

CREDENTIALISM OR QUALITY: A COMPARATIVE ANALYSIS OF GAOKAO AND A-LEVEL SYSTEMS BASED ON EDUCATIONAL PRODUCTION AND QUALITATIVE INSIGHTS

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ABSTRACT

The study aims to explore and navigate the differences, advantages, and drawbacks of the A-Level system in Malaysia and the National College Entrance Examination (NCEE), commonly known as the Gaokao, in China. While China's Gaokao system has been praised for rigor and fairness, the increasing outflow of students to Malaysia has raised questions about the internal limitations of the system. This paper aims to bridge the empirical gap by combining a production-function-based regression model with COREQ-guided qualitative analysis. The article will systematically demonstrate the proposition of whether student pursuit for Credentialism or superior education quality, and underlying factors that contribute to this trend and the implications for both educational systems. This article take reference for the education production function, establish the regression model, analyzing four independent variables: Curriculum Flexibility, Education Capital Input, English Education Ratio, and Teacher Quality for the correlation with academic admission, through quantitative research methods. Furthermore, the article imports the qualitative research by utilize interviews in accordance with COREQ guidance and other case study to testify and illustrate different education dimensions, to boost the exploration and interpretation of this topic. Due to the sensitive nature of the subject and confidentiality restrictions, it is challenging to acquire comprehensive and systematic data across various secondary schools in China and Malaysia. Nevertheless, based on the collection and analysis of available public statistics, the author has continued the research and observed that the differences between the two educational systems are not as significant as previously assumed. In fact, China demonstrates notable advantages and stronger performance in certain areas. Through systematic qualitative interviews and in-depth case studies, the findings suggest that the underlying causes of the observed issues lie in cultural feudalism, the political structure, and the persistence of credentialism.

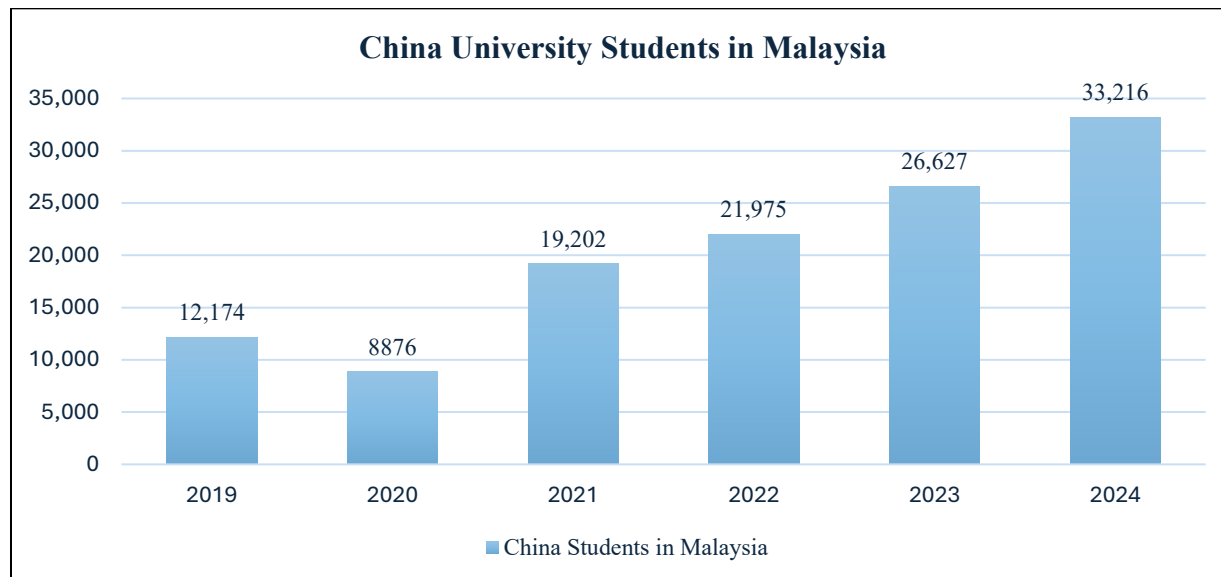
Key Words: Education System, Comparative Education, Secondary School Education, China Gao Kao(NCEE), Malaysia Education, Credentialism

INTRODUCTION

Based on the swift development of world education diversification, student mobility and Internationalization, studying abroad, especially in Asian and African countries, is becoming more popular. (Knight, J. 2012) Nevertheless, the devaluation of credentials and the quality of diplomas, which mentioned by Satoshi Araki in his article, he argued that credentialism becomes more pronounced and credential inflation tends to occur in societies where lower-level tertiary education expands significantly. In contrast, when higher-level tertiary education expands more broadly, a process of “Decredentialization” emerges—diminishing the value of formal credentials while placing greater emphasis on skills in determining rewards. (Satoshi Araki. 2022)

An interesting phenomenon during this tendency is that China proclaims that its comprehensive strengths, including educational conditions, which is issued as *the 2024-2035 master plan on building China into a leading country in education*, aiming to enhance the capacity that can stand up to Western systems. (The State Council of the People's Republic of China. 2025) But the fact is, according to the EMGS report, the number of Chinese student applications has surged from 12,174 in 2019 to 33,216 in 2024, representing a 172% increase in just five years. (Simone Rensch. 2024) Furthermore, In Malaysia, the internationalization of higher education in terms of student mobility has changed tremendously in the last two decades as the country has shifted from a sending to a receiving country. (Siew Yean Tham.2013)

Figure 1 *Data and Tendency of China University Students in Malaysia (2019-2024)*



Source: Ministry of Education Malaysia

In this context, the article introduces a discussion comparing the A-Level education system in Malaysia with the Chinese high school education system. The fact is if China's Gaokao system has been praised for its vigorous, Advanced test-taking skills and fairness, the increasing outflow of students who pursuit study to Malaysia, it has arisen questions about the internal limitations of the system.

As widely known, Malaysia is a country which encompass multiple ethnic and culture, as well characterized by a robust attitude towards co-exist and tolerance, especially shown as the role as a hub for transnational education and springboard. (Joseph Kee-Ming Sia. 2023) This nation offers a vigorous teaching structure and various study choice, which includes international school, local Malaysian Chinese schools, public schools, and Indian schools. Furthermore, the hybrid and module curricula languages, and syllabus, is also the strong point that appreciated by Many parties. This educational diversity not only enriches the learning experience but also promotes cultural understanding and cooperation among its diverse population. (Noraini Omar. 2015) The comprehensive teaching method and syllabus include various systems such as TVET, STPM, UEC, IB, A-Level, and SPM.

On the other hand, Senior Secondary Education in China, particularly the National College Entrance Examination (NCEE), commonly known as the Gaokao, serves as the standardized test for university admissions. Besides, there as well exist international school, or public school as The High School Affiliated to Renmin University of China, Beijing No.4 High School, they also have International Department.

If the criteria focus on the output and worldwide award, the achievement of China totally surpass Malaysia. Chinese students have achieved remarkable success in international competitions, such as the International Olympiad in Informatics (IOI), International Mathematical Olympiad (IMO), and International Physics Olympiad (IPO), significantly outperforming students from Malaysia. (Yan, X. 2024) the same point provides in the book *Education in China and the World*, which mentioned the STEM assessment criteria: Science, Technology, Engineering, and Math (STEM) education, which formulated by National Science Foundation (NSF). China scores highly in PISA performance and the number of STEM graduates, ranking among the top globally; however, the proportion of STEM teachers holding a master's degree or above is relatively low, lagging behind countries such as Germany and Japan. (Yan, X., Yu, T., & Chen, Y. 2024)

Furthermore, as the world's second-largest economy, it experiences a lower net inflow of foreign students despite a significant number of Chinese students studying abroad, which is not suitable for its status as a global economic leader. Based on the China Association for International Education (CAFSA) official data, between 2012 and 2015, the number increased from 328,330 to 397,635, reflecting a growth of 21.11%. However, this official data has not been updated, and the representation of North America, Oceania, and Europe has declined, while the African aspect has improved. (CAFSA. 2016)

The dilemma and gap throughout the phenomenon, drive people to doubt and reconsider about in comparing the two education systems, does Malaysia's educational quality truly surpass that of China's, or other reason behind it. As their motivations are often rooted in the relatively lower entry threshold, the potential to use Malaysia as a springboard to Western countries, and a largely utilitarian purpose in pursuing education.

This article will utilize quantitative and qualitative method for testify it, and summaries with the interview and case, to finalize the research outcome.

LITERATURE REVIEW

Current Research

In the article *Higher School Education Quality Forecasting by Regression Analysis Methods*, the study focuses on secondary school students' chosen specialties and investigates key factors such as teaching quality, student characteristics, professional orientation, institutional resources, and curriculum effectiveness. By applying quantitative methods, the research explores how these variables significantly influence educational outcomes and the overall quality of higher education. The findings contribute to the development of practical benchmarks and standards for evaluating and enhancing education quality. (Kharitonov, I. M. 2021)

In Xudong Gao's article : *An Analysis and Comparison Between the Chinese GaoKao System and the A-Level System in the UK: Challenges and Improvements*, he argued The Gaokao system was stubbornly fixed for setting subjects for all students, disregarding individual strong points and interests. The rigid structure of the Chinese education system might limit students' ability to pursue fields in which they might truly excel. In contrast, the A-Level system offers a broader range of subjects, enabling students to tailor their studies according to their strengths and interests. Additionally, admission quotas and thresholds are widely applied across provinces in China, raising concerns about the fairness and transparency of the selection process, especially in light of controversial bonus point policies. These issues highlight the need for standardizing admission criteria and expanding subject choices to promote greater equity and academic alignment with students' capabilities. This research provides a qualitative reference for a case study of the two-education system. (Gao, X. 2024).

Moreover, Pi Xiao Ming's research as *Factors influencing the intention and decision of Chinese high school students to study at higher education institutions in Malaysia*, adopt the quantitative method Theory of reasoned action (TRA) and Theory of planned behavior (TRB) (Ming, P. X.2020)

The article "Educational Analysis to Develop Character in Malaysia and Indonesia" (Mahanani, P. 2022) serves as a good example for comparative education research. However, the observation focuses primarily on character development and education policy formulation.

For the credentialism ideology, due to Anlu Zhou and Jeong-Kyu Lee their stand point, not only in the Confucianism impact Asian country, but also U.S. exist the credentialism, even encourage it for usher in the contest and efficiency. (Jiang& Wan. 2008)

Research Gap

The current research paper on the Chinese high school education system and A-levels, which belongs to the social science domain, rarely uses quantitative methodology. The current research includes independent variables such as teaching quality and capital input within the existing model. However, quantitative methodology is still limited in comparative education research. Additionally, some sections of the article utilize questionnaires to measure educational factors. Unfortunately, both approaches lack specific data and robust quantitative measurement.

The qualitative research aspect, as comparing Malaysia and Indonesia primarily focuses on familiar customs and regional dynamics, inadvertently neglecting the notable trend of the increasing influx of Chinese overseas students in Malaysia. Additionally, while discussions regarding GaoKao and credentialism are pertinent, they fail to clearly identify the motivations that drive Chinese students to study in Malaysia. A more thorough examination of this trend could elucidate the reasons behind it and explore the potential long-term benefits that these students may reap from their educational experiences in Malaysia. Such insights would enhance our understanding of the broader implications of international education in the region.

Problem Statement

In qualitative or mixed-methods research process, theoretical method and proposition are often undergoing in explored and discussed. Especially when the sample amount and observations are insufficient to adequately address the topic, using deductive thematic analysis and conducting exploratory research can help supplement the findings.

In this regard, based on the Current Research foundation, the Research Gap and the trend that a net inflow overseas student from China to Malaysia, the author draft the research problems.

P1: Are Chinese overseas students pursuing higher education in Malaysia motivated by the superior quality of education, or are they merely influenced by credentialism?

P2: In comparing the two education systems, does Malaysia's educational quality truly surpass that of China's?

Research Significance and Innovation

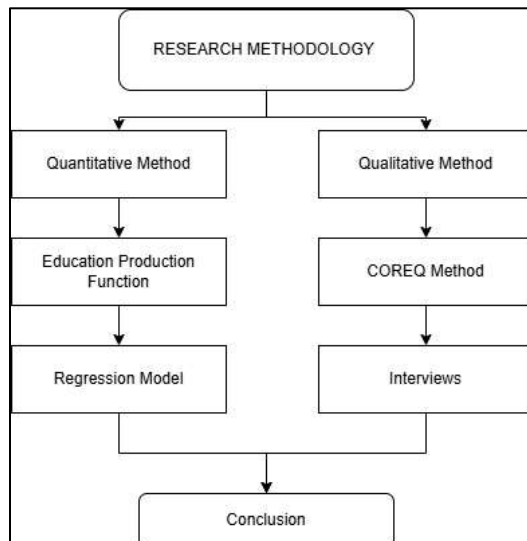
Current research in this field either mostly adopts a deductive thematic analysis approach or fails to integrate both school-level and student-level data in comparative studies. Moreover, while statistical models and equations provide valuable insights, they often include the limitation in fully capturing the correlation of comparative education quality. On the other hand, qualitative methods and deductive narratives, though rich in detail, can become monotonous and lack persuasive power.

This article seeks to bridge the gap between deductive thematic analysis and quantitative methods. Rooted in a pragmatic research philosophy, it aims to critically address the issue of credentialism and explore its underlying causes and manifestations. Notably, the study introduces an innovative application of the COREQ (Consolidated Criteria for Reporting Qualitative Research) framework—commonly used in medical and biological sciences—into the field of education research. By incorporating diverse interviewee perspectives, this paper elevates the discussion of educational issues through the lenses of history, culture, and sociology.

METHODOLOGY

This research paper adopts a mixed-methods approach that combines both quantitative and qualitative methodologies. The quantitative aspect focuses on data related to four dimensions: Curriculum Flexibility, Educational Capital Input, English Education Ratio, and Teacher Quality in secondary schools. Throughout the former statistics, to examine the outcomes and achievements of students, specifically those admitted to Tsinghua and Peking Universities in China, as well as Malaysian students accepted into QS top 50 universities. The quantitative aspect, it employs qualitative research by conducting interviews in accordance with COREQ guidelines to enrich the exploration of this topic.

Figure 2 *The Flow Chart of Research Methodology*



Eric Hanushek, the American economist and educational scholar, he asserts that cognitive skills are causally linked to economic outcomes for both individuals and nations. (Hanushek, E. A. 2017) Within the framework of the education production function, students' academic performance is considered the output, while factors such as teacher quality, educational resources, and family socioeconomic background serve as crucial inputs that influence this outcome. In this context, he proposes the theory of the Education Production Function. (Hanushek, E. A. 2020).

$$Y_{AA1} = \beta_0 + \beta_1CF + \beta_2ECI + \beta_3EER + \beta_4TQ + \varepsilon \quad (1)$$

$$Y_{AA2} = \beta_0 + \beta_1CF + \beta_2ECI + \beta_3EER + \beta_4TQ + \varepsilon \quad (2)$$

In this model:

- Y_{AA1} – AA equals to Academic Admission (China student admitted to Tsinghua, Peking, FuDan, Shanghai Jiao Tong, ZheJiang Universities)
- Y_{AA2} AA equals to Academic Admission (Malaysia students admitted to QS top 50 Universities)
- β_0 qualsto the constant term (intercept term).
- CF refers to Curriculum Flexibility
- ECI refers to the Education Capital Input
- EER refers to English Education Ratio
- TQ refers to teachers' quality
- $\beta_1, \beta_2, \beta_3, \beta_4$ refers to the regression coefficient of independent variables
- ε_i refers to the deviation

Observation Sample

For the CF (Curriculum Flexibility) observation sample, according to the Malaysian Qualifications Agency's official statement, GCE 'A' Levels, offered by recognized examination bodies such as Cambridge International Examinations (CIE) and Edexcel, are recognized as university entrance qualifications. This statement refers to the fact that the

educational institution can depend on its own situation to formulate the education system of A-Levels, but essentially obey the syllabubs of Pearson.

Furthermore, Pearson Edexcel International Advanced Levels, as mentioned in their description: Each Edexcel International Advanced Level subject has a specification (syllabubs) that is designed and maintained by Pearson. As summarized from International School Malaysia, the A-Level Course offering as follow:

Table 1: *International School Malaysian A-Level Courses*

School	A-Level Courses	Description
Sunway International School	9	English – First Language (0500), English as a Second Language (0993) Chinese – First Language (0509), Chinese – Second Language (0523) Mandarin Chinese – Foreign Language (0547), Malay – Foreign Language (0546), German – Foreign Language (0525) Mathematics (0580), Additional Mathematics (0606) Chemistry (0620) Physics (0625) Biology (0610) Global Perspective (0457) History (0470) Art & Design (0400) Computer Science (0478) Economics (0455) / Business Studies (0450) Accounting (0452)
Garden International School (GIS)	8	English Literature, Mathematics & Further Mathematics, Biology, Chemistry, Physics History, Geography, Psychology, Sociology Business, Computer Sciences, Economics, Mandarin, Spanish, French Art and Design, Photography, DT – Product Design, Drama and Theatre Studies, Music Social Emotional Learning Based on different field of Year 12 & 13 Curriculum
SRI KDU School	6	For Example - STEM Careers (Biology, Chemistry, Physics, Mathematics, Computer Science, Engineering)

Noted: Source from Official Website of Sunway College, GIS and SRI KDU School

In contrast, NCEE/Gao Kao, the system rooted in the Ministry of Education of China, which based on the policy document: 2019 National Unified Examination SYKlabus for Enrollment into General Higher Education Institutions & Opinions of the State Council on Deepening the Reform of the Examination and Enrollment System, it finalizes the current examination subjects:

Table 2 *China High School GaoKao Required Courses*

China High School	GaoKao Courses	Description
Public Senior School	Chinese Language and Literature, Foreign Language, Mathematics	English, Japanese, Russian, Spanish, German, French
	Geography, History, Ideological and Political Education	Arts student
	Physics, Chemistry, Biology	Science student

Noted: The State Council of the People's Republic of China & Ministry of Education of China

Education Capital Input

According to the Education Production Function theory, Education Capital Input is as well a significant component in the assessment of the education quality. In this regard, the author search for the Beijing Municipal Finance Bureau report 2023 and official website for the following Malaysian International School, collected the data. The International School in school like GIS, Sunway school, the Capital Input based on the average tuition fee per year.

Table 3 *China and Malaysia High School Capital Input Comparison*

	Country	School Category	– Each Student Per Year (RM)
The High School Affiliated to Renmin University of China (HSARUC)	China	Public	35,662.57
Beijing No.4 High School	China	Public	35,662.57
YK Pao School	China	International School	137,746.32
Garden International School (GIS)	Malaysia	International School	110,790.00
Sunway International School	Malaysia	International School	80,000.00

Source: Data collected from Beijing Municipal Finance Bureau report 2023,

Noted: The unit utilize Malaysian ringgit, based on recent 3 years moving average of myr-rmb exchange rate 1.65

Teachers' Quality

Based on Lawrence Ingvarson's article Quality Assurance in Teacher Education and Outcomes: A Study of 17 Countries, he argued there's statistically significant relationship between quality assurance arrangements and the mathematics achievement of student. (Lawrence Ingvarson. 2017). Nevertheless, although Labaree (1997) critiques credentialism, posed educational credentials serve more as a positional good rather than as a measure of academic achievement or actual learning. (Labaree, D. F. 1997) it can be inferred from his arguments that, in systems lacking robust teacher evaluation methods, graduate degrees are still used as practical proxies for content mastery and teaching competence. In this context, the author still utilize the Degree of PhD & Master for Tutors in High School, for the measurement criteria.

Table 4 *China and Malaysia High School Teachers' Quality Comparison*

	Country	School Category	Degree of PhD & Master for Tutors (%)	Description
The Affiliated to Renmin University of China (HSARUC)	China	Public	29%	Tutors are mainly from the Chinese mainland. Some are senior teachers or nationally recognized master teachers. The school places strong emphasis on teaching research and competition coaching.
Beijing No.4 High School	China	Public	40.33%	Tutors mainly from China mainland. Some are senior teachers or nationally recognized master teachers. Emphasizes independent exam design and curriculum reform practices.
YK Pao School	China	International School	39.2%	47% of the tutors are from mainland China, while 19% are from the United Kingdom and 17% from the United States. A significant part of teachers have backgrounds in international curricula such as IGCSE and IB. The average teaching experience exceeds five years, with an average tenure at the school of approximately five years.

Garden International School (GIS)	Malaysia	International School	Over 80% tutors hold a Master's degree, mostly from Commonwealth countries, and possess qualifications such as PGCE
Sunway International School	Malaysia	International School	The majority hold Master's degrees (particularly in Education), with undergraduate degrees from Canada or Malaysia, and possess Ontario teaching certification (OCT)

Source: Data collected from all the official websites of the high schools, Smart Shanghai journal, China Education Online.

English Education Ratio

For China public high school, as HSARUC, Beijing No.4 High School, it is required and supervised by General Senior High School Curriculum Plan and Subject Curriculum Standards (2017 Edition, Revised in 2020). And the Syllabus for Enrollment into General Higher Education, as mentioned in Table 2 only English Course could be taught by English. The Curriculum Framework Diagram of YK Pao School, showed in secondary school English Education Ratio around 75%. And GIS and Sunway International School all adopted the British & Canadian education systems, which means a full English learning environment.

Table 5 China and Malaysia High School English Education Ratio Comparison

	Country	School Category	English Education Ratio
The High School Affiliated to Renmin University of China (HSARUC)	China	Public	16.67%
Beijing No.4 High School	China	Public	16.67%
YK Pao School	China	International School	75%
Garden International School (GIS)	Malaysia	International School	100%
Sunway International School	Malaysia	International School	100%

Table 5 China and Malaysia High School Academic Admission

For the public High School in China, part of the graduation students' information is public. According to Beijing Municipal Education Commission's social live broadcast platform, HSARUC and Beijing No.4 High School, YK Pao School official website information.

School Name	Country	Top University Offer	Graduating Students	Proportion
The High School Affiliated to Renmin University of China (HSARUC)	China	393	817	48.10%
Beijing No.4 High School	China	131	640	20.47%
YK Pao School	China	In 2024, students received over 60 offers from Top 30 global universities. Notably, 7 offers came from Ivy League institutions in the United States. The overall admission rate to Top 30 U.S. universities is approximately 55%, with admissions to mid-Top 30 to Top 15 comprehensive & Ivy League universities remaining relatively stable in recent years.		33.15%

Garden International School	Malaysia	In 2024, 20% GIS students gained acceptance to a top 10 global institution, and 50% were admitted to one of the world's top 100 universities.	35%
Sunway International School	Malaysia	Interview for the staff in Sunway International School. Excellent student had the admission of NUS, NTU, Harvard, University of Cambridge, King's College London etc. The proportion for graduation student gets top 50 QS University offers 30%-40%	37%

Source: Data collected from all the official websites of the high schools, Smart Shanghai journal, China Education Online. Sunway International School's Academic Admission data collected from telephone interview.

Data Normalization and Harmonization of Standards

The quantitative judgment criteria, which take the reference for Likert scale. The author takes the reference from P. Spoore's research method in Student evaluation by 10 Likert-scales. (P. Spoore. 2007): Each Likert scale in the instrument is designed to measure a separate dimension of teaching effectiveness. The author optimizes the scale ranges typically from 1 (weak in this facet) to 5 (strongly in this facet), depending on the specific implementation:

Table 6 *Likert-scales for assessment of variables*

Dimension	Extremely Homogeneous	Homogeneous	Normal	Diversified	Extremely Diversified
CF (Curriculum Flexibility)	1	2	3	4	5
Dimension	Extremely Scarce	Scarce	Normal	Vigorous	Extremely Vigorous
ECI (Education Capital Input)	1	2	3	4	5
Dimension	Extremely Inferior	Inferior	Normal	High-Quality	Extremely High-Quality
TQ (Teachers' Quality)	1	2	3	4	5
Dimension	100 Percent Teach in Chinese	Low-Widespread	Normal	High-Widespread	100 Percent Teach in English
EER (English Education Ratio)	1	2	3	4	5
Dimension	Minimal Number	Small Number	Normal	Plenty Number	Tremendous Number
Academic Admission	1	2	3	4	5

According to the modified Likert-scales criteria, the indicator for CF (Curriculum Flexibility) is displayed as follow:

Table 7 *Quantitative Scoring for CF (Curriculum Flexibility)*

School	Country	Type	Course Flexibility and Grade (1-5)
The High School Affiliated to Renmin University of China (HSARUC)	China	Public	3

Beijing No.4 High School	China	Public	3
YK Pao School	China	International	4
Garden International School (GIS)	Malaysia	International	4
Sunway International School	Malaysia	International	4

Table 8 *Quantitative Scoring for ECI (Education Capital Input)*

	Country	Type	Education Capital Input and Grade (1-5)
The High School Affiliated to Renmin University of China (HSARUC)	China	Public	2
Beijing No.4 High School	China	Public	2
YK Pao School	China	International	5
Garden International School (GIS)	Malaysia	International	5
Sunway International School	Malaysia	International	4

Table 9 *Quantitative Scoring for TQ(Teachers' Quality)*

	Country	Type	Teachers' Quality and Grade (1-5)
The High School Affiliated to Renmin University of China (HSARUC)	China	Public	4
Beijing No.4 High School	China	Public	5
YK Pao School	China	International	4
Garden International School (GIS)	Malaysia	International	5
Sunway International School	Malaysia	International	3

Table 10 *Quantitative Scoring for EER (English Education Ratio)*

	Country	Type	English Education Ratio and Grade (1-5)
The High School Affiliated to Renmin University of China (HSARUC)	China	Public	2

Beijing No.4 High School	China	Public	2
YK Pao School	China	International	4
Garden International School (GIS)	Malaysia	International	5
Sunway International School	Malaysia	International	5

Throughout the summaries and sort out of the

Table 11 *Final Scoring Sheet for all schools*

	CF	ECI	TQ	EER	AA
The High School Affiliated to Renmin University of China (HSARUC)	3	2	4	2	4
Beijing No.4 High School	3	2	5	2	3
YK Pao School	4	5	4	4	4
Garden International School (GIS)	4	5	5	5	4
Sunway International School	4	4	3	5	4

Qualitative Research and Interview

Since the reference *A Concise Introduction to Mixed Methods Research* demonstrates that it is used in education, health, social sciences, and business, especially when dealing with complex human behaviors or contextual differences. Mixed methods. Within the quantitative and qualitative method, are especially valuable when one type of data alone is not sufficient to address the research question fully. (Creswell, J. W. 2015) The quantitative data, with the scarce of the observational sample, cannot generally illustrate the real correlation and the elements that impact the two education systems, an interview for a qualitative supplement is significant as well.

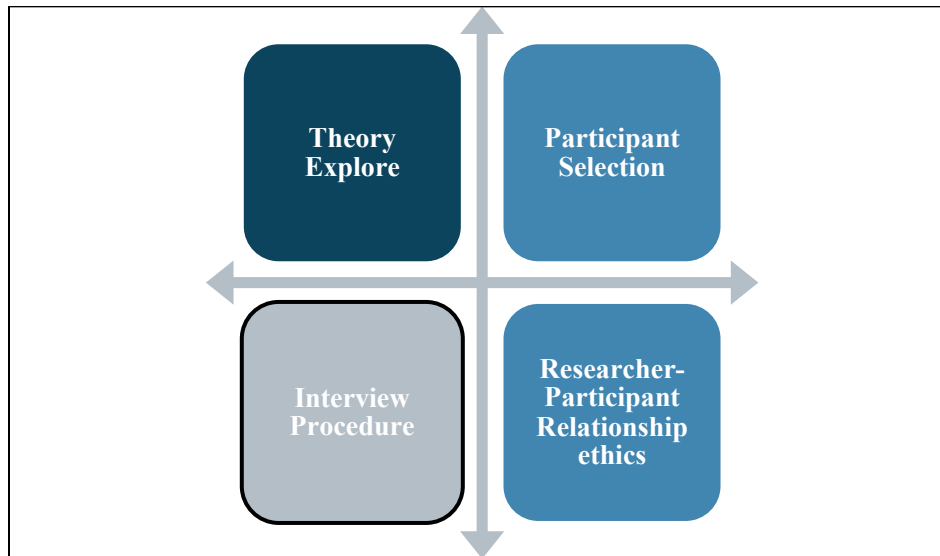
Ultimately, researcher Maxwell emphasizes that qualitative research does not aim to establish correlations but instead focuses on interactive and adaptive methods. It seeks to understand how and why things occur from the participants' perspectives, particularly in contexts involving religion, emotions, and real-life scenarios (Maxwell, J. A., 2012).

According to the article quality of quality criteria: Replicating the development of the Consolidated Criteria for Reporting Qualitative Research (COREQ), typically posed this qualitative interview standard. The article was published by Tong, Sainsbury and Craig in 2007. This approach was designed as a tool for enhance the structural integrity comprehensive reporting method. It utilise of qualitative interview studies and focus group studies and to “indirectly” improve rigor, comprehensiveness, and credibility of such research (Tong. 2007)

The author follows the COREQ (Consolidated Criteria for Reporting Qualitative Research) guidelines and structures the study into four key aspects: theoretical exploration, participant selection, interview procedure, and researcher-participant relationship ethics. All participants provided informed consent and record, and pseudonyms were used for some of them to protect their identities.

In the Findings chapter, the author presents only the essential ideas and representative viewpoints from the interviews. The full transcripts of the interviews are included in Appendix 1: Interview Minutes.

Figure 3 *The Interview Structure from COREQ guideline*



Noted: the figure was compiled by author

Participant Selection and Interview Procedure

In this study, the purpose of observation sampling, as the interviewee, was to select participants who have the experience and insight into the education systems of China, Malaysia, and other relevant backgrounds. The participants encompass two students, as one from China (educated under the Gaokao system) and one from Indonesia (educated under the A-Level system), one early childhood educator from a kindergarten in Singapore, and one former officer from a Chinese educational regulatory institution.

There were no relationship and relevant parties, and conflicts of interest between the researcher and the interviewee. The interview structure were conducted either physically face to face or via Microsoft Teams, depending on each participant's availability and interview condition. Each session lasted approximately 30 to 45 minutes. With informed consent, all interviews were audio-recorded to ensure accuracy in data analysis. The interviews aimed to explore participants' perceptions of educational quality and system effectiveness, particularly in the context of cross-national comparisons between Malaysia and China. Sample guiding questions included:

- (1) What is your opinion regarding the differences between the Malaysian and Chinese education systems?
- (2) How do you think the abnormal phenomena that - as the world's second-largest economy, China experiences a lower net inflow of foreign students despite a significant number of Chinese students studying abroad, which is not suitable for its status as a global economic leader?
- (3) In your view, does Malaysia's educational quality truly surpass that of China's?
- (4) How's the credentialism and people's attitude towards it in your country?

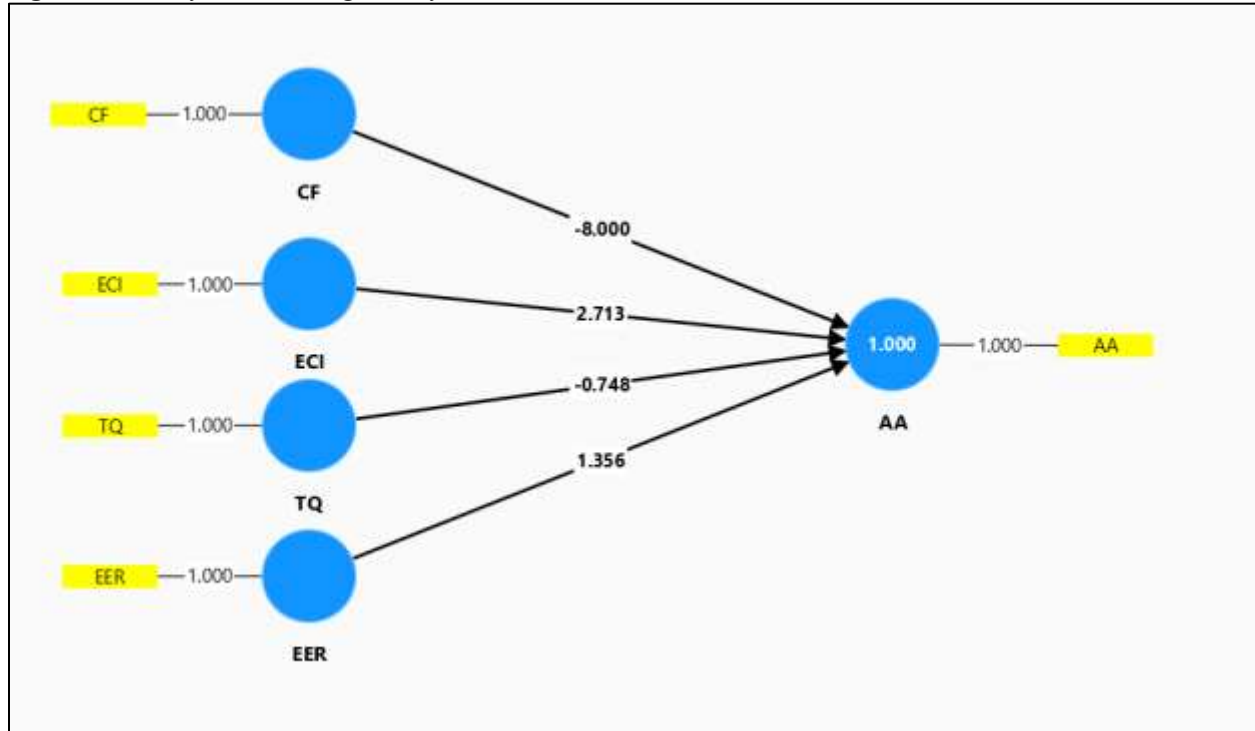
FINDINGS

By revealed four distinct pedagogical independent variables, the observation and calculation lead to the result that Curriculum Flexibility, Education Capital Input, Teachers Quality and English Education Ratio, since the lack of sample, do not exhibit a linear and significant correlation for Academic achievement. Moreover, with the empirical observation and case study, it is suggested that except for the English using ratio, the capital input for both China & Malaysia international schools, the Degree of PhD & Master for Tutors, and excellent students who got admission to top universities, there is no vital difference among them.

Quantitative Research finding

The quantitative research approach which follows the Education Production Function, by calculating in the Smrt-PLS software, the result and correlation is as below:

Figure 4 Result of PLS-SEM Algorithm for the research model



The impact for four indicators is respectively display as: -8.000, 2.713, -0.748, 1.356.

Table 13 Latent Variable Correlations

	AA	CF	ECI	EER	TQ
AA	1.000	0.612	0.590	0.590	-0.535
CF	0.612	1.000	0.963	0.963	-0.327
ECI	0.590	0.963	1.000	0.891	-0.118
EER	0.590	0.963	0.891	1.000	-0.315
TQ	-0.535	-0.327	-0.118	-0.315	1.000

Table 14 Model Fit Testing

	Saturated model	Estimated model
SRMR	0.000	1.987
d ULS	0.000	59.237
d G	0.366	183.369
Chi-square	n/a	n/a
NFI	n/a	n/a

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	26.000	.000		.
	CF	-8.000	.000	-9.798	.
	ECI	2.000	.000	6.782	.
	TQ	-1.000	.000	-1.871	.
	EER	1.000	.000	3.391	.

a. Dependent Variable: AA

Based on the calculating result finding above, it is evident that there exists the limitation of sample size, which has significantly impacted the reliability of the observed correlations and the overall model fit. The statistical outputs, including an SRMR value of 1.987 and abnormal coefficient magnitudes (For example CF = -8.000), suggest poor model fitness and unstable linear relationships among Curriculum Flexibility (CF), Education Capital Input (ECI), Teacher Quality (TQ), and English Education Ratio (EER) in predicting Academic Achievement (AA). When

quantitative data yields inconsistent results, it's essential to complement the study with qualitative approaches. Integrating in-depth interviews, case studies, and observational data will enhance robustness and uncover contextual factors and stakeholder perceptions not captured by statistical modeling.

Qualitative Research Finding

Table 12 Interview memo and information integration

	Theory Explore	Participant Age	Country	Interview Participants	Relationship and Potential Bias	Interview questions designed
David	Confucianism, Utilitarianism and Historicism	62	China	Officer	Ex Colleague	Standatrized questions & Free Discussion
Sophia	Personal work experience	34	Singapore	Teacher	Ex Colleague	
Yang	Empirical observation and GaoKao background	20	China	Student	Classmate	
Student-G	Empirical observation and A Level background	24	Indonesia	Student	Classmate	

This chapter solely import and summarize the essential idea and stand point of the interview, the specific interview memo was shown in Appendix 1: Interview Minutes. The following content are the essence opinions for the four interviewees towards credentialism, education quality between China and Malaysia, empirical observation, and utilitarianism:

David

"The credentialism of China is the long-term customs. During the whole feudalism epoch, Confucianism continuously emphasizes the ideology those who excel in learning are qualified to serve in government (Xue Er You Ze Shi)"

"The Degree in China has become instrumentalization. Spend more money and energy promoting the credential, and the higher the opportunity for job opportunities in State-Owned Enterprises. Once one gets a job in SOE, it refers to monopoly and a stable future career perspective."

Sophia

"From my experience, Singapore-Chinese, who ancestor most from Fujian, have the ideology of : Kiasu." It's a term derived from the Hokkien meaning afraid and something to lose. The Pan-cultural of Chinese and the similarities to China's Tiger parenting, all pin point the impact by Confucianism. When I worked in Singapore from 1997-1999, the most educational level was O-Level. Public education and elite education are also regionally polarized.

Yang

"In my view, another important aspect of the Gaokao is its classification as a State Secret. A notable criminal case involved Yang Bo, a Gaokao candidate from Sichuan Province, who stole the exam paper in 2003 and was sentenced to seven years in prison. In contrast to the cheating associated with the Gaokao, the cheating seen in A-levels, the IB, and counterfeit IELTS scores has evolved into an entire industry, sharing profits with various education agencies."

"The cost of crime between Gaokao and in A-levels is severely different. Therefore, the threshold of China public University and Foreign country University is totally different. You can transform the education system from Gaokao to-levels, but not vice versa."

Student-G

"The issue in Indonesia is that the government does not value or respect intellectual and their contributions. Credentialism is not a significant concern; those who can afford tuition fees in the U.S. or U.K. are often from wealthy business families, and degree requirements do not serve as barriers to their careers. In contrast, families of government officials tend to inherit privilege, where access to resources and political connections outweighs the importance of credentials."

For the empirical observative criteria, as the International Olympiad in Informatics (IOI), International Mathematical Olympiad (IMO), and International Physics Olympiad (IPO), which shown as the Table 13, the output and the achievement of China students are totally surpass Malaysia.

Table 13 Country-wise Performance in International Science Subject Competitions

	China	Russia	USA	Poland	Malaysia	Korea
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AMC	6	16	18	2	0	0
IOI	102	68	68	44	1	49
IMO	180	111	146	34	6	93
IPO	151	96	78	24	1	88

Source: Data collected from each International Olympiads Competitions official website

In the qualitative analysis, a notable case involves the issue of PhD graduates allegedly claiming excessive subsidies and subsidy ab. According to a report by China Science Daily, a college in Hunan province, China, enrolled 23 PhD graduates. All 23 PhDs graduated from Adamson University in the Philippines, specializing in philosophy, and their duration of study was from August 2019 to December 2021—just two years and four months. The financial benefits for bringing in these PhDs were substantial: 350,000 yuan as an introduction fee, 150,000 yuan for a scientific research start-up fund, 144,000 yuan for a transitional subsidy, and 200,000 yuan in introduction fees, despite not assigning any deputy work. The total amount allocated per PhD is approximately 844,000 yuan, resulting in a total expenditure of over 19 million yuan for the 23 PhDs. (L.X.Meng. 2022)

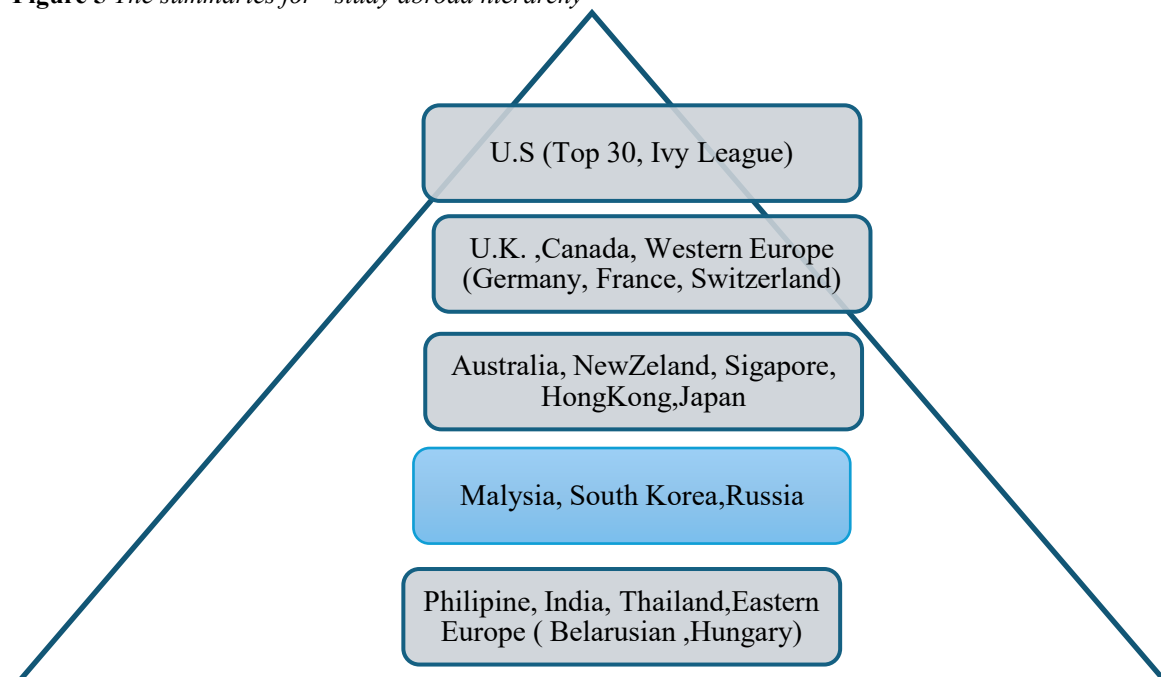
Table 14 Subsidy of PhD graduation student who back to China

City	Subsidy (RM)	Noted
SuZhou	72,727	
HangZhou	60,606	
GuangZhou	121,212	Oversea PhD
ZhangJiaGang	151,515	

Noted: The unit utilize Malaysian ringgit, based on recent 3 years moving average of myr-rmb exchange rate 1.65

Furthermore, the “study abroad hierarchy” has become a popular and debatable topic in recent years, especially within social media and online communities. However, while the citations used in this discussion may not be appropriate for data sources, they do provide practical insights for interpreting the phenomenon. The PAPER journal (belongs to Oriental Morning Post), China science daily, and the New Oriental Education & Technology Group Inc website, all had the news and related viewpoint for propose the “study abroad hierarchy” conception.

Figure 5 The summaries for “study abroad hierarchy”



In summaries, the qualitative analysis, it showed that oversea students’ motivations are often rooted in the relatively lower entry threshold, the potential to use Malaysia as a springboard to Western countries, and a largely utilitarian purpose in pursuing education.

PROBLEMS AND LIMITATION

Although quantitative research often faces limitations such as insufficient sample and restricted persuasion power, it can still remain valuable and be precious when the research adds qualitative insights, particularly those capturing participants lived experiences and empathetic understanding. In spite of qualitative research emphasizes in the depth for understanding the characters of generalizability, it still requires systematic theoretical support to ensure coherence between sample design and inference validity. (Robert T. Trotter II.2012)

In addition, in article *Qualitative Research and Evaluation Methods*, the author Patton argued:

"I suggested that if one had to choose between implementation information and outcomes information because of limited evaluation resources, there are many instances in which implementation information would be of greater value."

He as well proposed, in some scenario, rather than waiting for perfect data, it is more appropriate to conduct so called "good enough quality" research which under real-world conditions. This is especially critical in policy and program evaluation, where timely and actionable information is often more valuable than methodological perfection. (Patton. M. Q. 2002)

The author emphasizes the significance of an openly revealing and honest attitude to address problems and limitations in academic works. In the research of education, it is necessary to explore and explain these issues with ethical integrity and a serious, honest mindset. Only by adopting this approach can we uncover deeper challenges, address existing gaps in educational research, and make meaningful contributions to the advancement of global education.

In this regard, with self-reflection, the limitation in quantitative method for comparison:

▪ The different dimension for measurement of Academic Admission

As Peking, Tsinghua, Fudan, Shanghai Jiao Tong, ZheJiang Universities in China, in QS Ranking respectively rank as 14,20,39,45,47. However, in GaoKao/National College Entrance Examination (NCEE) requirement the former universities are totally different with other western country Universities which accept the GaoKao score. The following table prove specific evidence:

Table 15 *GaoKao Score Requirement between China University and QS Top Rank University*

		QS Rank	Country	GaoKao Score Requirement (Beijing Benchmark)
Peking University		14	China	675
Tsinghua University		20	China	667
Fudan University		39	China	678
Shanghai Jiao Tong University		45	China	668
Sydney University		18	Australia	Average 80% (600)
Monash University		37	Australia	Average 70% (525)
The University of British Columbia (UBC)		38	Canada	Expects students to achieve a minimum provincial Tier 1 university cut-off score (523 Beijing Benchmark)

Source: Data collected from official website of each university.

This indicates that the academic rigor and mastery of foundational subjects required by top Chinese universities through the Gaokao system far exceed the admission standards of equivalently ranked universities in Western countries. Such disparity highlights the intense academic pressure and competitiveness embedded in China's national higher education system.

▪ The observation sample

Due to the scarcity of observational samples, the quantitative data, it may not effectively capture the potential correlations and the diversified factors, which influencing the two education systems under the navigating. In addition, the scarcity of connection, social resource and confidential disciplines, determine that the width of sample is limited. Therefore, the incorporation of qualitative methods, such as semi-structured interviews or case studies, serves as a critical complement to enrich the analysis, provid contextual depth, and enhance the overall validity of the findings.

▪ Education Capital Input

According to the confidential discipline of each secondary school, it is difficult for researcher to approach and collect the frontier data, financial report. And tuition fee generally cannot represent or completely delegate to the indicator for Education Capital Input.

In Queirós's *Strengths and limitations of qualitative and quantitative research*, he highlight that quantitative methodologies offer precision and scalability, yet "lack depth and the possible nuances" compared to qualitative approaches. Combining both allows researchers to formulate more informed and robust choices. (Queirós, A.2017) In article *Very well Mind*, it as well notes quantitative research efficiently uncovers patterns ("what" and "how many"), but warns that sole reliance on numbers "can be inconclusive" and "may lead to overlooking broader themes and relationships." Qualitative methods fill this gap by capturing the nuanced "why" and "how.(Cuncic, A. 2021).

In this regard, the author still holds the positive opinion that, although the sample size and observational data may be limited, the exploratory and pioneering nature of this study embodies the spirit that academic research should uphold. Even the introduction of new analytical dimensions or alternative perspectives contributes meaningfully to the field of educational research.

CONCLUSION

According to the quantitative calculation, the empirical observation for the education indicators, the qualitative interview and case study, the result and agreement to the question statement, is gradually tend to be comprehensive clarified.

P1: Are Chinese overseas students pursuing higher education in Malaysia motivated by the superior quality of education, or are they merely influenced by credentialism?

Regarding P1, the evidence suggests a multipolar answer. The motivation for Chinese overseas students' study in Malaysia, mainly concern about the lower tuition fees, English-medium education, easier threshold, the springboard for access western postgraduate education system, and the subsidy when they back to China. The cluster for those reasons more associate to the utilitarianism purpose. In comparison with the dimension for education quality judgment, there's no explicit evidence testify that Chinese overseas students pursuing higher education in Malaysia was driven by the education quality. The credentialism, as Master or PhD degree, which can assist them to realize the social class crossing, still stand for the main motivation and purpose for them.

P2: In comparing the two education systems, does Malaysia's educational quality truly surpass that of China's?

For answering P2, there's no strong indication and cases demonstrates that Malaysia's educational quality truly surpasses that of China's. From **Table 13 - Country-wise Performance in International Science Subject Competitions** and **Table 15 GaoKao Score Requirement between China University and QS Top Rank University**, All the findings point to a central phenomenon: the intense competition caused by involution in China has driven many overseas Chinese students to choose Malaysia for postgraduate studies. Their motivations are often rooted in the relatively lower entry threshold, the potential to use Malaysia as a springboard to Western countries, and a largely utilitarian purpose in pursuing education.

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Appendix 1: Interview Minutes

Meeting Minutes 1 for Interview of Education System between Malaysia and China

Meeting Details

- **Date:** April 28, 2025
- **Location:** UCSI Residence 2, UCSI University (Online-Meeting)
- **Interviewee:** David
- **Interviewee Occupation:** Former Financial Regulatory Authority Officer

Interview Questions and Responses

1. **What is your opinion regarding the differences between the Malaysian and Chinese education systems:**
 - In comparison with Malaysia, China encompasses the ideology of Confucianism, which worship the superior credential and hold the perception that who excel in learning are qualified to serve in government (Xue Er You Ze Shi)
2. **How do you think the abnormal phenomena that - as the world's second-largest economy, China experiences a lower net inflow of foreign students despite a significant number of Chinese students studying abroad, which is not suitable for its status as a global economic leader:**
 - The education resources in China is severely unequal, especially in rural area the education input and resources is inadequate. The Pareto principle highlights 20% of the people govern 80% of the property of society; vice versa is suitable for an educational narrative. David proposed a conception "Proletariat Low Level", which means most of the Chinese citizens still stay in related inferior level.
 - "I'm not sure of Malaysia's overall degree or diploma level, but in China, people who can get postgraduate education are still a minority. The 2023 China Statistical Yearbook showed that as of the end of 2022, 64.17% of Chinese citizens have an education level below secondary school degree.
3. **In your view, does Malaysia's educational quality truly surpass that of China's?**
 - In my opinion, only the junior school and elementary school study, those parents who want their children get rid of involution. For others just focus on the easu credential threshold.
4. **How's the credentialism and people's attitude towards it in your country**

- It's very common, even some of the bank president, their publication was published in some supplementary issue. With power comes the ability to allocate resources, including educational resources. Therefore, the question arises: who gets to enter this circle of power? Naturally, the ideology of academic credentialism takes shape.

Meeting Minutes 2 for Interview of Education System between Malaysia and China

Meeting Details

- **Date:** April 21, 2025
- **Location:** UCSI Library, UCSI University
- **Interviewee:** Yang
- **Interviewee Occupation:** Chinese Student

Interview Questions and Responses

1. What is your opinion regarding the differences between the Malaysian and Chinese education systems:

- In my perception, the Chinese high school education system emphasizes mental arithmetic and higher algebra more. Compared with the A-Level system, the former surpasses it both in depth and range. The only shortcoming is its limitation in English teaching, use of academic terms, and overall internationalization.

2. How do you think the abnormal phenomena that - as the world's second-largest economy, China experiences a lower net inflow of foreign students despite a significant number of Chinese students studying abroad, which is not suitable for its status as a global economic leader:

- I thought it was because of the various numbers of the population of China. One the one hand, we witness profound Chinese intelligent student got award in IMO, IPO, one the other hand,

3. In your view, does Malaysia's educational quality truly surpass that of China's?

- I thought it was because of the various numbers of the population and imbalance of China. One the one hand, we witness profound Chinese intelligent student got award in IMO, IPO, one the other hand, a overwhelm number of citizens still have lower education even education resource.

- Another important aspect is that, for the Gaokao, the confidential level is State Secrets. One criminal case was Yang Bo, a Gaokao candidate from Sichuan Province who stole the test paper in 2003, and was sentenced to seven years. Comparing to the cheating in Gaokao, cheating in A-level, IB, fake IELTS score, already become Industrial chain, which share the profits with education agencies.

- In this case, I thought the threshold of Gaokao is far more superior than A-Level, even the most eminent university - University College London (UCL). It offers a one-year Undergraduate Preparatory Certificate (UPC) program for international students. This foundation course is designed for students whose high school qualifications or English proficiency are not sufficient for direct entry into UCL undergraduate programs. After successfully completing the UPC and meeting the progression requirements, students can advance to the first year of a UCL undergraduate degree or other top UK universities.

4. How's the credentialism and people's attitude towards it in your country

- The phenomenon is common. 90% of the State-Owned Enterprise (SOE), the entrance requirement is master degree. If the candidates are oversea students, QS Top 100 already become a standard configuration.

5. Other Stand Point:

- The abnormal phenomena somehow do not directly correlate with race or ethnicity, which means that not only Chinese parents were widely regarded as Tiger parents. India indeed has extensive competition and high-intensity college entrance examination coaching institutions similar to China's "Hengshui model," especially centered around the entrance exam for the Indian Institutes of Technology (IIT), which is known as the Joint Entrance Examination (JEE). This phenomenon is widely referred to as the "coaching culture" and bears many similarities to China's Tiger parenting, which is interpreted as the "chicken baby" (jīwá) phenomenon, where students are pushed intensely by parents and schools to achieve top academic results.