the various teaching activities given to make the school a most enjoyable place as well as a paradise where students can attain achievement subsequently.

3.1.2. Management and Nurture[4]

The Main Standards aim to implement the curriculum-led education model, stressing the MICSS educational ideology of "becoming a decent human being before being successful in life". Incorporating the MICSS vision and core competencies, the Main Standards target the cultivation of whole-person development while facilitating and integrating the pace of subject development. Other than this, the curriculum-led education model needs to crystalise and practicebased on the ethics of current scientific research and leadership. The curriculum- led education model reveals the relationship between the unified curriculum and independent Chinese secondary schools in general. On that score, the curriculum views of individual independent Chinese secondary schools should respond to the theme of "what kind of students to produce" and take the initiative to lead teachersand students towards its realisation and practice.

3.1.3. The Formation of School Ethos

It refers to the cultivation of ideological moral and humanistic competencies as well as mutual relationships. Each and every student in the school compound can respect oneself and tolerate others. The school atmosphere is the essential element for the expression of Chinese culture, the culture of other ethnic groups and environmental education. While pursuing knowledge, students are expected to share what they have learned willingly and simultaneously interact with people surrounding them proactively, including elders and teachers, parents, friends, community residents, or even friends from social media to convey positive energy and cultivate happiness.

3.2. Empower Children to Attain Achievement

Under the umbrella of Chinese culture dissemination, the Main Standards lets each and every student develop holistically within the dimension of morality, intelligence, physical health, teamwork and aesthetics. It raises "Life-long Learner" as its optimal goal in cultivation supported by "Self-directed Learning", "Collaborative Learning" and "Societal Participation" to put the vision "empower children to attain achievement"in practice eventually.

3.2.1. Self-directed Learning

It is realised through the learning process of "making students as active learners". The learner needs to first be able to examine her/his experience in both learning andgrowing thus creating happiness and bringing about spiritual benefits such that she/he is capable of appreciating the beauty in life on one hand and exerting a positive and proactive attitude on the other. Learners likewise can command knowledge and various symbols and know how to leverage modern technology to promote their learning and tackle learning difficulties. On this foundation, learners are expected to further probe into uncertain domains, exert innovation, solve daily issues and confront challenges.

3.2.2. Collaborative Learning

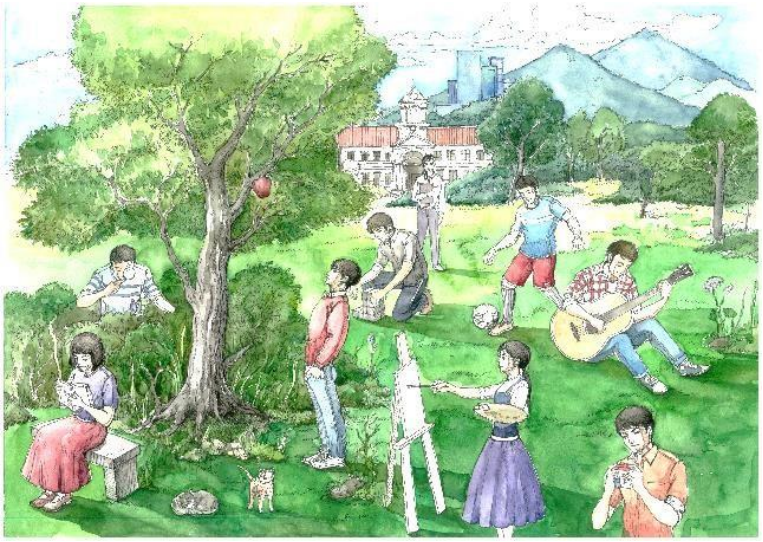
It is realised through the communication and collaboration of "oneself, among a group and

[4] It integrates the practice of curriculum-led implementation raised in the MICSS Education Blueprint.

within the general public". For oneself, the learner is expected to be able to self-adjust; in the face of controversial views, the learner is expected to ensure personal value and attitude while respecting others and is able to resolve conflicts appropriately. As a member of a group, the learner is expected to be able to lead and work collaboratively to achieve a common goal together in a concerted spirit. In the matter of the general public, the learner needs to master her/his mother tongue to disseminate the essence of Chinese culture, command Bahasa Melayu, the national language to practice love for the country and nation, and know English the international language to bridge the world. In short, the learner is expected to make appropriate use of the languages learned and acquired in various contexts for the best communicative effect.

3.2.3. Societal Participation

The learner can realise societal participation in her/his recognition and awareness of "personal morality, civil awareness and sustainable development". The learner is expected to reckon that behaviour management as well as the promotion of personal competencies is a societal responsibility. As such, she/he must dwell on continuing to learn to optimise morality while simultaneously being able to appreciate others and be compassionate towards others. In the meantime, the learner is proud of her/his nationality as a Malaysian and is willing to partake in the development of the community and country for the prosperity of the nation. In the face of diverse cultures and traditions, the learner can realise their strengths and tolerate the deficiency in differences. Similarly, the learner cares about her/his environment, commercial and social problems. She/he personally takes part in actual efforts not to harm the environment, other people and future generation's way of life. She/he puts the concept of sustainable development into practice and cherishes the earth's resources.



Artist: LEE Choong Wee—Enjoy Teaching, Love Learning.

4. CURRICULUM OBJECTIVES

4.1. Main Education Objectives

MICSS education is a sustainable education industry; other than the dissemination of Chinese culture, it also ensures every student in MICSS develops holistically in terms of morality, intelligence, physical health, teamwork and aesthetics. The students are expected to sustain life−long learning and to strive unremittingly for self-improvementas well as being inquiry-oriented, innovative, daring in response to unpredictable change, confident and willing to work as a team. In this way, the students are capableof achieving their personal happiness, and willing to strive relentlessly for the harmony,prosperity, advancement, freedom and equality of their family, ethnic group, society and country to contribute successively.[5]

4.2. Junior Level Curriculum Objectives

4.2.1. To build up students' foundation on morality, intelligence, physical health, teamwork and aesthetics and to develop their capabilities complying with their own personality in the balance based on these basics;

4.2.2. To nurture and train students on the capabilities and habits of learning how to learn,read and think to prepare for self-directed learning/active learning);

4.2.3. To ensure students reach the basic level in knowledge, capability and attitude andfurther arouse their potential for distinctive achievements;

4.2.4. To build up students' proactiveness and positive value towards living and life; and

4.2.5. To mould an environment for students to know about the languages, cultures and religions, etc. of the ethnic groups in the country so as to lead students to respect the pluralistic culture, recognise the reality of the country thus opening up global eyesight.

4.3. Senior Level Curriculum Objectives

4.3.1. To suitably build up students' foundation on morality, intelligence, physical health, teamwork and aesthetics to get ready for their prospective work, career, learning and living;

4.3.2. To establish students' foundation on self-directed learning to further build up their capabilities on learning eagerness, individual thinking, critical thinking and innovation;

4.3.3. To nurture students with the will to seek excellence and be altruistic thus creating the prerequisites for more happiness for oneself, community, country and humankind;

4.3.4. To lead students to recognise themselves comprehensively and be confident and assured in the face of their society and era change;

4.3.5. To nurture students' affordability towards their own family, ethnic group, society and country and respect multiple cultures as well as broadening their world view; and

4.3.6. To create opportunities for students to partake proactively in various ethnic group activities, and ensure them to be able to interact and learn in a cross-cultural atmosphere.

[5] Dong Zong. (2018). *Malaysian Independent Chinese Secondary Schools Education Blueprint* (p. 49). United Chinese School Committees' Association of Malaysia (Dong Zong).

5. CORE COMPETENCIES

The Main Curriculum Standards is based on the six core competencies[6] proposed in the MICSS Education Blueprint, as well as three additional core competencies added to cater to curriculum development needs, forming a total of nine core competencies. Further explanation is given in the design of Junior Level and Senior Level curriculum development. Core competencies emphasise the holistic qualities of individuals and encompass knowledge, skills and attitudes.

Diagram 1
Framework for MICSS Core Competencies

Diagram 1 shows that MICSS curriculum development cultivates lifelong learners. The structure expanded into three principles that empower children to attain achievement, namely self-directed learning, communication and collaboration as well as societal participation. The outer ring of the core competency structure is presented in a colour spectrum, revealing the integration of nine competencies with the three principles. The misalignment of the inner and outer circle further clarifies that the implementation of each competency incorporates the three major principles. Based on the rule of integration and feasibility, the Main Curriculum Standards promote each competency through three principles. Table 1 presents the core competencies and their definitions.

[6] Dong Zong. (2018). *Malaysian Independent Chinese Secondary School Education Blueprint* (pp. 40-41). United Chinese School Committees' Association of Malaysia (Dong Zong).

Table 1

MICSS Core Competencies and Definitions

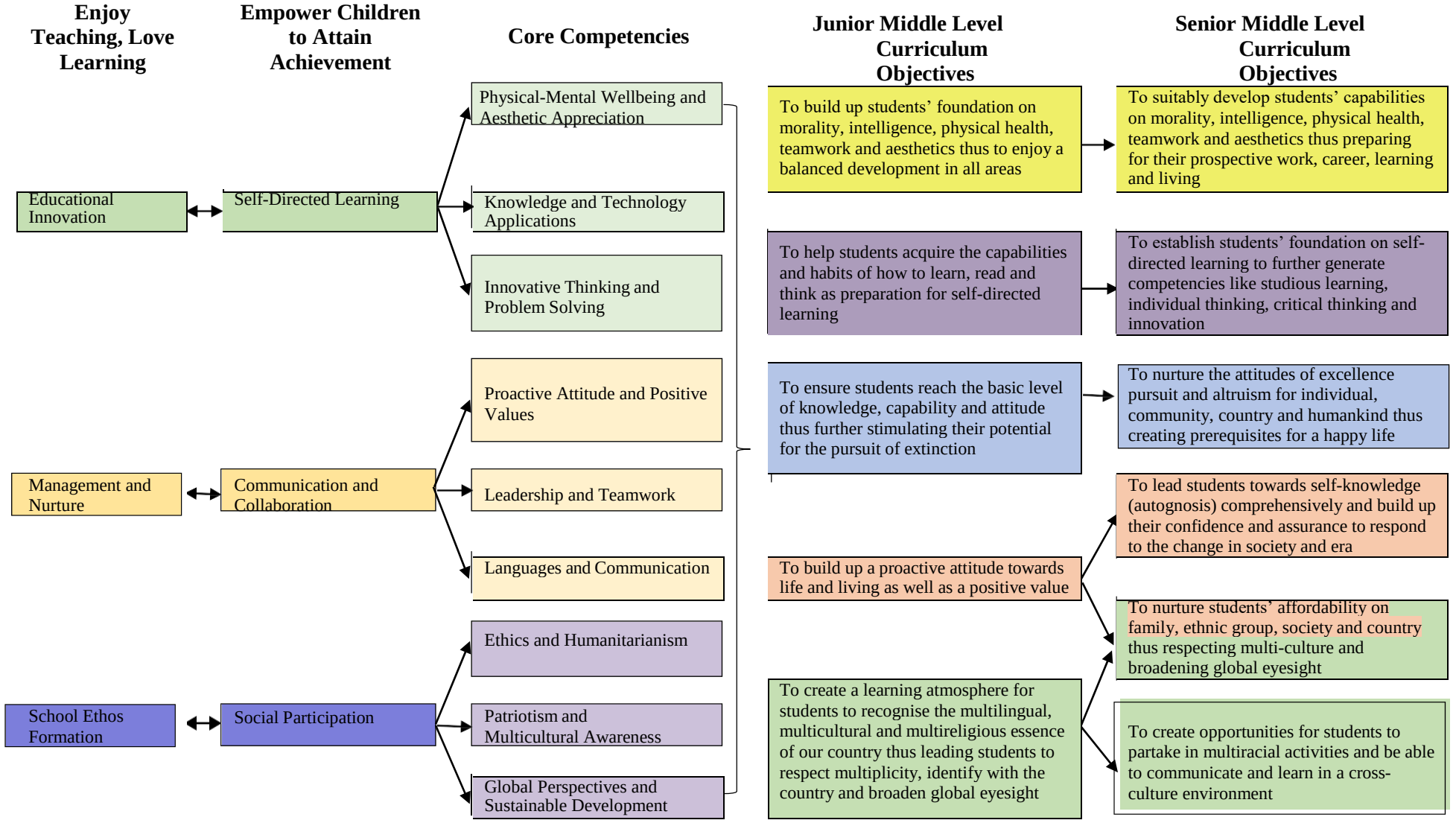
Curriculum Principle	Core Competencies	Definition	Junior Middle Level	Senior Middle Level	Student Outcome
A. Self-Directed Learning	A1. Physical-Mental Wellbeing and Aesthetic Appreciation	She/He possesses the capability to take care of personal mental and spiritual health and knows how to appreciate the best parts in life and can reflect on her/his experience in learning and growing thus adjusting stages of pursuits in career development. This way, it not only benefits mental and spiritual growth but also exerts proactiveness in creating happiness for her/his own life.	She/He is well informed of personal mental and spiritual health, knows the uniqueness of aesthetics and can discover personal value in living to exert richness and aesthetics thus experiencing the meaning of life proactively.	She/He possesses the competency and is informed of the approaches to promote her/his physical and mental competencies; she/he knows how to appreciate the true goodness of people and entities, affirm the personal value and realise professional pursuits, including how to enrich life by applying aesthetics in daily life, and relentlessly seek self-improvement to transcend herself/himself thus creating a happy personal life.	One who cares about herself/himself
	A2. Knowledge and Technology Applications	She/He possesses literacy and numeracy and living skills as well as acquiring the three languages, core subjects like Mathematics and History, etc. She/He knows and learns knowledge of other disciplines, leverages Information Technology to communicate, interact and express for comprehensive development; meanwhile, she/he applies these in real life for better learning outcomes thus resolve difficulties in learning.	She/He possesses the fundamentals of knowledge and various symbols and commands the application of Information Technology to sense problems in daily life and is able to communicate, experience and practice in such circumstances.	She/He possesses the ability to make use of various symbols to express, literate in Information Technology and can focus on and deepen the particular field of knowledge to exchange experience, express thoughts and values in innovative problem solving.	One who is knowledgeable
	A3. Innovative Thinking and Problem Solving	She/He possesses inquisitive, critical and inferential capabilities and can use her/his creativity to monitor her/his self-directed learning skills to tackle or solve problems in living and life thus deciding ona response to societal changes.	She/He possesses the capabilities of self-directed learning, inquiry-based learning, critical and inferential and innovative higher-order thinking thus using appropriate strategies to resolve and tackle daily life problems and issues.	She/He can consolidate inquiry-based learning, critical thinking and innovative higher-order thinking, and can practise active learning as well as expressing her/his creativity to further inquire into unknown realms and solve all sorts of issues and challenges in the face of daily life on this basis.	One who can solve problems

Curriculum Principle	Core Competencies	Definition	Junior Middle Level	Senior Middle Level	Student Outcome
B. Communication and Collaboration	B1. Proactive Attitude and Positive Values	She/He possesses values like respect, voluntary accountability, studious and positive values to confront challenges generated in daily life and the learning process. She/ He also recognises the importance of fulfilling social responsibility and has the courage to make aclear and appropriate judgement when confronted with dilemmas and can learn to face discrepancies as well managing conflicts.	She/He inquires about personal and environmental values and senses the discrepancies between them. She/He learns to live with discrepancies and build up respect, responsibility, a studious attitude and positive values in life.	She/He deepens her/his attitudes and values thus to respect, care and appreciate others' discrepancies, and can fumble on the differences of values between oneself and the existence and learn to tackle confrontation, affirm and practise positive values and competency;she/he braves to make the proper judgment in the face of difficulties and challenges.	One who cares about others
	B2. Leadership and Teamwork	She/He possesses the capability to lead and can effectively work and build up an interactive relationship with others thus developing teamwork competencies of communication, negotiation and service.	She/He possesses the basic self-directed capability and good habits and is happy to interact thus building up good collaborative relationships and can complete tasks through collaboration.	She/He possesses compassion, personal judgment, gregarious capability and attitude; meanwhile, she/he develops communicative co-operation and teamwork competency; she/he can get along well with others collaboratively, and is able to complete the assignment well with advanced planning.	One who knows the importance of teamwork
	B3. Languages and Communication	She/He possesses the background knowledge of culture, tradition and religion and can make use of Chinese Mandarin learned from Chinese education, command Bahasa Melayu towards patriotism and love for community and is versed in English for international linkage. When it permits, she/he will master more languages and use these languages in different situations for optimal effect.	She/He possesses the background knowledge of culture, tradition, religion and can make use of Chinese Mandarin learned from Chinese education, the command of both Bahasa Melayu and English to make friends from different ethnic groups thus enhancing the four skills in language learning and eventually realise the importance of language as a medium of cultural dissemination and communication.	She/He is well versed in Chinese Mandarin and possesses appreciative competency to enrich her/his knowledge of local and exotic cultures, lifestyles and religions throughthe learning of Bahasa Melayu and English. If it permits, she/he will equip herself/himself with more additional languages in the face of academic pursuits and professional development.	One who is skillful in communication

Curriculum Principle	Core Competencies	Definition	Junior Middle Level	Senior Middle Level	Student Outcome
C. Social Participation	C1. Ethics and Humanitarianism	She/He practices good morality and can manage her/his own behaviours and understand that it is a social responsibility to promote personal competencies. She/He can appreciate, is compassionate and respects others' freedom of speech.	She/he practices well on good morality and can suitably reflect her/his own behaviours; she/he can likewise sustain and modify her/his initiated voluntary proactiveness and is willing to listen to different views, ways of expression and respect others' decisions.	She/He possesses the correct attitude towards ethical and public issues and presents herself/himself as someone who treats others generously and is severe with herself/himself and expresses her/his care towards society through rational expression and care and learns to judge public issues from different aspects and angles.	One who is open-minded
	C2. Patriotism and Multicultural Awareness	She/He possesses the cultural identity of her/his own culture, understands and respects others' culture thus merging herself/himself in a multicultural environment, recognise the history of her/his country and realise the multiplicity of the country and is proud of herself/himself as a Malaysian who has civil awareness and responsibility safeguarding the harmony ofthe country for national unity and integration.	She/He is well versed in her/his own culture, understands and accepts the culture of other ethnic groups; she/he respects discrepancies, cares about national issues, and is proactive in community construction and is ready to be of service to others.	She/He identifies her/his cultural identity, respects and appreciates the discrepancies between cultures; she/he has civil awareness and knows her/his responsibilities; she/he safeguards national harmony and promotes the spirit of national consolidation and is proactive in the development of her/his community and country to confer benefits on society.	A patriot and one who loves her/his community
	C3. Global Perspectives and Sustainable Development	She/he has the competency of caring for world issues and international relationships and also cares about the environment, economics and social problems. She/He walks her/his talk in the protection of the environment, her/his and others' livingmode and sustains the concept of sustainable development and cherishes resources on earth.	She/He is informed of global issues and international relationships and can express herself/himself on environmental, economic and social problems. She/He cherishes the living of resources appreciation and cares about the environment and social justice-related issues.	She/He possesses the ability to express her/his own views on global issues and international relationships and can debate on the environment, economy and social problems; She/He can keep her/his words and not bring harm to the environment, people and lifestyle; She/He is willing to partake charity campaign such as environment protection and social justice.	One who knows the importance of sustainable development

Diagram 2

The Relation of Vision, Core Competencies and Curriculum Objectives



6. CURRICULUM STRUCTURE

This Main Standards further extends the trains of thought, principles, formulation guidelines for curriculum standards and senior level curriculum category definitions[7] in response to the proposals raised in the MICSS Education Blueprint on the senior and junior level curriculum structure.

6.1. Curriculum Design Introduction

6.1.1. It consolidates MICSS students' global competitiveness:

It simply means to emphasise the teaching of the three languages (Chinese, Bahasa Melayu and English) and students' command of the Chinese language needs to be on par with the standards in China, Taiwan, Hong Kong and Macau. Meanwhile, Students are expected to build up anti-stress capability for continuous learning and personal growth in between the multicultural backdrop and fair independent Chinese secondary school atmosphere. Besides, they are also expected to grasp solid fundamentals through the 'second lesson'—co-curricular activities—for the nurture of core competencies such as leadership, communication, problem-solving and collaboration to measure up with the key competencies of the 21st Century.

6.1.2. It enhances MICSS students' competencies:

This subsumes the enforcement of the verbal expression capability of the three languages. Other than this, students need to enhance their communication with other ethnic groups to further understand one another's culture. The school can leverage community atmosphere and inter-school interactions to help students understand other ethnic groups as a curriculum goal. Community service likewise can let students learn about their living environment as it promotes civil awareness simultaneously. Apart from knowing one's country and community, it also provides the opportunity for students to broaden their global eyesight. In actual fact, the new curriculum nurtures students with a more self-directed and inquiry-basedlearning curriculum design hoping to build up their logical thinking and innovative competency.

6.1.3. It is based on the extant curriculum and MICSS operation characteristics:

The previous curriculum of MICSS provided many competitive courses that correspond to the needs of the schools, students, tertiary studies and market; these courses are essentially the foundation for further extension of the new curriculum. They will be optimised and promoted in quality to meet the expectations of tertiary studies and careers. Moreover, the nature of self-sponsored as a characteristic and demographical location also exerts the schools' individual uniqueness and enriches their multiplicity and advantages in terms of curriculum.

6.1.4. It provides the solution for development concerns of extant curriculum development:

The establishment and practice of a curriculum-led mechanism will ensure the quality of the MICSS curriculum. In addition, the curriculum-led system will likewise integrate the development of the curriculum to further encourage interdisciplinary cooperation for all

[7] Dong Zong. (2018). *Malaysian Independent Chinese Secondary Schools Education Blueprint* (pp. 55-69). United Chinese School Committees' Association of Malaysia (Dong Zong).

rounding talents. Simultaneously, the time allocation for unified and school-developed curricula will be more flexible thus promoting awareness and capability of the schools to partake in curriculum development. When both curriculum development and assessmentare incorporated, the Main Standards will become the sole referential document to put the curriculum-led objective in place.

6.1.5. To stress the build-up of multiple options for senior level curriculum:

Amenable to the MICSS Education Blueprint, the configuration is as follows: inquiry-based learning at senior one; streaming at senior two and deepening and broadening of knowledgeat senior three[8]. To effectively practice this proposal, the credit system will be introduced at the senior middle level to make the curriculum structure more flexible, and concurrently provide more options for students to establish the vision to"Empower Children to Attain Achievement". Meanwhile, tertiary studies and career consultation will become more important as they help students realise their own traits and can confirm their prospective undertakings.

6.2.Curriculum Design Principles

The Main Standards have proposed five principles as the referential and adherent guidelines:

6.2.1. Mission of MICSS

The curriculum development must not go astray from the four missions and six education operational strategies of the "MICSS Proposals".

6.2.2. Competency Orientation

The curriculum development needs to put the nine core competencies in place, namely, mental and spiritual balance and aesthetics, optimisation of knowledge and the application of modern technology, innovative mindset and problem-solving, proactive attitude and positive value, leadership and teamwork, command of languages and communicativeexpression, moral and humanistic care, country identification and multi-culture, global world view and sustainable development.

6.2.3. Cohesion and Integration

The development of the curriculum needs to incorporate both horizontal and longitudinal contents. For horizontal linkage, the emphasis is on the holistic development of morality, intelligence, physical health, teamwork and aesthetics, learning and related relationships of living, and the linkage and integration of different subjects. Longitudinally, emphasis is onthe connection of contents learned from different stages as well as the conformity of order on mental and spiritual development thus avoiding repetition.

6.2.4. Multiple Suitability

The development of the curriculum provides students with multiple choices. The establishment of unified and school-developed, compulsory/optional, deepened and broadened curriculum, pluralistic assessment model and others to help students develop suitably.

[8] Dong Zong. (2018). *Malaysian Independent Chinese Secondary Schools Education Blueprint* (p. 66). United Chinese School Committees' Association of Malaysia (Dong Zong).

6.2.5. Package Collaboration

The development of curriculum demands holistic consideration to be in concert with teacher education, assessment, students' tertiary studies and career consultation to push forward comprehensively. Besides, at the school level, it also matches the size of the school and its unique characteristics aiming to integrate both internal and external resources for optimal effect.

6.3. Notes to Subject Curriculum Standards Design

The following should be taken into consideration while designing and writing subject curriculum standards:

6.3.1. The objectives of the curriculum have to follow the senior and junior level curriculum objectives proposed by the Main Standards.

6.3.2. The core competencies of the subject curriculum must comply with the nine core competencies proposed by the Main Standards to conform with the competencies responsiveto the particular subject.

6.3.3. The content selection of the subject curriculum must take the time allocation proposed by the Main Standards into account as well as consider reality (time, space) and the connection between the subjects horizontally to avoid repetition and excessive burden on the students.

6.3.4. The subject curriculum content must be categorised based on their required contents, optionalcontents and referential contents to meet the objectives of suitable teaching and diverse learning. The required content is proposed to be at least 70 percent relevant to the questions in the unified assessment, while the optional content can be the optional questions of the unified assessment and be categorised in accordance with the multiple-choice questions. Students can be taught in compliance with the optional contents. Further, the referential contents of the subject curriculum can be extended reading materials and they are proposedto emphasise the broadening of eyesight, be applicable to daily life and have a linkage withinterdisciplinary/domain issues.

6.3.5. Apart from the consideration of the scope and depth of the knowledge, the treatment of thecurriculum contents should increase inquiry-based and hands-on elements, including daily life-related and pragmatic elements.

6.3.6. The teaching of the subjects needs to be interesting, suitable and pluralistic in content to arouse students' participation aiming to meet the objective of learner-centred learning.

6.3.7. The teaching should be effective learning strategy oriented which incorporates higher-order thinking and activities and nurtures self-directed learning capability through reading, data integration and summarisation.

6.3.8. In the learning outcome assessment, the Learning Standards of the students must be listed clearly, including Performance Standards for teachers to conduct "Assessment for Learning"thus promoting students' learning effectiveness as formative assessment. It is to further assist students to grow and complete themselves (Assessment as Learning) for the promotionof students' self-assessment of their learning (Assessment of Learning) as a summative assessment.

6.4. Junior Level Curriculum Structure

Responding to the proposals raised by the MICSS Education Blueprint[9], and the needs of the Junior level curriculum development comprehensively, the Main Standards propose the curriculum structure as follows:

Diagram 3

The Curriculum Structure of Junior Level Disciplines

[9] Dong Zong. (2018). *Malaysian Independent Chinese Secondary Schools Education Blueprint* (p. 61). United Chinese School Committees' Association of Malaysia (Dong Zong).

Table 2

Period Distribution of Junior Level Disciplines

Types	Discipline	Subjects	Junior One Periods		Junior Two Periods		Junior Three Periods		Total Weekly Periods in Hours
Dong Zong Curriculum (Compulsory)	Language	Chinese	5	15	5	15	5	15	3 hours 20 minutes
		Bahasa Melayu	5		5		5		3 hours 20 minutes
		English	5		5		5		3 hours 20 minutes
Dong Zong Curriculum (Compulsory)	Mathematics	Mathematics	6	6	6	6	6	6	4 hours
Dong Zong Curriculum (Compulsory)	Natural Science	Natural Science	5–6	5–6	5–6	5–6	5–6	5–6	3 hours 20 minutes to 4 hours
Dong Zong Curriculum (Compulsory)	Social Science	History	2	6	2	6	2	6	4 hours
		Geography	2		2		2		
		Civic and Citizenship Education	1		1		1		
		Guidance and Counselling Activities	1		1		1		
Dong Zong Curriculum (Compulsory)	Arts	Fine Arts	2	3–4	2	3–4	2	3–4	1 hour 20 minutes
		Music	1		1		1		40 minutes
Dong Zong Curriculum (Optional)		Performing Arts and Living	1		1		1		40 minutes
Dong Zong Curriculum (Compulsory)	Physical Education and Health	Physical Education and Health	2	2	2		2	2	1 hour 20 minutes
Dong Zong Curriculum (Compulsory)	Technology and Living	Information Technology and Living	2–3	2–3	2–3	2–3	2–3	2–3	1 hour 20 minutes to 2 hours
Dong Zong Curriculum (Compulsory)	Integrated Practice	Learning and Inquiry/ Societal Practice and Service	1	5	1	5	1	5	40 minutes
School-Developed Curriculum (Compulsory/ Optional Subjects with Required Credits)		Co-curricular Activities	2		2		2		1 hour 20 minutes
		School-Developed Curriculum	1		1		1		40 minutes
School Education Measures		Class Meeting/Weekly Assembly	1		1		1		40 minutes
Total			44–47						29 hours 20 minutes to 31 hours 20 minutes

Introduction of Junior Level Curriculum Design:

a) Nature of Discipline[10]

i) Language: Chinese is the major medium for MICSS students to understand, grasp, think about, broaden, communicate and express knowledge, promote emotional level and internalise living and value. The command of Bahasa Melayu and English can let students absorb extensively and cope with relevant messages, enrich their mindset and imagination readily thus be more confident and braver in expression. This way, they can also recognise the culture, tradition and religious background of relevant language for the promotion of cross-racial understanding and tolerance.

ii) Mathematics: Students pick up the fundamentals and basic skills of Mathematics to lay the foundation for senior level Mathematics. Simultaneously, they realise the application valueof Mathematics thus acquiring the capability to solve problems like quantity, amount and number, etc. Moreover, through mathematical evaluation, a scientific attitude is nurtured and logical thinking is formed, let alone abilities like curiosity, mathematical evaluation, observation of regular patterns, inference and expression.

iii) Natural Science: Students will come to know about the scientific knowledge of the surrounding entities and apply the knowledge in daily life thus gradually forming scientific behaviour and living habits. Through learning, students can understand the process and methodology of scientific research thus trying on inquiry-based scientific activities and gradually learning to see, think about and solve problems from a scientific aspect. Concurrently, they sustain and develop curiosity and enthusiasm for learning about their surroundings as well as forming imaginative, innovative and scientific attitudes and a respect for evidence.

iv) Social Science: This discipline stresses treating humans as the core, through self-recognition to understand further the relationship between oneself and the evolution of politics, society, economics and culture thus caring about how environmental change affects personal life. Students are trained to excel in the observation of a social phenomenon, analyse and conclude disparate social issues as well as thinking critically and raising constructive recommendations through the training of social science methodology. Through this discipline, students develop attitudes such as self-acceptance, respect for others and patriotism;they also are innovative and ready to make changes while respecting tradition.

v) Arts: The contents of this discipline stress the construction of healthy development mentally and spiritually for the students thus promoting aesthetic and facilitative competencies. That said, students will be able to practise positive attitudes in life and developthe habit of aesthetic experience and creativity.

vi) Physical Education and Health: It aims to promote students' cognition of physical exercise and health care. It further helps students to behave healthily, form habits and improve their skill level through systematic educational activities to exercise their body thus improving physical fitness. Simultaneously, students will have a comprehensive understanding of mental and spiritual health and can wittingly improve their personal and living conditions to avoid common illnesses and prevent being harmed by accidents.

vii) Technology and Living: Students are exposed to technology advancement, informed of the relationship between technology, the necessities of life and other disciplines and the ways to optimise technology for a better quality of life in this discipline. Through this discipline, students can command the operation of modern technology and know their operational principles. This discipline likewise nurtures the competencies of technology and intelligence to eventually achieve the ultimate goal of digital technology application.

[10] Dong Zong. (2018). *Malaysian Independent Chinese Secondary Schools Education Blueprint* (p. 60). United Chinese School Committees' Association of Malaysia (Dong Zong).

viii) Integrated Practice: This discipline emphasises the adaptation of interdisciplinary knowledge through inquiry and practice in the Integrated Practice to solve problems arising from learning, interpersonal relationship, living and group activities. Students in this discipline will be trained in leadership, communication, resilience and in the meantime, it aims to enhance their sense of responsibility, accountability and train them to be open to criticism and be able to put concepts into practice and not afraid of failure.

b) Curriculum Design

i) Educational System and Class Periods: The educational system for the MICSS Junior level is three academic years. There are 52 periods in an academic year. The duration of teaching is40 weeks, viz., 20 weeks in each semester. Each period is 40 minutes in duration.

ii) Weekly Periods: Not more than 45 periods are recommended; each period lasts 40 minutes.It is based on the consideration of not exceeding 9 periods per day (not exceeding 6 hours of class hour, exclusive of recess time), to correspond with the option of 5-day school implementation.

iii) Dong Zong Curriculum (Compulsory): The curriculum is designed by Dong Zong and is compulsory for all MICSS students.

iv) Dong Zong Curriculum (Optional): The curriculum is designed by Dong Zong and the school can decide whether to offer these courses. Students are encouraged to select the courses that they have an interest in.

v) School-Developed Curriculum (Compulsory): The curriculum is designed by the school and is compulsory for all students in that particular school.

vi) School-Developed Curriculum (Optional Subjects with Required Credits): The curriculum is designed by the school and students can choose the subjects according to their interests, but the school can decide the total hours of subjects to be taken by students.

c) Recommended Curriculum Assessment

Classroom-Based Formative Assessment: Besides subjects of the Unified Examination, the four disciplines, namely, Arts, Technology and Living, Physical Exercise and Health and Integrated Practice are suggested to be assessed by classroom-based formative assessments.

6.5. Senior Level Curriculum Structure

In response to the proposals raised by the MICSS Education Blueprint[11] and the needs of the Senior level curriculum development comprehensively, the Main Standards propose the curriculum structure as follows:

[11] Dong Zong. (2018). *Malaysian Independent Chinese Secondary Schools Education Blueprint* (p. 68). United Chinese School Committees' Association of Malaysia (Dong Zong).

Diagram 4

The Curriculum Structure of Senior Level Categories

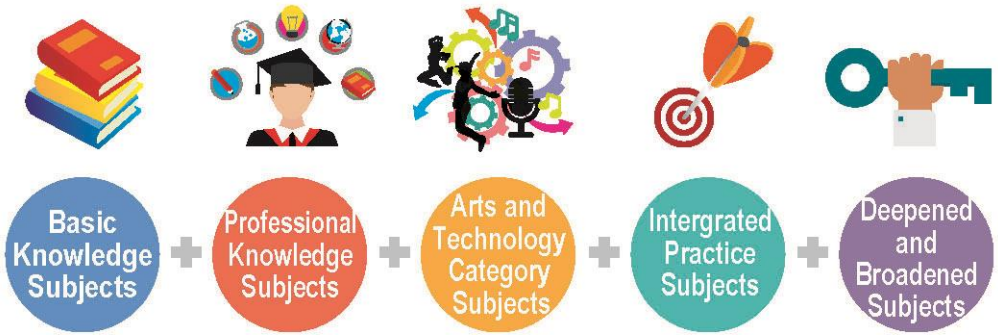


Table 3

Credit Distribution of Senior Level Basic Knowledge Category (Core Subjects)

Types	Subject Categories	Subjects	Senior One		Senior Two		Senior Three		Total Credits
			1st Semester	2nd Semester	1st Semester	2nd Semester	1st Semester	2nd Semester	
Dong Zong Curriculum (Compulsory)	Basic Knowledge (Core Subjects)[12]	Chinese	10		10		6		26
		Bahasa Melayu	10		10		6		26
		English	10		10		6		26
		Mathematics (Arts/Commerce/ Vocational)	10		10		10		30
		Advanced Mathematics (Science)	14		14		10		38
		Liberal Studies	4		4		4		12

Note: Students of all streams must take 120 to 128 compulsory credits in Basic Knowledge subjects.

[12] It aims to the nurture capability to command and use the languages, to possess logical thinking and civic awareness thus inspiring and developing students eventually.

Table 4

Credit Distribution of Senior Level Professional Knowledge Category (Compulsory for Science/Arts Stream)

<table>
<tr><th rowspan="2">Types</th><th rowspan="2">Subject Categories</th><th rowspan="2">Subjects</th><th colspan="2">Senior One</th><th colspan="2">Senior Two</th><th colspan="2">Senior Three</th><th rowspan="2">Total Credits</th></tr>
<tr><th>1st Semester</th><th>2nd Semester</th><th>1st Semester</th><th>2nd Semester</th><th>1st Semester</th><th>2nd Semester</th></tr>
<tr><td rowspan="3">Dong Zong Curriculum (Optional Subjects with Required Credits)</td><td rowspan="2">Professional Knowledge (Science)[13]</td><td>Physics</td><td colspan="2">4</td><td colspan="4" rowspan="3">40–64
(Choose from any two subjects: Senior 2 - 10 credits each; Senior 3 Physics - 12 credits, Senior 3 Biology and Chemistry - 10 credits each)</td><td rowspan="3">56–80</td></tr>
<tr><td>Biology</td><td colspan="2">6</td></tr>
<tr><td>Chemistry</td><td colspan="2">6</td></tr>
<tr><td>Professional Knowledge (Compulsory for Arts/ Commerce)</td><td>Science</td><td colspan="2">4</td><td colspan="2">4</td><td colspan="2">4</td><td>12</td></tr>
</table>

Note: 1. Science stream students must take 56 compulsory credits in Professional Knowledge subjects, on which senior one students must take Biology, Physics and Chemistry; senior two and three students can take any two of them.

2. Arts, Commerce and Arts plus Commerce stream students must take 12 compulsory credits in Science subjects.

[13] It carries the objective of suitable development aiming to let students infer their interests and aptitude thus to prepare for further studies and careers as well as acquiring basic knowledge and skills.

Table 5

Credit Distribution of Senior Level Professional Knowledge Category (Arts Stream)

Types	Subject Categories	Subjects	Senior One		Senior Two		Senior Three		Total Credits
			1st Semester	2nd Semester	1st Semester	2nd Semester	1st Semester	2nd Semester	
Dong Zong Curriculum (Optional Subjects with Required Credits)	Professional Knowledge (Arts)	History	4*		6–8		6–8		16–20
		Geography	4*		6–8		6–8		16–20

Note: 1. Arts stream students must take 16 compulsory credits in Professional Knowledge subjects.

2. If it permits, the subject taken for this 4*credits can be considered as optional credits for senior two non-Arts stream students.

Table 6

Credit Distribution of Senior Level Professional Knowledge Category (Commerce Stream)

Types	Subject Categories	Subjects	Senior One		Senior Two		Senior Three		Total Credits
			1st Semester	2nd Semester	1st Semester	2nd Semester	1st Semester	2nd Semester	
Dong Zong Curriculum (Optional Subjects with Required Credits)	Professional Knowledge (Commerce)	Business Studies	4*		6		6		16
		Accounting	6*		10		10		26
		Economics	4*		6		6		16

Note: 1. Commerce stream students must take 32 compulsory credits in Professional Knowledge subjects.

2. If it permits, the subjects taken for this 4*(Business Studies or Economics)/6* (Accounting) can be considered as optional credits for senior two non-commerce students.

Table 7

Credit Distribution of Senior Level Professional Knowledge Category (Technical Stream)

Types	Subject Categories	Subjects		Senior One		Senior Two		Senior Three		Total Credits
				1st Semester	2nd Semester	1st Semester	2nd Semester	1st Semester	2nd Semester	
Dong Zong Curriculum (Optional Subjects with Required Credits)	Professional Knowledge (Technical)	Electrical and Electronic	Analog Electronics	6*		10		10		26
			Electric Circuit and Electrical	6*		10		10		26
			Digital Electronic and Artificial Intelligence	6*		10		10		26
		Car Repair and Maintenance 1		6*		10		10		26
		Car Repair and Maintenance 2		6*		10		10		26
		Arts and Graphic Design	Arts Appreciation	4*		6		6		16
			Graphic Design	8*		14		14		36
		Food and Beverage Management 1		6*		10		10		26
		Food and Beverage Management 2		6*		10		10		26

Note: 1. Professional knowledge subjects (Technical) for Technical stream students: Besides Electrical and Electronic, students are required to take 52 credits for other subjects, whereas students of Electrical and Electronics are required to take 78 credits.

2. If it permits, the subjects taken for this 6*credits (Electrical and Electronic, Car Repair and Maintenance and Food and Beverage Management) /4*, 8* (Arts and Graphic Design) can be considered as optional credits for senior two students.

Table 8

Credit Distribution of Senior Level Arts and Technology Category (Fine Arts/Music/Information Technology)

Types	Subject Categories	Subjects	Senior One		Senior Two		Senior Three		Total Credits
			1st Semester	2nd Semester	1st Semester	2nd Semester	1st Semester	2nd Semester	
Dong Zong Curriculum (Optional)	Arts and Technology[14]	Fine Arts	4		4		4		12
		Music	2		2		2		6
		Information Technology	4		4		4		12

Note: 1. Students of all streams are suggested to take 14 compulsory credits in Arts and Technology category subjects (Fine Arts, Music, Information Technology).

2. Senior one students are suggested to take 10 compulsory credits in Arts and Technology category subjects.

Table 9

Credit Distribution of Senior Level Arts and Technology Category (Physical Exercise and Health)

Types	Subject Categories	Subjects	Senior One		Senior Two		Senior Three		Total Credits
			1st Semester	2nd Semester	1st Semester	2nd Semester	1st Semester	2nd Semester	
Dong Zong Curriculum (Compulsory)	Arts and Technology	Physical Education and Health	4		4		4		12

Note: Students of all streams must take 12 compulsory credits in Arts and Technology category subjects (Physical Exercise and Health).

[14] Its contents develop students' ability to build a healthy and high-quality life and technological innovation. At the living level, students are expected to own a healthy body, love and know how to live, including the digital capabilities needed for their future life; at the spiritual level, they own aesthetic capability thus forming innovative, beauty-appreciative, proactive and positive attitudes.

Table 10

Credit Distribution of Senior Level Integrated Practice Category

Types	Subject Categories	Subjects	Senior One		Senior Two		Senior Three		Total Credits
			1st Semester	2nd Semester	1st Semester	2nd Semester	1st Semester	2nd Semester	
Dong Zong Curriculum (Compulsory)	Integrated Practice[15]	Learning and Inquiry	2		2		2		6
		Societal Practice and Community Service	2		2		2		6
School-Developed Curriculum (Compulsory /Optional)		School-Developed Curriculum	4		4		4		12
		Co-curricular Activities	4		4		4		12
School Education Measures		Weekly Assembly/Class Meeting							

Note: Students of all streams must take 36 compulsory credits in Integrated Practice subjects.

Table 11

Credit Distribution of Senior Level Deepened and Broadened Category

Types	Subject Categories	Subjects (Examples)	Senior One		Senior Two		Senior Three		Total Credits
			1st Semester	2nd Semester	1st Semester	2nd Semester	1st Semester	2nd Semester	
Dong Zong Curriculum (Optional)/School-Developed Curriculum (Optional Subjects with Required Credits)	Deepened and Broadened Knowledge[16]	Chinese Literature					4		4
		Genetics					4		4
		Business English Conversation					4		4
		Accounting Software					4		4

Note: Cooperation with universities can be sought for credit transferrable or certificate-awarded recognised courses. Students of all streams are suggested to take 8 compulsory credits in Deepened and broadened subjects.

[15] Its contents prompt students to organise activities and tasks in real-life contexts and allow them to partake voluntarily, enjoy inquiry-based learning, and make use of all knowledge learned integrally to discover personal potential and promote soft skills.

[16] Its contents aim to extend basic knowledge, the basic knowledge for professional and arts subjects; It aims to deepen and broaden their contents for interested students to choose from as well as prepare them for prospective tertiary studies and careers.

Table 12

Credit Distribution of Overall Senior Level Curriculum

	Senior One					Senior Two					Senior Three				
	Arts	Commerce	Science	Technical		Arts	Commerce	Science	Technical		Arts	Commerce	Science	Technical	
				Car, Arts, Food	Electrical				Car, Arts, Food	Electrical				Car, Arts, Food	Electrical
Basic Knowledge	44	44	48	44		44		48	44		32				
Professional Knowledge	4–8	8–14	16	12	18	6–16	12–22	20–30	20	30	6–16	12–22	20–32	20	30
Professional Knowledge (Cross Stream)[17]	4	4				4					4				
Arts and Technology	14		6–8	14	6–8	6–8				4	6–8				
Integrated Practice	12					12					12				
Deepened and Broadened Knowledge											8				
Academic Year Compulsory Subject Credit	78	82			80	72	78	86	82	90	68	74	78		88
Maximum Academic Year Optional Subject Credit	12	8			10	18	12	4	8	0	22	16	12		2
Weekly Fixed Periods	39	41			40	36	39	43	41	45	34	37	39		44
Maximum Weekly Flexible periods	6	4			5	9	6	2	4	0	11	8	6		1

[17] Arts/Commerce stream students must take 4 credits in senior Science subjects.

Introduction of Senior Level Curriculum Design

a) Subject Categories[18]

i) Basic Knowledge Category Subjects

Their contents cover the use of languages, the possession of logical thinking and civic awareness aiming to enlighten and develop learning power. This category subsumes five subjects, namely, Chinese, Bahasa Melayu, English, Mathematics (Senior Mathematics/Advanced Mathematics)[19] and Liberal Studies. These five are compulsory subjects. In each week, the average period allocation is "5/5/3" for the three languages, "5/5/5" for Mathematics and "7/7/5" for Advanced Mathematics. General Knowledge (recommended to add to the list) is a 2-period compulsory subject that covers Civic Education, Moral Education, Science, Democracy and Legal System, etc.

ii) Professional Knowledge Category Subjects

Its objective is to help students develop suitably and let them discover their aptitude and interest through inquiry-based learning. It also helps them build up professional foundation and skills thus eventually preparing for tertiary studies and careers. This category consists of subjects in science, arts, commerce and technical streams (inclusive of Electrical Engineering,Arts and Graphic Design, Car Maintenance, Food and Beverage Management, etc.). The principle of postponement in streaming allows students to discover their aptitude and interest in senior one, meaning, to take four subjects in this category; or, when students have found their interested field, they can take at least two subjects at this level. Basically, at the senior two levels, students must decide whether to head for science, arts, commerce or technical stream. But the school can decide whether to allow them to take non-required subjects in this category, they can take four subjects at the most. Take, for instance, a science stream student who takes two science subjects at senior two, if the credit allows, she/he is allowed to take one or two subjects in the arts/commerce stream. Under this new curriculum configuration, the extant vocational stream contents need to be gradually promoted to the senior level for the purpose of tertiary admission.

iii) Arts and Technology Category Subjects

Its contents develop students' ability to build a healthy and high-quality life and technological innovation. At the living level, students are expected to own a healthy body, love and know how to live, including the digital capabilities needed for their future life; at the spiritual level, they own aesthetic capability thus forming innovative, beauty-appreciative, proactive and positive attitudes. This category emphasises skills, abilities, information technology and living. It will help students to develop personally and professionally in the future. This category includes Fine Arts, Music, Physical Exercise and Health and Information Technology. All subjects are optional subjects with required credits except Physical Exercise and Health.

iv) Integrated Practice Subjects

Its contents prompt students to organise activities and tasks in a real-life context and allow them to partake voluntarily, enjoy inquiry-based learning and make use of all knowledge learned integrally to discover personal potential and promote soft skills. The subjects in this category include Learning and Inquiry, Social Practice or Social Service, school-developed curriculum subjects and co-curricular activities. The school-developed

[18] Dong Zong. (2018). *Malaysian Independent Chinese Secondary Schools Education Blueprint* (pp. 66-67). United Chinese School Committees' Association of Malaysia (Dong Zong).

[19] Science stream students can only take Advanced Mathematics but not Senior Mathematics.

curriculum and co-curricular activities are designed by the schools respectively and the curriculum needs to concentrate on the nurturing of students' integrated practice capability. The IntegratedPractice category is allocated 6 periods for all levels.

v) Deepened and Broadened Category Subjects
This category is the extension of the Basic Knowledge, Professional Knowledge and Arts and Technology category. It aims to broaden and deepen its content for interested students to choose from and it also better prepares students for tertiary studies and careers. The examples are Malay Literature in the Basic Knowledge category, Accounting and Bookkeeping software in the Professional Knowledge category and Arts Appreciation in the Arts and Technology category. They are forwarded mainly for senior three students to choose from thus enhancing their competencies in Professional Knowledge category subjects. Affordable schools can develop their own Deepened and Broadened Knowledge category subjects but must negotiate with Dong Zong beforehand for suitability. Moreover, the schools can likewise co-organise credit-transferrable or certificate-awarded professional courses with universities. The subjects in this category can enrich MICSS senior three curricula and promote its value. Four periods are recommended for this category.

b) Curriculum Design

i) Educational System and Class Periods: The educational system of MICSS senior levelis designed to be in a stretch of three academic years. Each academic year has 52 weeks. There are 40 weeks of teaching in an academic year, meaning, each semester has 20 weeks of school. Each period lasts for 40 minutes, one credit is earned in a duration of one semester or a total of 20 periods of learning.

ii) Weekly Periods: It is recommended not to exceed 45 periods per week, and the duration of each period is 40 minutes. It is designed in consonant with the consideration thatnot more than nine periods are scheduled daily for the 5-day school implementation option to be in place.

iii) Dong Zong Curriculum (Compulsory): The curriculum is designed by Dong Zong and is compulsory for all MICSS students.

iv) Dong Zong Curriculum (Optional Subjects with Required Credits): The curriculum is designed by Dong Zong but students can take the subjects in accordance with their respective streams. As such, certain subjects are compulsory in the relevant stream.

v) Dong Zong Curriculum (Optional): The curriculum is designed by Dong Zong and the school can decide whether to offer these courses. Students are encouraged to select the courses that they have an interest in.

vi) School-Developed Curriculum (Compulsory): Curriculum designed by the school and is compulsory for all students.

vii) School-Developed Curriculum (Optional Subjects with Required Credits): Curriculum designed by the school. Students can choose the subjects according to their interests, but the school can decide the total credits of subjects to be taken by students.

c) Recommendation for Curriculum Assessment

i) Credit Earning: As long as the students have completed the class hours for a particular subject and passed the examination held by the school, credits will be earned.

ii) Graduation Credits: For the Arts stream, 218 credits; Commerce stream, 234 credits; Science stream, 246 credits and 242-258 credits for the technical stream.

iii) Referral tests or term break classes will be scheduled to help those who fail to complete their graduation credits. If any one student still cannot earn the relevant credits in the remedy measure, the school can consider letting them be promoted but she/he must retake the unearned credits. Under circumstances where students are seriously lagging behind in all their studies, the school can allow students to redo the entire level only they do not have to retake the credit-earned courses so that they can concentrate merely on the failed subjects.

iv) Article 'c' is non-applicable to graduating classes in the senior three levels. The school can issue graduation certificates based on students' performance in Senior UEC.

v) Classroom-Based Formative Assessment: Besides subjects of the Unified Examination, Arts and Technology, Integrated Practice and Deepened and Broadened Knowledge categories are suggested to be assessed by Classroom-Based Formative Assessment.

7. IMPLEMENTATION STRATEGIES

7.1. Cross Systematic Integration and Collaboration

The system here refers to the administration system besides the MICSS curriculum which includes teacher education as well as examination and assessment systems in Dong Zongor other systems out of Dong Zong like school administrators and the Board of Directors, etc.

7.1.1. Dong Zong's Internal System Integration and Collaboration

- Relevant administrators must study the MICSS Education Blueprint/the Main Standards closely to ensure a thorough understanding for better internal collaboration.
- Teacher Education needs to be enhanced to accord with the Main Standards.
- The Curriculum Department and Examination Department need to collaborate intimately to put the curriculum objectives and core competencies in place.
- Examination assessment should be reviewed and adjusted in accordance with the Main Standards.

7.1.2. Dong Zong's Integration and Collaboration with External Systems

- Dong Zong needs to appoint relevant officials to MICSSs to help map their own vision.
- Dong Zong needs to appoint relevant officials to MICSSs to help design their own school-developed curriculum.
- Dong Zong can appraise the implementation strategies of the MICSS Blueprint/Main Standards through a platform like the Principal/Director Conference.

7.1.3. MICSSs' System Integration and Collaboration

- All units (departments) in schools can integrate and collaborate organically to ensure that implementation is in place.
- The schools need to enforce integration and collaboration with communities and leverage community resources to design school-developed curricula.
- The schools need to organise the teacher resource properly to enhance the measures of Professional Learning Community and collaborative lesson preparation thus ensuring teachers promote teaching quality when the curriculum is simplified and time released.

7.2. Learning Support

The reform in curriculum or education is equivalent to a social reform, and a learning revolution. It demands mobilisation from all walks of life to achieve the final reform vision.

7.2.1. At Dong Zong Level

- It needs to organise seminars for the Main Standards and all subjects' curriculum standards.
- It needs to establish a "School-Developed Curriculum Committee" to formulate and publish the "School-Developed Curriculum Planning and Development Guidelines".
- It needs to hold training camps for school administrators and teachers to push forward the concepts of curriculum reform.
- It needs to optimise the small-scale schools' support mechanism to help them design

distinctive school-developed curricula.

- It needs to establish the 'Cloud' Education platform benefiting all students and supporting teaching.
- It needs to forward teaching devices/facilities and resource recommendations for schools' reference.

7.2.2. At School Level

- It needs to outline its school-developed image based on its mission and vision to compile a curriculum map with school characteristics.
- It needs to conduct school-developed teacher education to consolidate teachers' curricular views.
- It needs to reorganise the existing teachers or enhance the functions of the academic department to optimise the curriculum-led function thus designing and developing a distinctive curriculum.
- It needs to understand the aptitude and learning needs of the students to correspond withsuitable teaching models and strategies thus arousing learning motivation.

7.2.3. At the Parental/Community Level

- Parents and alumni with professional knowledge are invited to hold seminars for teachersand students regularly.
- Interactive opportunities are provided to parents, for instance, teacher-parent conferences,to let them understand the direction of the educational implementation.
- To be attuned to education reform, parents need to be re-educated in terms of concepts to support their children's learning.
- Financial resource needs to be provided for school development.

7.3. Schools and Communities

7.3.1. Constituents: The relevance between MICSS and its community (parents, alumni, members of the public) is a mutually beneficial and win-win relationship. If the community resources are leveraged, the hard and soft devices of the school can be promoted and the community culture/features and learning ethos/style can also be further improved.

7.3.2. The community can supply support: These supports include money, space (e.g. activity centre or playing field), professional knowledge and experience.

7.3.3. The strategy of using MICSS as an education center to support the community:

- The school is recommended to open facilities (e.g. hall, library, stadium/courts) on thecampus to the community and mobilise students as tour guides to enhance their communicative and expressive capabilities.
- The school is recommended to regularly organise learning outcome exhibitions in concert with senior and junior case study curricula in which community members are invited to participate.
- The school is recommended to organise activities in concert with senior and junior Community Service curriculum and community associations (folks associations, clan associations and non-governmental organisations) on special issues or festivals.

- The school is recommended to organise Alma Mater Feedback Day for alumni topartake in the construction of hardware and software in the school.
- The school is recommended to incorporate community characteristics to develop a school-developed curriculum.
- The school is recommended to establish a continuous learning center to offer eveningclasses for the community members.

8. ANNEXES—HIGHLY CONCERNED ISSUES

8.1. The International Recognition of the MICSS Curriculum

The ultimate goal of the MICSS curriculum must ensure that the students it produces can get admission from universities all over the world thus continuing their studies in colleges or universities pursuing their dreams. What the curriculum designers are most concerned about is how the UEC holders use the results obtained to broaden tertiary channels.

8.1.1. In what way the MICSS curriculum must incorporate with the world to further attain international recognition;

8.1.2. In what way the MICSS can correspond to the diverse requirements and standards of universities globally in terms of tertiary admission; and

8.1.3. Challenge: Certain local universities require prior UEC recognition from the government before admitting UEC holders.

8.2. Learner-centred Multivariate Pedagogy

No matter how good the curriculum design is, the success lies in its practice, that is, whether teachers can effectively impart the contents in their daily teaching practices thus to "enjoy teaching, love learning" and "empower children to attain achievement". How teachers can command diverse pedagogical approaches and spirit to reach the goal of successful learning is also the concern of a curriculum designer. Herewith some approaches are listed for reference:

8.2.1. Collaborative Learning
8.2.2. Field Trip Learning
8.2.3. Theme-based Learning
8.2.4. Project-based Learning
8.2.5. Inquiry-based Learning
8.2.6. Situated Learning
8.2.7. Activity-based Learning
8.2.8. Multimedia Learning
8.2.9. Experiment-based Learning
8.2.10. E-learning
8.2.11. Differentiated Instruction
8.2.12. Book Club
8.2.13. Interschool Teaching (Teachers as 'Teacher YouTubers')
8.2.14. Collaborative Teaching (Double Teacher System, two teachers teaching one unit or topic)
8.2.15. Direct Instruction

8.3. Time Allocation of Curriculum Implementation

The background of MICSS education is based on prioritising the Unified Examination, followed

by the development of textbooks to meet the needs of the Unified Examination. Simultaneously, the majority of teaching staff in MICSS have undergraduate backgrounds, they naturally emphasise subject-specific knowledge but lack comprehensive considerations for curriculum development as a whole. Based on this premise, when curriculum development reaches a stage where comprehensive thinking is necessary, and it involves concepts of interdisciplinary, cross-domain and subject integration, curriculum development faces significant challenges, especially in managing the allocation of instructional time for different subjects. Therefore, in formulating the Main Standards, editors of various subjects have put forward the following viewpoints to address the challenge of time allocation.

8.3.1. Discussions are conducted based on the grouping of different subject categories;
8.3.2. Reference to time allocation of curricula in various countries;
8.3.3. Clarify the essence and attributes of different subject categories;
8.3.4. Discuss time allocation based on subject categories and the recommended number of periods in the MICSS Education Blueprint;
8.3.5. Determine instructional hours based on the nature of each subject;
8.3.6. Decide the time allocation for subjects based on different streams; and
8.3.7. Reducing the number of periods may lead to an increase in the number of classes taught by subject teachers. The Main Standards should emphasise that a decrease in subject instructional hours should not increase the number of classes taught to ensure teaching quality.