

**DEVELOPMENT OF CURRICULUM LEADERSHIP
EDUCATION MODEL IN A HIGHER EDUCATION
INSTITUTION IN SANYA CITY, HAINAN, CHINA**

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UNIVERSITI TUNKU ABDUL RAHMAN
SEPTEMBER 2025

DEVELOPMENT OF CURRICULUM LEADERSHIP
EDUCATION MODEL IN A HIGHER EDUCATION
INSTITUTION IN SANYA CITY, HAINAN, CHINA

By

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A thesis submitted to Teh Hong Piow Faculty of Business and
Finance,

Universiti Tunku Abdul Rahman,

in partial fulfillment of the requirements for the degree of
Doctor of Philosophy in Management and Administration

September 2025

ABSTRACT

DEVELOPMENT OF CURRICULUM LEADERSHIP EDUCATION MODEL IN A HIGHER EDUCATION INSTITUTION IN SANYA CITY, HAINAN, CHINA

In an era marked by tumultuous transformations, education remains a pivotal pathway for humanity to navigate social upheavals, technological advancements, and global crises. This situation has shifted scholarly attention to the challenges of identifying and evaluating the effectiveness and quality improvement of higher education. The current study identified curriculum leadership as an essential factor in promoting university development and system improvement. The evaluation model focused on curriculum leadership based on its context, input, process, and product to identify the effectiveness and quality improvement of higher education. This model addressed the issue that China lacks in mature achievements in developing assessment tools for curriculum leadership. The present study adopted a quantitative analytical method to examine the context, input, process, and product of curriculum leadership at a private university in Sanya City, Hainan Province, China. Quota sampling was employed based on data from 512 valid questionnaires. Moreover, reliability, validity, confirmatory factor, and path analyses were used via AMOS 26.0 software to analyse the core elements of the four-dimensional structure of the model in higher education assessment, while validating significant sequential influences among these dimensions. The current study also provided in-depth conceptual connotations of curriculum leadership and its evaluative theoretical framework. From the perspective of curriculum leadership, an innovated, quality evaluation model for higher

education was developed. Simultaneously, operable optimisation pathways were presented to address practical dilemmas in curriculum leadership construction.

Keywords: higher education, private university, curriculum leadership, context evaluation, input evaluation, process evaluation, product evaluation

Subject Area: HD28-70 Management. Industrial management

ACKNOWLEDGEMENT

As I pick up my pen, I am filled with a myriad of emotions. This doctoral journey is the most precious chapter of my life. For me, it was a huge transformative experience. In the depths of my thoughts, it melts and reshapes the form of my cognition with the flame of academia. It has given me a perspective that transcends time and space, inspiring my awakening to multiple dimensions of academia. The profound gift of this educational journey to my life comes from all the people who have accompanied me through this journey. Here, I would like to express my heartfelt gratitude to them.

I am deeply grateful to my main supervisor, Dr. ***, and co-supervisor Dr. *****. Thank them for guiding me in my confusion and providing unwavering support. Thank them for their excellent and systematic academic insights, which have illuminated my path forward like a beacon. I must emphasize that my supervisors have shown great enthusiasm and empathy at all stages of this research. I firmly believe that without the valuable assistance and continuous evaluation of the supervisors, completing this thesis may bring considerable challenges.

On top of that, I would like to express my sincerest gratitude to UTAR for providing such a vast, free, and vibrant academic environment. I would like to

express my gratitude to Dr. ***, Prof. Dr. ***, and Dr. ***** for their course on methodology, which has made significant contributions to my research. I am especially grateful to ***** for inspiring my research with his extensive disciplinary perspective and profound ideas on university management. I would also like to extend my appreciation to the committees of internal examiners who provided insightful comments and inspiration during the Proposal Defence (PD) and Work Completion Seminar (WCS). Their challenging questions have broadened my writing from multiple perspectives, further deepening my understanding of the theoretical and methodological systems of academic research.

I sincerely thank Geely Talent Development Group for their warm support throughout my doctoral journey. Still fresh in my memory. Dr. *** insightful advice and visionary thinking significantly guided my research throughout this journey. I also sincerely thank University of Sanya for its strong support in my research.

I would also like to express my sincere gratitude to the three management and education experts from China. That is, Professor ***, Professor ***, and Professor ***. Thank them for their valuable support and collaboration in this research work. Their professional knowledge and assistance played an important role in ensuring the success of this report.

I also do not forget to thank those scholars whom I have never met before but have inspired me through their works. Your sparks of thought have ignited my

research inspiration.

Finally, I thank the self who never gave up. Thank me to myself for persisting day and night, maintaining curiosity and reverence for knowledge.

Given the numerous individuals who have contributed to this achievement, it is not feasible to mention each individual individually. With this article, I would like to express my gratitude and pay tribute to every fellow traveler during this meaningful period of time. It must be noted that I bear full responsibility for any remaining errors in this report, and none of the individuals or organizations previously mentioned should be held accountable.

APPROVAL SHEET

This thesis entitled “DEVELOPMENT OF CURRICULUM LEADERSHIP EDUCATION MODEL IN A HIGHER EDUCATION INSTITUTION IN SANYA CITY, HAINAN, CHINA” was prepared by GONG LIRONG and submitted as partial fulfillment of the requirements for the degree of Doctor of Philosophy in Management and Administration at Universiti Tunku Abdul Rahman.

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SUBMISSION OF THESIS

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Yours truly,

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DECLARATION

I, Gong Lirong, hereby declare that this thesis is based on my original work except for quotations and citations, which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UTAR or other institutions.

()

Date: 22nd September 2025

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LIST OF ABBREVIATIONS

CIPP	Context, Input, Process, and Product
EU	European Union
EUA	European University Association
HEI	Higher Education Institution
ML	Maximum Likelihood
MOE of the PRC	Ministry of Education of the People's Republic of China
OECD	Organisation for Economic Co-operation and Development
QR	Quick Response
SEM	Structural Equation Model
UK	United Kingdom
UNESCO	United Nations Educational, Scientific and Cultural
US	United States
UTAR	Universiti Tunku Abdul Rahman
KMO	Kaiser-Meyer-Olkin
TQM	Total Quality Management
PDCA	Plan-Do-Check-Act

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The current chapter mainly outlines the research background, research problem, research objectives, research significance, and operational definitions of the study.

1.2 Research Background

The current world has undergone interweaving changes in science and technology, the living environment, and the social sphere. The rapid development of information technology has transformed people's lifestyles and social organisational forms, while sustainable development and environmental protection have become important issues that humanity must experience. Furthermore, changes in politics, economy, and culture have significantly impacted human lives and social order. Yang (2022) stated that education is a vital track to addressing social change, technological progress, and the global ecological crisis. Considering that the concept of education is considered crucial by humans (Mpuangnan & Ntombela, 2024), past research have examined the tools or indicators to examine the effectiveness of education in university level. Among various evaluation models, the context, input, process, and product (CIPP) model was an evaluation tool that was widely employed in decision-making and improvement of education quality (Liu et al., 2022; Suri

et al., 2024; Babadi et al., 2024; Esmacilbeygi et al., 2024).

The disruptive reconstruction of society by digitalisation caused all social sectors to devote themselves to the exploration and practice of digitalisation to promptly seize the opportunity and possibility of potential upgrading and development. Higher education is included in this category. Moreover, as a subsystem of society, higher education is bound to be affected by external environmental factors, such as politics, economy, culture, and society (Lin, 2024; Wang & Hu, 2025). This condition has prompted human reflection on higher education.

Global higher education is in a profound and complex transition period driven by multiple forces: technological progress (especially generative AI) is reshaping the way of knowledge production and teaching. The global economic pattern and geopolitical changes affect the international flow of talents. Additionally, demands for education equity, quality, and return on investment are increasingly urgent.

A 2025 survey by Organisation for Economic Co-operation and Development (OECD) revealed that deep-seated issues have emerged after the historical expansion of the scale of global higher education. A critical issue includes the paradox between the expansion of academic qualifications and the

lack of skills. The technology wave represented by generative artificial intelligence has significantly deconstructed the traditional mode of teaching, learning, and evaluation. The 2025 horizon report of the American Association for Higher Education Information Technology outlined that AI teaching tools, VR immersive learning, and blockchain-based learning achievement certification have become crucial technical practices for reshaping higher education. Nonetheless, technology empowerment does not automatically solve the fundamental issue of skill training. The OECD Adult Skills Survey highlighted that from 2012 to 2023, adults' basic reading, writing, and computing abilities in numerous countries stagnated or even declined. The dimensions of quality and fairness further exposed vulnerability. The latest Gallup data revealed that the trust of the American public in higher education continues to decline.

The higher education system is experiencing multiple governance challenges. The OECD Education Survey 2025 disclosed that the academic completion rate is low. Second, the global fiscal pressure has intensified. Finally, the shortage of high-quality teachers has become a common issue. Higher education must shift from “proving value” to “creating value” in order to reshape its social contract.

Seeing that the curriculum in higher education is a critical subsystem for

educational and social reformation (Hajizadehanari, 2022, cited in Esmailbeygi et al., 2024), curriculum leadership is considered a critical factor for the improvement of institutions (Harris et al., 2020). Curriculum leadership refers to the ability of institutions to reflect educational ideas, educational philosophy, understanding of curriculum, planning, execution, management, and evaluation of curriculum in the educational institution. This aspect includes the process of improving and enhancing educational quality, construction of a curriculum leadership community, construction of school curriculum culture, curriculum design and development, curriculum organisation and implementation, and curriculum management and evaluation (Jin, 2020).

The evaluation tools for curriculum leadership are currently absent without mature achievements in China (Xuan, 2022). These phenomena have necessitated further research to examine curriculum leadership at the higher education level based on the CIPP evaluation model. This model emphasises that evaluation is not simply a final judgment, involving a dynamic process that serves continuous improvement and decision-making optimisation. This foundational approach proves that the CIPP model is suitable for evaluating curriculum leadership (Subasman, 2024; Dizon, 2023). Generally, curriculum leadership in higher education is a multidimensional leadership practice involving strategic planning, resource allocation, implementation monitoring, and reflection on results (Li et al., 2023; Harris et al., 2020).

1.2.1 Overview of Curriculum Leadership Development

The global pandemic crisis further prompted UNESCO to propose the 2050 Education Vision Declaration in 2020, advocating the educational reform from anthropocentric pedagogy to non-anthropocentric pedagogy that should be completed by 2050 (Yang, 2022). Prior to this proposed vision, Henderson and Hawthorne (2000) mentioned that transformational curriculum leadership is a collaborative process of educational reform.

Despite the significant discrepancies in the education system across countries such as the United Kingdom (UK) and the United States, the curriculum leadership is widely recognised as a vital factor towards education quality and learner learning outcomes. According to the European Union (EU) Education Policy Initiatives, the EU is committed to promoting educational cooperation and innovation in Europe (Li, 2024). The EU Education Policy Initiative has proposed various policies and plans regarding curriculum leadership, namely the EU Higher Education Credit Transfer and Accumulation System and the European Higher Education Area Quality Assurance Standards and Guidelines to expand international openness of higher education (Rodrigues et al., 2024).

The UK has embarked on educational reform since 1988, fostering curriculum leadership development with several policies and measures, such as

designating national curriculum standards, improving professional leadership and educators, and developing educational technology (Lyu, 2025; Chirisa, 2024). In the United States, students are prepared for the future workforce by addressing primary challenges, such as keeping curricula updated (Vengathattil, 2025).

Similarly, Asian countries, such as China, South Korea, and Singapore acknowledged the ability of curriculum leadership to improve the education quality and learner learning outcomes (Liu & Du, 2024). Since 2017, the government of China has adopted several policies for the reform of education evaluation towards high-quality educational curriculum leadership (Zhang & Liu, 2024; Bie, 2025). Meanwhile, since the 1990s, the Korean and Singapore governments have proposed several policies and plans on curriculum leadership to improve their educators' professional abilities and leadership, implementing interdisciplinary courses and learner-centred curriculum reform (Kim & Lee, 2020; So et al., 2024).

Furthermore, the UNESCO 2023 report stated that over 80% of universities worldwide are undergoing curriculum reconstruction to address cross-cultural mobility and the explosive growth of online learning. In this context, curriculum leadership is the core of distributed leadership models that coordinates multiple stakeholders and drives the transformation of curricula

from static knowledge transmission to dynamic competency development. The lack of robust curriculum leadership development cause universities to struggle to resist the risk of “curriculum fragmentation,” leading to a disconnect between educational outputs and the global labour market. Therefore, globally, the necessity of amplifying curriculum leadership construction lies in consolidating the foundation of international educational competitiveness.

1.2.2 Overview of Curriculum Leadership Development in China

In the context of China, the necessity for international educational competitiveness further elevates to the intrinsic demand of the national strategy for developing an education powerhouse. Compared to the global landscape, the prominent design of the education system in China requires leaders to bridge policy intentions with public implementation.

In China, higher education is in a new stage of promotion of “comprehensive reform in the education field” and moving from “management” to “governance” (Dong & Tang, 2019). The education reform in China includes accelerating modernisation, enhancing the reform of systems and mechanisms, and giving complete authority to the universities to stimulate the vitality of educational development towards quality education. The ultimate effectiveness of this reform task is closely related to educational leadership at all levels. Moreover, university curricula are a crucial component of higher education and

a crucial support for achieving talent development goals (Liu et al., 2022). Hence, highlighting curriculum leadership is a priority to continuously enhance educational leadership.

From the perspective of education development in Western countries, such as the UK and US, the emergence of curriculum leadership is significantly connected to the school-based curriculum development movement (Wang, 2020). In China, the concept of curriculum leadership initially concerned the expansion of curriculum reform in basic education. Nevertheless, the promulgation of the Higher Education Law of the People's Republic of China in 1998 signals that the higher education in China has transformed its paradigm. The society has gradually focused on HEIs, and people have proposed higher requirements for education and curriculum quality.

In 2018, the Ministry of Education of the People's Republic of China (the MOE of the PRC) proposed the requirement of “strict management Education in degree program and the teaching process”, and clarified that “to comprehensively organise the teaching content of each course, eliminate the ‘shoddy courses’, and create the ‘prime courses’”. In the same year, the opinions from MoE on accelerating the development of high-level undergraduate education and improving the ability to cultivate talents in an inclusive way were issued to address the requirement of “deepening teaching

reform to stimulate learners' learning interest and potential". This statement urges HEIs to continue improving their curriculum development capacity and curriculum leadership.

1.2.3 Curriculum Leadership Development at University Level

At the level of Chinese universities, the development and construction of curriculum leadership serve as a concrete pathway for enhancing the modernisation of educational governance. Based on the number of HEIs reported on the MoE of the PRC website in 2023, 1,242 undergraduate schools (universities with undergraduate or higher education levels) were listed under higher education institutions in China. In terms of the effectiveness of curriculum leadership development, the QS World University Rankings 2023 reported that several public universities in China hold high international reputation, such as Tsinghua University, Peking University, Fudan University, Shanghai Jiao Tong University, Zhejiang University, Wuhan University, and Nanjing University.

In addition to the aforementioned universities, private universities in China have played an important role in the field of higher education. The rapid rise of private education has alleviated financial pressure, expanded resource supply, fulfilled diverse needs, stimulated educational vitality, and encouraged educational consumption (Dong, 2018).

Since the 1980s, private universities in China have emerged and become a significant component of the higher education system in the country, accounting for 31.5% of undergraduate Chinese universities. Private universities play a role in alleviating the shortage of educational resources, enriching educational diversity, encouraging educational innovation, and stimulating competition in Chinese higher education system. Therefore, private education has gained national attention, and the Chinese government has introduced the Law of the People's Republic of China on the Promotion of Private Education in 2002 (revised in November 2016).

A significant gap remains between private universities and public universities. Compared to public universities, private universities have slightly fewer resources and funding. Hence, the efficiency of resource management needs to be improved, and the leadership role need to be strengthened (Liu et al., 2020; Wang, 2021a; Que & Wang, 2022). The curriculum design and implementation is relatively flexible, albeit short of scientific and strict methods to ensure the effectiveness of said curriculum (Que et al., 2019; Wang & Zeng, 2019).

1.3 Problem Statement

Curriculum leadership is a core aspect of educational leadership (Chen,

2013). The focus of curriculum leadership has evolved from traditional teaching and management approaches to a more holistic, people-oriented educational model. Xu and Hu (2013) discovered that educational leadership is increasingly shifting from an emphasis on individual leadership to organisational leadership.

The present study focused on the University of Sanya, which is a private university in China. Presently, 391 private undergraduate education institutions exist in China (2023). Organisations in the same institutional environment tend to lean towards structural isomorphism (DiMaggio & Powell, 1983; cited in Posadas et al., 2023). Constrained by unified policies such as the evaluation standards and discipline setting regulations by the Ministry of Education, the operational structure of University of Sanya (department configurations and credit system) exhibits significant similarity to that of Chinese public universities. The operational structure of University of Sanya, similar to other private universities, closely resembles that of Chinese public universities.

In terms of resource sources, data from the China Private Education Association in 2022 revealed that tuition revenue accounts for over 80% of the budget in private universities. The financial structure of Sanya University is consistent with that of most Chinese private universities. Meanwhile, the development trajectory of this university is synchronised with that of Chinese

private universities. This university was established as an undergraduate institution in 2005. Based on the 2003 “Private Education Promotion Law of the People's Republic of China,” the development of this university is synchronised with emphasis on “legal development and quality enhancement” in Chinese private higher education institutions. Currently, this university has passed all stages of quality assessments by the Ministry of Education.

The University of Sanya has remained in the top three in the comprehensive ranking of private HEIs on the China Alumni Network in recent years. This university is also the sole one in Hainan Province that was rated as one of the top 50 universities in China, with graduates succeeding in job seeking within three months upon graduation by the MOE of the PRC. The University of Sanya is also among the six universities in China that have been approved by the MoE to offer a Master’s programme. The university has become the first private university to be awarded the National Social Science Fund of China for five consecutive years, approved by the State Council of China.

As of 2022, the University of Sanya has achieved national quality standards of China for several evaluations. For instance, in 2012, the University of Sanya was evaluated by the MOE of the PRC and successfully converted from an independent college into a private university, indicating the

fulfilment of the basic conditions for operating a Chinese university (Jiao Fa [2004] No.2), including teaching staff, learner educator ratio, teaching facilities and equipment, and coursebooks. In 2015, this university successfully passed the qualification evaluation of the newly established undergraduate university by the Ministry of Education (Jiao Gao [2011] No.9), indicating the fulfilment of the basic requirements for the quality of undergraduate education in China, including leadership roles, teaching teams, teaching conditions and utilisation, discipline, subject and curriculum development, quality management, learning style construction, learner guidance, and teaching quality. Nevertheless, the University of Sanya experiences issues that need to be addressed and requiring continuous improvement towards quality education.

Firstly, in the dimension of context, the conscious quality culture of the University of Sanya has yet to be fully established. Based on Ylimaki's (2012) research, curriculum leadership is closely related to social, political, and cultural backgrounds (Liu & Li, 2013). In 2021, the Ministry of Education in China proposed the requirements for quality culture development of "self-awareness, self-introspection, self-discipline, self-examination, and self-correction". Chinese universities, especially private universities, such as the University of Sanya, are developing and have not yet achieved the quality culture requirements required by the Ministry of Education in China.

In the early stages of university construction, the University of Sanya primarily encouraged the improvement of internal education quality through external forces and gradually achieved the basic quality requirements of Chinese university education based on the government evaluation standards. The institutional framework and requirements from the government cause the University of Sanya to focus more on the institutional standards and requirements of the government when pursuing quality culture development. Quality management activities pursue the content required by the government. Therefore, the quality consciousness of the University of Sanya remains in the development stage awakening. Hence, an important step is to gradually enhance the understanding and grasp of the development laws and the construction mission of quality culture.

Although the university is responsive to external feedback, the mechanisms for conducting systematic horizontal and vertical quality comparisons, and comprehensive background and environmental analyses, remains in the exploratory phase.

Secondly, the University of Sanya needs to enhance the connotation and process management of the university concerning investment, specifically from an input perspective. Investment is crucial to the development of universities, encompassing all factors and processes that impact educational outcomes

(Zhang et al., 2022). As a private institution, the University of Sanya recognises the importance of investment in achieving educational goals and fulfilling the social responsibility of the institution. The university has conducted ongoing efforts in strategic, human, material, and financial areas.

The emphasis during the investment process tends to focus significantly on economic aspects, primarily ensuring basic conditions, often neglecting the humanistic elements, such as peer influence, teaching strategies, and equal dialogue (Zhang et al., 2022). Additionally, although the university prioritises investment, process tracking and management are often overlooked. Furthermore, a lack of effective evaluation exists in strategic planning, educational project execution, fund allocation, and educator training. In terms of investment, organisational needs and the development of educators receive more attention, neglecting systems and measures that enhance learners' experiences.

Thirdly, based on the process perspective, the evaluation and continuous improvement system at the University of Sanya remains incomplete. Currently, the university has established an internal teaching quality monitoring system, an external teaching quality monitoring system, a quality information and utilisation system, and an evaluation system for course project construction. Nonetheless, a curriculum leadership evaluation system that reflects the

interconnection and interaction of various educational elements from the perspective of the institution has yet to be developed.

Process evaluation involves continuous supervision and feedback during the implementation of a plan (Yang et al., 2023). At the University of Sanya, the process evaluation is progressing steadily. During this process, universities need to concentrate on the directional guidance aspect of educational evaluation (Liu, 2022). Currently, the main issue at the University of Sanya is that the guidance provided by process evaluation in development efforts has led to several achievements lacking strength in third-party assessments of the reputation of the university. Additionally, the mechanisms for guidance and the construction of platforms that support high-quality employment outcomes remain weak.

Finally, significant gaps are present in the educational achievements of the University of Sanya. In August 2015, the Ministry of Education (MOE) of the People's Republic of China initiated the development of world-class universities and first-class disciplines, establishing new standards for the positioning and quality of Chinese universities. In October 2019, the MOE launched the creation of first-class undergraduate courses, followed by the introduction of the first batch of national first-class undergraduate courses in November 2020. Nonetheless, few courses at the University of Sanya have

received national recognition.

1.4 Research Questions

General Question:

What is the context evaluation, input evaluation, process evaluation, and product evaluation of curriculum leadership in the University of Sanya, China?

Specific Question:

(1) Is there any significant relationship between context evaluation and input evaluation of curriculum leadership in the University of Sanya, China?

(2) Is there any significant relationship between input evaluation and process evaluation of curriculum leadership in the University of Sanya, China?

(3) Is there any significant relationship between process evaluation and product evaluation of curriculum leadership in the University of Sanya, China?

(4) Is there any significant relationship between product evaluation and context evaluation of curriculum leadership in the University of Sanya, China?

1.5 Research Objectives

Based on the CIPP evaluation model as the theoretical basis, the

curriculum leadership evaluation model was determined.

General Objective:

To examine the context evaluation, input evaluation, process evaluation, and product evaluation of curriculum leadership in the University of Sanya, China.

Specific Objectives:

(1) To examine the significant relationship between context evaluation and input evaluation of curriculum leadership in the University of Sanya, China.

(2) To examine the significant relationship between input evaluation and process evaluation of curriculum leadership in the University of Sanya, China.

(3) To examine the significant relationship between process evaluation and product evaluation of curriculum leadership in the University of Sanya, China.

(4) To examine the significant relationship between product evaluation and context evaluation of curriculum leadership in the University of Sanya, China.

1.6 Significance of the Study

1.6.1 Theoretical Significance

The current study has developed the theoretical research on curriculum leadership. The academic community has achieved positive results in the study of curriculum leadership in universities. Nonetheless, no specific theoretical exploration and research results can be used in practice regarding the evaluation model of higher education curriculum leadership based on the CIPP evaluation model (Xuan, 2022). Therefore, the present study is the first in conducting research on the curriculum leadership evaluation model, constructing evaluation models for university curriculum leadership, and developing a measurement questionnaire. Therefore, the current study enriches the theory of curriculum leadership.

The connotation of curriculum leadership is developed in the present study by exploring and defining the concept and providing a reference for the academic community to conduct in-depth research. The curriculum leadership evaluation model structure was developed based on the organisational perspective and the basic viewpoints of the CIPP evaluation model (not evaluation, but improvement), fully considering the role of culture and background in the diagnosis of key elements, highlighting the echo of external response and internal governance, focusing on the effectiveness of comparative way in problem analysis, and adding the influencing factors of humanistic

attributes, such as community, learner experience, academic promotion, learning scenarios, and school reputation. Thus, the relevance factor of curriculum leadership is enriched by four aspects: context, input, process, and product.

1.6.2 Practical Significance

Curriculum is the most important medium for universities to perform the knowledge transfer process through teaching and learning. The current study developed an evaluation framework for curriculum leadership development, which provides a practical path for addressing the issues in curriculum leadership development.

The multidimensional evaluation of curriculum leadership can comprehensively reflect effective efforts of universities in the process of managing the university, reflecting the objective state and the strength of the university. Simultaneously, the curriculum leadership evaluation model can help universities form self-improvement and development mechanisms.

1.7 Chapter Outline

This study comprises five chapters:

Chapter one focuses on the research background, introducing the background and origin of the study, the study objectives, problems, and the

significance of the study.

Chapter two focuses on the literature review, mainly reviewing the past studies related to the current study, and discussing curriculum leadership, the CIPP evaluation model, and evaluation of higher education quality in universities.

Chapter three includes methodology, discussing study paradigms, study design, scale development, data collection methods, and processes.

Chapter four consists of data analysis for reliability and validity analysis, conducting large-scale sample analysis, exploratory factor analysis, and confirmatory factor analysis on various evaluation elements of context, input, process, and product.

Chapter five summarises the findings, implications, limitations, recommendations for future study, and conclusion.

1.8 Operational Definitions

1.8.1 Curriculum Leadership

The concept of curriculum leadership presents diversity due to varying scholars and educational backgrounds (Stryker & Burke, 2000; Wang & Zhu,

2020; Jin, 2020; Zhan, 2024; Sun, 2025).

Curriculum leadership in the current study involves a type of system capability of a university to improve educational quality in its educational philosophy and quality culture. Specifically, curriculum leadership involves the process of continuously improving the quality of university and education, based on the top-level curriculum reform vision and top-level design, the university presents the advancement of educational thought and culture, the foresight of talent training education reform and measures, the adaptability of talent training orientation and social development and the external response ability of the university, the internal guidance ability, the team's driving force and the external influence ability reflected in the process of curriculum construction, exploration, reform and practice, encouraging the continuous growth of educators and learners and the continuous improvement of curriculum culture.

In the previous paragraph, top-level design involves considering all levels and elements of the project as a whole, tracing back to the source, managing the overall situation, and seeking solutions to issues at the highest level. This consideration is the embodiment of the “overall concept” of a project (Hu & Lu, 2024). Meanwhile, quality culture is a concept advocated by the European University Association (EUA), which is an organisational culture that aims to

continually improve quality. The EUA believes that any quality culture is based on two elements: one is a set of common values, beliefs, expectations and commitment to quality (psychological aspects refer to understanding, flexibility, participation, and hope and emotion); The second is to maintain a clear process structure or management elements to improve quality and coordinate efforts (the tasks, standards, and responsibilities of individuals and units) (Li & Li, 2023).

1.8.2 CIPP Evaluation Model

Based on years of study and reflection on Taylor's behavioural goal model, American scholar Stufflebeam proposed the CIPP evaluation model in 1966 at the Education Evaluation Centre at Ohio State University. CIPP is an abbreviation for context, input, process, and product. The starting point of this model is to obtain effective feedback information to help decision-makers formulate and improve policies that are conducive to improving work and the quality of education (Stufflebeam, 2007).

Context evaluation in the current study involves an evaluation of the project background and overall objectives, assessing the rationality of project objectives, analysing the project background, and supporting planning and decision-making.

Input evaluation involves an evaluation of the resources and design schemes invested. This process entails identifying and evaluating the advantages and disadvantages of designing solutions after determining project objectives through a background assessment. Essentially, the process is an evaluation of the feasibility and effectiveness of a solution, serving organisational decision-making.

Process evaluation involves the evaluation of project activities and implementation processes, monitoring, and inspecting the implementation status of the project with the aim of adjusting and improving the implementation process, which is formative evaluation during the project implementation process to serve the implementation decision-making.

Product evaluation is the evaluation of results and outputs, measuring, judging, and interpreting the achievements of a project, also known as summary evaluation, serving a circulating decision-making service.

1.8.3 Curriculum Leadership Evaluation Model Based on CIPP Evaluation Model

Based on the CIPP evaluation model, the curriculum leadership evaluation model refers to the established indicator framework that matches the context, input, process, and product of the CIPP evaluation model to evaluate the development of university curriculum leadership.

Context evaluation of curriculum leadership. Based on the concept of “C” in CIPP, an evaluation framework is composed of relevant factors in the field of higher education quality, analysing aspects such as the educational environment, construction goals, learner needs, and existing issues to help educators comprehend the social and cultural environment and the sources of educational concerns. Context evaluation is a significant concept in the field of education, which includes analysis of various aspects such as educational background, social background, and subject background to better comprehend the needs and characteristics of curriculum leadership development.

Input evaluation of curriculum leadership. Based on the concept of “I” in CIPP, an evaluation framework comprises relevant factors in the field of higher education quality. This indicator framework evaluates educational resources, strategies, and plans to assess whether universities have sufficient resources and appropriate plans to solve educational concerns.

Process evaluation of curriculum leadership. Based on the concept of “Pc” in CIPP, an evaluation framework is formed using relevant factors in the field of higher education quality to evaluate the implementation process of education, monitor the implementation of education projects, and promptly identify issues in curriculum leadership development and manage setbacks.

Product evaluation of curriculum leadership. Based on the concept of “Pr” in CIPP, an evaluation framework is developed using relevant factors in the field of higher education quality to assess educational outcomes and effectiveness in order to determine whether curriculum leadership has achieved the expected results.

1.9 Chapter Summary

This chapter clarifies the process of rapid world change, where scholars have discovered that education is a vital path for humans to respond to social changes, scientific and technological progress, and global ecological crises. Education experiences significant impacts and changes, and scholars have demonstrated that curriculum leadership is an effective medium for addressing educational transformation.

Based on the importance of education and curriculum leadership, this chapter further clarifies the need for developing curriculum leadership in Chinese universities and the University of Sanya. Specifically, objectives, and significance of the study were discussed.

The current chapter also clarifies the three main concepts of “curriculum leadership”, “CIPP evaluation model”, and “curriculum leadership evaluation model based on the CIPP evaluation model”. This chapter lays the foundation

for subsequent research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The present chapter includes a review of development and existing research related to curriculum leadership and the CIPP evaluation model. Furthermore, the relevant theoretical connotations and the development of educational quality connotations of the current study are distinguished.

2.2 Quality of Education

The concept of quality has been gradually integrated into the field of higher education under multiple backgrounds and needs. Since the mid-20th century, with the development of industrialisation, the popularisation of higher education, and the intervention of new public managerialism, the concept has entered the field of higher education (Zhang & Du, 2022).

The quality of higher education is a systematic concept comprising macro quality, meso quality, and micro quality (Li, 2011). Macro quality is the overall quality of higher education system in a country, which is to completely adapt to and encourage the needs of the social economy and the development of learners as the main body (Li et al., 2021). Meso quality concerns the quality of talent cultivation in universities, requiring the coordinated development of

external and individual adaptability qualities (Ossiannilsson, 2025). Micro quality refers to the internal teaching quality of universities, which requires a high degree of attention to courses, classrooms, and learner engagement in learning. The concept also includes the “quality” highlighted by the internal educational philosophy, training objectives, teaching tasks, and management functions of universities (Ossiannilsson, 2025). The evaluation of curriculum leadership in universities is a measure to enhance the construction of meso and micro quality under the requirements of macro quality.

The connotation of higher education quality has formed numerous viewpoints after years of development and discussion. The connotation of higher education quality also varies with time, location, culture, and educational objectives.

Crosby (1979), a world-renowned quality management expert and modern management expert from the United States, defined quality as “meeting requirements” in *Quality is Free*, which was subsequently applied to the field of higher education. Under this framework, educational quality reflects educational outcomes that meet or exceed established teaching objectives and learner expectations. American scholar Martin (1985) differs from Crosby’s viewpoint by emphasising the importance of the input-process-output (IPO) model in evaluating educational quality. The quality of education should be

based on learners' admission conditions (input), educational experience (process), and post-graduation achievements (output).

In terms of higher education in the 21st century, Australian educator Biggs (2001) proposed the concept of “Constructive Alignment”, which is a principle of educational design that emphasises consistency between curriculum objectives, teaching methods, learning activities, and evaluation. The concept explains that quality education is learner-centred, providing learners with the necessary support to help them achieve their learning goals.

Contrary to the abovementioned human-centred perspective, institutions such as the European Union for Quality Assurance of Higher Education (ENQA, 2005) have emphasised a method based on standards and guidelines. They advocate the establishment of an external audit mechanism to ensure that educational institutions fulfil commonly recognised quality standards and processes. This approach considers quality as a process of following several best practices and achieving expected results. The Middle States Commission on Higher Education (MSCHE, 2011) views the quality of higher education as the degree to which it achieves its mission and goals, and the process of enhancing capabilities via self-evaluation and continuous improvement.

In the digital economy era, Salmi (2019) outlined the impact of globalisation, digitisation, and continuous innovation on the quality of higher

education. Quality no longer concerns improving classroom teaching but rather how to provide learners with a comprehensive learning experience, including digital skills, cross-cultural communication, and critical thinking.

The quality of higher education manifests in various forms, such as consistent educational design, adherence to best practices, a comprehensive learning experience, surpassing teaching objectives, achieving mission level, and continuous education appreciation.

2.3 Exploration of Curriculum Leadership

2.3.1 The Development of Curriculum Leadership

The emergence, nurturing, and development of the concept of curriculum leadership is traced to the mid-20th century when the term “curriculum leadership” first appeared in Passow’s (1954) research project, “Organisation and Development of Curriculum Leadership” (Wang & Zhu, 2020). During the 1960s and 1970s, the movement for “school-based curriculum development” flourished in countries with a tradition of decentralisation, such as the United Kingdom and the United States. This shift towards a school-based curriculum necessitated new concepts of curriculum management and leadership.

In 1976, Glenys highlighted that curriculum leadership is crucial for educational reform, stating that effective leadership involves taking

responsibility for educators and producing a significant, positive impact on education in the United States. The role of curriculum leaders is to cultivate the ability to generate innovative solutions. Therefore, these leaders need to expand their vision for curriculum development to align with ideals of humanism and democracy, while addressing advancements in knowledge and technology, including future research needs (Bao, 2016).

Curriculum leadership was initially viewed as a tool for developing educational curricula. In the 1980s, British and American countries renewed their focus on state role in monitoring the quality of school curricula, coinciding with the rise of the school-based management movement. Nevertheless, this situation did not negatively affect the school-based curriculum development movement. Instead, both movements progressed simultaneously, sharing a common goal of emphasising high-quality school curricula. Consequently, a form of curriculum leadership emerged that valued and standardised school curriculum development (Wu, 2023). Publications from this period, such as the “Handbook of Curriculum Leadership and Development” and “Curriculum Leadership,” clearly displayed practical and instrumental characteristics of curriculum leadership (Bao, 2016).

The function of curriculum leadership has gradually surpassed the characteristics of tools. In the 1990s, Brady, Henderson, and Hawthorne

recognised that curriculum reform should not be localised or isolated; rather, the quality of education does not solely depend on the curriculum. Effective curriculum reform requires a holistic approach that emphasises the transformation of institutional organisation, the reshaping of its culture, and the creation of a democratic, cooperative, and shared school environment (Wu, 2023).

In 1994, Brubeck published *Creative Curriculum Leadership*, which proposed the concept of “Creative Curriculum Leadership” (Bao, 2016). Creative curriculum leadership is based on the variations between internal and external courses in cultivating human subjectivity and creativity. The development of internal courses that value personal experience and sense of meaning is chosen as the ideal way of curriculum reform, emphasising the process of curriculum development via creative imagination and self-value awareness (Wu, 2023).

Curriculum leadership is evolving towards a value-oriented approach. The paradigm established by Pinar, Apple, and Doll in the 1990s has gradually gained traction, advocating for “the paradigm of understanding curriculum,” which emphasises the interaction between subjects within educational contexts (Wang & Zhu, 2020).

This evolution in curriculum leadership is influenced by two trends: the comprehension of curriculum paradigms and the emergence of new theories of school leadership. Consequently, the concept of curriculum leadership is undergoing significant changes, which shifts the focus from a tool-oriented approach to a more value-centred perspective. This focus emphasises purpose and meaning, highlighting vision, democracy, collaboration, constructive engagement, and critical reflection (Bao, 2016).

According to Zhang et al. (2019), the educational value of curriculum leadership serves as an internal driving force for enhancing school reform and promoting educational progress. Based on the changes in educational concepts, the value pursuit of curriculum leadership has undergone corresponding changes summarised as:

(1) From curriculum management to diversified curriculum implementation and reform. Traditional curriculum leadership values mainly focus on curriculum management and control, while modern curriculum leadership emphasizes more on curriculum implementation, evaluation, and reform, highlighting the improvement of educational quality and the achievement of educational goals.

(2) From focusing on education administration to focusing on educators'

professional development: in the process of curriculum leadership development, education leaders gradually recognise the dominant position of educators in curriculum implementation and begin to concentrate on educators' professional development by providing support and training, and facilitating educators to improve their teaching ability and professional quality.

(3) From neglecting learners' personalised development to focusing on their needs and development: Following this change in educational philosophy, curriculum leadership has attached importance to learners' needs and development, creating an environment conducive to their learning and growth, and concentrating on their personalised development and overall quality improvement.

(4) From conservative educational concepts to innovation and change: compared to traditional curriculum leadership, modern curriculum leadership places more emphasis on educational innovation and change, dares to try new educational concepts and methods, encourages curriculum reform, and adapts to the needs of social development and educational reform.

(5) From a closed education system to internationalisation and diversification: Alongside the development of globalisation and the knowledge economy, curriculum leadership has focused on the internationalisation and

diversification of curriculum, promoting communication and cooperation between universities and the international education communities, while facilitating the sharing and optimisation of educational resources.

The focus of academic community on curriculum leadership (from the perspective of research content) mainly involves the curriculum practice, curriculum reform, school-based characteristic courses, curriculum management, curriculum development, and curriculum concepts while highlighting educators' roles as curriculum leaders, leadership dilemmas, and conceptual research. Based on the research level, the research on curriculum leadership lacks depth and outstanding achievements in the operational principles, ability elements, and leadership process of curriculum leadership.

Although universities have internalised and practiced curriculum leadership, the practical paths and methods for effectively solving practical issues and achieving results have not yet formed a systematic and mature method and model (Xuan, 2022).

Research on curriculum leadership in China emphasises the importance of curriculum reform capabilities. The literature actively explores curriculum resources, enhances educators' teaching skills, and encourages teaching research. Studies emphasising individual perspectives, such as those of

principals and educators, have yielded significant results. In contrast, Western countries are increasingly highlighting areas such as organisational culture, management practices, leadership elements, and content. Currently, most findings are confined to one or a few related aspects, lacking a comprehensive view of curriculum leadership development and evaluation. Therefore, examining and evaluating the implementation of curriculum leadership from a broader perspective is essential for improving education quality.

2.3.2 Review of Past Studies Related to Curriculum Leadership

The literature on curriculum leadership encompasses multiple disciplines and fields, specifically management, psychology, and education.

Firstly, theoretical research outweighs practical evaluation tool exploration. Theoretical research in curriculum leadership encompasses various aspects, including the development of concepts, functions, values, influencing factors, and paths to improvement. Glatthorn et al. (2016, 2018), Jin (2020), and Harris et al. (2020) have contributed significantly to these studies. Additionally, research has examined the ontology, axiology, and epistemology of curriculum leadership philosophically (Xuan, 2022; Wu, 2023). New theoretical frameworks have also emerged, including shared, creative, innovative, and crucial curriculum leadership (Liu & Li, 2013).

Table 2.1*Literature Review of Curriculum Leadership Theory Research*

Theoretical Research Area	Detail	Researcher
Concept development	Focus on the definition and connotation of curriculum leadership	Glatthorn et al. (2016, 2018), Jin (2020), Harris et al. (2020), Lin & Huang (2005), Yu (2005), Huang et al. (2002), & Liu (2025)
Function and value	Explore the role and significance of curriculum leadership	Glatthorn et al. (2016, 2018), Jin (2020), & Harris et al. (2020)
Influencing factors	Analysing factors affecting curriculum leadership	Tapala et al. (2021), Tapala et al. (2021), Glatthorn et al. (2018), Jin (2020), & Harris et al. (2020)
Improvement path	Propose strategies to enhance curriculum leadership	Glatthorn et al. (2016, 2018), Jin (2020), Harris et al. (2020), Glatthorn et al. (2018), Jorgensen (2016), Kami & Corrie (2016), DeMatthews & David (2014), Jin (2008), & Huang et al. (2002)
Philosophical perspective	From the perspective of ontology, axiology, and epistemology	Xuan (2022) & Wu (2023)
New theoretical framework	Propose a sharing, creative, innovative, and critical framework	Liu & Li (2013)
Literature review	Combing the literature map of curriculum leadership, analysing its transformation trends and limitations	Xuan (2022) & Li & Lu (2024)

Limited progress is observed in practical research. Localised practice only exists in the Shanghai Curriculum Leadership Improvement Project (Jin, 2020), while effect evaluation research is scattered, mainly promoted by Lijie's team (Lv et al., 2019). No empirical research has been conducted on basic elements (such as operating mechanisms, processes, and effects), and limited localised practice models and high-reliability school-based empirical research exist (Xuan, 2022).

Table 2.2*Literature Review of Curriculum Leadership Practical Research*

Practical Research Area	Detail	Researcher	Research Status
Localisation practice	Only available in Shanghai Leadership Development Programme	Jin (2020)	Limited
Effect evaluation	Scattered, mainly driven by the Lijie team	Lv et al. (2019)	Scattered
Basic elements research	Limited to theoretical speculation, lack of research on operating mechanism, process, and effect	Xuan (2022)	Lacking
Localisation practice model	Almost no research	Zheng (2018), Xuan (2022), & Li & Lu (2024)	Lacking
High reliability empirical research	Lack of school-based empirical research	Xuan (2022)	Lacking

Secondly, more situational and human factors need to be reflected. Existing research on curriculum leadership have attempted to provide a generally applicable leadership approach or style. Research focused more on structural and managerial aspects, such as creating curriculum vision, integrating curriculum resources, curriculum modelling, and curriculum support environments (Li et al., 2023).

In the tertiary education level, education and learning do not occur in isolation but are closely linked to factors, such as environment, tools, materials, and culture. Hence, cognitive development is contextualised. Meanwhile, complex interactions is the key to transformation and development (Dole,

translated by Wang, 2017). Therefore, focusing on situational and humanistic factors, such as the impact of situations on learning, the advocacy of ‘equal dialogue’ in postmodern curriculum theory, and the idea of ‘learner-centred’ in humanistic philosophy, encourage improvements in educational effectiveness and ensure that learners have more opportunities to discourse in learning. These aspects have been presented in existing theoretical explorations of curriculum leadership, albeit a low degree of reflection in constructive indicators of curriculum leadership.

In the current era of rapid development of intelligent technology, the educational space has shifted from two-dimensional to three-dimensional (Xia et al., 2023). The use of technological means to enrich educational scenarios needs to be considered. Moreover, improving the quality of education through the integration of humanistic thought and digital techniques is a factor that needs to be included in the construction of curriculum leadership.

Table 2.3

Research on the Situational and Humanistic Factors of Curriculum Leadership

Key Point	Describe	Researcher
Current research on curriculum leadership emphasises structure and management	The current research emphasises the vision of the curriculum, integration of resources, modelling, and supportive environments, albeit neglecting situational and humanistic factors	Li et al., 2023

Table 2.3(Continued)

Key Point	Describe	Researcher
A need for deeper reflection on situational and humanistic factors	Curriculum leadership should incorporate contextual factors, such as environment, tools, culture, and learner-centred humanistic approaches	Kaur, (2017)
The learning experience in higher education is affected by various situational factors	Learning is shaped by factors, such as environment, tools, and culture, which should be reflected in the design of the curriculum	Kaur, (2017) & Dole, translated by Wang, 2017
The key to transformation and development is complex interaction	Cognitive development is influenced by complex interactions and necessitates curriculum leadership to facilitate transformational learning	Dole, translated by Wang, 2017
Postmodern curriculum theory advocates for equal dialogue	Postmodern methods emphasise dialogue and challenge traditional power, promoting inclusivity	Slattery, (2012)
Humanistic philosophy focuses on placing the learner at the centre of the educational experience	Humanistic education focuses on personal growth and emotional well-being, advocating learner-centeredness	Slattery, (2012)
Intelligent technology transforms educational spaces into three dimensions	Technologies, such as AI and VR have transformed education, necessitating adaptation to three-dimensional learning environments	Xia et al., 2023, Southworth, 2023, Tao & Shen, 2024, & Kerimbayev, 2025
Combining the humanities with digital technology to improve the quality of education	Integrating humanistic care with AI technology enhances personalised, ethical, and educational outcomes	Tao & Shen, 2024 & Kerimbayev, 2025

Thirdly, limited research has explored integration feature factors. Xuan (2023) conducted a graph analysis of 259 Chinese literary works (sourced from core journals and CSSCI) on curriculum leadership from 2002 to 2020 and

discovered two types of keywords with a frequency of over 10 times. One is “principal”, “principal curriculum leadership”, and “educator curriculum leadership” from a human perspective, the second is “school curriculum leadership” and “curriculum management” from an organisational perspective. Therefore, existing scholars in the academic community mostly focus on individual individuals or managerial affairs.

The educational environment is variable and complex, and a single trait may not be able to cope with various situations and challenges. Moreover, a single perspective and approach may limit the innovative ability of course leaders. Meanwhile, education is a system that involves multiple stakeholders, such as governments, school administrators, teachers, students, parents, students, and enterprises (Hu & Tian, 2010). Therefore, the main frame in the construction of curriculum leadership will gradually shift from a single subject to a community of curriculum leadership. The exploration of the theoretical foundation, constituent elements, and operational models of the curriculum leadership community is a new topic for the study of curriculum leadership development (Xuan, 2022).

In terms of educational media and carriers, the existing literature on curriculum leadership primarily focuses on schools and classrooms, with limited examination of the direction of integrated characteristics formed by

educational carriers or mechanisms. For example, in-depth integration of industry, education, research, and government (Chen, 2023).

Table 2.4

Research on the Fusion Factors of Curriculum Leadership

Research Focus	Description	Researcher
Content focus	Research reveals that curriculum leadership research currently focuses on personal or managerial affairs, with limited integration of characteristic factors	Wang (2013), Tsui (2014), Xuan (2022), & Shan & Chen (2022)
Shortcomings in research	The evidence suggests that the educational environment is complex; a single perspective may limit innovation, and a single trait factor can complicate coping with various situations and challenges	Hu & Tian (2010), Avizhgan et al. (2015), Shan & Chen (2022), & Xuan (2022)
Operating carrier	Existing literature tends to focus more on schools and classrooms, with less research dedicated to the deep integration of industry, education, and government	Xiong & Lim (2015) & Chen (2023)
Expansion of the subject	Curriculum leadership should transition from a single-subject focus to a community-based model that involves multiple stakeholders, including government officials, school administrators, educators, learners, parents, and businesses	Hu & Tian(2010), Nguyen-Truong et al. (2020), & Xuan (2022); Sun (2025)

Fourthly, few practical explorations internalised in universities. The research on curriculum leadership lacks depth, with limited outstanding achievements in the operational principles, ability elements, and leadership process of curriculum leadership. Despite multiple internalisation and practice of curriculum leadership in universities, the practical paths and methods that

can effectively solve practical issues and achieve effects have not developed. Xuan (2022) stated a lack of effective curriculum leadership measurement frameworks and evaluation tools in China. Another important direction for future curriculum leadership is developing effective curriculum leadership evaluation tools and models to enhance the diagnostic and improvement effectiveness of evaluation.

2.4 Review of Relevant Theoretical Models

2.4.1 Education Evaluation

Regarding education evaluation, the ‘Overall Plan for Deepening the Reform of Education Evaluation in the New Era’ (2020) by the Chinese government highlights education evaluation as a vital factor that affects the direction of education development. Such evaluation guidance results in a school-running orientation. Therefore, education evaluation is at the upstream of the education service industry, which is value-leading, including the formulation and output of educational standards and rules (Zhou et al., 2023). Moreover, the characteristics of advancing the reform and construction of educational evaluation will be manifested as follows: the function has the characteristics of guidance, the content has overall coherence, the implementation has structural balance, the organisation has collaborative relationships, and the impact has spillover driving force (Liu, 2022).

Education evaluation emphasises evaluating the nature, ability, or quality of the object to be evaluated, beyond completing value judgements and focusing more on the process of obtaining judgment basis, interactive communication with the evaluation object, reflection, and improvement upon completing the judgement (Feng, 2022). A high-quality education system requires high-quality educational evaluation (Feng, 2023a).

The modern educational philosophy states that “learner-centred” is a powerful tool to improve the quality of higher education (Sui & Wu, 2020). Generally, the modern education concept emphasises learner-centred. The concept encourages the cultivation of learners’ abilities of independent learning, critical thinking, and innovation, emphasises learners’ comprehensive development concerning knowledge, skills, emotions, and values, and urges educators to perform reflective practice while continuously improving teaching methods and strategies.

The modern educational evaluation ideology highlights diversity, comprehensiveness, and development. The idea focuses on the process, individual differences, the comprehensive development of learners, and the use of evaluation results as the basis for teaching feedback and improvement (Zhu & Cao, 2024).

The emergence of modern educational concepts and educational ideas has

placed “human development” as the foundation of education, and learner development has become a new significant indicator of the quality of higher education and teaching in universities (Han et al., 2023). Therefore, the evaluation work in universities increasingly demands the enhancement of educational effectiveness and the value of continuous improvement in education. This aspect also includes expectations for the evaluation of curriculum leadership construction, which should be based on examining the following issues regarding educational quality evaluation.

Firstly, a path dependency exists for quality evaluation activities. In China, the quality evaluation organised by the government urges HEIs to further clarify the ideas and positioning of university to consolidate the central position of teaching work, increase the input of teaching and improve teaching pedagogies, and play an important role in strengthening university teaching and management norms (Wu, 2014). This situation has formed a significant institutional inertia and path dependence of quality management in Chinese universities.

The quality activities and evaluation of Chinese universities are guided by the government evaluation. Although the evaluation is mainly introverted, the government must adopt external indicators, reflect external situations, and conduct external evaluation, indicating that this assessment is not a “complete

introspection” (David & Elizabeth, 2010). Consequently, the subjectivity of HEIs has been obscured, and the consciousness of subjectivity remains weak. Nonetheless, HEIs should focus on the external environment, policies, and technology, alongside cultivating their endogenous drive, self-conscious awareness, and ability in quality development and evaluation activities (Liu, 2024).

Several scholars have outlined the shortcomings in considering and developing a quality culture in education quality assessment (Cardoso et al., 2016; Berings, 2018; Qin, 2018). The quality culture of universities provides an extensive background and context for educational quality. Neglecting this culture or only formalising construction may lead to the evaluation only focusing on the external issue, overlooking broader reasons and factors behind education quality.

Secondly, a process management ignores education investment. Presently, education evaluation activities in China attach great importance to the input component. Universities are actively investing in teaching instruments, teacher training, digital facility construction, and the construction of educational and research platforms (Du, 2024). Nevertheless, the effectiveness of education investment is often dismissed.

In the input content, the strategic deployment, work plan, and fund budget are considered and formulated by HEIs along with the actual situation of the university. Nonetheless, the text attribute is obvious and often not based on the formulated task blueprint in actual operation (Chen, 2024).

Inadequate process management exists during the implementation of strategic planning, with no annual or mid-term inspections of the effectiveness of the planning implementation with no goal evaluation and incentive and constraint mechanisms (Liu & Zou, 2018). Furthermore, numerous subdivisional work or curriculum development projects do not have a complete and systematic work plan. A lack of assessment and evaluation remains on the function, role, and support effect of the input link on the overall education quality.

Thirdly, procedural quality activities and information are dismissed. The evaluation of the education administrative department still primarily takes the form of work. The evaluation process lacks the links of dialogue, suggestions, and tracking. This typical summative evaluation fail to encourage HEIs to improve education quality (Xiong et al., 2011). In reality, universities coordinate more by process and mechanism than by results (Frederick, 2006). Nevertheless, the current focus of universities on improving quality in their

operations is on the changes in their positions in university rankings, where universities are following the rankings in their operations (Liu, 2024).

The Central Committee of the Communist Party of China and the State Council issued the Overall Plan for Deepening the Reform of Educational Evaluation in the New Era (2020), urging universities to “improve the outcome evaluation, strengthen the process evaluation, explore the value-added evaluation, and enhance the comprehensive evaluation”. Nonetheless, in education quality management, HEIs tend to emphasise result evaluation, lacking process-oriented research, ignoring process quality activities, thus resulting in the ‘loss’ of process quality management information. Additionally, learners’ learning feelings and experiences were neglected (Cao et al., 2018). Moreover, the integration of digital technology has resulted in “reducing educational human activities to material activities, and treating education based on the theories and methods of engineering and behavioural science” (Liu, 2024, P, 5).

Fourthly, the methods and systems for product evaluation in HEIs remain underdeveloped. Presently, Chinese HEIs conduct various types of educational evaluations from the perspective of managers. Evaluations from the perspective of managers typically examine the achievement of government-set educational goals and tasks in universities. Meanwhile, universities have not conducted

in-depth exploration and reflection on identifying and evaluating short-term and long-term costs and outcomes. Universities also lack horizontal and vertical analysis and comparison of the degree of achievement of talent cultivation goals, achievements of learner academic, university influence, and university reputation (Zhong et al., 2019; Hu et al., 2025).

2.4.2 Relevant Theoretical Models

In terms of its historical development, the origin of educational evaluation is closely connected to the development of student academic ability testing activities. The evaluation evolved into an activity to measure the degree to which educational activities achieve educational goals (Wang & Zhu, 2024). The development of educational evaluation models is the core embodiment of the continuous evolution of educational evaluation theory and practice (Gao & Fang, 2022).

Table 2.5

Educational Evaluation Model

Model Name	Developer and Development Time	Contribution	Main structure	Field of Use
Total Quality Management Model (TQM)	W. Edwards Deming, Joseph Juran, 1950	Promotes the systematisation of quality management, emphasising continuous improvement and customer satisfaction	1. Customer orientation 2. Process optimisation 3. Employee participation 4. Continuous improvement	Manufacturing, Service, Education

Table 2.5 (Continued)

Model Name	Developer and Development Time	Contribution	Main structure	Field of Use
European Foundation for Quality Management (EFQM) Model	European Foundation for Quality Management (EFQM), 1988	Provides a comprehensive quality management framework that drives organisational performance excellence	1. Leadership 2. Strategy 3. Employees 4. Partners and resources 5. Processes, products, and services 6. Customer results 7. Employee results 8. Social outcomes 9. Business results	Businesses, Government Agencies, Non-Profit Organisations
PDCA (Plan, Do, Check, Act) Cycle Theory Model	W. Edwards Deming, 1950	Continuous improvement is achieved through a cycle of planning, doing, checking, and acting	1. Plan 2. Do 3. Check 4. Action	Manufacturi ng, Service, Education
CIPP (Context, Input, Process, Product) Evaluation Model	Daniel Stuff beam, 1960	Provides a framework for comprehensive evaluation from four dimensions: context, input, process, and outcome	1. Context evaluation 2. Input evaluation 3. Process evaluation 4. Product evaluation	Educational Projects, Policy Evaluation

Alongside the changes in educational concepts, social needs, and technological progress, educational evaluation models have gradually developed from simple standardised tests to diversified, systematic, and personalised evaluation systems. Several influential evaluation theory models applied to education have also been formed (Efendi, 2022; Silvestri et al., 2024; Anastasiou, 2024; Mitsiou, 2024; Gianni, 2024).

2.4.2.1 Total Quality Management Model

Total Quality Management (TQM) is a systematic approach designed to include the entire organisation in the planning and execution of improvement (continuous and breakthrough) processes (Owusu-Kyei et al., 2023). TQM was originally developed for business and manufacturing, and applied to various fields, including healthcare, government, and education. The approach focuses on continuous improvement, employee involvement, and customer satisfaction, which signifies adaptability for schools. Implementing TQM principles allows schools to enhance their organisational effectiveness and foster a supportive learning environment (Anastasiou & Ntokas, 2024).

Despite TQM being effective and successful, the theory is not suitable for evaluating curriculum leadership development (Efendi, 2022). This situation is due to TQM being not constantly successful in practice. In Canada, the United States, and the United Kingdom, various institutions have failed in TQM practice (Zhao, 2023). In-depth research has revealed that culture is an important factor in determining the effectiveness of quality management, while TQM focuses more on process optimisation (Zhao, 2023; Anastasiou & Ntokas, 2024). Nonetheless, the purpose of curriculum leadership development is to cultivate the quality culture of educational institutions further while achieving the overall capacity development of system quality improvement.



Figure 2.1 *Diagram of TQM management principles*

2.4.2.2 EFQM Evaluation Model

The EFQM model is a systematic and comprehensive self-assessment performance improvement tool based on cause-and-effect relationships. Organisations apply the EFQM model to manage the crucial factors (facilitators) that trigger higher and lasting performance “results” (Bi et al., 2023; Edgeman, 2018; Taraza et al., 2024).

The EFQM model provides a valuable framework for gaining a comprehensive overview of the strengths and weaknesses of an educational organisation (Gianni et al., 2024). The model helps identify essential improvements and implementing them to achieve sustainable development in education. The EFQM model serves as a tool for the thorough assessment of organisations and their performance (Sütőová et al., 2022).



Figure 2.2 EFQM Model

Criticisms focus on the complexity and sophistication of the model. Studies have disclosed that complexity hinders user participation due to the lack of necessary expertise, specifically in small and medium-sized institutions (Martusewicz et al., 2024). Implementing the model requires important resources in terms of time, manpower, and money (Deliou et al., 2021; Murthy et al., 2022).

2.4.2.3 PDCA Cycle Theory Model

The Plan-Do-Check-Act (PDCA) cycle, or the Deming cycle, is a repetitive four-stage model designed for continuous improvement in quality management (Chen et al., 2022). The PDCA method is implemented for ongoing enhancement in multiple fields, including educational quality (Hayati et al., 2024; Nguyen et al., 2023). The PDCA cycle serves as a quality tool and

a fundamental concept of continuous process improvement embedded in the organisational culture (Kurnia et al., 2022).

The PDCA cycle is the ideological basis of total quality management and conforms to the basic internal laws of teaching quality management (Wang, 2024). Nevertheless, leadership in education is complex (Hu & Wang, 2015). To a certain extent, curriculum leadership emphasises that the curriculum is organic, non-linear, and generative and that curriculum implementation is filled with complexity (Gong & Song, 2024).

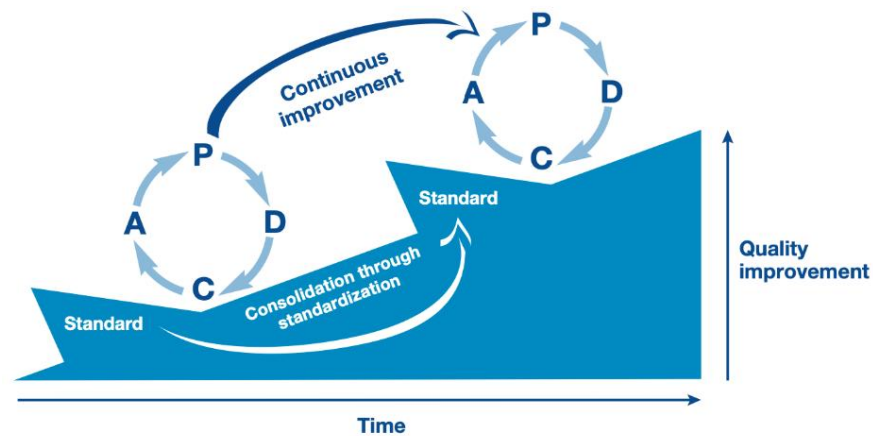


Figure 2.3 *PDCA Model*

Curriculum leadership development involves a complex educational environment and is a long-term and continuous development process. The PDCA model assumes a relatively linear and short-term improvement cycle (Vi et al., 2023), inconsistent with the long-term characteristics of leadership

development. Additionally, leadership development is significantly affected by cultural and situational factors (Zhou et al., 2025). The PDCA model does not completely consider these factors, producing incomplete or inaccurate evaluation results.

2.4.2.4 CIPP Evaluation Model

A judgment-oriented evaluation exists in the 1960s. Stufflebeam shares a similar proposition as Cronbach (American psychologist and educator), emphasising that educational evaluation concerns providing useful information for educational decision-making, subsequently proposing the CIPP model. The model integrates context evaluation, input evaluation, process evaluation, and product evaluation, with strong systematicity.

The CIPP evaluation model encompasses the entire evaluation cycle, from the inception to conclusion. This model provides a comprehensive framework that helps evaluators systematically collect, analyse, and utilise information to inform decision-making. Consequently, the CIPP evaluation model emphasises the developmental and systematic aspects of evaluation (Feng, 2023b). The effectiveness of the model outlines its significant influence on the development of educational evaluation systems (Liu & Zhang, 2023).

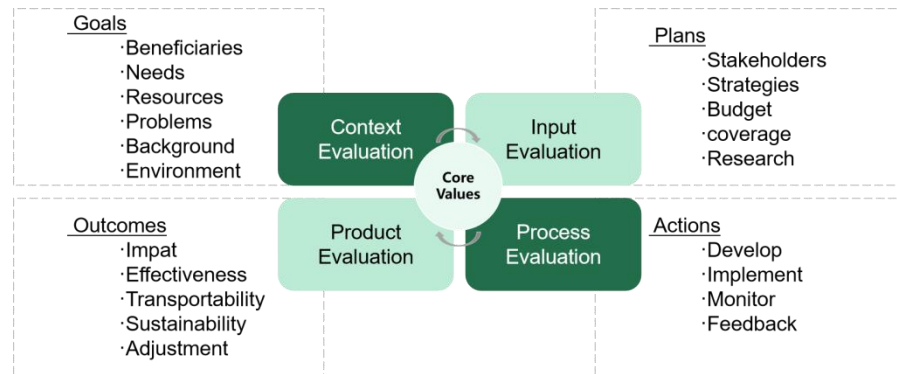


Figure 2.4 *Context, Input, Process, Product (CIPP) Evaluation Mode*

This model has distinct advantages compared to other models in the history of educational evaluation, specifically as follows:

Firstly, the CIPP model, which stands for Context, Input, Process, and Product, is an evaluation framework that prioritises management characteristics. This framework emphasises the formation of processes, service-related decision-making, and continuous improvement (Tang et al., 2020; Wang & Zhu, 2024). This model is particularly distinguished for its focus on formative assessment and decision-making in educational evaluation (Wang & Zhu, 2024; Gifari & Arifin, 2024). Hence, the most distinctive advantage is providing valuable information to decision-makers and enhancing education services.

Secondly, the CIPP model provides evaluators with a comprehensive perspective on a plan from beginning to end. This approach ensures that all

vital aspects of evaluation are considered (Hong, 2024). The focus on context evaluation provides evaluators with a deeper comprehension of the background and environment of the project, allowing for more accurate and relevant assessments (Babadi et al., 2024). Additionally, product evaluation helps to identify the expected and unexpected outcomes of the project, clarifying the extent to which the predefined goals have been achieved. This information serves as a valuable basis for making future decisions (Wu et al., 2022; Babadi et al., 2024).

Thirdly, the model adapts to the current demands of educational evaluation by emphasising process evaluation and improvement. The model also highlights the organic integration of educational evaluation with the teaching process, viewing educational evaluation as a crucial component of teaching. Instead of serving primarily as a tool for identification, this model uses educational evaluation as a means to enhance teaching quality (Vo, 2018; Wang & Zhu, 2024).

Fourthly, the comprehensiveness of the CIPP model encourages stakeholders from various backgrounds and perspectives to participate in the evaluation process (Stufflebeam, as cited in Yılmaz & Özkan, 2018). Considering that stakeholders originate from various backgrounds with multiple perspectives and experiences, this situation helps form a

comprehensive assessment.

Fifthly, the CIPP model is highly adaptable and offers strong operability (Tang et al., 2020). During the evaluation process, evaluators can utilise numerous strategies tailored to the specific needs of various projects or programmes. These strategies include static or dynamic evaluation, qualitative or quantitative assessment, process or outcome evaluation, and short-term or periodic evaluation. This flexibility provides evaluators with numerous options to suit their requirements.

Sixthly, the objective thinking foundation of the CIPP model provides better decision-making information and necessary value judgments in complex, large-scale projects (Lin & Liu, 2025).

The CIPP model (Context, Input, Process, Product) is a systematic, decision-oriented evaluation paradigm. Its theoretical foundations are based on systems theory, decision theory, and the pragmatic philosophy of evaluation (Toosi et al., 2021). Evaluation extends beyond a final judgment, including dynamic process that serves continuous improvement and decision-making optimisation. This foundational approach makes the CIPP model suitable for evaluating curriculum leadership (Subasman, 2024; Dizon, 2023).

Firstly, from a systems theory perspective, curriculum leadership extends beyond an isolated behaviour, involving a dynamic process embedded in the institutional ecosystem (Li et al., 2023). Academic research suggests (Alshumaimeri, 2023) that the effectiveness of curriculum leadership depends on sensitive responses to context, such as in rapidly changing educational environments where leaders need to assess the impact of external factors on the curriculum. The context assessment component of CIPP supports this condition, ensuring that evaluation extends beyond internal operations to include macro environmental analysis, thereby enhancing the ecological validity of leadership evaluation.

Secondly, the input evaluation of CIPP emphasises the optimisation of resource allocation, which is consistent with the strategic deployment of human, material, and intellectual resources in curriculum leadership (Cooney, 2021b; Glatthorn et al., 2018). Decision theory plays a crucial role, and CIPP draws on Herbert Simon's bounded rationality decision model (Hernandez & Ortega, 2019), advocating for identifying potential setbacks through input evaluation and proposing alternative solutions. This situation is reflected in the evaluation of course leadership as a quantitative and qualitative assessment of the leader's ability to mobilise resources.

Thirdly, the process evaluation component, based on feedback loop theory,

is suitable for monitoring the dynamics of curriculum leadership implementation, including collaboration mechanisms, change management, and problem-solving. This aspect is consistent with Donald Schön's "reflection-in-action" theory (Cáceres, 2017; Tan, 2020), which emphasises leaders' adaptive adjustment during the process. The process evaluation in CIPP reveals deficiencies in curriculum leadership, such as barriers to teamwork, thereby supporting formative improvement. In higher education, this finding helps assess how leaders navigate the complexities of curriculum change and ensures the dynamic and practical nature of the evaluation model.

Finally, the theoretical foundation of product evaluation depends on outcomes-oriented pragmatism, assessing the ultimate impact of curriculum leadership, such as student learning outcomes, institutional performance, and societal contributions. This idea is based on John Dewey's empirical perspective on evaluation (L. Wei, 2024), emphasising the practical utility of outcomes rather than abstract indicators. This component of the CIPP also enables the evaluation model to quantify the long-term value of leadership by validating the effectiveness of leadership practices through student achievement indicators, thus bridging the gap between theory and practice.

2.5 Exploration of CIPP Evaluation Model

2.5.1 Existing Exploration of CIPP Evaluation Model

The CIPP evaluation model has garnered significant attention and thorough investigation in evaluating higher education institutions. This interest stems from the increasing demand for education evaluation, driven by globalisation and ongoing education reform. The CIPP model offers a comprehensive and systematic framework for evaluation. Through continuous research and practical application by educators, this model enhances people's comprehension of education quality and effectiveness, while fostering the ongoing improvement and development of higher education (Mertens & Wilson, 2018). A literature review on the CIPP evaluation model reveals several important research aspects.

Table 2.6

Existing Exploration of CIPP Evaluation Model

Research Direction		Research Content	Researcher
Theory and Development Study	Theoretical Basis	Early literature (1971-1983) clarified the theoretical foundation of the CIPP model, emphasising that evaluation is a systematic and multidimensional process rather than merely focusing on outcomes	Stufflebeam, 1971,
	Explanation		Stufflebeam, 1983, Stufflebeam, 2003, & Tia, 2019
	Decision-Making Tool	Stufflebeam proposes that evaluation should be used as a decision support tool, emphasising the importance of evaluation in management	Stufflebeam (1971)
	Expansion of Application Scenarios	Subsequent research has applied the CIPP model to fields such as informal education, vocational training, higher education, and policy-making, verifying its broad applicability	Wang & Zhu (2024), Lei (2024), & Gifari & Arifin (2024)

Table 2.6 (Continued)

Research Direction	Research Content	Researcher
Summary 1	The early research on the CIPP model (1971-1983) mainly focused on the construction of theoretical foundations and the evaluation of its application as a decision-making tool. Subsequent research has gradually expanded to specific application scenarios, such as informal education, vocational training, higher education, and policy-making, verifying its broad applicability. These studies have laid a solid theoretical foundation for the further development of the CIPP model.	
Empirical Study	Educational Projects	Use the CIPP model to evaluate teaching projects Charles (2021)
	Strategic Management	Evaluate the effectiveness of strategic management projects in business schools using the CIPP model Birgili et al. (2021)
	Community Education	Evaluate community education projects based on the CIPP model Smith et al. (2020), Johnson et al. (2021), & Wu (2023)
	Practice Teaching	Evaluate the effectiveness of practical teaching using the CIPP model Wang et al. (2020), Zhang et al. (2022), & Yin et al. (2025)
Summarize 2	The CIPP evaluation model has been widely applied in empirical research in multiple fields, including educational projects, strategic management, community education, and practical teaching. These studies have validated the effectiveness of the CIPP model in evaluating project outcomes and providing decision support, while demonstrating its flexibility and applicability in various scenarios.	
Application Study	School Evaluation	Proposed a developmental school evaluation method based on the CIPP model and provided a systematic evaluation framework for the healthy development of higher education Shi (2004), Zhang (2019), Wang et al. (2021), & Ranjbar et al. (2022)
	Teaching Evaluation	Provides a systematic operational framework for evaluating the quality of practical teaching and classroom teaching in applied universities Li (2019), Zhang (2022), & Lei (2023)
	Course Evaluation	The proportion of course evaluation in the field of higher education is approximately 21.17%, and the research mainly draws on the advantages of the CIPP model to provide path guidance for university course evaluation Li (2020)

Table 2.6 (Continued)

Research Direction	Research Content	Researcher
Educator Evaluation	This provides systematic indicators, evaluation methods, and scientific basis for education and training evaluation, educator teaching ability evaluation, and educator assessment	Zhang (2019), Zhou and Che (2022), & Feng (2023b)
Learner Learning Effectiveness Evaluation	Proposed the principles, subjects, content, methods, and implementation procedures for academic evaluation of college learners. Provided a systematic indicator system for evaluating the learning quality of learners.	Yuan (2011), Huang and Wang (2020), Gerayllo et al. (2025)
Constructing an Evaluation Index System and Model	Proposed a systematic indicator system for evaluating the integration of industry and education. Provided a systematic evaluation system for the cultivation of applied talents. Provided a systematic indicator system for evaluating after-school services.	Zhen (2021), Hu (2022), Xue et al. (2023), Liu & Wang (2025), & Cui et al. (2025)
Summarize 3	The CIPP evaluation model has been widely applied in multiple directions, including school evaluation, teaching evaluation, curriculum evaluation, educator evaluation, learner academic evaluation, and the construction of evaluation index systems. These studies have validated the applicability and effectiveness of the CIPP model in various educational scenarios, providing systematic and multidimensional theoretical support and practical guidance for educational evaluation.	

2.5.2 Review of Past Studies Adapted CIPP Evaluation Model

Although the CIPP evaluation model is generally regarded as an effective and practical evaluation tool, several limitations and challenges in the existing literature require attention.

Firstly, a lack of sufficient theoretical development and innovation exists in the framework of the CIPP model. Although the CIPP model has existed for decades, few updates or a re-evaluation of its theory and framework remain. In

2004, Stufflebeam divided the vital procedures for the second half of output evaluation into four categories: impact assessment, effectiveness assessment, sustainability assessment, and transferability assessment (Stufflebeam & Zhang, 2019). Nonetheless, most studies tend to focus on descriptive introductions to the CIPP model rather than exploring the theoretical foundations or its connections to other evaluation theories (Gerayllo et al., 2025). Consequently, research on the CIPP evaluation model is lacking in terms of theoretical interpretation and improvements to its framework.

Numerous studies are replicating existing knowledge without offering new insights or models for application. For instance, research focused on evaluating curriculum leadership is limited and has not yielded significant results. As of March 2025, the total number of studies utilising the CIPP model has reached 1,284 (CNKI). Most of these studies (Yang & Shi, 2023; Duan et al., 2023b; Wu et al., 2022) apply the CIPP model to develop evaluation frameworks or indicator systems for assessing educational quality, teaching, curriculum, and projects.

Secondly, a lack of multi-level systematic analysis exists. The design of the CIPP model encourages evaluators to fully consider the environment in which the programme operates, which theoretically supports a multi-level in-depth analysis of this factor (Lin & Liu, 2025). Nevertheless, the literature

reveals that the depth of background analysis covered or the background analysis considering multiple factors varies based on the study. For example, educational and economic factors are explored in detail in most studies (Wang & Tian, 2021; Surendran & Norazlinda, 2022; Mao et al., 2024; Liu & Wang, 2025). Contrarily, political and technical factors are often overlooked, specifically in projects with vague connection between project factors and policies or technology (Tang, 2024; Cui et al., 2025).

In a broader system understanding, the impact between subsystems within the system and the interaction between subsystems within the system and their external environment are usually considered more extensively. Lin and Liu (2025) proposed that the CIPP model is suitable for evaluating projects in complex and dynamic social environments. As for the study of the CIPP evaluation model, in addition to considering the project or plan, broader social, economic, cultural, environmental, technological, political, and religious factors should also be considered. This inclusion is consistent with the exploration demand of the model for evaluating curriculum leadership development.

Although literature based on the CIPP evaluation model provides valuable insights and tools for evaluation, several limitations, shortcomings, and challenges remain. These shortcomings provide opportunities for further

research and exploration for researchers and practitioners intending to conduct in-depth research based on this model.

2.6 Curriculum Leadership Based on the CIPP Evaluation Model

2.6.1 Context Evaluation

The context evaluation section refers to evaluating the environment, needs, issues, and opportunities that arise in the course or project (Stufflebeam, 2004; Stufflebeam & Zhang, 2019). In terms of curriculum leadership, this evaluation may involve considerations of educational needs, learner characteristics, school culture, socio-economic factors, national education policies, and scientific and technological development.

Context analysis in higher education is critical and enhances curriculum leadership. Firstly, this aspect provides in-depth knowledge of the educational environment and trends, and grasp of the opportunities and challenges of educational development. Secondly, the aspect optimises educational resources, improves educational quality, and leads to educational innovation and change. Scholars' exploration of this section, although relatively discrete, can highlight context analysis from multiple perspectives. The literature is organised into the following two aspects to present the above connotation: organisation leadership (Wang, 2012; Liu, 2014^b; Zhu, 2016^b; Wren & Bedeian, translated by Sun et al.,

2017; David et al., 2019) and measurement and analysis (Huang, 2002; Zhu, 2016^a).

Table 2.7

Source of Indicators for Context Evaluation

Context Evaluation			
Primary Indicator	Literature (Researcher)	Secondary Indicator	Literature (Researcher)
C1 Organisation Leadership	Wang, 2012, p17; Zhu , 2016, p103; Daniel & Arthur, translated by Sun et al., 2017, p522, p528; David et al., 2019, p410	C1-1 Culture Development	Edgar, translated by Ma et al., 2011, Zhu, 2016 ^b , Daniel and Arthur, translated by Sun et al., 2017, p529, Ken and Michael, 2018, P248, & Jerab and Mabrouk, 2023
		C1-2 External Response	Ken and Michael, 2018, p248, Liu and Martin, 2020, Yang and Wang, 2022, & Mok, 2022
		C1-3 Internal Governance	Zhu, 2016 ^b , P109 & Li, 2023 ^c
		C1-4 Leader Participation	Zhu, 2016 ^b , P109; Huang & Lin, 2021, P2, P3; Xiao & Wang, 2022
C2 Measurement and Analysis	Huang, 2002, p3; Zhu, 2016 ^b , p14; Zhu, 2016 ^a , p109	C2-1 Quality Standard Formulation	Liu, 2016, Li, 2021, Wang, 2021 ^b , Chen & Yang, 2021, & Qiu, as cited in Du Ruijun, 2021
		C2-2 Comparison with Other Universities	Li et al., 2023, P28
		C2-3 Analysis of Educational Background	Chen and Xiang, 2017, Zhao, 2018, Huang, 2019, Wang, 2020 ^a ; Wang, 2020 ^b , Wang, 2021 ^c , Jenny et al., 2021, P252, Yang et al., 2023, & Duan et al., 2023 ^a

2.6.2 Input Evaluation

In education evaluation based on the CIPP evaluation model, the input section highlights the resources, strategies, plans, and programme design required for the evaluation project. The input section of curriculum leadership includes evaluating the effectiveness of university strategies, curriculum development plans, educator cultivation and training, learner growth support, and educational resource allocation (Stufflebeam & Zhang, 2019; Chien & Cheng, 2022). Various studies have revealed how to promote the development and quality improvement of university curriculum leadership from the ‘input’ perspective. The literature is divided into the following aspects to present the above connotation: community development (Liu, 2014b; Santiyadnya 2021; Rahmaniar & Mustari, 2021), administrative input (Li, 2016; Rahmaniar & Mustari, 2021), educator development (Santiyadnya 2021; Rahmaniar & Mustari, 2021; Zhao Lei, 2018; Li et al., 2023), and learner growth (Santiyadnya 2021; Rahmaniar & Mustari, 2021; Li et al., 2023).

Table 2.8

Source of Indicators for Input Evaluation

Input Evaluation			
Primary Indicator	Literature (Researcher)	Secondary Indicator	Literature (Researcher)
I1	Guili et al., 2011, Liu	I1-1	Yan and Zheng, 2019, Wei and Meng, 2019,
Community	Hengchao, 2014, N	Educator	Sun, 2019, Hargreaves, 2021, & Mou et al.,
Development	Santiyadnya 2021	Community	2023

Table 2.8 (Continued)

Input Evaluation			
Primary Indicator	Literature (Researcher)	Secondary Indicator	Literature (Researcher)
		I1-2 Learner Community	Peng, 2015, Goodman, 2020, & Jenny et al., 2021, P364, P365
		I1-3 Educator-Learner Community	Ouyang et al., 2020, Ge, 2020, Hu and Li, 2022, & Yang et al., 2023
		I2 Administrative Input	Li, 2016, P116 & Rachmaniar et al., 2021
		I2-1 Strategy Formulation and Implementation	Li, 2016, P116, John and Bert, 2020, Carvalho et al., 2021, & Li, 2023 ^d
		I2-2 Organisational Learning	Liu, 2020, Tan and Olaore, 2021, & Leithwood & Louis (Eds.), 2021
		I2-3 Investment and Use of Funds	Abdullah et al., 2016, Qi and Ji, 2017, Jorgenson and Fraumeni, 2020, & Li et al., 2023, P34
		I3 Educator Development	Santiyadnya, 2021, Rachmaniar et al., 2021, & Li et al., 2023, p36
		I3-1 Educator Cultivating and Training	Pujiastuti et al., 2021, Popova et al., 2022, & Li et al., 2023, P36, p37
		I3-2 Educator Promotion and Assessment	Yu & Zhang, 2022 & Zhuo, 2023
		I3-3 Educator's Working Environment	Cazes et al., 2015 & Chen et al., 2023
		I4 Learner Growth	Santiyadnya, 2021, Rachmaniar et al., 2021, & Li et al., 2023, p37
		I4-1 Academic Support and Services	Ifenthaler and Yau, 2020, Gueldner et al., 2020, & Cheng, 2022; Li et al., 2023, p39
		I4-2 Discipline Competitions	Gu et al., 2019, Li et al., 2023, p39, & Ye et al., 2019

Table 2.8 (Continued)

Input Evaluation			
Primary Indicator	Literature (Researcher)	Secondary Indicator	Literature (Researcher)
		I4-3 Learning Incentive and Experience	Zhu, 2016 ^b , p110, Guo and Ji, 2019, Wood and Shirazi, 2020, Borah, 2021, A. Elmessiry et al., 2021, Susan and Ma, 2022, & Li et al., 2023, p38
		I4-4 learner Entrepreneurship and Employment	Wang, 2018, Yan and Zhu, 2019, Zhao and Lai, 2020, & Lu et al., 2021
		I4-5 Cultivate Learners' International Perspective	Li et al., 2023, p39

2.6.3 Process Evaluation

In the evaluation based on the CIPP evaluation model, the “process” section refers to the process of implementing the plan, including strategies, methods, activities, and implementation quality (Stufflebeam, 2004; Stufflebeam & Zhang, 2019).

As for research on curriculum leadership, the process section evaluates how universities and their curriculum leaders guide and manage teaching activities, form decisions, allocate resources, and monitor and adjust the education implementation process. In the development of curriculum leadership, process evaluation can determine areas for improvement and

provide valuable feedback (Stufflebeam & Zhang, 2019).

The renowned American scholar Hackman suggested that to address this issue, the concept of equifinality proposed by systems theorists can be applied. Various paths and common goals refer to an open system that can achieve the same result through various channels (Liu, 2014a). Therefore, a literature review can outline the following seven aspects for some process areas to present the above connotation: major development, curriculum development, teaching management, resource development, integration of industry and education, academic promotion (Zhu, 2016b; Fan et al., 2023), and monitoring and feedback (Acep et al., 2019; Li et al., 2023).

Table 2.9

Source of Indicators for Process Evaluation

Process Evaluation			
Primary Indicators	Literature (Researcher)	Secondary Indicators	Literature (Researcher)
Pc1 Major Development	Zhu, 2016 ^b , p110 & Li et al., 2023, p29	Pc1-1 Position and Orientation of Major	Lin et al., 2012 & Zhu, 2016 ^b
		Pc1-2 Research on Talent Cultivation Needs	Hou and Liu, 2018, Yue, 2021, & Fang and An, 2021
		Pc1-3 Major Talent Training Plan	Zhu, 2016 ^b , Li et al., 2023, p28, & Yuan, 2019

Table 2.9 (Continued)

Process Evaluation			
Primary Indicators	Literature (Researcher)	Secondary Indicators	Literature (Researcher)
Pc2 Curriculum Development	Zhu, 2016 ^b , p110 & Li et al., 2023, p30, p31	Pc2-1 Curriculum Vision and Planning	Zhu, 2016 ^b , p110, Wang, 2017, Cui and Zhang, 2018, & Gouëdard et al., 2020
		Pc2-2 Curriculum Design and Implementation	Ogar and Opoh, 2015 & Grant, 2018
		Pc2-3 Curriculum Reform	Lin et al., 2019, Huang et al., 2020, & Campbell, 2020
		Pc2-4 Classroom Teaching	Black and Wiliam, 2018, Guo, 2019, & Li et al., 2023, p31
		Pc2-5 Technology Application	Bernacki et al., 2020, Jiao, 2022, & Li Zhi et al., 2023, p31
Pc3 Teaching Management	Zhu, 2016 ^b , p110	Pc3-1 Educator's Teaching Effort	Zhu, 2016 ^b , p110, Zhou, 2020, Li et al., 2023, p36, & Zhang, 2023
		Pc3-2 Teaching Guidance, Observation and Assessment	Zhu, 2016 ^b , p110, O'Leary, 2020, & Dignath and Veenman, 2021
		Pc3-3 Teaching Research and Reform	Zhu, 2016 ^b , p110 & Li et al., 2023, p36
		Pc3-4 Development of Interdisciplinary Teaching Team	Perignat et al., 2023 & Li et al., 2023
Pc4 Resource Development	Li et al., 2023, p34	Pc4-1 Teaching Facilities and Conditions	Li et al., 2023, p34
		Pc4-2 Course Database	Sun and Ma, 2016, Wang and Tian, 2022, & Li et al., 2023, p34
		Pc4-3 Academic Resources	Shang et al., 2019 & Li et al., 2023, p34
Pc5 Integration of Industry and Education	Li et al., 2023, p32	Pc5-1 University- Industry Collaboration	Li et al., 2023, p32

Table 2.9 (Continued)

Process Evaluation			
Primary Indicators	Literature (Researcher)	Secondary Indicators	Literature (Researcher)
		Pc5-2	Tang et al., 2018, Qu et al., 2023, Hu et al., 2023, Li et al., 2023, p32, & Zhu and Meng, 2023
		Development Mechanism	
		Pc5-3	Wu et al., 2019, Chen et al., 2020, Qu, 2022, & Ba and Zeng, 2023
		Learning Scenarios and Environments	
		Pc6-1	Zhu, 2016 ^b , p110
		Academic Assignment Management	
Pc6	Zhu, 2016 ^b , p110 & Li et al., 2023, p33	Pc6-2	Wei et al., 2019, Shi and Li, 2021, Zhou and Zhou, 2022, & Li et al., 2023, p33
Academic		Innovation and Entrepreneurship Education for learners	
Promotion		Pc6-3	Leal-Rodriguez and Albort-Morant, 2019 & Morris, 2020
		Experiential Learning	
Pc7	Maksum et al., 2019 & Li et al., 2023, p40, p41	Pc7-1	Ji et al., 2018, Liu et al., 2019, Liu et al., 2019, & Lucander and Christersson, 2020
Monitoring and Feedback		Teaching and Learning Quality Monitoring	
		Pc7-2	Mulliner and Tucke, 2017, Shengnan et al., 2020, Haughney et al., 2020, & Nico and McCallum, 2022
		Quality Information Feedback	
		Pc7-3	Gao, 2018 & Li et al., 2023, p41
		Quality Improvement	

2.6.4 Product Evaluation

In the CIPP evaluation model, the “product” section focuses on the evaluation results, outcomes, and impacts (Stufflebeam, 2004; Stufflebeam & Zhang, 2019). Specifically, the evaluation of curriculum leadership should include learner learning outcomes, curriculum satisfaction, teaching quality,

graduation rate, employment rate, and long-term impacts related to the curriculum. Therefore, the literature review concentrates more on the effectiveness of university curriculum education, the achievements of curriculum development, and the long-term impact related to the curriculum. Specifically, the literature is reviewed from the following aspects to present the above connotation: evaluation of the government and society (Jiang, 2022; & Zhao & Zhou, 2023) (qualification assessment indicators, and basic requirements), teaching effectiveness (Li et al., 2023), and cultural formation (Małgorzata et al., 2020; Wu, 2022; & Li et al., 2023).

Table 2.10

Source of Indicators for Product Evaluation

Product Evaluation			
Primary Indicator	Literature (Researcher)	Secondary Indicator	Literature (Researcher)
Pr1 Evaluation of Government and Society	Jiang, 2022 & Zhao and Zhou, 2023	Pr1-1 University Reputation	Peng and Jiang, 2019, Christensen, 2020, & Zhao and Zhou, 2023 “QS World University Rankings” (began in 2004)
		Pr1-2 Curriculum Outcomes	Glatthorn et al., 2018, Prakash, 2018, & Bao et al., 2023
		Pr1-3 Quality of Service	Prakash, 2018, Karasar, 2019, Li, 2023 ^c , Li, 2023 ^a , & Guo et al. (2025)
Pr2 Teaching Effectiveness	Li et al., 2023, p42	Pr2-1 Learner’s Achievement	Lu et al., 2018, Liu et al., 2018, & Li al et., 2023, p39
		Pr2-2 Undergraduate Enrolment Rate	Zhou and Wang, 2018, Yang and Li, 2019, & Li et al., 2023, p42

Table 2.10 (Continued)

Product Evaluation			
Primary Indicator	Literature (Researcher)	Secondary Indicator	Literature (Researcher)
		Pr2-3 Learner Academic	Wang and Xiao, 2012 & Li et al., 2023, P38
		Pr2-4 Learner Employment Rate and Structure	Li, 2018, Xiao, 2019, Tang and Ruan, 2023, & Li et al., 2023, p42
		Pr3 Cultural Formation	Wu, 2022, Li et al., 2023, & Dzimińska et al., 2020
		Pr3-1 Improvement in Institution and Practice	Liu, 2019, Lin, 2020, & Li et al., 2023
		Pr3-2 Curriculum Quality Assurance	Huang and Li, 2022, Wu, 2022, & Li et al., 2023, P40
		Pr3-3 Quality Report	Liu, 2018, Fan and Wu, 2019, & Li et al., 2023, p42

2.6.5 Review of Relevant Literature on Curriculum Leadership Based on CIPP

1. Curriculum leadership based on context evaluation

In this part of the literature, the current study highlights cultural development and quality management.

Firstly, cultural construction is important in HEIs, affecting the quality of teaching, talent cultivation, research, and the environment in HEIs, where quality culture is manifested at multiple levels (Liu, 2024). The literature on this aspect also presents a state of “emphasising the importance of establishing

a supportive, open, and inclusive quality culture and emphasising a quality culture that encourages innovation and respects diversity”.

Existing literature may overemphasise idealised cultural visions and overlook how to achieve them in daily practice (Ren & Du, 2024). For example, how to reflect the quality culture of HEIs in detail. Moreover, limited literature exists on the interaction between quality culture and curriculum leadership. After years of practice, the evaluation of education and teaching in Chinese universities has made significant improvements in terms of value orientation, evaluation concepts, evaluation methods, and means. Nonetheless, research requires focus on the construction of quality culture (Du, 2021).

The literature on quality management is diverse and effectively demonstrates the adequacy of scholars’ and educators’ exploration of quality factors and theories. Moreover, when exploring practical issues in education quality management and evaluation, the literature has emphasised the possibility that excessive quantification may “diminish” the effectiveness and quality of education (Liu, 2024). Nevertheless, most literature that evaluates quality through the establishment of indicators via research generally pursues a “quantitative” approach. The main issue with quantitative evaluation is artificially excluding non-quantifiable information from the scope of evaluation (Wang, 2021^b).

Secondly, the development of university education is driven by multiple factors, including economic development, social development, policy development, and technological development (Altbach & Balán, 2023). These background factors shape the goals and functions of higher education and propose new requirements for the design and implementation of evaluation systems (Wu, 2023; Li & Zhou, 2024). Nonetheless, the existing literature lacks analysis of the impact of these background factors on higher education evaluation and the adaptability of the evaluation system. Existing studies often highlight a single background factor (such as economic development or policy development) and lack a systematic analysis of the interaction of multidimensional factors. This fragmentation limits a comprehensive understanding of the complexity of higher education evaluation.

The university quality comparison system is a crucial tool for evaluating and improving education quality and encouraging optimal resource allocation and education reform. Horizontal comparison (cross-institutional comparison) provides universities with a multi-dimensional perspective to identify strengths, weaknesses, and improvement directions (Li & Zhou, 2024). Nonetheless, the current research on establishing a complete horizontal university quality comparison system has not yet developed a systematic framework, and the relevant literature has significant deficiencies in theoretical construction, method design, and practical application.

Although several countries and regions have attempted to establish quality comparison systems (such as the “Double First-Class” evaluation in China and the U-Multirank in Europe), few systematic analyses has been conducted on these practices (Altbach & Balán, 2023). Horizontal comparison practices mostly focus on ranking competition, dismissing how to encourage cooperation and resource sharing via comparison (Liu, 2024).

2. Curriculum leadership based on input evaluation

In this section, the researcher mainly concentrates on exploring the protective factors that ensure curriculum leadership development. For example, the formulation and implementation of university strategies, investment in university funds, and participation of stakeholders.

Firstly, in curriculum leadership, strategic planning can form clear visions and goals for curriculum reform (Liu, 2025) and establish a systematic curriculum development framework. This systematic perspective ensures that curriculum leadership can cope with numerous challenges in a complex educational environment. Nonetheless, the disconnect between strategic planning and strategic implementation is a prominent issue in strategic management (Liu, 2025).

Multiple studies (John & Bert, 2020; Li, 2023) focus on the strategic

planning process, including vision development, goal setting, and the implementation path of strategic goals. These studies emphasise the importance of stakeholder participation, including learners, faculty, and management, to ensure broad support for the plan. Although the theoretical framework and methods of strategic planning have been widely discussed, insufficient research has examined the specific obstacles and challenges encountered in the implementation process. Moreover, limited literature has explored the implementation and monitoring of strategic planning in universities (Qiu et al., 2022).

Secondly, regarding investment in education, literature research usually outlines how funds are allocated and effectively used, including examining the relationship between input and output. Nonetheless, insufficient in-depth studies have explored the rationality of the funding scale (Li, 2020). In early research on education investment, Hanushek (2003) proposed that merely increasing the scale of education funding does not improve education quality or student performance, emphasising the need to focus on the efficiency of fund utilisation. The traditional definition of “reasonableness” is questioned based solely on the assumption of investment scale, creating a theoretical foundation for subsequent research.

Baker (2025) proposed a framework for evaluating education financial

systems, emphasising that the rationality of education investment extends beyond the total amount of funds, including fairness and efficiency in distribution. Nonetheless, education investment, especially the portion of funding invested in education, has a significant impact on teaching models, student performance, and university rankings (Guo et al., 2023; Weber & Baker, 2023). Therefore, focusing on the evaluation of education investment is vital.

Thirdly, educators and learners, as the dual subjects of education, are the focus of quality research (Liu, 2024). To invest human resources, literature research is generally based on traditional perspectives, such as cultivation and training (Wang, 2025; Liang & Zhang, 2025). Studies have explored the power of forming alliances entering the field of education. These explorations tend to focus on a certain type of community, such as from the perspective of educators or curriculum designers, dismissing the role of learners as generative subjects within the community (Yang, 2024). The literature also concentrates more on the construction of the educator-learner community, emphasising the coexistence of subjects and values (Dan, 2023; Chi, 2024; Xi, 2024).

The current community research of institutes lacks a systematic perspective. Therefore, curriculum leadership needs to focus on community building, encouraging the formation of three types of communities among educators, learners, and between educators and learners to create a positive

synergistic effect.

3. Curriculum leadership based on process evaluation

This section emphasises the implementation process and strategies of educational activities, and how they encourage the achievement of educational goals. Therefore, research has focused more on major development, curriculum development, resource development, academic promotion, integration of industry and education, and quality monitoring.

Firstly, the development of majors and curriculum is the main content in the implementation process. The literature on these two aspects is also diverse. Although curriculum and profession are interdependent, no research directly explored the relevant discussions on the supportive role of profession in curriculum leadership construction. For example, early literature (Fullan, 2001; Spillane, 2006) emphasised that curriculum leadership depends on cultural change, collaboration among teachers, support from school administrators and resource allocation, disregarding professional construction as a direct supporting factor. Although recent literature has made progress in the field of curriculum leadership, the role of professional construction as a supporting factor has not yet been explored (Timotheou, 2023; Signore et al., 2024).

Researchers who explain curriculum leadership focus on certain aspects

when defining the term, although the development of curriculum and curriculum leadership is a systematic project that requires the integration of multiple factors, such as learners, educators, professions, curriculum, resources, and culture (Xuan, 2022). Few research has uniformly incorporates multiple factors and operational measures into a curriculum leadership evaluation system.

Secondly, academic promotion and industry-education integration are presented as a strategic state in curriculum leadership construction. Nonetheless, few studies explored implementation strategies similar to curriculum leadership that can be adopted to promote students' academic and non-academic growth (such as emotional and social) and how to encourage industry-education integration. The framework research on implementation strategies for achieving students' personalised development and comprehensive growth from the perspective of curriculum leadership remains insufficient. Presently, more research focuses on principal curriculum leadership (Lin & Chen, 2024), teacher curriculum leadership (Li & Lu, 2024; Wan, 2024), curriculum consultant leadership (Sithole & Tachie, 2024), curriculum leadership components and influencing factors (Xuan, 2022), curriculum leadership functional value (Wang & Xu, 2022; Harris, 2022), and improvement measures (Song, 2022; Wu, 2023).

4. Curriculum leadership based on product evaluation

This section aims to examine the factors that determine the effectiveness of curriculum leadership construction. Based on the universal framework in the CIPP evaluation model, researchers focus on aspects, such as university reputation, university influence, learner achievement, cultural formation, continuous improvement, and quality reporting.

Firstly, from the literature on reputation and influence, existing studies usually highlight the role of university reputation and impact in enrolment, fundraising, and international cooperation. Nonetheless, limited literature discussed the direct effect on the development and implementation of curriculum leadership. Moreover, limited research has examined how reputation and influence shape curriculum leadership decisions and strategies. Tom and Liang (2020) stated that “the expression of reputation symbols in China universities was limited in both internal operation and external environment”.

Secondly, learner achievement is a powerful perspective for examining whether curriculum leadership is effective. Nevertheless, the evaluation indicators for learner achievement advocated in existing literature may rely significantly on standardised tests and quantitative data and may not fully reflect learners’ learning depth, critical thinking ability, and creativity, which is

not the quality direction pursued by curriculum leadership. Scholars (Tang & Jin, 2023) have proposed the construction of an academic evaluation system for college learners based on the perspective of multiple intelligence theory (language, mathematics, space, movement, music, social interaction, introspection, natural observation, and existence). Unfortunately, this research knowledge is only at the theoretical level, and no specific evaluation system content or implementation methods have been proposed.

Thirdly, the “circular” mechanism of continuous improvement is the focus of university management reform and connotation development (Zhao, 2025). In the construction of the concept and mechanism of continuous improvement, the issues of imperfect improvement system, imperfect improvement mechanism, and unsatisfactory improvement effect remain common, which are important factors restricting the high-quality development of universities (Zhao, 2025).

A quality report is a symbol of transparency and responsibility. Research on quality reports is based on the practical construction inspiration provided by the report text with limited discussion on the content structure, formation method, and mechanism of the report (Liu & Xia, 2021). Liu and Xia (2021) discovered that research in this field requires further analysis, clarification of basic theoretical issues, and expansion of research perspectives.

2.7 Research Framework

When using educational evaluation ideas to measure the relevant content of educational quality, a complete evaluation model is needed. The current study uses the CIPP evaluation model. This model implies the theoretical framework and analytical structure for evaluation and is a conceptual tool to help researchers analyse the internal process elements and structural relationships of curriculum leadership development in universities.

Based on the universality of Stufflebeam’s CIPP evaluation model and the operational concept of the “Curriculum Leadership Evaluation Model” in the present study, the Curriculum Leadership Evaluation Model is as follows:

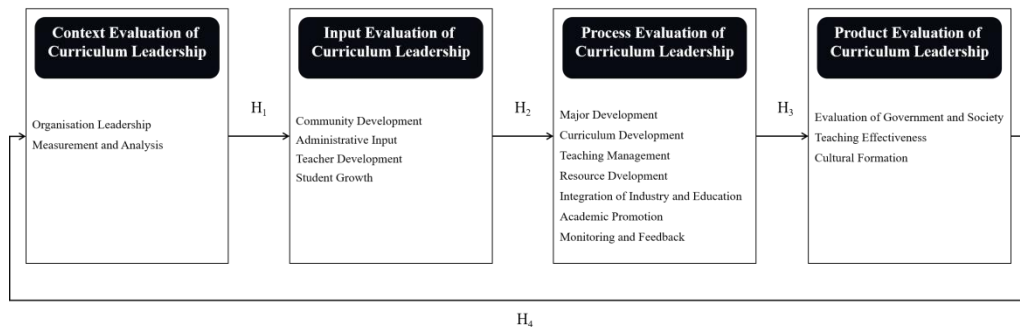


Figure 2.5 *Research Framework*

Firstly, the context evaluation section comprises two indicators: Organisation Leadership and Measurement and Analysis.

Secondly, the input evaluation section includes four indicators:

Community Development, Administrative Input, Teacher Development, and Student Growth.

Thirdly, the process evaluation section involves seven indicators: Major Development, Curriculum Development, Teaching Management, Resource Development, Integration of Industry and Education, Academic Promotion, Monitoring and Feedback.

Fourthly, the achievement evaluation section comprises three indicators: Evaluation of Government and Society, Teaching Achievements, and Cultural Formation.

The context evaluation content provides a decision-making basis for the input evaluation content. The input evaluation content encourages (facilitates) the construction of process evaluation content, and the process evaluation content realises the product evaluation content. The product evaluation content tests the effectiveness of curriculum leadership development and encourages reflection on the context evaluation content.

2.8 Hypothesis Development

The present study proposes four hypotheses: H1, H2, H3, and H4, to fulfil the research objectives in Chapter 1, which are to measure the impact of the

relationship between context evaluation and input evaluation, input evaluation and process evaluation, process evaluation and product evaluation, and product evaluation and context evaluation in the research framework.

2.8.1 The relationship between context evaluation and input evaluation (H1)

From an organisational perspective, organisation leadership is the process of achieving organisational goals within a specific organisational structure by clarifying strategic direction, coordinating resources, motivating members, and optimising system operations (Harris & Jones, 2023; Bottoms et al., 2024; Geesa & Stith, 2024; Soncin et al., 2024).

The administrative system of the university has the function of legitimacy (including organisation, leadership, and control) and power, assuming a leading role in the development planning of the university, funding, management of external environmental requirements, and allocation of internal resources (Li Weidong, 2016).

Related studies are listed in Table 2.11. The present study predicts that context evaluation has an impact on input evaluation (see H1), which affects the input evaluation from two dimensions of context evaluation, respectively.

H1: A significant relationship exists between context evaluation and input

evaluation of curriculum leadership in the University of Sanya, China.

H1-1: Organisation leadership has a significant impact on input evaluation.

H1-2: Measurement and analysis have a significant impact on input evaluation.

Table 2.11

Research on the Impact of Various Indicators in Context Evaluation on Input Evaluation in the Existing Literature

Literature	The impact on the Community	Impact on Administrative Input	Impact on Educator Development	Impact on Learner Growth	Data Analysis Method
Harris and Jones. (2023), School Leadership and Management, 43(5), 395-407	The study emphasises the importance of school leaders supporting cooperation and exploratory practices among teachers within the school	Organisation leadership influences resource allocation priorities. The main role of school leadership is to create a positive school and classroom environment that enables learner learning to flourish.	---	---	Literature Method
Soncin et al. (2024). Educational Management Administration and Leadership	Leaders support educators' collaborative community (cluster analysis, significant category differences)	---	---	Leadership is associated with learner learning	Latent Class Analysis (LCA)
Mullins. (2024). ProQuest Dissertations and Theses.	Leadership support for educator community stability	---	Leadership affects educators' professional satisfaction	---	one-way ANOVA
Geesa and Stith. (2024). Journal of Organisational and Educational Leadership, 10(2)	---	---	Promoting professional growth of educators (qualitative coding, significant themes)	Supporting students' personalised growth	Mixed Methods (qualitative and descriptive statistics)

Table 2.11 (Continued)

Literature	The impact on the Community	Impact on Administrative Input	Impact on Educator Development	Impact on Learner Growth	Data Analysis Method
Zito and Larwin. (2024). Journal of Organisational and Educational Leadership, 10(1)	Leadership enhances the potential participation of the community	---	---	---	Q-methodology
Martínez et al. (2023). Varona, Revista Científico-Metodológica, (78), 1-13	Evaluation indicators promote the activities of the education community	---	Quantitative performance indicators provide a basis for institutional measures (such as promotion)	---	Descriptive research combining quantitative and qualitative methods

2.8.2 The relationship between input evaluation and process evaluation (H2)

Liang (2020) discussed through case analysis the factors influencing the construction of teacher teaching levels, including cultivating and training, assessment, and supervision, which directly impact major development and curriculum development. Meanwhile, the promoting effect of university strategic planning on course resources and quality monitoring systems (including monitoring and feedback) was demonstrated.

Zhu (2016) focused on analysing the impact of two indicators, Educator Development and Learner Incentive, on indicators such as Major Development, Curriculum Development, Educator's Teaching Effort, Teaching Research and Reform, and Practical Management through empirical data.

The related studies are listed in Table 2.12. The present study predicts that input evaluation has an impact on process evaluation (see H2), which impacts the process evaluation from the four dimensions of input evaluation, respectively.

H2: A significant relationship exists between input evaluation and process evaluation of curriculum leadership in the University of Sanya, China.

H2-1: Community development has a significant impact on process evaluation.

H2-2: Administrative input has a significant impact on process evaluation.

H2-3: Educator development has a significant impact on process evaluation.

H2-4: Learner growth has a significant impact on process evaluation.

Table 2.12

Research on the Impact of Various Indicators in Input Evaluation and Process Evaluation in the Existing Literature

Literature	The Impact on Major Development	The Impact on Curriculum Development	The Impact on Teaching Management	The Impact on Resource Development
Cui Di (2017) (Doctoral Dissertation, Northeast Normal University)	---	The professional learning community of educators optimises course content, encourages innovative teaching methods, and enhances course quality through collaborative learning and diverse professional development activities	The professional learning community of educators optimises teaching management through leadership support and sharing, evaluation tools, and data analysis	---
Yang and Long (2024), College Chemistry, 39 (03), 132-137	---	---	The community of educators and learners optimises teaching management through unified goals, separation of teaching and examination, and real-time feedback	---
Shao (2024), Journal of Jimei University (Education Science Edition), 25 (05), 67-76	Strategic formulation supports major development by clarifying the positioning of education and disciplinary advantages	---	Strategy formulation optimises teaching management through reforming the educational model	---
El Gibari et al. (2021), Mathematics, 9 (14), 1626	---	---	The funding policy optimises teaching management through teaching performance indicators	Funding investment directly affects resource allocation

Table 2.12 (Continued)

Literature	The Impact on Major Development	The Impact on Curriculum Development	The Impact on Teaching Management	The Impact on Resource Development
Bian (2023) (doctoral thesis, Central University of Finance and Economics)	---	---	---	Resource construction is closely related to investment
Cui Di (2017) (Doctoral Dissertation, Northeast Normal University)	---	---	---	Literature Review Method + Corpus Analysis Method + Case Analysis Method
Yang and Long (2024) College Chemistry, 39 (03), 132-137	---	---	---	Case Study
Shao (2024), Journal of Jimei University (Education Science Edition), 25 (05), 67-76	The strategy supports industry education collaboration through in-depth integration of teaching projects and technical assistance with the industry	---	---	Literature Analysis Method + Case Study Method
El Gibari et al. (2021), Mathematics, 9 (14), 1626	---	---	The funding policy dynamically monitors the performance of universities through performance indicators	MRP-WSCI
Bian (2023) (doctoral thesis, Central University of Finance and Economics)	Emphasise the incentive effect of funding on the integration of industry and education	Academic promotion measures rely on financial support	---	Literature Research Method + Empirical Analysis Method + Comparative Analysis Method + Qualitative Analysis Method

2.8.3 The relationship between process evaluation and product evaluation (H3)

Hattie (2016) has demonstrated through extensive research that curriculum design and implementation are crucial in improving learners' achievement. Bernacki, ML, Greene, JA, and Crompton (2020) disclosed that technological applications have a positive impact on education, directly affecting learner learning and learning achievement. In the previous literature statement, Curriculum Design and Implementation and Technology Application are secondary indicators of Curriculum Development, and Learner Achievement are secondary indicators of Teaching Effectiveness in product evaluation.

Glathorn et al. (2018) also discussed that the planning and implementation methods of curriculum have a significant impact on curriculum outcomes. Moreover, Curriculum Planning is a secondary indicator of Curriculum Development in the process evaluation section. Curriculum Outcomes are the secondary indicator of Government and Social Evaluation in the product evaluation section.

The related studies are listed in Table 2.13. The present study predicts that process evaluation has an impact on product evaluation (see H3), which affects the product evaluation from the seven dimensions of process evaluation, respectively.

Table 2.13*Research on the Impact of Various Indicators in Process Evaluation and Product Evaluation in the Existing Literature*

Literature	Impact on Evaluation of Government and Society	Impact on Teaching Effectiveness	Impact on the Cultural Formation	Research Method
Bendermacher et al. (2021), Advances in Health Sciences Education, 26, 467-487			Interdisciplinary teaching team development is one of the core contents of quality culture construction	Qualitative Research Methods
			Collecting and acting on feedback from educators and learners is crucial for enhancing the quality of education and fostering a culture of quality	
			Strengthening curriculum development (curriculum alignment vision) is critical to improve the quality culture	
Qin (2021) (PhD dissertation, East China Normal University).	A regression equation model between learner satisfaction and educator teaching in applied university courses was constructed, where curriculum development affects learner satisfaction	The main issue that leads to employment complications for college graduates is the matching of major structure with the skill requirements of labour market positions. Developing and improving higher education at the major, subject, and curriculum levels helps solve the employment issues and employment rate issues		Content Analysis
				Method + Text Analysis Method + Case Analysis method
Ardhana er al. (2023), International Journal of Educational Research Excellence (IJERE) 2(2): 501-509		A curriculum that responds to industry changes provide graduates with skills that enhance their competitiveness in the job market		Literature Research

H3: A significant relationship exists between process evaluation and product evaluation of curriculum leadership in the University of Sanya, China.

H3-1: Major development has a significant impact on product evaluation.

H3-2: Curriculum development has a significant impact on product evaluation.

H3-3: Teaching management has a significant impact on product evaluation.

H3-4: Resource development has a significant impact on product evaluation.

H3-5: Integration of industry and education has a significant impact on product evaluation.

H3-6: Academic promotion has a significant impact on product evaluation.

H3-7: Monitoring and feedback has a significant impact on product evaluation.

2.8.4 The relationship between product evaluation and context evaluation (H4)

The government and society have changed traditional direct management and intervention methods using various policy tools, such as laws and regulations, strategic planning, funding, administrative intervention, quality evaluation, and public opinion to exert influence on the development of universities and university governance and culture (Dobbins et al., 2011, cited by Li, 2019).

As a regulatory mechanism, quality assurance highlights improvement, providing information and judgment on quality through the common recognition of process procedures and the improvement of standards (Wu, 2022). Thus, quality assurance encourages the improvement of standards and impact quality analysis and judgment.

Indicators, such as Quality Assurance and Government and Social Evaluation are included in the product evaluation section of the current study. Indicators, namely Cultural Development, Internal Governance, and Standard Formation are included in the context evaluation section.

Related studies are presented in Table 2.14. The current study predicts that the evaluation of the product affects the context evaluation (see H4), which affects the context evaluation from the three dimensions of product evaluation, respectively.

H4: A significant relationship exists between product evaluation and context evaluation of curriculum leadership in the University of Sanya, China.

H4-1: A significant relationship exists between the evaluation of government and society and context evaluation.

H4-2: A significant relationship exists between teaching effectiveness and context evaluation.

H4-3: A significant relationship exists between cultural formation and context evaluation.

Table 2.14*Research on the Impact of Various Indicators in Product Evaluation and Context Evaluation in the Existing Literature*

Literature	Impact on Organisation Leadership	Impact on measurement and Analysis	Research Method
Tayyaba et al. (2023), Heliyon. Oct 11;9(10):e20904	External evaluation (such as ranking systems) encourages universities to focus on optimising their internal governance structures	Global ranking systems, such as QS and THE, provide a competitive framework for universities by setting indicators, including academic performance and research output. These indicators are considered external reference points for quality standards, prompting universities to adjust their internal policies to meet these standards Government or third-party evaluation directly affects the direction of university quality standards through the selection and weighting of indicators	Focus Group Method
Liu (2024), Journal of Shanxi Normal University (Social Science Edition), 51(04), 1-7		The establishment of internal and external quality assurance systems (including government and social evaluation) and the implementation of quality evaluation and quality management activities have played a positive role in encouraging the quality improvement of higher education. These systems have expanded and strengthened quality awareness and quality concepts and established a complete set of quality standards and quality specifications	Literature Review Method + Conceptual Analysis Method + Normative Analysis Method
Zhao et al. (2024), Tsinghua University Education Research, 45(05), 66-77	Quality assurance activities (especially government-led external evaluations) encourage universities to adjust their organisational structures (such as setting up quality departments) and change their decision-making models (such as from collegial to bureaucratic or democratic), thus affecting the internal governance of universities	Government and social evaluations provide external pressure and reference for universities, shifting standards from internal academic orientation to external accountability or social demand orientation	Qualitative Analysis Method

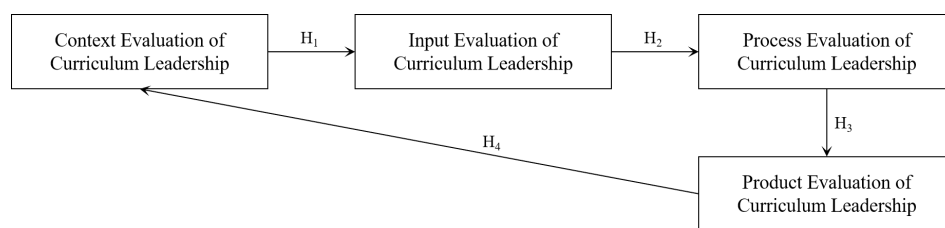


Figure 2.6 *Hypothesis Diagram of Path Relationship*

2.9 Chapter Summary

The literature review and analysis in this chapter clarifies that curriculum leadership has shifted from a tool-oriented approach to a more value-oriented approach, from a focus on technology and means to a focus on purpose and meaning, emphasising vision, democracy, cooperation, constructiveness, and critical reflection. Meanwhile, the study discovered that the curriculum leadership assessment tool is lacking in the education field in China.

In this chapter, the relevant content of education evaluation was reviewed from the perspective of its evolution by researchers, reflecting the shortcomings of education evaluation, such as “path dependence of quality evaluation activities”, “neglect of process management of education investment”, “neglect of process quality activities and information”, and “immature methods and systems of evaluating outcomes”.

The existing literature affirms the advantages of the CIPP evaluation model. The present study presents that the CIPP evaluation model reflects the

requirement of universities that educational evaluation can contribute to the improvement of educational activities and educational effectiveness. The model can fulfil the educational needs of development, promotion, and improvement of educational quality. Therefore, examining the CIPP evaluation model has positive significance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter proposes an empirical plan for the framework structure of the curriculum leadership evaluation model through methods, such as designing a comprehensive sample data survey and analysis, including developing research instruments, data collection procedures, pilot tests, reliability and validity testing, exploratory factor analysis, confirmatory factor analysis, and hypothesis testing.

3.2 Research Paradigm

Thomas Kuhn (1962) defined a paradigm as a recognised pattern that a specific scientific community must comply to engage in a certain scientific activity. This aspect includes a shared world view, basic theories, paradigms, methods, means, standards, and those related to scientific research (Zhou, 2021). Thomas Kuhn believes “the scientific community obtains a paradigm by having a standard for selecting problems. When the paradigm is taken for granted, these selected problems can be considered solvable problems” (Xia, 2023, P. 224).

Various classification methods can be used for research paradigms in the

academic community. Positivists believe that science is the most crucial method to acquire knowledge, and only those issues that can be solved through the application of scientific methods should attract people's attention (Charlotte, 2023). This process tends to use quantitative methods to collect data and evidence.

Post-positivism includes quantitative methodology (Adam, as cited in Maksimović & Evtimov, 2023), overcoming the limitations of quantifying data as the sole criterion for measuring social phenomena. Post-positivism tends to adopt more flexible research methods that are compatible with quantitative and qualitative research.

Interpretivism states that certain characteristics of human experience cannot be objectively "known", such as emotions, understanding, and values. Explanatory theory holds that qualitative methods are the preferred method for examining these phenomena (Rob, 2020).

Constructivist researchers seek to comprehend the experiences of research participants to discover their subjective truths or perceptions. Constructivist researchers typically apply qualitative methods, such as interviews, focus groups, and observations (Penny, 2017).

The current study adopted the positivist paradigm to conduct research due to the following reasons:

Firstly, a quantitative research method and large sample data were used for research. A larger sample size improves data consistency and overall feature representation (Park et al., 2020).

Secondly, the empirical research process involves two categories: with research hypotheses and without research hypotheses. (Punch, cited as Cheng & Chen, 2017). The present study has a research hypothesis. In the pre-empirical stage, the research process was characterised as: determining the research field, clarifying the research topic, determining the research question, and proposing the research hypothesis. In the empirical stage, the research process was characterised as conducting research design, collecting data, analysing data, and validating research hypotheses.

3.3 Research Design

Curriculum leadership is a manifestation of the ability and level of educational quality. Therefore, the content that is evaluated and the structure of the content should align with the basic structural characteristics of educational teaching activities and quality management in universities. The current study organised the results of existing literature, combined with the actual demands of the education quality in Sanya University based on the CIPP evaluation

model, identifying key elements of curriculum leadership, and pre-constructed a curriculum leadership evaluation model. Hence, a questionnaire on “The Development of Curriculum Leadership Education Model in HEIs in Sanya City, Hainan Province” was developed (see Appendix 1).

This questionnaire has undergone revisions via a pre-test and pilot test before being finalised for use. A questionnaire survey was employed using the revised and improved questionnaire to gather research data. The collected data were used to conduct confirmatory factor analysis and model hypothesis testing (path analysis) to complete the evaluation of the degree of fit between the built model and the pre-set goals.

Curriculum leadership evaluation belongs to a perceptual evaluation of the subject perception of the object, and the relevant data cannot be obtained from public sources. Therefore, the current study employed the deductive approach, the cross-sectional approach, and the quantitative research approach, achieving the research analysis objectives via a questionnaire survey.

Yang et al. (2021) proposed that the questionnaire survey method is a research strategy that applies standardised and structured questionnaires to ask questions of a sample of selected social groups and conducts statistical analysis on the obtained data to analyse and comprehend the overall situation and

patterns. The current study used a questionnaire survey method to collect quantitative data on the curriculum leadership evaluation model.

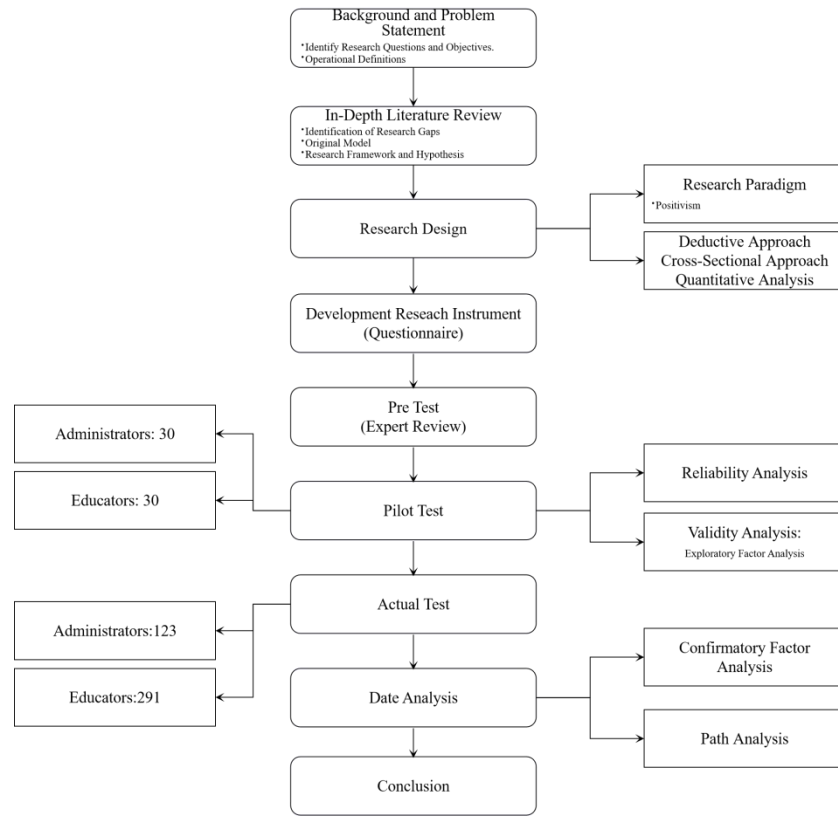


Figure 3.1 *Research Flowchart*

3.4 The Sampling Strategy

3.4.1 Sampling Frame

The present study is based on considerations of representativeness and necessity, considering the requirements of research cost and efficiency and Sanya University as the research site. Relevant data were gathered through factual evaluations of the curriculum leadership development level of the respondents from University of Sanya.

The survey primarily targets employees knowledgeable about higher education teaching laws and have worked full-time at the University of Sanya for over a year to ensure that the survey data accurately represents the development of curriculum leadership in universities. The respondents were a group of employees directly involved in curriculum leadership development, including administrators and educator from various disciplines and schools.

3.4.2 Sampling Technique

The respondents were from varying disciplines and majors at the University of Sanya to ensure a diverse range of data sources. During the pilot testing phase, the study emphasised two schools: the School of Tourism and International Hotel Management and the School of Finance and Economics. These schools were established at the founding of Sanya University and have developed alongside the institution via numerous educational stages. In the actual investigation stage, the study involved all majors from every college within the University of Sanya.

A quota sampling technique was applied, which is a direct method to implement and ensures that units from various categories within the population are represented in the sampled data (Jia et al., 2024).

In probability sampling methods, stratified sampling and quota sampling in non-probability sampling share a common feature: the sample aimed to reflect the structure of the population on important and known characteristics. The methods attempt to prevent severe deviations in the sample on certain important features. Hence, the goal of sampling is structural representativeness (Iliyasu & Etikan, 2021). Nonetheless, significant variances remain between the two. Stratified sampling employs simple random sampling when generating categories, while quota sampling uses availability sampling (Iliyasu & Etikan, 2021). The reason the present study adopted the quota sampling method rather than stratified sampling is due to the focus on educators and administrators. Additionally, the sampled individuals need to meet the requirement of having over a year of working experience. Therefore, adopting the quota method better meets the sample availability needs.

3.4.3 Sampling Size

The sample size was determined based on the respondents. The present study applied the Krejcie and Morgan (1970) table to determine the sample size (the total population is 1,315), which requires to survey at least 414 people. In factor analysis, the number of samples should be 10 times the number of variables (Xiao, 2023). Thus, the current study distributed 414-550 questionnaires.

Table 3.1*Quota Sampling Sample Data Table*

School	Population (Educator)	Coefficient	Sample (Educator)	Population (Administrators)	Coefficient	Sample (Administrator)
School of Law	50	0.2553	13	7	0.7028	5
School of Sociology	70	0.2553	18	8	0.7028	6
School of Foreign Languages	90	0.2553	22	11	0.7028	8
School of Humanities and Communication	95	0.2553	24	17	0.7028	12
School of Art	114	0.2553	29	15	0.7028	10
School of Finance and Economics	81	0.2553	21	11	0.7028	8
School of New Energy and Intelligent Connected Vehicles	65	0.2553	17	13	0.7028	9
School of Tourism and International Hotel Management	79	0.2553	20	12	0.7028	8
School of Management	120	0.2553	31	17	0.7028	12
School of Music	63	0.2553	16	8	0.7028	6
School of Physical Education	53	0.2553	14	9	0.7028	6
School of Information and Intelligence Engineering	76	0.2553	19	17	0.7028	12
School of Marxism	71	0.2553	18	13	0.7028	9
School of Health Industry Management	39	0.2553	10	7	0.7028	5
School of Saxo Fintech Business	74	0.2553	19	10	0.7028	7
Total	1,140		291	175		123

Table 3.1 demonstrates that the total number of sampled educators in the present study is 1,140, and the number of administrative personnel is 175. Based on Kreicje and Morgan's table, the sampling numbers were 291 and 123, respectively. The sampling ratio can guide how many samples need to be obtained for each layer (Wu & Cai, 2022). The sampling number of educators and administrators for each school was determined based on the sampling ratio of 291/1140 (0.2553) for educators and 123/175 (0.7028) for administrators.

3.5 Questionnaire Development

3.5.1 Questionnaire Formation

The current study focused on the curriculum leadership evaluation model. As the relevant data cannot be directly obtained from public sources, a questionnaire survey was employed to obtain the necessary data for the study.

The questionnaire study design was based on the framework of the factors that affect curriculum leadership in the previous section and divided into four parts: context evaluation, input evaluation, process evaluation, and product evaluation. The context evaluation included seven indicators, the input evaluation included 14 indicators, the process evaluation included 24 indicators, and the product evaluation included 10 indicators, a total of 55 indicators.

A questionnaire item description was provided for these 55 indicators. The

content described in the questionnaire items was based on the relevant documents of the Ministry of Education of China and the relevant educational documents of the University of Sanya, combined with the characteristics of education quality management in Chinese universities and the current ideas and requirements of the University of Sanya on curriculum development. Combined with the current economic, social, scientific, and technological development situation, the description content of each item were formed, which ultimately formed the curriculum leadership evaluation questionnaire. The questionnaire was measured based on a five-point Likert scale.

The questionnaire content was mainly based on the following documents: China Ministry of Education qualification assessment (started in 1994), China Ministry of Education audit assessment (first round, started in 2014), China Ministry of Education audit assessment (new round, started in 2021), and China first-class curriculum (started in 2019); QS World (Regional) University Rankings (since 2004); The Outline of the University of Sanya (started in 2017).

In “context evaluation”, the item description of “cultural construction” was based on the document of audit evaluation of China (new round, starting in 2021), and the specific content in the document was “quality culture” and “self-awareness, self-introspection, self-discipline, self-examination, and self-correction of quality culture development”. This content was also

emphasised in the Educational Outline of University of Sanya, which stated that “quality culture was one of the main cultures of the University of Sanya”. Therefore, the description of the item on “cultural development” was to form a quality culture of self-awareness, self-introspection, self-discipline, self-examination, and self-correction.

In the “input evaluation” section, the item “investment and use of funds” was derived from the three evaluation documents of the Ministry of Education of China (as mentioned above) and the educational outline of Sanya University, which has been simplified.

In the “process evaluation” section, the item description of “Curriculum Vision and Planning” was derived from the content requirements of the three evaluation documents of the Ministry of Education of China (as mentioned above) and the first-class curriculum development documents in China, which has been simplified.

In the “product evaluation” section, the item description of “university reputation” was derived from the qualified evaluation by the Ministry of Education of China (since 1994), the review and evaluation by the Ministry of Education of China (a new round, starting from 2021), the QS world (regional) university ranking (since 2004), and the outline of the University of Sanya

(since 2007), which has been simplified.

Table 3.2

Source of the Items

Context Evaluation						
Indicators from original CIPP	Domain	Indicators of the Curriculum Leadership Evaluation Model		Preference Document		
Needs	C1	C1-1	China Ministry of Education	China Ministry of Education	Guideline of University of Sanya	
	Organisation Leadership	Culture Development	Audit Evaluation (First Round, since 2014)	Audit Evaluation (Second Round, since 2021)	(since 2017)	
Beneficiaries						
Resources		C1-2	China Ministry of Education	Guideline of University of Sanya		
		External Response	Audit Evaluation (Second Round, since 2021)	(since 2017)		
		C1-3	Guideline of University of Sanya			
		Internal Governance	(since 2017)			
		C1-4	China Ministry of Education	China Ministry of Education	China Ministry of Education	Guideline of University of Sanya
		Leader Participation	Qualification Evaluation (since 1994)	Audit Evaluation (First Round, since 2014)	Audit Evaluation (Second Round, since 2021)	(since 2017)
Beneficiaries	C2	C2-1	China Ministry of Education	China Ministry of Education	China Ministry of Education	Guideline of University of Sanya
Resources	Measurement and Analysis	Quality Standard Formulation	Qualification Evaluation (since 1994)	Audit Evaluation (First Round, since 2014)	Audit Evaluation (Second Round, since 2021)	(since 2017)
Problems						
Background		C2-2	China Ministry of Education			
Environment		Comparison with Other Universities	Audit Evaluation (Second Round, since 2021)			
		C2-3	Guideline of University of Sanya			
		Analysis of Educational Background	(since 2017)			
Input Evaluation						
Indicators from original CIPP	Domain	Indicators of the Curriculum Leadership Evaluation Model		Preference Document		
Stakeholders	I1	I1-1	Guideline of University of Sanya			
	Community Development	Educator Community	(since 2017)			
		I1-2	Guideline of University of Sanya			
		Learner Community	(since 2017)			

Table 3.2 (Continued)

Input Evaluation								
Indicators from original CIPP	Domain	Indicators of the Curriculum Leadership Education Model		Preference Document				
Stakeholders	I1 Community Development	I1-3 Educator-Learner Community	Guideline of University of Sanya (since 2017)					
Research	I2	I2-1	China Ministry of Education	China Ministry of Education	Guideline of University of Sanya			
Budget	Administrative Input	Strategy Formulation and Implementation	Qualification Evaluation (since 1994)	Audit Evaluation (First Round, since 2014)	(since 2017)			
		I2-2 Organisational Learning	Guideline of University of Sanya (since 2017)					
		I2-3	China Ministry of Education	China Ministry of Education	China Ministry of Education	Guideline of University of Sanya		
		Investment and Use of Funds	Qualification Evaluation (since 1994)	Audit Evaluation (First Round, since 2014)	Audit Evaluation (Second Round, since 2021)	(since 2017)		
Budget	I3	I3-1	China Ministry of Education	China Ministry of Education	China Ministry of Education	China First-Class Curriculum	QS World (Regional) University	Guideline of University of Sanya
	Educator Development	Educator Cultivating and Training	Qualification Evaluation (since 1994)	Audit Evaluation (First Round, since 2014)	Audit Evaluation (Second Round, since 2021)	(since 2019)	Ranking (since 2004)	(since 2017)
Stakeholders		I3-2	China Ministry of Education	China First-Class Curriculum	Guideline of University of Sanya			
		Educator Promotion and Assessment	Audit Evaluation (First Round, since 2014)	(since 2019)	(since 2017)			
		I3-3	Guideline of University of Sanya					
		Educators' Working Environment	(since 2017)					
	I4	I4-1	China Ministry of Education	China Ministry of Education	China Ministry of Education	Guideline of University of Sanya		
	Learner Growth	Academic Support and Services	Qualification Evaluation (since 1994)	Audit Evaluation (First Round, since 2014)	Audit Evaluation (Second Round, since 2021)	(since 2017)		
		I4-2	China Ministry of Education					
		Discipline Competitions	Audit Evaluation (First Round, since 2014)					
		I4-3	China Ministry of Education	China Ministry of Education	China Ministry of Education	China First-Class Curriculum	QS World (Regional) University	Guideline of University of Sanya
		Learning Motivation and Experience	Qualification Evaluation (since 1994)	Audit Evaluation (First Round, since 2014)	Audit Evaluation (Second Round, since 2021)	(since 2019)	Ranking (since 2004)	(since 2017)
		I4-4	China Ministry of Education	China Ministry of Education	Guideline of University of Sanya			
		Learner Entrepreneurship and Employment	Qualification Evaluation (since 1994)	Audit Evaluation (Second Round, since 2021)	(since 2017)			

Table 3.2 (Continued)

Input Evaluation							
Indicators from original CIPP	Domain	Indicators of the Curriculum Leadership Evaluation Model		Preference Document			
Budget	I4	I4-5	China Ministry of Education	China Ministry of Education	QS World (Regional) University		
	Learner Growth	Cultivate Learners’ International	Audit Evaluation	Audit Evaluation	Ranking		
Stakeholders		Perspective	(First Round, since 2014)	(Second Round, since 2021)	(since 2004)		
Process Evaluation							
Indicators from original CIPP	Domain	Indicators of the Curriculum Leadership Evaluation Model		Preference Document			
Develop	Pc1	Pc1-1	China Ministry of Education	China Ministry of Education	China Ministry of Education	Guideline of University of Sanya	
	Major Development	Position and Orientation of	Qualification Evaluation	Audit Evaluation	Audit Evaluation	(since 2017)	
Implement		Major	(since 1994)	(First Round, since 2014)	(Second Round, since 2021)		
		Pc1-2	China Ministry of Education	Guideline of University of Sanya			
		Research on Talent Cultivation	Audit Evaluation	(since 2017)			
		Needs	(Second Round, since 2021)				
		Pc1-3	China Ministry of Education	China Ministry of Education	China Ministry of Education	China First-Class Curriculum	Guideline of University of Sanya
		Major Talent Training Plan	Qualification Evaluation	Audit Evaluation	Audit Evaluation	(since 2019)	(since 2017)
			(since 1994)	(First Round, since 2014)	(Second Round, since 2021)		
		Pc2	Pc2-1	China Ministry of Education	China Ministry of Education	China Ministry of Education	China First-Class Curriculum
		Curriculum Development	Curriculum Vision and Planning	Qualification Evaluation	Audit Evaluation	Audit Evaluation	(since 2019)
				(since 1994)	(First Round, since 2014)	(Second Round, since 2021)	
		Pc2-2	China Ministry of Education	China First-Class Curriculum			
		Curriculum Design and	Qualification Evaluation	(since 2019)			
		Implementation	(since 1994)				
		Pc2-3	China First-Class Curriculum	Guideline of University of Sanya			
		Curriculum Reform	(since 2019)	(since 2017)			
		Pc2-4	China Ministry of Education	China Ministry of Education	China Ministry of Education	China First-Class Curriculum	
		Classroom Teaching	Qualification Evaluation	Audit Evaluation	Audit Evaluation	(since 2019)	
			(since 1994)	(First Round, since 2014)	(Second Round, since 2021)		
		Pc2-5	China Ministry of Education	China Ministry of Education	China Ministry of Education	China First-Class Curriculum	
		Technology Application	Qualification Evaluation	Audit Evaluation	Audit Evaluation	(since 2019)	
			(since 1994)	(First Round, since 2014)	(Second Round, since 2021)		

Table 3.2 (Continued)

Process Evaluation							
Indicators from original CIPP	Domain	Indicators of the Curriculum Leadership Evaluation Model		Preference Document			
Develop Implement	Pc3 Teaching Management	Pc3-1	China Ministry of Education	China Ministry of Education	China Ministry of Education	Guideline of University of Sanya	
		Educator's Teaching Effort	Qualification Evaluation (since 1994)	Audit Evaluation (First Round, since 2014)	Audit Evaluation (Second Round, since 2021)	(since 2017)	
		Pc3-2	China First-Class Curriculum (since 2019)	Guideline of University of Sanya (since 2017)			
		Teaching Guidance, Observation and Assessment					
	Pc3-3	China Ministry of Education	China Ministry of Education	China First-Class Curriculum (since 2019)	Guideline of University of Sanya (since 2017)		
		Teaching Research and Reform	Audit Evaluation (First Round, since 2014)	Audit Evaluation (Second Round, since 2021)			
		Pc3-4	China Ministry of Education	China First-Class Curriculum (since 2019)	Guideline of University of Sanya (since 2017)		
		Development of Interdisciplinary Teaching Team	Audit Evaluation (Second Round, since 2021)				
	Pc4 Resource Development	Pc4-1	China' Ministry of Education	China Ministry of Education	China Ministry of Education	Guideline of University of Sanya	
		Teaching Facilities and Conditions	Qualification Evaluation (since 1994)	Audit Evaluation (First Round, since 2014)	Audit Evaluation (Second Round, since 2021)	(since 2017)	
		Pc4-2	China Ministry of Education	China Ministry of Education	China Ministry of Education	China First-Class Curriculum (since 2019)	Guideline of University of Sanya (since 2017)
		Course Database	Qualification Evaluation (since 1994)	Audit Evaluation (First Round, since 2014)	Audit Evaluation (Second Round, since 2021)		
	Pc4-3	China's Ministry of Education	China Ministry of Education	China Ministry of Education	Guideline of University of Sanya (since 2017)		
		Academic Resources	Qualification Evaluation (since 1994)	Audit Evaluation (First Round, since 2014)	Audit Evaluation (Second Round, since 2021)		
Pc5 Integration of Industry and Education		Pc5-1	China Ministry of Education	China Ministry of Education	China Ministry of Education	China First-Class Curriculum (since 2019)	
		University- Industry Collaboration	Qualification Evaluation (since 1994)	Audit Evaluation (First Round, since 2014)	Audit Evaluation (Second Round, since 2021)		
	Pc5-2	Guideline of University of Sanya (since 2017)					
	Development Mechanism						
Pc5-3	China Ministry of Education	China Ministry of Education	China Ministry of Education	China First-Class Curriculum (since 2019)			
	Learning Scenarios and Environments	Qualification Evaluation (since 1994)	Audit Evaluation (First Round, since 2014)	Audit Evaluation (Second Round, since 2021)			
	Pc6 Academic Promotion	Pc6-1	China Ministry of Education				
		Academic Assignment Management	Audit Evaluation (Second Round, since 2021)				

Table 3.2 (Continued)

Process Evaluation						
Indicators from original CIPP	Domain	Indicators of the Curriculum Leadership Evaluation Model		Preference Document		
Develop	Pc6	Pc6-2	China Ministry of Education Audit Evaluation (Second Round, since 2021)			
Implement	Academic Promotion	Innovation and Entrepreneurship Education for learners				
		Pc6-3	China Ministry of Education Qualification Evaluation (since 1994)	China Ministry of Education Audit Evaluation (First Round, since 2014)	China Ministry of Education Audit Evaluation (Second Round, since 2021)	China First-Class Curriculum (since 2019)
		Experiential Learning				
Monitor	Pc7	Pc7-1	China Ministry of Education	China Ministry of Education	China Ministry of Education	
Feedback	Monitoring and Feedback	Teaching and Learning Quality	Qualification Evaluation	Audit Evaluation	Audit Evaluation	
		Monitoring	(since 1994)	(First Round, since 2014)	(Second Round, since 2021)	
		Pc7-2	China Ministry of Education	China Ministry of Education		
		Quality Information Feedback	Audit Evaluation	Audit Evaluation		
			(First Round, since 2014)	(Second Round, since 2021)		
		Pc7-3	China Ministry of Education	China Ministry of Education		
		Quality Improvement	Audit Evaluation	Audit Evaluation		
			(First Round, since 2014)	(Second Round, since 2021)		
Product Evaluation						
Indicators from original CIPP	Domain	Indicators of the Curriculum Leadership Evaluation Model	Preference Document			
Impact	Pr1	Pr1-1	China Ministry of Education	China Ministry of Education	QS World (Regional) University	Guideline of University of Sanya
Sustainability	Evaluation of Government and Society	University Reputation	Qualification Evaluation	Audit Evaluation	Ranking	(since 2017)
			(since 1994)	(Second Round, since 2021)	(since 2004)	
Effectiveness		Pr1-2	China First-Class Curriculum	Guideline of University of Sanya		
		Curriculum Outcomes	(since 2019)	(since 2017)		
		Pr1-3	China Ministry of Education	China Ministry of Education	China Ministry of Education	Guideline of University of Sanya
		Quality of Service	Qualification Evaluation	Audit Evaluation	Audit Evaluation	(since 2017)
			(since 1994)	(First Round, since 2014)	(Second Round, since 2021)	
	Pr2	Pr2-1	China Ministry of Education			
	Teaching Effectiveness	Learner’s Achievement	Audit Evaluation			
			(Second Round, since 2021)			
		Pr2-2	China Ministry of Education	QS World (Regional) University		
		Undergraduate Enrolment Rate	Audit Evaluation	Ranking		
			(Second Round, since 2021)	(since 2004)		

Table 3.2 (Continued)

Product Evaluation						
Indicators from original CIPP	Domain	Indicators of the Curriculum Leadership Evaluation Model		Preference Document		
Effectiveness	Pr2 Teaching Effectiveness	Pr2-3	China Ministry of Education			
		Learner Academic	Audit Evaluation (Second Round, since 2021)			
		Pr2-4	China Ministry of Education	China Ministry of Education	China Ministry of Education	QS World (Regional) University
		Learner Employment Rate and Structure	Qualification Evaluation (since 1994)	Audit Evaluation (First Round, since 2014)	Audit Evaluation (Second Round, since 2021)	Ranking (since 2004)
Adjustment	Pr3 Cultural Formation	Pr3-1	China Ministry of Education			
		Improvement in Institution and Practice	Audit Evaluation (Second Round, since 2021)	Guideline of University of Sanya (since 2017)		
Sustainability		Pr3-2	China Ministry of Education			
Transportability		Curriculum Quality Assurance	Audit Evaluation (Second Round, since 2021)	Guideline of University of Sanya (since 2017)		
Adjustment		Pr3-3	China Ministry of Education			
Sustainability		Quality Report	Audit Evaluation (Second Round, since 2021)	Guideline of University of Sanya (since 2017)		

Table 3.3*List of Items in the Questionnaire for the Curriculum Leadership Evaluation Model*

Context Evaluation			1	2	3	4	5
Primary Indicator	Secondary Indicator	Item					
C1 Organisation Leadership	C1-1 Culture Development	Developed a quality culture of self-awareness, self-introspection, self-discipline, self-examination, and self-correction					
	C1-2 External Response	Responded with keen insight to the social changes through development of the university curriculum					
	C1-3 Internal Governance	Established a two-level decision-making system at the university and faculty level					
	C1-4 Leader Participation	Established a proper leadership system among top management teams					
C2 Measurement and Analysis	C2-1 Quality Standard Formulation	Established guidelines for quality education evaluation and curriculum development standards					
	C2-2 Comparison with Other Universities	Established a reasonable quality comparison system among universities in China					
	C2-3 Analysis of Educational Background	Analysed the changing trends in the environment, policies, stakeholders, resources, and technology in global education context					
Input Evaluation			1	2	3	4	5
Primary Indicator	Secondary Indicator	Item					
I1 Community Development	I1-1 Educator Community	Established a developmental and communicative learning platform and mechanism that is conducive to promoting long-term cooperation among educators					
	I1-2 Learner Community	Established systems and measures to guide learners to participate in each other, learn from each other, and develop together					
	I1-3 Educator-Learner Community	Created a mechanism to help educators and learners spontaneously form equal relationships that help each other grow and develop					

Table 3.3 (Continued)

Input Evaluation			1	2	3	4	5
Primary Indicator	Secondary Indicator	Item					
I2 Administrative Input	I2-1 Strategy Formulation and Implementation	Made strategic arrangements for the curriculum development					
	I2-2 Organisational Learning	Organised university administrators and educators to conduct regular and periodic learning activities on various aspects of curriculum education					
	I2-3 Investment and Use of Funds	Established and completed management methods to prioritise the use of funds for curriculum development					
I3 Educator Development	I3-1 Educator Cultivating and Training	Established a training system that promotes the sustainable development of educators					
	I3-2 Educator Promotion and Assessment	Established a constructive assessment system highlighting teaching contributions for educator promotion					
	I3-3 Educators' Working Environment	Continuously to enhance constructive working environment for educators					
I4 Learner Growth	I4-1 Academic Support and Services	Emphasised on the development of learner academic guidance service system					
	I4-2 Discipline Competitions	Established mechanisms to help learners effectively integrate learners' learning with subject competitions					
	I4-3 Learning Incentive and Experience	Established mechanisms that enable effective learning experiences for learners					
	I4-4 Learner Entrepreneurship and Employment	Taken effective measures to promote learner employment and entrepreneurship					
	I4-5 Cultivate learners' International Perspective	Provided sufficient opportunities for learners to study abroad					

Table 3.3 (Continued)

Process Evaluation			1	2	3	4	5
Primary Indicator	Secondary Indicator	Item					
Pc1 Major Development	Pc1-1 Position and Orientation of Major	A clear talent-training positioning that meets the needs of economic, social, and industry development					
	Pc1-2 Research on Talent Cultivation Needs	Established a system to research on talent cultivation needs.					
	Pc1-2 Major Talent Training Plan	Provided detailed regulations for all aspects of talent cultivation					
Pc2 Curriculum Development	Pc2-1 Curriculum Vision and Planning	Developed directional curriculum vision guidance, including phases of curriculum planning					
	Pc2-2 Curriculum Design and Implementation	Publicised major curriculum plans for university and faculty					
	Pc2-3 Curriculum Reform	Continuously updating the concepts and methods of teaching and learning					
	Pc2-4 Classroom Teaching	Provided conducive classroom teaching to increase learners learning					
	Pc2-5 Technology Application	Continuously promoting the integration of digital technology into education and teaching processes					
Pc3 Teaching Management	Pc3-1 Educator's Teaching Effort	Developed an effective measurement to ensure the active engagement of educators in their teaching work					
	Pc3-2 Teaching Guidance, Observation and Assessment	Established an effective teaching guidance, observation and assessment measurement					
	Pc3-3 Teaching Research and Reform	Encouraged educators to participate in teaching research and reform					
	Pc3-4 Development of Interdisciplinary Teaching Team	Developed relevant systems for interdisciplinary teaching team					

Table 3.3 (Continued)

Process Evaluation			1	2	3	4	5
Primary Indicator	Secondary Indicator	Item					
Pc4 Resource Development	Pc4-1 Teaching Facilities and Conditions	Strengthened the teaching facilities such as smart classrooms and smart laboratories					
	Pc4-2 Course Database	Provided support for the development of a major course resource database					
	Pc4-3 Academic Resources	Provided books, an online database, academic journals, and other resources for research activities					
Pc5 Integration of Industry and Education	Pc5-1 University- Industry Collaboration	Developed bilateral and multi-dimensional cooperation between universities and enterprises					
	Pc5-2 Development Mechanism	Formed a community model and mechanism for industry education integration in the industry sector					
	Pc5-3 Learning Scenarios and Environments	Provided learners with new experimental scenarios and real work environments based on industry and market changes					
Pc6 Academic Promotion	Pc6-1 Academic Assignment Management	Created a structured, diverse learner academic evaluation strategy guidance mechanism closely linked to the development of learner abilities					
	Pc6-2 Innovation and Entrepreneurship Education for learners	Designed an innovation and entrepreneurship course modules to cultivate a culture of innovation and entrepreneurship					
	Pc6-3 Experiential Learning	Integrating social practice projects with educational value into the curriculum system					
Pc7 Monitoring and Feedback	Pc7-1 Teaching and Learning Quality Monitoring	Subdivided and collected information on the quality of talent cultivation activities					
	Pc7-2 Quality Information Feedback	Established a feedback system for quality talent cultivation information					
	Pc7-3 Quality Improvement	Conducted an in-depth analysis of the collected quality information for improvement					

Table 3.3 (Continued)

Product Evaluation			1	2	3	4	5
Primary Indicator	Secondary Indicator	Item					
Pr1 Evaluation of Government and Society	Pr1-1 University Reputation	Developed a positive academic reputation, and an employer reputation					
	Pr1-2 Curriculum Outcomes	Achieved continuously increasing the results of highly recognised course development					
	Pr1-3 Quality of Service	Continuously improved the satisfaction of society, industry, educators and learners with the university					
Pr2 Teaching Effectiveness	Pr2-1 Learner's Achievement	Increased the number and level of awards for learners participating in various subject competitions year by year					
	Pr2-2 Undergraduate Enrolment Rate	Increased the enrolment rate and quality of learners year by year					
	Pr2-3 Learner Academic	Increased learner's academic achievements year by year					
	Pr2-4 Learner Employment Rate and Structure	Increased quality of learner employment year by year					
Pr3 Cultural Formation	Pr3-1 Improvement in Institution and Practice	Implemented new institutions, procedures, and practices based on evaluation results					
	Pr3-2 Curriculum Quality Assurance	Formed a curriculum quality assurance system that includes one framework , two systems, and three supports					
	Pr3-3 Quality Report	Generated annual education quality reports, curriculum quality reports, and sustainable development analysis reports, and publicise them					

3.5.2 Pre-Test of the Questionnaire

A pre-test on the established curriculum leadership evaluation scale was conducted. This step was performed to ensure the validity of the curriculum

leadership evaluation scale and comply with the principles of quality management and the basic laws of higher education.

Three experts from the university and the school of the University of Sanya (senior professional titles) were invited as there is no consensus on the number of experts required to review a document. Lynn et al. (1986) recommended the participation of at least three experts in the pre-test (Almanasreh, 2019).

The researcher consulted the opinions or suggestions of the three experts based on the content of the curriculum leadership evaluation scale. Subsequently, the scale was modified based on the opinions and suggestions. The present study primarily investigated whether the questionnaire structure and items reflected the actual situation of curriculum leadership construction in universities, whether the item descriptions were clear and easy to understand, and whether sensitive or complex questions were involved. Based on the expert feedback, the questionnaire structure and the expression and language wording of the questionnaire items were adjusted, and the ambiguous content was corrected to facilitate respondents answering the survey.

Table 3.4*List of Pre-Testers*

Pre-Tester	Identity	Expertise
Professor Wen	Vice-principal of the university Member of the Teaching Guidance Committee of the Ministry of Education in China (Vice president of Beihua University)	University management
Professor Qi	Assistant principal of the university High level talents in Hainan Province, China	External cooperation of universities Curriculum development
Professor Wang	The dean of the school Member of the Teaching Guidance Committee of the Ministry of Education Qualified Evaluation expert of the Ministry of Education National Social Science Fund Communication Review Expert Expert in the Evaluation of Humanities and Social Sciences Fund Projects by the Ministry of Education Expert reviewer of the Degree Centre of the Ministry of Education Head of National First-Class Major Development Site (Director of Academic Affairs Office of Jilin University of Finance and Economics)	Major development Curriculum development Teaching quality evaluation

Table 3.5*Details of the Data Collection Procedure in the Pre-Test*

Time	Expert	Way	Location	Questionnaire for Expert Usage Method
April 6, 2024 10:00 am - 1:00 pm	Professor Wang	Write Questionnaire for Expert	The Cafe in Sanya	Revise the questionnaire, item by item, according to the suggestions given by the experts

Table 3.5 (Continued)

Time	Expert	Way	Location	Questionnaire for Expert Usage Method
April 6, 2024 3:00 pm - 5:00 pm	Professor Wen	Write Questionnaire for Expert	The Teahouse in Sanya	
April 7, 2024 2:00 pm - 4:00 pm	Professor Qi	Write Questionnaire for Expert	The Teahouse in Sanya	

Table 3.6*List of Experts' Comments and Changes Made*

No.	Original Item	Feedback and Modification	Revised Item
1	C1-3 Internal Governance Established a two-level decision-making system at the university and faculty level	Specific measures need to be clearly defined for “internal governance”	Established a two-tier decision-making system between the university and the faculties, including improving the rules of procedure and decision-making processes, establishing a robust system of joint meetings for department party government, and creating academic committees
2	C1-4 Leader Participation Established a proper leadership system among top management teams	Need to reflect the way of participation	Established a proper leadership system among top management teams, which enables leaders to actively participate in and conduct frontline research, attend lectures, and proactively understand various aspects of talent cultivation work
3	None	In the “Input Evaluation” section, “Community Development” should add “Association Community”	The university has established a good interactive relationship with provincial-level and above-level societies

Table 3.6 (Continued)

No.	Original Item	Feedback and Modification	Revised Item
4	I4-5 Cultivate learners' International Perspective Provided sufficient opportunities for learners to study abroad	There is a lack of integration with current technological developments in cultivating educators' international perspectives	Provided sufficient opportunities and a series of diverse platforms for learners to study abroad that integrate digital technology
5	Pc2-2 Curriculum Design and Implementation Publicised major curriculum plans for university and faculty	Publicize the curriculum execution plan of schools and the university based on industry or enterprise participation in curriculum design or revision	On the basis of industry or enterprise participation in curriculum design or revision, publicised major curriculum plans for university and faculty
6	Pc5-1 University- Industry Collaboration Developed bilateral and multi-dimensional cooperation between universities and enterprises	There is an overlap in the content between the "University-Industry Collaboration" and "Development Mechanism" in the "Integration of Industry and Education". Suggestion to modify "University-Industry Collaboration" to "Application of Achievements"	Regions, industries, and enterprises have benefited from the practical and research achievements of universities
7	Pr2-1 Learner's Achievement Increased the number and level of awards for learners participating in various subject competitions year by year	In the "achievements of learner", supplementing the achievements of learners' patents is necessary	Increased the number and level of awards for learners participating in various subject competitions year by year, including patents

Table 3.6(Continued)

No.	Original Item	Feedback and Modification	Revised Item
8	Pr3-3 Quality Report Generated annual education quality reports, curriculum quality reports, and sustainable development analysis reports, and publicise them	The “Quality Report” lacked attention to employment and the Chinese Ministry of Education requirements for this aspect of work in the original item description	Generated annual education quality reports, undergraduate employment data analysis report, and graduate tracking survey report, and publicise them
9	Pr2-3 Learner Academic Increased learner’s academic achievements year by year	The content of the academic paper publication and participation in academic conferences should be included in “Learner Academia”	Increased learner’s academic achievements year by year, including academic paper publication and participation in academic conferences

3.5.3 Pilot Test of the Questionnaire

After the pre-test, a pilot test was conducted to assess the reliability and validity of the initial questionnaire. Based on the central limit theorem, when the sample size is ≥ 30 , the sample mean approaches a normal distribution. The normal distribution is suitable for statistical inference and analysis (Xiao, 2023). Despite no absolute standard for sample size determination, a sample size is recommended to be greater than 100 for factor analysis to ensure a certain level of reliability (Xiao, 2023).

During the process, educators from the School of Finance and Economics and the School of Tourism and International Hotel Management at the University of Sanya in China were invited to participate in the survey. A total of 160 educators were from these two schools (established at the same time as the university). Administrators from the School of Saxo Fintech Business, the School of Humanities and Communication, the School of Finance and Economics, the School of Tourism and International Hotel Management, the School of Management, and the School of Information and Intelligence Engineering were also invited to participate in the survey. A total of 84 administrators were in these six schools (encompassing 78% of the disciplines of the university).

Table 3.7

Details of the Data Collection Procedure in the Pilot Test

Time	Process	location	Way	Data Collection
April 20-26, 2024	Communicate with the Vice President (responsible for educational management) and the deans of each school	Office of the University	Telephone Communication	A total of 123 questionnaires were distributed. Out of these, 115 valid questionnaires were collected, which accounts for a recovery rate of 93.5% after eliminating 8 invalid questionnaires.
April 27, 2024-May 20, 2025	Distribute questionnaires	School Conference Rooms School Work Groups	On Site Instructions Scan the Code Online	No one gave additional feedback after the questionnaire. No feedback was received

Validity Test

Validity refers to the degree to which the measured results reflect the content to be investigated (Yang et al., 2021). A higher validity coefficient reflects a higher consistency between the measurement results and the content to be investigated (Zhu, 2016^b). The testing of validity primarily includes two aspects: content validity and construct validity. Content validity refers to the applicability of the content of the questionnaire items to the measurement of relevant concepts, which is the rationality of the item design (Yang et al., 2021).

The survey questionnaire for the current study was formed based on a literature review and pre-test. The content of the questionnaire items was repeatedly revised to ensure a significant match between the questionnaire items and the measured concepts and to ensure that each item in the survey questionnaire has good content validity. Constructive validity concerns the extent to which measuring tools reflect the characteristics of theoretical concepts (Zhu, 2016^b). Factor analysis (exploratory factor analysis) is usually employed to measure the effectiveness of structures. Researchers can apply factor analysis to evaluate whether the questionnaire can measure the conceptual structure that was assumed.

In terms of exploratory factor analysis, the purpose is to validate the factor structure of the scale (Wu, 2022). The current study aimed to further improve the construct validity of the survey questionnaire via exploratory factor analysis. Exploratory factor analysis was conducted in the following two steps of the study: Firstly, determining whether the collected data is suitable for factor analysis is necessary before conducting factor analysis, which means conducting an applicability test of factor analysis.

The primary methods used are KMO (Kaiser Meyer Olkin) and the Bartlett Test of Sphericity. KMO is mainly applied for factor analysis in multivariate statistics. A KMO statistic closer to 1 indicates a stronger correlation between variables, while a weaker partial correlation signals a better effect of factor analysis. In actual analysis, the KMO statistic performs better when exceeding 0.7. A KMO statistic of below 0.5 suggests that factor analysis is not suitable for application. The specific situation is presented in Table 3.6 (Chen, 2016). The Bartlett Spherical Test is a test method that determines the degree of correlation between various variables. The statistic of the Bartlett Test of Sphericity should be significantly different from 0, and a larger chi-square approximation indicates more suitability for factor analysis (Zhu, 2016^b).

Table 3.8*KMO Statistics Values and Corresponding Situations*

Test Category	Range of Value	Situation of Suitable for Factor Analysis
KMO	Greater than 0.9	Perfect for
	0.8~0.9	Very suitable
	0.7~0.8	Suitable
	0.6~0.7	Barely suitable
	0.5~0.6	Not very suitable
	Less than 0.5	Inappropriate

In conducting exploratory factor analysis on the items in the context, input, process, and product sections, principal component analysis was used to extract factors, while factor rotation was performed using the maximum variance method. The criterion is that the feature root is over 1, the factor load of each item is over 0.5, and the proportion of cumulative explanatory variance is over 50% (Zhu, 2016^b).

Reliability Test

As for the internal consistency coefficient, Cronbach developed for the Likert scale, which is the most widely used evaluation method for reliability. In testing the feasibility of the research purpose, Cronbach's α reaching 0.7 is sufficient (Xiao, 2023). Generally, the value of "alpha reliability" indicates the following meanings (George & Malley, 2003):

Table 3.9*The Significance of the “Alpha Reliability” Value*

Cronbach’s alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

3.5.3.1 Validity Test: Exploratory Factor Analysis

The present study performed an exploratory factor analysis on 115 samples in two steps. Firstly, before conducting the exploratory factor analysis, the samples must be tested for adequacy, specifically using the KMO (Kaiser-Meyer-Olkin) measure and the Bartlett Test of Sphericity, to determine whether the collected data was suitable for factor analysis. The criteria for judgement are specified in Table 3.8.

The current study performed an exploratory factor analysis on the questionnaire items, employed principal component analysis to extract factors, and applied factor rotation using the maximum variance method. The criteria for judgement were: the eigenvalue is over 1, the factor loading of each item is over 0.5, and the cumulative explained variance ratio exceeds 50% (Zhu, 2016b). Factor loading denotes the strength of the relationship between the

item and the extracted principal component. A higher factor loading signifies stronger construct validity. Only items that fulfil these standards can meet the requirements for questionnaire construct validity.

1. Exploratory Factor Analysis of Context Evaluation

The variables in the Context Evaluation were evaluated for suitability. The results indicated that the KMO value was 0.768, which surpasses the threshold of 0.70. Meanwhile, the Bartlett Spherical significance probability was under 0.001, confirming suitability for further exploratory factor analysis. Subsequently, factor analysis was performed on seven items in 115 samples using principal component analysis. Two key factors were extracted, meeting the criteria of a characteristic root over 1 and factor loading over 0.5. Factor 1 represented “organisational leadership” and Factor 2 represented “measurement and analysis”. The cumulative explained variance of the two factors was 69.761%, signifying success in the exploratory factor analysis.

Table 3.10

Results of Exploratory Factor Analysis of Context Evaluation

Dimension Name	Item (abbreviation)	Factor	
		1	2
C1 Organisation Leadership	C1-1 Culture Development	.834	.054
	C1-2 External Response	.774	.243

Table 3.10 (Continued)

Dimension Name	Item (abbreviation)	Factor	
		1	2
	C1-3 Internal Governance	.855	.062
	C1-4 Leader Participation	.821	.091
C2 Measurement and Analysis	C2-1 Quality Standard Formulation	.046	.745
	C2-2 Comparison with Other Universities	.200	.873
	C2-3 Analysis of Educational Background	.089	.860
Result Analysis	KMO 值: 0.868	df: 21	Sig: 0.000
	Bartlett's value: 316.144		
	Cumulative explained variance of 2 factors: 69.761%		

2. Exploratory Factor Analysis of Input Evaluation

The adequacy test of each variable input for evaluation revealed that the KMO value was 0.805, which exceeded 0.70. Additionally, the Bartlett spherical significance probability was under 0.001, which was suitable for further exploratory factor analysis. Hence, factor analysis was performed on 15 items in 115 samples and factors were extracted by principal component analysis. Based on the requirements that the characteristic root should exceed 1 and the factor loading be over 0.5, a total of four main factors were extracted.

Table 3.11 presents that the factor analysis results of all items were

consistent with expectations. Nonetheless, the factor loading of the item “Association Community” was 0.404, which was under 0.5, hence considered for deletion. Factor 1 represents “student growth”, factor 2 represents “administrative investment”, factor 3 is “community development”, and factor 4 is “teacher development”. The cumulative explained variance of the four factors was 80.157%, which passed the exploratory factor analysis test.

Table 3.11

*Results of Exploratory Factor Analysis of Input Evaluation
(before deleting the item)*

Dimension Name	Item (abbreviation)	Factor			
		1	2	3	4
I4 Learner Growth	I4-1 Academic Support and Services	.836	.030	.189	.280
	I4-2 Discipline Competitions	.693	.043	.125	.302
	I4-3 Learning Incentive and Experience	.924	-.005	.120	-.015
	I4-4 Learner Entrepreneurship and Employment	.883	.004	.126	-.024
	I4-5 Cultivate Learners' International Perspective	.942	.067	.154	.083
I2 Administrative Input	I2-1 Strategy Formulation and Implementation	.077	.932	.087	.045
	I2-2 Organisational Learning	-.018	.939	.128	.066
	I2-3 Investment and Use of Funds	.024	.920	.104	.119
I1 Community	I1-1 Educator Community	.183	.047	.804	.308

Table 3.11 (Continued)

Dimension Name	Item (abbreviation)	Factor			
		1	2	3	4
	I1-2 Learner Community	.228	.035	.838	.088
	I1-3 Educator-Learner Community	.180	.050	.856	.237
	I1-4 Association Community	.028	.165	.404	.042
	I3-1 Educator Cultivating and Training	.236	.277	.219	.718
I3 Educator Development	I3-2 Educator Promotion and Assessment	.077	-.045	.258	.816
	I3-3 Educators' Working Environment	.090	.080	.108	.819
Result Analysis		KMO 值: .805 df: 105 Sig: 0.000			
		Bartlett's value: 1285.366			
		Cumulative explained variance of 2 factors: 75.584%			

Table 3.12

*Results of Exploratory Factor Analysis of Input Evaluation
(after deleting the item)*

Dimension Name	Item (abbreviation)	Factor			
		1	2	3	4
I4 Learner Growth	I4-1 Academic Support and Services	.838	.031	.180	.289
	I4-2 Discipline Competitions	.695	.042	.112	.313
	I4-3 Learning Incentive and Experience	.920	.000	.141	-.020
	I4-4 Learner Entrepreneurship and Employment	.881	.007	.139	-.027
	I4-5 Cultivate Learners' International Perspective	.941	.070	.158	.084

Table 3.12 (Continued)

Dimension Name	Item (abbreviation)	Factor			
		1	2	3	4
I2 Administrative Input	I2-1 Strategy Formulation and Implementation	.077	.936	.058	.046
	I2-2 Organisational Learning	-.019	.947	.105	.064
	I2-3 Investment and Use of Funds	.029	.921	.053	.131
I1 Community Development	I1-1 Educator Community	.170	.085	.833	.295
	I1-2 Learner Community	.216	.075	.865	.075
	I1-3 Educator-Learner Community	.176	.082	.841	.243
I3 Educator Development	I3-1 Educator Cultivating and Training	.234	.281	.212	.718
	I3-2 Educator Promotion and Assessment	.071	-.038	.272	.811
	I3-3 Educators' Working Environment	.089	.079	.103	.821
Result Analysis	KMO 值: .810 df: 91 Sig: 0.000				
	Bartlett's value: 1265.355				
	Cumulative explained variance of four factors: 80.157%				

3. Exploratory Factor Analysis of Process Evaluation

The adequacy test for each variable in the process evaluation revealed that the KMO value was 0.838, exceeding the threshold of 0.70. The Bartlett spherical significance probability was below 0.001, which confirmed suitability for further exploratory factor analysis. Therefore, factor analysis was conducted on 24 items from 115 samples. The factors were derived via principal component analysis, considering that the eigenvalue exceeded 1 and the factor loading was over 0.5. Consequently, a total of seven main factors

were identified.

The results of the factor analysis are presented in Table 3.13, aligned with the expectations for all items. Factor 1 represented “curriculum development”, factor 2 represented “teaching management”, factor 3 denoted “monitoring and feedback”, factor 4 stood for “integration of industry and education”, factor 5 indicated “major development”, factor 6 was linked to “resource development”, and factor 7 referred to “academic promotion”. The cumulative explained variance of the seven factors was 86.569%, thus fulfilling the criteria for the exploratory factor analysis test.

Table 3.13

Results of Exploratory Factor Analysis of Process Evaluation

Dimension Name	Item (abbreviation)	Factor						
		1	2	3	4	5	6	7
Pc2 Curriculum Development	Pc2-1 Curriculum Vision and Planning	.834	.109	.093	-.032	.251	.076	-.038
	Pc2-2 Curriculum Design and Implementation	.863	.142	.132	.174	.159	.096	.084
	Pc2-3 Curriculum Reform	.884	.158	.044	.107	.115	.066	-.036
	Pc2-4 Classroom Teaching	.873	.120	.134	.160	.209	.089	.122
	Pc2-5 Technology Application	.914	.155	.044	.051	.129	.100	.021

Table 3.13 (Continued)

Dimension Name	Item (abbreviation)	Factor						
		1	2	3	4	5	6	7
Pc3 Teaching Management	Pc3-1							
	Educator's Teaching Effort	.162	.807	.137	.067	.269	.183	.142
	Pc3-2							
	Teaching Guidance, Observation and Assessment	.194	.881	.233	.140	.139	.157	.071
	Pc3-3							
	Teaching Research and Reform	.180	.831	.238	.113	.144	.283	.049
	Pc3-4							
	Development of Interdisciplinary Teaching Team	.206	.873	.248	.134	.148	.187	.060
Pc7 Monitoring and Feedback	Pc7-1							
	Teaching and Learning	.089	.171	.913	.154	.058	.108	.077
	Pc7-2							
	Quality Information	.150	.204	.922	.120	.090	.083	.009
	Pc7-3							
	Quality Improvement	.113	.310	.852	.136	.055	.146	.041
Pc5 Integration of Industry and Education	Pc5-1							
	Development	.108	.127	.113	.885	.160	.096	.175
	Pc5-2							
	Learning Scenarios and	.173	.084	.182	.882	.087	.153	.174
	Pc5-3							
	Application of	.093	.147	.126	.869	.077	.186	.171
Pc1 Major Development	Pc1-1							
	Position and Orientation	.304	.208	.102	.165	.833	.205	.168
	Pc1-2							
	Research on Talent	.296	.249	.067	.104	.862	.214	.077
	Pc1-2							
	Major Talent Training	.408	.231	.079	.143	.806	.197	.055
Pc4 Resource Development	Pc4-1							
	Teaching Facilities and	.089	.229	.087	.098	.127	.792	-.046
	Pc4-2							
	Course Database	.219	.261	.196	.190	.257	.750	.180

	Pc4-3 Academic Resources	.106	.307	.109	.260	.250	.774	.149
Pc6 Academic Promotion	Pc6-1 Academic Assignment	-.027	.027	.027	.229	.139	.077	.817
	Pc6-2 Innovation and	.045	.278	-.045	.173	.061	-.138	.766
	Pc6-3 Experiential Learning	.098	-.058	.192	.095	.015	.431	.720
Result Analysis	KMO 值: .838	df: 276	Sig: 0.000					
	Bartlett's value: 3152.336							
	Cumulative explained variance of seven factors: 86.569%							

4. Exploratory Factor Analysis of Product Evaluation

The adequacy of the result evaluation variables was assessed, and the results indicated that the KMO value was 0.810, which exceeded 0.70. The Bartlett spherical significance probability was below 0.001, indicating suitability for further exploratory factor analysis. Hence, factor analysis was conducted on 10 items in 115 samples. Factors were extracted via principal component analysis, resulting in the extraction of three main factors that met the requirements of a characteristic root exceeding 1 and factor loadings over 0.5.

The factor analysis results of all items in Table 3.14 aligned with expectations. Factor 1 represents “teaching achievements,” factor 2 represents “cultural formation,” and factor 3 represents “government and social evaluation”. The cumulative explained variance of the three factors is 72.514%,

fulfilling the exploratory factor analysis test.

Table 3.14

Results of Exploratory Factor Analysis of the Product Evaluation

Dimension Name	Item (abbreviation)	Factor		
		1	2	3
Pr2 Teaching Effectiveness	Pr2-1 Learner's Achievement	.867	.101	.130
	Pr2-2 Undergraduate Enrolment Rate	.882	.241	.134
	Pr2-3 Learner Academic	.843	.028	.088
	Pr2-4 Learner Employment Rate and Structure	.880	.198	.198
	Pr3-1 Improvement in Institution and Practice	.155	.814	.060
	Pr3-2 Curriculum Quality Assurance	.110	.817	.033
Pr3 Cultural Formation	Pr3-3 Quality Report	.141	.782	.258
	Pr1-1 University Reputation	.220	.038	.830
	Pr1-2 Curriculum Outcomes	-.012	.284	.717
	Pr1-3 Quality of Service	.202	.028	.776
Result Analysis	KMO 值: .810 df: 45 Sig: 0.000			
	Bartlett's value: 570.166			
	Cumulative explained variance of three factors: 72.514%			

3.5.3.2 Reliability Analysis

Upon conducting exploratory factor analysis, the study needs to conduct a reliability analysis on the factors within each dimension to determine whether

the items within each dimension are internally consistent and stable. This analysis provides a basis for adding, removing, or revising questionnaire items. The reliability standard for judgement is that Cronbach's α coefficient for each item should exceed 0.7 (see page 96).

1. Reliability Analysis of Context Evaluation

The present study analysed the reliability of the two factors in the Context Evaluation section. Tables 3.15 and 3.16 summarise the test results. The reliability statistics indicate that the Cronbach's α coefficient for each variable exceeds 0.7. Specifically, the Cronbach's α coefficient for the "organisational leadership" factor is 0.847, and for the "measurement and analysis" factor is 0.786. The overall Cronbach's α coefficient for the variables in the context evaluation section is 0.791.

Although Cronbach's α coefficient of "quality standard formulation" upon deletion of the item is slightly higher than the overall coefficient, the item is a necessary basis for quality measurement. The item is retained due to fulfilling the conditions in the sub-item structure.

In general, good internal consistency is present among the various variable items in the context evaluation section.

Table 3.15*Results of Reliability Analysis of Context Evaluation (N = 115)*

Dimension Name	Item (abbreviation)	Mean Value	Standard Deviation	Item - Overall Correlation Coefficient	Cronbach's α Coefficient after Deleting the Item	Cronbach's α Coefficient
C1 Organisation Leadership	C1-1 Culture	4.59	.528	.689	.805	.847
	Development					
	C1-2 External Response	4.32	.539	.656	.818	
	C1-3 Internal Governance	4.29	.542	.722	.790	
	C1-4 Leader Participation	4.37	.599	.677	.811	
C2 Measurement and Analysis	C2-1 Quality Standard Formulation	3.83	.512	.492	.840	.786
	C2-2 Comparison with Other Universities	3.94	.582	.733	.586	
	C2-3 Analysis of Educational Background	3.95	.575	.671	.660	

Table 3.16*Overall Reliability Analysis Results of Context Evaluation (N = 115)*

Dimension Name	Item (abbreviation)	Mean Value	Standard Deviation	Item - Overall Correlation Coefficient	Cronbach's α Coefficient after Deleting the Item	Cronbach's α Coefficient
C1 Organisation Leadership	C1-1 Culture	4.59	.528	.545	.759	.791
	C1-2 External Response	4.32	.539	.625	.744	

Table 3.16 (Continued)

Dimension Name	Item (abbreviation)	Mean Value	Standard Deviation	Item - Overall Correlation Coefficient	Cronbach's α Coefficient after Deleting the Item
C2 Measurement and Analysis	C1-3 Internal Governance	4.29	.542	.569	.755
	C1-4 Leader Participation	4.37	.599	.554	.757
	C2-1 Quality Standard	3.83	.512	.346	.794
	C2-2 Comparison with Other Universities	3.94	.582	.554	.757
	C2-3 Analysis of Educational Background	3.95	.575	.442	.779

2. Reliability Analysis of Input Evaluation

The study conducted a reliability analysis on the four factors in the input evaluation part. Tables 3.17 and 3.18 summarise the test results. The Cronbach's α coefficients of all variables exceed 0.7. Specifically, the Cronbach's α coefficient of the “community development” factor is 0.875, the Cronbach's α coefficient of the “administrative input” factor is 0.936, the Cronbach's α coefficient of the “educator development” factor is 0.777, and the Cronbach's α coefficient of the “learner growth” factor is 0.926. The overall Cronbach's α coefficient of the variables in the input evaluation part is 0.865.

Although the Cronbach's α coefficient of “discipline competitions” in the

“student growth” structure is 0.939 after deleting the item, which is slightly higher than the Cronbach’s α coefficient of 0.926, the coefficient of “subject competition” in the summary structure of the input evaluation section is 0.854 after deleting the item, which is below the overall 0.865, indicating reasonableness. Considering that “discipline competitions” is an important part of “student growth”, this item is retained. Good internal consistency is present among the variable items in the input evaluation section.

Table 3.17

Reliability Analysis Results of Input Evaluation (N = 115)

Dimension Name	Item (abbreviation)	Mean Value	Standard Deviation	Item - Overall Correlation Coefficient	Cronbach’s α Coefficient after Deleting the Item	Cronbach’s α Coefficient
I1 Community Development	I1-1 Educator	4.31	.742	.775	.811	.875
	Community					
	I1-2 Learner	4.16	.657	.740	.844	
	Community					
	I1-3 Educator-Learner	4.24	.733	.771	.813	
	Community					
I2 Administrative Input	I2-1 Strategy	4.22	.673	.871	.905	.936
	Formulation and Implementation					
	I2-2 Organisational Learning	4.16	.657	.888	.890	
	I2-3 Investment and Use of Funds	4.31	.583	.853	.922	

Table 3.17 (Continued)

Dimension Name	Item (abbreviation)	Mean Value	Standard Deviation	Item - Overall Correlation Coefficient	Cronbach's α Coefficient after Deleting the Item	Cronbach's α Coefficient
I3 Educator Development	I3-1 Educator Cultivating and Training	4.19	.712	.626	.699	.777
	I3-2 Educator Promotion and Assessment	3.90	.959	.639	.692	
	I3-3 Educators' Working Environment	4.12	.774	.609	.706	
I4 Learner Growth	I4-1 Academic Support and Services	4.12	.623	.829	.907	.926
	I4-2 Discipline Competitions	4.20	.595	.635	.939	
	I4-3 Learning Incentive and Experience	3.87	.755	.865	.897	
	I4-4 Learner Entrepreneurship and Employment	3.77	.773	.803	.910	
	I4-5 Cultivate Learners' International Perspective	3.90	.810	.927	.884	

Table 3.18*Overall Reliability Analysis Results of Input Evaluation (N = 115)*

Dimension Name	Item (abbreviation)	Mean Value	Standard Deviation	Item - Overall Correlation Coefficient	Cronbach's α Coefficient after Deleting the Item	Cronbach's α Coefficient
I1 Community Development	I1-1 Educator	4.31	.742	.606	.851	
	Community					
	I1-2 Learner Community	4.16	.657	.545	.855	
	I1-3 Educator-Learner	4.24	.733	.587	.852	
	Community					
I2 Administrative Input	I2-1 Strategy	4.22	.673	.362	.864	
	Formulation and Implementation					
	I2-2 Organisational Learning	4.16	.657	.334	.865	
	I2-3 Investment and Use of Funds	4.31	.583	.365	.863	
I3 Educator Development	I3-1 Educator	4.19	.712	.621	.851	
	Cultivating and Training					
	I3-2 Educator Promotion and Assessment	3.90	.959	.445	.863	
	I3-3 Educators' Working Environment	4.12	.774	.434	.861	
I4 Learner Growth	I4-1 Academic Support and Services	4.12	.623	.697	.848	
	I4-2 Discipline Competitions	4.20	.595	.569	.854	

Table 3.18 (Continued)

Dimension Name	Item (abbreviation)	Mean Value	Standard Deviation	Item - Overall Correlation Coefficient	Cronbach's α Coefficient after Deleting the Item	Cronbach's α Coefficient
I4 Learner Growth	I4-3 Learning Incentive and Experience	3.87	.755	.566	.853	
	I4-4 Learner Entrepreneurship and Employment	3.77	.773	.538	.855	
	I4-5 Cultivate Learners' International Perspective	3.90	.810	.667	.847	

3. Reliability Analysis of Process Evaluation

The study performed a reliability analysis on the seven factors in the process evaluation section. Tables 3.19 and 3.20 demonstrate the test results. The reliability statistics indicate that the Cronbach's α coefficient for each variable exceeds 0.7. Specifically, the Cronbach's α coefficient for the "major development" factor is 0.968, for the "curriculum development" factor is 0.950, for the "teaching management" factor is 0.961, for the "resource development" factor is 0.884, for the "integration of industry and education" factor is 0.935, for the "academic promotion" factor is 0.727, and for the "monitoring and feedback" factor is 0.949. The overall Cronbach's α coefficient for the variables in the process evaluation section is 0.935.

Table 3.19*Reliability Analysis Results of Process Evaluation (N = 115)*

Dimension Name	Item (abbreviation)	Mean Value	Standard Deviation	Item - Overall Correlation Coefficient	Cronbach's α Coefficient after Deleting the Item	Cronbach's α Coefficient
Pc1 Major Development	Pc1-1 Position and Orientation of Major	4.41	.560	.925	.958	.968
	Pc1-2 Research on Talent Cultivation Needs	4.40	.618	.944	.945	
	Pc1-3 Major Talent Training Plan	4.46	.582	.930	.954	
Pc2 Curriculum Development	Pc2-1 Curriculum Vision and Planning	4.19	.661	.809	.948	.950
	Pc2-2 Curriculum Design and Implementation	4.40	.604	.867	.938	
	Pc2-3 Curriculum Reform	4.27	.667	.854	.940	
	Pc2-4 Classroom Teaching	4.43	.608	.888	.934	
	Pc2-5 Technology Application	4.37	.599	.902	.932	
Pc3 Teaching Management	Pc3-1 Educator's Teaching Effort	4.04	.552	.840	.968	.961
	Pc3-2 Teaching Guidance, Observation and Assessment	4.10	.536	.940	.939	
	Pc3-3 Teaching Research and Reform	4.08	.532	.896	.952	

Table 3.19 (Continued)

Dimension Name	Item (abbreviation)	Mean Value	Standard Deviation	Item - Overall Correlation Coefficient	Cronbach's α Coefficient after Deleting the Item	Cronbach's α Coefficient
Pc3 Teaching Management	Pc3-4 Development of Interdisciplinary Teaching Team	4.13	.538	.945	.937	
Pc4 Resource Development	Pc4-1 Teaching Facilities and Conditions	4.28	.539	.647	.938	
	Pc4-2 Course Database	4.43	.636	.844	.770	.884
	Pc4-3 Academic Resources	4.37	.626	.852	.762	
Pc5 Integration of Industry and Education	Pc5-1 Development Mechanism	3.72	.643	.867	.905	
	Pc5-2 Learning Scenarios and Environments	3.66	.647	.880	.895	.935
	Pc5-3 Application of Achievements	3.60	.723	.857	.917	
Pc6 Academic Promotion	Pc6-1 Academic Assignment Management	4.00	.496	.634	.532	
	Pc6-2 Innovation and Entrepreneurship Education for learners	4.03	.407	.510	.694	.727
	Pc6-3 Experiential Learning	4.02	.562	.534	.677	
Pc7 Monitoring and Feedback	Pc7-1 Teaching and Learning Quality Monitoring	3.96	.754	.892	.926	.949

Table 3.19 (Continued)

Dimension Name	Item (abbreviation)	Mean Value	Standard Deviation	Item - Overall Correlation Coefficient	Cronbach's α Coefficient after Deleting the Item	Cronbach's α Coefficient
	Pc7-2					
	Quality					
	Information	3.91	.767	.931	.896	
	Feedback					
	Pc7-3					
	Quality	3.99	.669	.865	.949	
	Improvement					

In the factor reliability analysis, Cronbach's α coefficients for “teacher teaching input” and “teaching facilities and conditions” were 0.968 and 0.938, respectively, upon deletion of several items. These coefficients were slightly above the original reliabilities of 0.961 and 0.884. Nonetheless, in the overall reliability analysis of the process evaluation part, the Cronbach's α coefficients for “educator's teaching effort” and “teaching facilities and conditions” were 0.661 and 0.934, respectively (after deleting the items), which were below the overall 0.935 reliability. In considering the overall reliability analysis, the Cronbach's α coefficient for “academic assignment management” after removing the items was 0.936, slightly exceeding the overall reliability of 0.935. Nonetheless, in the factor reliability analysis, Cronbach's α coefficient (after removing items) was 0.532, lower than the original reliability of 0.727. Hence, these items remained. The variable items in the process evaluation section revealed good internal consistency.

Table 3.20*Overall Reliability Analysis Results of Process Evaluation (N = 115)*

Dimension Name	Item (abbreviation)	Mean Value	Standard Deviation	Item - Overall Correlation Coefficient	Cronbach's α Coefficient after Deleting the Item	Cronbach's α Coefficient
Pc1 Major Development	Pc1-1 Position and Orientation of Major	4.41	.560	.710	.930	
	Pc1-2 Research on Talent Cultivation Needs	4.40	.618	.674	.931	
	Pc1-3 Major Talent Training Plan	4.46	.582	.716	.930	
	Pc2-1 Curriculum Vision and Planning	4.19	.661	.542	.933	
	Pc2-2 Curriculum Design and Implementation	4.40	.604	.666	.931	
	Pc2-3 Curriculum Reform	4.27	.667	.568	.932	
Pc2 Curriculum Development	Pc2-4 Classroom Teaching	4.43	.608	.682	.931	.935
	Pc2-5 Technology Application	4.37	.599	.595	.932	
	Pc3-1 Educator's Teaching Effort	4.04	.552	.661	.931	
	Pc3-2 Teaching Guidance, Observation and Assessment	4.10	.536	.703	.931	
	Pc3-3 Teaching Research and Reform	4.08	.532	.706	.931	
Pc3 Teaching Management						

Table 3.20 (Continued)

Dimension Name	Item (abbreviation)	Mean Value	Standard Deviation	Item - Overall Correlation Coefficient	Cronbach's α Coefficient after Deleting the Item	Cronbach's α Coefficient
Pc3 Teaching Management	Pc3-4 Development of Interdisciplinary Teaching Team	4.13	.538	.721	.930	
Pc4 Resource Development	Pc4-1 Teaching Facilities and Conditions	4.28	.539	.482	.934	
	Pc4-2 Course Database	4.43	.636	.710	.930	
	Pc4-3 Academic Resources	4.37	.626	.674	.931	
Pc5 Integration of Industry and Education	Pc5-1 Development Mechanism	3.72	.643	.716	.933	
	Pc5-2 Learning Scenarios and Environments	3.66	.647	.542	.932	
	Pc5-3 Application of Achievements	3.60	.723	.666	.933	
Pc6 Academic Promotion	Pc6-1 Academic Assignment Management	4.00	.496	.568	.936	
	Pc6-2 Innovation and Entrepreneurship Education for learners	4.03	.407	.682	.935	
	Pc6-3 Experiential Learning	4.02	.562	.595	.935	
Pc7 Monitoring and Feedback	Pc7-1 Teaching and Learning Quality Monitoring	3.96	.754	.661	.933	

Table 3.20 (Continued)

Dimension Name	Item (abbreviation)	Mean Value	Standard Deviation	Item - Overall Correlation Coefficient	Cronbach's α Coefficient after Deleting the Item	Cronbach's α Coefficient
Pc7	Pc7-2					
Monitoring and Feedback	Quality Information	3.91	.767	.703	.933	
	Feedback					
	Pc7-3					
	Quality Improvement	3.99	.669	.706	.932	

4. Reliability Analysis of Product Evaluation

The study conducted a reliability analysis on the three factors in the result evaluation section. Tables 3.21 and 3.22 summarise the test results. All variables have Cronbach's α coefficients exceeding 0.7. Specifically, the "evaluation of government and society" factor has a Cronbach's α coefficient of 0.711, the "teaching effectiveness" factor has a coefficient of 0.914, and the "cultural formation" factor has a coefficient of 0.771. The overall Cronbach's α coefficient for all variables in the product evaluation section is 0.837.

In the reliability analysis of the product evaluation section, the Cronbach's α coefficient upon removing the "curriculum outcomes" item was 0.839, slightly above the overall Cronbach's α coefficient of 0.832. Nevertheless, considering that "curriculum outcomes" manifest the results, this item was retained. Upon deleting the item "student academic", the Cronbach's α coefficient is 0.919, slightly exceeding the Cronbach's α coefficient of 0.914 in the reliability analysis of the "teaching achievement" factor. Nonetheless, in the

overall reliability analysis, the Cronbach's α coefficient is 0.817, which is below the overall Cronbach's α coefficient of 0.837. Meanwhile, “student academic” is another manifestation of “curriculum outcomes”, hence the item remained. Good internal consistency is present among the variable items in the product evaluation section.

Table 3.21

Reliability Analysis Results of Product Evaluation (N = 115)

Dimension Name	Item (abbreviation)	Mean Value	Standard Deviation	Item - Overall Correlation Coefficient	Cronbach's α Coefficient after Deleting the Item	Cronbach's α Coefficient
Pr1 Evaluation of Government and Society	Pr1-1 University Reputation	3.96	.552	.613	.512	.711
	Pr1-2 Curriculum Outcomes	3.99	.554	.459	.711	
	Pr1-3 Quality of Service	3.88	.498	.527	.628	
Pr2 Teaching Effectiveness	Pr2-1 Learner's Achievement	4.07	.631	.785	.895	.914
	Pr2-2 Undergraduate Enrolment Rate	4.22	.673	.863	.867	
	Pr2-3 Learner Academic	4.03	.537	.712	.919	
	Pr2-4 Learner Employment Rate and Structure	4.25	.633	.869	.865	

Table 3.21 (Continued)

Dimension Name	Item (abbreviation)	Mean Value	Standard Deviation	Item - Overall Correlation Coefficient	Cronbach's α Coefficient after Deleting the Item	Cronbach's α Coefficient
Pr3 Cultural Formation	Pr3-1 Improvement in Institution and Practice	3.85	.380	.604	.695	.771
	Pr3-2 Curriculum Quality Assurance	3.89	.318	.600	.705	
	Pr3-3 Quality Report	3.88	.378	.624	.671	

Table 3.22

Overall Reliability Analysis Results of Product Evaluation (N = 115)

Dimension Name	Item (abbreviation)	Mean Value	Standard Deviation	Item - Overall Correlation Coefficient	Cronbach's α Coefficient after Deleting the Item	Cronbach's α Coefficient
Pr1 Evaluation of Government and Society	Pr1-1 University Reputation	3.96	.552	.478	.827	.837
	Pr1-2 Curriculum Outcomes	3.99	.554	.355	.839	
	Pr1-3 Quality of Service	3.88	.498	.434	.831	
Pr2 Teaching Effectiveness	Pr2-1 Learner's Achievement	4.07	.631	.661	.808	
	Pr2-2 Undergraduate Enrolment Rate	4.22	.673	.753	.796	
	Pr2-3 Learner Academic	4.03	.537	.584	.817	

Table 3.22 (Continued)

Dimension Name	Item (abbreviation)	Mean Value	Standard Deviation	Item - Overall Correlation Coefficient	Cronbach's α Coefficient after Deleting the Item	Cronbach's α Coefficient
	Pr2-4 Learner Employment Rate and Structure	4.25	.633	.774	.794	
Pr3 Cultural Formation	Pr3-1 Improvement in Institution and Practice	3.85	.380	.402	.833	
	Pr3-2 Curriculum Quality Assurance	3.89	.318	.363	.836	
	Pr3-3 Quality Report	3.88	.378	.475	.828	

3.6 Data Collection and Analysis Methods

Upon pre-test and obtaining ethical clearance approval, the present study adopted a questionnaire survey method to collect data, divided into two steps for data collection and analysis. The first step is to ensure the reliability and effectiveness of the internal structure of the survey questionnaire. The researcher first distributed the questionnaire to the six schools of the University of Sanya and used the assessment as a pilot test. As for complete exploratory factor analysis, the second step involved conducting a large-scale questionnaire distribution. The large sample data gathered in this survey were used for confirmatory factor analysis.

In the process of data analysis, the current study applied descriptive

statistical analysis, reliability and validity tests, exploratory factor analysis, and confirmatory factor analysis based on the operational steps. The current study applied SPSS 27.0 for descriptive statistical analysis, reliability and validity testing, and exploratory factor analysis of the data. Confirmatory factor analysis and path analysis were employed on the hypothesis model using AMOS 26.0.

3.6.1 Descriptive Statistical Analysis

Descriptive statistics are the first step in statistical analysis, which provides judgements on the distribution, concentration, and degree of variability of data. The main purpose of the analysis is to observe the effectiveness and overall distribution of the data thoroughly (Li et al., 2020) and to summarise and explain the sample data. The present study primarily described the basic information of the survey sample educators, including participating faculties, positions, professional titles, ages, and the subjects to which the respondents belong.

3.6.2 Confirmatory Factor Analysis

Confirmatory factor analysis was employed to examine the relationship between several measurement variables (observed variables) and several factors that can explain the measurement variables (latent variables) (Wu, 2022). Exploratory factor analysis can only explain and summarise the sample

and cannot quantify the overall fit of the final factor structure. Nonetheless, confirmatory factor analysis can evaluate the fit of pre-defined factor models to actual data. The present study conducted confirmatory factor analysis using AMOS software based on exploratory factor analysis and analysed whether the estimated values of each parameter fulfil the fitting criteria based on the obtained model parameter estimation results. The evaluation criteria for fitness are presented in Table 3.23 (Wu, 2022).

Table 3.23

Evaluation Indicators and Evaluation Standards for the Fitness of the SEM Overall Model

Statistical Test Parameter		Standards or Critical Values for Fitness
Absolute Fitting Index		
GFI	>	0.90
AGFI	>	0.90
RMR	<	0.05
SRMR	<	0.05
RMSEA	< 0.05 (good fitness); < 0.08 (reasonable fitness)	
NCP	The smaller, the better; the 90% confidence interval contains 0	
ECVI	The ECVI of the theoretical model is smaller than that of the independent	
Relative Fitting Index		
NFI	>	0.90
RFI	>	0.90
IFI	>	0.90
TLI	>	0.90

CFI	> 0.90
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3.6.3 Path Analysis

Based on the model hypothesis, the following paths were determined: One was the structural equation model path of the effect of two potential variables in the context of curriculum leadership on the input part of curriculum leadership. The second involved the structural equation model path of the influence of the four potential variables in the input section of curriculum leadership on the process section of curriculum leadership. The third was the structural equation model path of the influence of the seven potential variables in the curriculum leadership process on the curriculum leadership product. The fourth was the structural equation model path of the effect of the three potential variables in the curriculum leadership product section on the context section of curriculum leadership. The collected data and the software AMOS was applied to evaluate the hypothesis. The judgement standard is $P < 0.05$ (significance probability), which has an impact.

3.7 Ethical Consideration

Research ethics issues concern the ethical issues encountered by researchers in scientific research activities, such as right or wrong, good or bad, and should or should not (Xin, 2023). During the research process, the researcher concentrated on ethical issues, as their words and actions contain an

ethical concept that influenced the moral mindset and emotions of the research subjects and the public, resulting in ethical distress and impacting the reliability of research results.

During the research process, ethical principles were observed: autonomy, non-maleficence, beneficence, and impartiality. The following aspects were considered: First, respondents could withdraw from the study at any stage. Secondly, respondents must know everything before agreeing. Thirdly, the identity of the respondents remained hidden and protected. Fourthly, the researcher should not provide exaggerated research results. Fifth, respondents should not be harmed or pressured.

The present study applied for ethical clearance approval from UTAR by the ethical standards for academic research. After the ethical clearance approval was obtained, the questionnaire survey was implemented from April 2024.

3.8 Chapter Summary

This chapter primarily determined the research paradigm, research design, sampling plan, questionnaire preparation, and data collection and analysis methods via an overall consideration of the curriculum leadership evaluation model testing plan. Based on the joint use of document analysis and

questionnaire survey methods in the present study, which confirmed that the current study is a positivist research paradigm. Combined with the need for “curriculum leadership evaluation to correspond to the basic structural characteristics of higher education teaching activities and quality management”, a research design was established. Detailed explanations were provided for the sampling strategy and questionnaire preparation.

Based on the objectives of the study, a combination of descriptive statistical analysis, reliability and validity tests, exploratory factor analysis, and confirmatory factor analysis was applied in the data collection and analysis methods. This chapter provides methodological preparation for subsequent research.

CHAPTER FOUR

DATA ANALYSIS

4.1 Introduction

This chapter discusses the descriptive analysis and inferential analysis. Structural equation modelling (SEM) was employed to perform confirmatory factor analysis on data collected to analyse the effectiveness of the entire evaluation model. Finally, a hypothesis verification was conducted based on the hypotheses proposed in Chapter 2 to obtain better comprehension of the examination of curriculum leadership and educational quality management in universities.

4.2 Descriptive Analysis

The respondents in the present study are educators and administrators from 16 schools affiliated with the University of Sanya. A total of 560 questionnaires were distributed for this formal survey, where 524 were obtained and 512 were deemed valid, resulting in an effective response rate of 91.43%.

A total of 512 completed questionnaires were recorded in AMOS 26.0. The table below provides a descriptive statistical analysis of the basic information collected from the valid samples:

Table 4.1*Details of the Data Collection Procedure in the Actual Test*

Time	Process	Location	Way	Data Collection
August 20-25, 2024	Communicate with the Vice President (responsible for educational management) and the deans of each school	Office of the University	Telephone Communication	The effective response rate of the questionnaire is 91.34%, with no missing value questionnaires, and 12 questionnaires that are unwilling to participate in data analysis (based on the participants' wishes).
September 2, 2024 - October 15, 2024	Distribute questionnaires	School Conference Rooms School Work Groups	On-Site Instructions Scan the Code Online	

Table 4.2*Descriptive Statistics of Schools in Sample Data (N = 512)*

School	Sample Size	Percentage	Cumulative Percentage
School of Law	21	4.1	4.1
School of Sociology	16	3.1	7.2
School of Finance and Economics	35	6.8	14.1
School of Management	46	9	23
School of New Energy and Intelligent Connected Vehicles	64	12.5	35.5
School of Foreign Languages	59	11.5	47.1
School of Tourism and International Hotel Management	6	1.2	48.2
School of Humanities and Communication	23	4.5	52.7
School of Art	46	9	61.7
School of Music	40	7.8	69.5
School of Physical Education	24	4.7	74.2
School of Health Industry Management	37	7.2	81.4
School of Information and Intelligence Engineering	72	14.1	95.5
School of Saxo Fintech Business	7	1.4	96.9
School of Marxism	16	3.1	100

Total	512	100
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Table 4.3

Descriptive Statistics of Educator Characteristics in Sample Data (N = 512)

Classification	Content	Sample Size	Percentage	Cumulative Percentage
Title	Professor	54	10.5	10.5
	Deputy Professor	94	18.4	28.9
	Lecturer	124	24.2	53.1
	Assistant	118	23	76.2
	None	122	23.8	100
Position	Educators	388	75.8	75.8
	Administrators	124	24.2	100
Discipline	Philosophy	7	1.4	1.4
	Economics	17	3.3	4.7
	Law	39	7.6	12.3
	Education	38	7.4	19.7
	Literature	79	15.4	35.2
	History	3	0.6	35.7
	Science	32	6.3	42
	Engineering	109	21.3	63.3
	Agronomy	13	2.5	65.8
	Medical Science	28	5.5	71.3
	Management	76	14.8	86.1
	Art	71	13.9	100
Age	35 and below	219	42.8	42.8
	36 - 45 years old	212	41.4	84.2
	46 - 55 years old	43	8.4	92.6
	56 and above	38	7.4	100

The data in Table 4.2 demonstrates the sample distributions in all schools, among which the sample data of School of Tourism and International Hotel

Management ($n = 6$) and School of Saxo Fintech Business ($n = 7$) are relatively negligible, considering that the educators of these two schools participated in the small sample sampling. The School of Information and Intelligent Engineering had the largest number of samples ($n = 72$). The sample data also reveals that the discipline background of educators is mainly engineering, with overall similar number from engineering and humanities. The sample indicates that most educators hold intermediate or higher professional titles, and young and middle-aged educators are the main participants.

4.3 Confirmatory Factor Analysis

In order to test the fit of the pre-defined factor model with the actual data, or to test the ability of the factor model to fit the actual data, a confirmatory factor analysis was conducted using AMOS26.0. This analysis was performed based on a large sample of questionnaire survey data, which further tested the fit of the curriculum leadership evaluation model.

The structural equation model is a reflective model when the change of the item will not cause the change of the structural plane, nonetheless, the change of the structural plane will cause the change of the item. Therefore, the reflective structural equation model was adopted in the current study.

Within the confirmatory factor analysis of structural equation modelling,

additional assessments of convergence validity and discriminant validity are required. Convergence validity concerns the degree of aggregation of items within the same construct based on the Average Variance Extracted (AVE) and Composite Reliability (CR). Discriminant validity is a critical measure for determining the degree of differentiation between various latent variables. This measure is assessed by comparing the square root of the AVE of a factor with the correlation coefficients between that factor and other factors (Yang & Zhang, 2024).

4.3.1 Context Evaluation

The exploratory factor analysis discussed in the previous chapter indicates that the context evaluation section comprises two dimensions: Organisational Leadership and Measurement and Analysis. To further verify the accuracy and stability of this dimension partitioning, the present study employed confirmatory factor analysis for validation. Figure 4.1 and Tables 4.4-4.7 present the structural model, along with the fitting results and fitting indices.

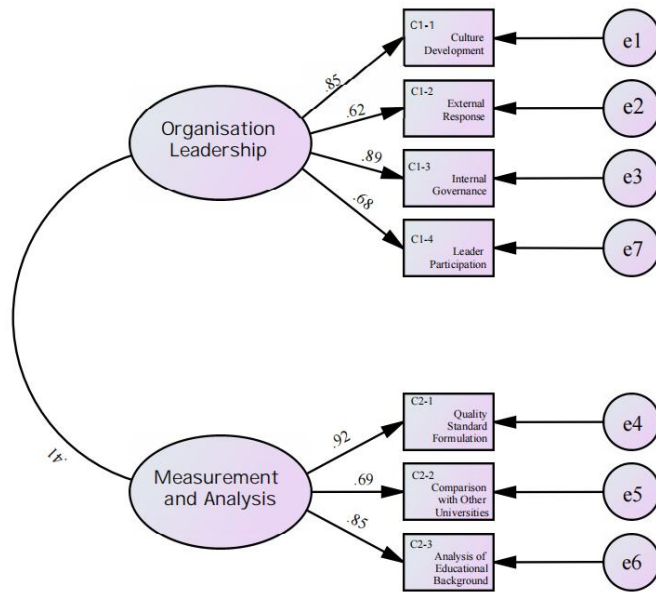


Figure 4.1 *Structural Model of Context Evaluation*

Table 4.4

The Fitting Results of the Context Evaluation Structural Model

			Standardised	S.E.	C.R.	p
Path			Path Coefficient			
Organisation Leadership	→	C1-1 Culture Development	.849			
Organisation Leadership	→	C1-2 External Response	.622	.048	14.845	***
Organisation Leadership	→	C1-3 Internal Governance	.885	.046	22.162	***
Organisation Leadership	→	C1-4 Leader Participation	.681	.051	16.490	***
Measurement and Analysis	→	C2-1 Quality Standard Formulation	.922			
Measurement and Analysis	→	C2-2 Comparison with Other Universities	.693	.046	18.456	***
Measurement and Analysis	→	C2-3 Analysis of Educational Background	.851	.038	24.396	***

In Table 4.4, the Standardised Path Coefficient reflects the explanatory power of latent variables on observed variables. The value range is [-1,1] (Wu, 2022), where a larger absolute value signifies a stronger relationship. A standardised path coefficient of ≥ 0.5 is acceptable. S.E. is the standard error of parameter estimation, which denotes the accuracy of parameter estimation and is a significant indicator for evaluating the reliability of factor analysis results. S.E. The smaller the better. C.R. is used to confirm whether each observed variable effectively measures the target factor. At a significance level of 0.05, $|C.R. | > 1.96$ (Wu, 2022) indicates significant parameter estimation. The data in Table 4.4 suggests that the analysis results meet the standard definition requirements, hence the model fits well.

Table 4.5

The Fitting Index of the Context Evaluation Structural Model

Absolute fitting index			Relative fitting index			
CMIN/DF	RMSEA	NFI	RFI	IFI	TLI	CFI
1.939	0.043	.986	.977	.993	.989	.993

In Table 4.5, the Absolute Fit Indices are a type of index used to evaluate the overall goodness of fit of the model. The indices directly measure the difference between the model and the data, denoting the absolute degree of fit of the model to the data. A smaller CMIN/DF, indicates a better fit between the model and the data. Generally, RMSEA value ≤ 0.08 is within the acceptable

range.

The relative fitting index is applied to measure the degree of improvement in the fit of the theoretical model relative to the benchmark model. A closer value to 1 signifies a better model fit. The value of this type of index ≥ 0.90 is within the acceptable range (Xiao, 2023).

The results from the context evaluation denote that the ratio of chi-square to degrees of freedom is 1.939, which is below the threshold of 3, indicating a good model fit (Wu, 2022). The RMSEA value is 0.043, which is below 0.08, further indicating a good fit (Wu, 2022). The relative fit indices, including NFI, RFI, IFI, TLI, and CFI, are 0.986, 0.977, 0.993, 0.989, and 0.993, respectively, all exceeding the acceptable level of 0.9 (see Table 3.6). Additionally, the path coefficients for each variable are significant at the $p < 0.001$ level. Based on a comprehensive evaluation of the above indicators, the division of the two dimensions of context evaluation is effective and fulfils the construct validity criteria.

Table 4.6

Test Results of Convergent Validity and Discriminant Validity Parameters for the Context Evaluation

Variable	Factor Loading				AVE	AVE SQRT	CR
Organisation Leadership (OL)	0.85	0.62	0.89	0.68	0.590	0.768	0.849

Measurement and Analysis (MA)	0.92	0.69	0.85	0.682	0.826	0.864
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Table 4.6 demonstrates that the CR of the two variables exceeds 0.7, and the AVE of variables OL and MA is over 0.5 (Yang & Zhang, 2024). The pieces of evidence reveal that the convergent validity of the model is good.

Table 4.7 depict a significant correlation between variables OL and MA. Comparing the square root of each dimension AVE (see Table 4.7) and the correlation coefficient between dimensions, the square root of each variable AVE is higher than the correlation coefficient of the variable (Wan et al., 2024). This result reveals a certain correlation between the dimensions of Context Evaluation with a certain degree of distinction between them.

Table 4.7

Variables Correlation Coefficient of Context Evaluation and the Square Root of AVE

Variable	OL	MA
OL	0.768	
MA	.363**	0.826

Note: ** At the 0.01 level (double tailed), the correlation is significant

4.3.2 Input Evaluation

The exploratory factor analysis discussed in the previous chapter indicates that the input evaluation section comprises four dimensions: Community

Development, Administrative Input, Educator Development, and Learner Growth. To further verify the accuracy and stability of this dimension partitioning, the present study employed confirmatory factor analysis for validation. Figure 4.2 and Tables 4.8-4.11 demonstrate the structural model, along with the fitting results and fitting indices.

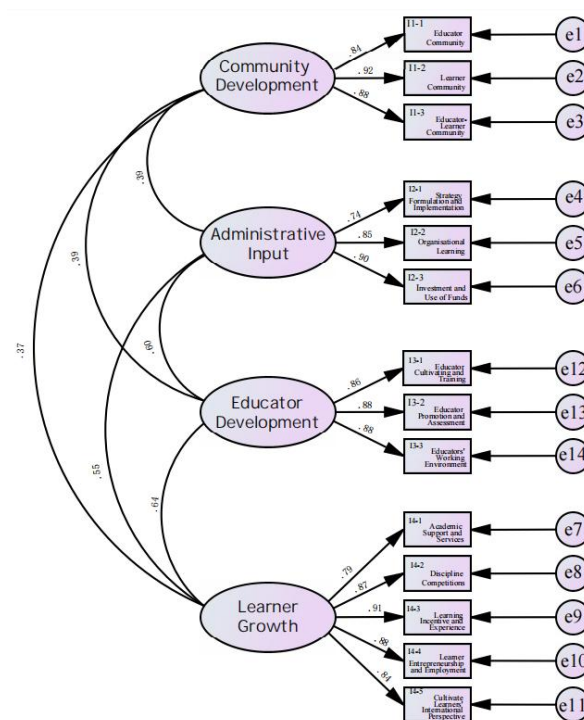


Figure 4.2 *Structural Model of Input Evaluation*

Table 4.8

The Fitting Results of the Input Evaluation Structural Model

	Path	Standardised Path Coefficient	S.E.	C.R.	p
Community Development	→ I1-1 Educator Community	.844			

Table 4.8 (Continued)

	Path	Standardised Path Coefficient	S.E.	C.R.	p
Community Development	→ I1-2 Learner Community	.917	.044	25.915	***
Community Development	→ I1-3 Educator-Learner Community	.878	.044	24.873	***
Administrative Input	→ I2-1 Strategy Formulation and Implementation	.742			
Administrative Input	→ I2-2 Organisational Learning	.847	.060	18.676	***
Administrative Input	→ I2-3 Investment and Use of Funds	.900	.061	19.558	***
Educator Development	→ I3-1 Educator Cultivating and Training	.864			
Educator Development	→ I3-2 Educator Promotion and Assessment	.878	.039	25.397	***
Educator Development	→ I3-3 Educators' Working Environment	.884	.041	25.700	***
Learner Growth	→ I4-1 Academic Support and Services	.788			
Learner Growth	→ I4-2 Discipline Competitions	.872	.047	22.725	***
Learner Growth	→ I4-3 Learning Incentive and Experience	.914	.049	24.079	***
Learner Growth	→ I4-4 Learner Entrepreneurship and Employment	.880	.052	22.721	***
Learner Growth	→ I4-5 Cultivate learners' International Perspective	.837	.056	21.181	***

The meaning of the indicators in Table 4.8 is similar to that in Table 4.4.

The data in Table 4.8 indicates that the data analysis results meet the standard definition requirements and that the model fits well.

Table 4.9

The Fitting Index of the Input Evaluation Structural Model

Absolute fitting index			Relative fitting index			
CMIN/DF	RMSEA	NFI	RFI	IFI	TLI	CFI
2.929	0.062	.963	.953	.976	.969	.975

The meanings of the indicators in Table 4.9 are similar to those in Table 4.5. The results from the input evaluation suggest that the ratio of chi-square to degrees of freedom is 2.929, which is under the threshold of 3, indicating a good model fit. The RMSEA value is 0.062, which is below 0.08, further indicating a good fit. The relative fit indices, including NFI, RFI, IFI, TLI, and CFI, are 0.963, 0.953, 0.976, 0.969, and 0.975, respectively, all exceeding the acceptable level of 0.9 (see Table 3.6). Additionally, the path coefficients for each variable are significant at the $p < 0.001$ level. Based on a comprehensive evaluation of the above indicators, the division of the two dimensions of context evaluation is effective and fulfils the construct validity criteria.

Table 4.10

Test Results of Convergent Validity and Discriminant Validity Parameters for the Input Evaluation

Variable	Factor Loading					AVE	AVE SQRT	CR
Community Development (COD)	0.84	0.92	0.88			0.839	0.916	0.912
Administrative Input (AI)	0.74	0.85	0.9			0.693	0.833	0.871
Educator Development (ED)	0.86	0.88	0.88			0.763	0.873	0.906
Learner Growth (LG)	0.79	0.87	0.91	0.88	0.84	0.738	0.859	0.934

Table 4.10 presents that the CR of the four variables exceeds 0.7, and the AVE value is over 0.5. The pieces of evidence denote that the convergent validity of the model is good.

Table 4.11

Variables Correlation Coefficient of Input Evaluation and the Square Root of AVE

Variable	COD	AI	ED	LG
COD	0.916			
AI	0.359**	0.833		
ED	0.353**	0.540**	0.873	
LG	0.349**	0.502**	0.588**	0.859

Note: ** At the 0.01 level (double tailed), the correlation is significant

Table 4.11 presents a significant correlation between the variables COD, AI, ED, and LG. Comparing the square root of each dimension AVE (see Table 4.11) with the correlation coefficient between the dimensions, the square root of each variable AVE exceeds the correlation coefficient of the variable. This

result suggests a certain correlation between the various dimensions of the input evaluation and a certain degree of distinction between them.

4.3.3 Process Evaluation

The exploratory factor analysis discussed in the previous chapter indicates that the process evaluation section comprises seven dimensions: Major Development, Curriculum Development, Teaching Management, Resource Development, Integration of Industry and Education, Academic Promotion, and Monitoring and Feedback. To further verify the accuracy and stability of this dimension partitioning, the current study employed confirmatory factor analysis for validation. Figure 4.3 and in Tables 4.12-4.15 present the structural model, along with the fitting results and fitting indices.

Table 4.12

The Fitting Results of the Process Evaluation Structural Model

			Standardized	S.E.	C.R.	p
Path		Path	Coefficient			
Major Development	→	Pc1-1 Position and Orientation of Major	.800			
Major Development	→	Pc1-2 Research on Talent Cultivation Needs	.856	.050	20.269	***
Major Development	→	Pc1-3 Major Talent Training Plan	.848	.054	20.122	***

Table 4.12 (Continued)

		Path	Standardized Path Coefficient	S.E.	C.R.	p
Curriculum Development	→	Pc2-1 Curriculum Vision and Planning	.871			
Curriculum Development	→	Pc2-2 Curriculum Design and	.888	.034	28.501	***
Curriculum Development	→	Pc2-3 Curriculum Reform	.845	.037	25.629	***
Curriculum Development	→	Pc2-4 Classroom Teaching	.878	.036	27.565	***
Curriculum Development	→	Pc2-5 Technology Application	.871	.034	26.896	***
Teaching Management	→	Pc3-1 Educator's Teaching Effort	.854			
Teaching Management	→	Pc3-2 Teaching Guidance, Observation and Assessment	.850	.041	24.258	***
Teaching Management	→	Pc3-3 Teaching Research and Reform	.901	.038	27.456	***
Teaching Management	→	Pc3-4 Development of Interdisciplinary Teaching Team	.862	.042	25.133	***
Resource Development	→	Pc4-1 Teaching Facilities and Conditions	.812			
Resource Development	→	Pc4-2 Course Database	.793	.051	18.675	***
Resource Development	→	Pc4-3 Academic Resources	.834	.059	19.118	***
Integration of Industry and Education	→	Pc5-1 Development Mechanism	.875			
Integration of Industry and Education	→	Pc5-2 Learning Scenarios and Environments	.873	.041	25.274	***
Integration of Industry and Education	→	Pc5-3 Application of Achievements	.835	.040	23.597	***

Table 4.12 (Continued)

		Path	Standardized Path Coefficient	S.E.	C.R.	p
Academic Promotion	→	Pc6-1 Academic Assignment	.847			
Academic Promotion	→	Pc6-2 Innovation and Entrepreneurship Education for learners	.877	.044	22.966	***
Academic Promotion	→	Pc6-3 Experiential Learning	.740	.048	18.182	***
Monitoring and Feedback	→	Pc7-1 Teaching and Learning Quality Monitoring	.831			
Monitoring and Feedback	→	Pc7-2 Quality Information Feedback	.761	.071	14.106	***
Monitoring and Feedback	→	Pc7-3 Quality Improvement	.705	.070	13.455	***

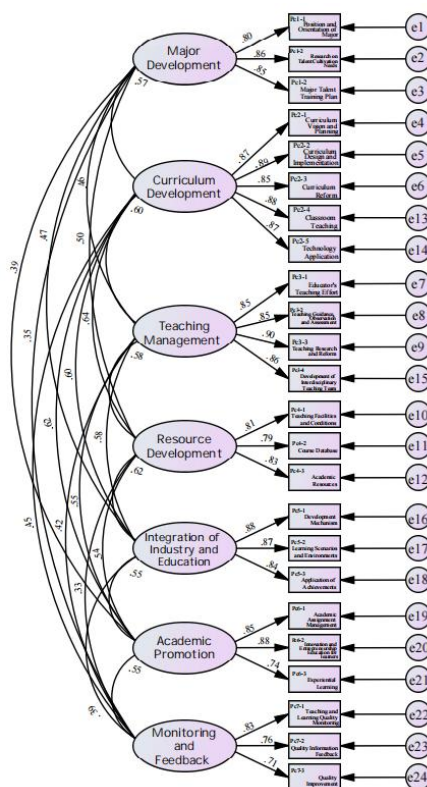


Figure 4.3 *Structural Model of Process Evaluation*

The meaning of the indicators in Table 4.12 is similar to that in Table 4.4. The data in Table 4.12 presents that the data analysis results fulfil the standard definition requirements, where the model fits well.

Table 4.13

The Fitting Index of the Process Evaluation Structural Model

Absolute fitting index			Relative fitting index			
CMIN/DF	RMSEA	NFI	RFI	IFI	TLI	CFI
2.367	0.052	.941	.929	.965	.958	.965

The meanings of the indicators in Table 4.13 are similar to those in Table 4.5. The results from the input evaluation indicate that the ratio of chi-square to degrees of freedom is 2.367, which is under the threshold of 3, indicating a good model fit. The RMSEA value is 0.052, which is below 0.08, further indicating a good fit. The relative fit indices, including NFI, RFI, IFI, TLI, and CFI, are 0.941, 0.929, 0.965, 0.958, and 0.965, respectively, all exceeding the acceptable level of 0.9 (see Table 3.6). Additionally, the path coefficients for each variable are significant at the $p < 0.001$ level. Based on a comprehensive evaluation of the above indicators, the division of the two dimensions of context evaluation is effective and fulfils the construct validity criteria.

Table 4.14

Test Results of Convergent Validity and Discriminant Validity Parameters for the Process Evaluation

Variable	Factor Loading					AVE	AVE SQRT	CR
Major Development (MD)	0.80	0.86	0.85			0.701	0.837	0.875
Curriculum Development (CD)	0.87	0.89	0.85	0.88	0.87	0.761	0.872	0.941
Teaching Management (TM)	0.85	0.85	0.9	0.86		0.749	0.865	0.923
Resource Development (RD)	0.81	0.79	0.83			0.656	0.810	0.851
Integration of Industry and Education (IIE)	0.88	0.87	0.84			0.746	0.864	0.898
Academic Promotion (AP)	0.85	0.88	0.74			0.682	0.826	0.865
Monitoring and Feedback (MF)	0.83	0.76	0.71			0.590	0.768	0.811

Table 4.14 reveals that the CR of the seven variables exceeds 0.7, and the AVE values are over 0.5. The pieces of evidence denote that the convergent validity of the model is good.

Table 4.15

Variables Correlation Coefficient of Process Evaluation and the Square Root of AVE

Variable	MD	CUD	TM	RD	IIE	AP	MF
MD	0.837						
CUD	.518**	0.872					
TM	.414**	.617**	0.865				
RD	.431**	.574**	.516**	0.810			
IIE	.417**	.553**	.535**	.536**	0.864		
AP	.350**	.562**	.492**	.472**	.499**	0.826	

MF	.271**	.365**	.334**	.252**	.319**	.449**	0.768
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Note: ** At the 0.01 level (double tailed), the correlation is significant.

Table 4.15 presents significant correlations between variables MD, CUD, TM, RD, IIE, AP, and MF. Comparing the square root of each dimension AVE (see Table 4.15) with the correlation coefficient between dimensions, the square root of each variable AVE exceeds the correlation coefficient of the variable. This result signifies a certain correlation between the dimensions of process evaluation with a certain degree of distinction between them.

4.3.4 Product Evaluation

The exploratory factor analysis in the previous chapter indicates that the product evaluation section comprises three dimensions: Evaluation of Government and Society, Teaching Effectiveness, and Cultural Formation. The present study employed confirmatory factor analysis for validation to further verify the accuracy and stability of this dimension partitioning. Figure 4.4 and Tables 4.16-4.19 present the structural model, along with the fitting results and fitting indices.

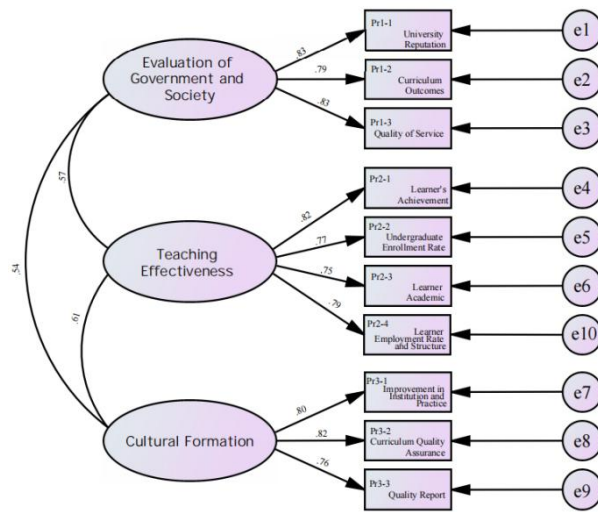


Figure 4.4 Structural Model of Product Evaluation

Table 4.16

The Fitting Results of the Process Evaluation Structural Model

Path		Standardized Path Coefficient	S.E.	C.R.	p
Evaluation of Government and Society	→ Pr1-1 University Reputation	.834			
Evaluation of Government and Society	→ Pr1-2 Curriculum Outcomes	.794	.053	19.093	***
Evaluation of Government and Society	→ Pr1-3 Quality of Service	.828	.051	19.737	***
Teaching Effectiveness	→ Pr2-1 Learner's Achievement	.818			
Teaching Effectiveness	→ Pr2-2 Undergraduate Enrolment Rate	.769	.060	17.732	***
Teaching Effectiveness	→ Pr2-3 Learner Academic	.754	.061	17.484	***

Table 4.16 (continued)

		Standardized Path Coefficient	S.E.	C.R.	p
Teaching Effectiveness	→ Pr2-4				
	→ Learner Employment Rate and Structure	.793	.047	19.459	***
Cultural Formation	→ Pr3-1				
	→ Improvement in Institution and Practice	.804			
Cultural Formation	→ Pr3-2				
	→ Curriculum Quality Assurance	.823	.057	18.228	***
Cultural Formation	→ Pr3-3				
	→ Quality Report	.756	.061	16.747	***

The meaning of the indicators in Table 4.16 is similar to that in Table 4.4.

The data in Table 4.16 demonstrates that the data analysis results fulfil the standard definition requirements and the model fits well.

Table 4.17

The Fitting Index of the Process Evaluation Structural Model

Absolute fitting index			Relative fitting index			
CMIN/DF	RMSEA	NFI	RFI	IFI	TLI	CFI
2.568	0.055	.969	.957	.981	.973	.981

The meanings of the indicators in Table 4.17 are similar as those in Table 4.5. The results from the input evaluation suggest that the ratio of chi-square to degrees of freedom is 2.568, which is under the threshold of 3, indicating a

good model fit. The RMSEA value is 0.055, which is below 0.08, further suggesting a good fit. The relative fit indices, including NFI, RFI, IFI, TLI, and CFI, are 0.969, 0.957, 0.981, 0.973, and 0.981, respectively, all exceeded the acceptable level of 0.9 (see Table 3.6). Additionally, the path coefficients for each variable are significant at the $p < 0.001$ level. Based on a comprehensive evaluation of the above indicators, the division of the two dimensions of context evaluation is effective and fulfil the construct validity criteria.

Table 4.18

Test Results of Convergent Validity and Discriminant Validity Parameters for the Product Evaluation

Variable	Factor Loading				AVE	AVE SQRT	CR
Evaluation of Government and Society (EGS)	0.83	0.79	0.83		0.667	0.817	0.857
Teaching Effectiveness (TE)	0.82	0.77	0.75	0.79	0.613	0.783	0.864
Cultural Formation (CF)	0.8	0.82	0.76		0.630	0.794	0.836

Table 4.18 reveals that the CR of the three variables all exceeds 0.7, and the AVE values are all over 0.5. The results indicate that the convergent validity of the model is good.

Table 4.19 presents significant correlations between variables EGS, TE, and CF. Comparing the square root of each dimension AVE (see Table 4.19) with the correlation coefficient between dimensions, the square root of each

variable AVE exceeds the correlation coefficient of the variable. This result denotes a certain correlation between the dimensions of product evaluation with a certain degree of distinction between them.

Table 4.19

Variables Correlation Coefficient of Product Evaluation and the Square Root of AVE

Variable	EGS	TE	CF
EGS	0.817		
TE	.481**	0.783	
CF	.454**	.507**	0.794

Note: ** At the 0.01 level (double tailed), the correlation is significant

4.4 Path Analysis and Hypothesis Testing

A path analysis on the relationship between the four parts needs to be conducted to further comprehend the influence of the various elements of the curriculum leadership evaluation model and verify the path model hypothesis in the previous article (Chapter 2). The present study employed structural equation modelling and regression analysis to analyse the path interaction relationships between numerous parts to guide practice.

Before conducting data analysis using structural equation modelling, examining the validity and reasonableness of the sample data is crucial. The maximum likelihood (ML) method is employed in structural equation

modelling as the approach for parameter estimation. This method stems from the consistency of maximum likelihood estimators, the minimal variance of ML estimators, and their asymptotic normality (Richard, 2024). The strategy also enables a reasonable estimation of the unknown parameters underlying the theoretical model. Nonetheless, a sample size exceeding 100 is needed and the data conform must conform to a normal distribution (Zhu, 2026; Richard, 2024).

The skewness and kurtosis tests of 512 in the formal sample data using SPSS 27.0 denoted that the sample data fulfilled the requirements of normal distribution, with an absolute skewness of below 3 and an absolute kurtosis of under 10 (Wu, 2022) (see Table 4.20). A Pearson correlation analysis was conducted on 16 latent variables, as presented in Table 4.21. Based on the Pearson correlation coefficient table, a significant correlation exists between the 16 latent variables in the curriculum leadership evaluation model to conduct further path analysis.

The present study primarily involves data collection from two groups at the university: educators and administrators. Therefore, “position” was employed as a control variable, with one-way analysis of variance (ANOVA) used to analyse its influence on each latent variable. In Table 4-22 (based on the mean), the significance levels exceed 0.05 (Xiao, 2023), indicating that the

data are suitable for one-way analysis. Concurrently, in Table 4.23, all significance levels exceed 0.05 (Xiao, 2023), indicating that the various positions of educators and administrators do not yield any notable variances in curriculum leadership.

Table 4.20

Kurtosis and Skewness of Sample Data

Variables	Number of Samples	Skewness	Kurtosis
C1-1 Culture Development	512	-.539	1.160
C1-2 External Response	512	-.497	1.341
C1-3 Internal Governance	512	-.533	1.474
C1-4 Leader Participation	512	-.381	.540
C2-1 Quality Standard Formulation	512	-.782	.556
C2-2 Comparison with Other Universities	512	-.335	-.677
C2-3 Analysis of Educational Background	512	-.978	1.283
I1-1 Educator Community	512	-.353	.507
I1-2 Learner Community	512	-.171	.064
I1-3 Educator-Learner Community	512	-.194	.044
I2-1 Strategy Formulation and Implementation	512	-.433	.345
I2-2 Organisational Learning	512	-.456	.184
I2-3 Investment and Use of Funds	512	-.464	.425
I3-1 Educator Cultivating and Training	512	-.585	.663
I3-2 Educator Promotion and Assessment	512	-.597	.786
I3-3 Educators' Working Environment	512	-.578	.502
I4-1 Academic Support and Services	512	-.670	1.237
I4-2 Discipline Competitions	512	-.528	.320
I4-3 Learning Incentive and Experience	512	-.851	1.896
I4-4 Learner Entrepreneurship and Employment	512	-.702	1.159
I4-5 Cultivate Learners' International Perspective	512	-.526	.461
Pc1-1 Position and Orientation of Major	512	-.300	.645
Pc1-2 Research on Talent Cultivation Needs	512	-.391	1.115
Pc1-3 Major Talent Training Plan	512	-.284	.524
Pc2-1 Curriculum Vision and Planning	512	-.419	.059
Pc2-2 Curriculum Design and Implementation	512	-.519	.677

Table 4.20 (Continued)

Variables	Number of Samples	Skewness	Kurtosis
Pc2-3 Curriculum Reform	512	-.401	.261
Pc2-4 Classroom Teaching	512	-.374	.189
Pc2-5 Technology Application	512	-.564	1.074
Pc3-1 Educator's Teaching Effort	512	-.609	1.950
Pc3-2 Teaching Guidance, Observation, and Assessment	512	-.665	1.975
Pc3-3 Teaching Research and Reform	512	-.623	2.021
Pc3-4 Development of Interdisciplinary Teaching Team	512	-.284	.861
Pc4-1 Teaching Facilities and Conditions	512	-.350	.515
Pc4-2 Course Database	512	-.377	.695
Pc4-3 Academic Resources	512	-.283	-.141
Pc5-1 Development Mechanism	512	-.272	.278
Pc5-2 Learning Scenarios and Environments	512	-.160	-.012
Pc5-3 Application of Achievements	512	-.410	.580
Pc6-1 Academic Assignment Management	512	-.397	.773
Pc6-2 Innovation and Entrepreneurship Education for learners	512	-.411	.913
Pc6-3 Experiential Learning	512	-.297	.214
Pc7-1 Teaching and Learning Quality Monitoring	512	-.428	1.600
Pc7-2 Quality Information Feedback	512	-.619	1.858
Pc7-3 Quality Improvement	512	-.475	.844
Pr1-1 University Reputation	512	-1.807	4.700
Pr1-2 Curriculum Outcomes	512	-1.467	3.114
Pr1-3 Quality of Service	512	-1.657	4.132
Pr2-1 Learner's Achievement	512	-1.261	3.352
Pr2-2 Undergraduate Enrolment Rate	512	-.818	1.137
Pr2-3 Learner Academic	512	-.522	.682
Pr2-4 Learner Employment Rate and Structure	512	-1.578	5.685
Pr3-1 Improvement in Institution and Practice	512	-1.103	2.340
Pr3-2 Curriculum Quality Assurance	512	-1.210	2.539
Pr3-3 Quality Report	512	-.694	2.106

Table 4.21*Pearson Correlation Analysis Between Variables in the Curriculum Leadership Evaluation Model*

Variable	Mean	Standard Deviation	OL	MA	COD	AI	ED	LG	MD	CUD	TM	RD	IIE	AP	MF	EGS	TE	CF
OL	4.111	0.545	1															
MA	4.238	0.648	.363**	1														
COD	3.787	0.643	.309**	.343**	1													
AI	3.989	0.660	.342**	.399**	.359**	1												
ED	3.940	0.726	.357**	.410**	.353**	.540**	1											
LG	4.114	0.636	.394**	.431**	.349**	.502**	.588**	1										
MD	3.904	0.570	.370**	.348**	.263**	.387**	.426**	.426**	1									
CUD	4.060	0.631	.442**	.451**	.365**	.514**	.498**	.497**	.518**	1								
TM	3.809	0.577	.358**	.377**	.293**	.372**	.442**	.429**	.414**	.617**	1							
RD	3.960	0.611	.336**	.351**	.238**	.386**	.344**	.390**	.431**	.574**	.516**	1						
IIE	3.776	0.691	.346**	.390**	.275**	.433**	.423**	.424**	.417**	.553**	.535**	.536**	1					
AP	3.910	0.579	.371**	.368**	.356**	.424**	.420**	.513**	.350**	.562**	.492**	.472**	.499**	1				
MF	3.900	0.527	.332**	.340**	.359**	.358**	.385**	.448**	.271**	.365**	.334**	.252**	.319**	.449**	1			
EGS	3.706	0.490	.263**	.273**	.322**	.290**	.296**	.340**	.251**	.357**	.228**	.181**	.223**	.303**	.349**	1		

TE	3.652	0.519	.220**	.312**	.264**	.244**	.334**	.370**	.298**	.364**	.266**	.224**	.278**	.320**	.304**	.481**	1	
CF	3.801	0.470	.320**	.336**	.339**	.311**	.405**	.450**	.385**	.402**	.317**	.275**	.304**	.375**	.352**	.454**	.507**	1

Note: (1) The correlation coefficient is a symmetric matrix, so only one side of the data is retained. (2)**. The correlation is significant at 0.01 (level).

(3) Abbreviations of variables and indicators:

Abbreviation	Full name of variable	Abbreviation	Full name of variable	Abbreviation	Full name of variable
OL _	Organisation Leadership	MD _	Major Development	MF _	Monitoring and Feedback
MA _	Measurement and Analysis	CUD _	Curriculum Development	EGS _	Evaluation of Government and Society
COD _	Community Development	TM _	Teaching Management	TE _	Teaching Effectiveness
AI _	Administrative Input	RD _	Resource Development	CF _	Cultural Formation
ED _	Educator Development	IIE _	Integration of Industry and Education		
LG _	Learner Growth	AP _	Academic Promotion		

Table 4.22*Homogeneity Test of Variance*

		Levene's Statistic	p
OL	Based on the mean	.336	.564
	Based on the median	.255	.615
	Based on the median with adjusted degrees of freedom	.255	.615
	Based on the trimmed mean	.357	.551
MA	Based on the mean	.068	.795
	Based on the median	.086	.770
	Based on the median with adjusted degrees of freedom	.086	.770
	Based on the trimmed mean	.098	.754
COD	Based on the mean	.179	.673
	Based on the median	.454	.502
	Based on the median with adjusted degrees of freedom	.454	.502
	Based on the trimmed mean	.150	.700
AI	Based on the mean	.049	.825
	Based on the median	.008	.928
	Based on the median with adjusted degrees of freedom	.008	.928
	Based on the trimmed mean	.051	.822
ED	Based on the mean	2.667	.105
	Based on the median	2.144	.146
	Based on the median with adjusted degrees of freedom	2.144	.146
	Based on the trimmed mean	2.745	.100
LG	Based on the mean	2.162	.144
	Based on the median	.822	.367
	Based on the median with adjusted degrees of freedom	.822	.367
	Based on the trimmed mean	1.938	.167
MD	Based on the mean	1.388	.241
	Based on the median	1.024	.314
	Based on the median with adjusted degrees of freedom	1.024	.314
	Based on the trimmed mean	.851	.358
CUD	Based on the mean	1.962	.164
	Based on the median	3.782	.054
	Based on the median with adjusted degrees of freedom	3.782	.054
	Based on the trimmed mean	1.750	.189
TM	Based on the mean	1.246	.267
	Based on the median	.268	.606
	Based on the median with adjusted degrees of freedom	.268	.606
	Based on the trimmed mean	1.419	.236

Table 4.22 (Continued)

RD	Based on the mean	.448	.505
	Based on the median	.011	.917
	Based on the median with adjusted degrees of freedom	.011	.917
	Based on the trimmed mean	.699	.405
IIH	Based on the mean	.543	.463
	Based on the median	1.230	.270
	Based on the median with adjusted degrees of freedom	1.230	.270
	Based on the trimmed mean	.715	.399
AP	Based on the mean	.009	.925
	Based on the median	.004	.952
	Based on the median with adjusted degrees of freedom	.004	.952
	Based on the trimmed mean	.016	.898
MF	Based on the mean	2.088	.151
	Based on the median	1.205	.275
	Based on the median with adjusted degrees of freedom	1.205	.275
	Based on the trimmed mean	1.919	.169
EGS	Based on the mean	.080	.777
	Based on the median	.182	.670
	Based on the median with adjusted degrees of freedom	.182	.670
	Based on the trimmed mean	.136	.713
TE	Based on the mean	1.068	.304
	Based on the median	.678	.412
	Based on the median with adjusted degrees of freedom	.678	.412
	Based on the trimmed mean	1.575	.212
CF	Based on the mean	1.318	.253
	Based on the median	.233	.361
	Based on the median with adjusted degrees of freedom	.233	.361
	Based on the trimmed mean	1.216	.193

Table 4.23

One-Way Analysis of Variance (ANOVA) Examining the Influence of Position on Context, Input, Process, and Product

		Sum of squares	Degree of Freedom	Mean Square	F	p
OL	Intergroup	.010	1	.010	.002	.963
	In group	2430.347	510	4.765		
	Total	2430.357	511			
MA	Intergroup	13.488	1	13.488	3.592	.059
	In group	1915.307	510	3.756		

Table 4.23 (Continued)

		Sum of squares	Degree of Freedom	Mean Square	F	p
COD	Total	1928.795	511			
	Intergroup	7.619	1	7.619	.769	.361
	In group	5157.867	510	9.356		
AI	Total	5235.119	511			
	Intergroup	2.630	1	2.630	.699	.343
	In group	1448.743	510	3.527		
ED	Total	1674.492	511			
	Intergroup	7.597	1	7.597	1.602	.206
	In group	2417.872	510	4.741		
LG	Total	2425.469	511			
	Intergroup	17.475	1	17.475	1.729	.189
	In group	5154.132	510	10.106		
MD	Total	5171.607	511			
	Intergroup	1.151	1	1.151	.392	.531
	In group	1495.644	510	2.933		
CUD	Total	1496.795	511			
	Intergroup	8.311	1	8.311	.835	.361
	In group	5076.969	510	9.955		
TM	Total	5085.279	511			
	Intergroup	5.121	1	5.121	.961	.327
	In group	2716.754	510	5.327		
RD	Total	2721.875	511			
	Intergroup	2.730	1	2.730	.813	.368
	In group	1711.763	510	3.356		
IIE	Total	1714.492	511			
	Intergroup	5.784	1	5.784	1.346	.246
	In group	2191.091	510	4.296		
AP	Total	2196.875	511			
	Intergroup	.994	1	.994	.329	.566
	In group	1540.270	510	3.020		
MF	Total	1541.264	511			
	Intergroup	3.972	1	3.972	.895	.301
	In group	2073.962	510	3.799		
EGS	Total	2209.775	511			
	Intergroup	.032	1	.032	.017	.895
	In group	1265.054	510	1.730		
TE	Total	1372.017	511			
	Intergroup	4.073	1	4.073	.945	.331
	In group	2197.802	510	4.309		

	Total	2201.875	511			
CF	Intergroup	.013	1	.013	.007	.935
	In group	1015.104	510	1.990		
	Total	1015.117	511			

4.4.1 Impact of Context Evaluation on Input Evaluation

The confirmatory analysis results reveal that the context evaluation section primarily comprises two dimensions: Organisational Leadership and Measurement and Analysis. Therefore, the present study explored the impact of context evaluation on input evaluation from these two dimensions to validate the hypothesis proposed in the previous article:

H1: A significant relationship exists between context evaluation and input evaluation of curriculum leadership in the University of Sanya, China.

In summary, the following were discussed:

H1-1: Organisational Leadership has a significant impact on Input Evaluation.

H1-2: Measurement and Analysis have a significant impact on Input Evaluation.

Based on the above hypotheses, the present study established a path

diagram of the structural equation model for the impact of context evaluation on input evaluation (see Figure 4.5) and employed AMOS 26.0 to evaluate the assumptions. The two latent variables of organisational leadership and measurement and analysis are exogenous (the names in the structural model are the same below). The four latent variables of community construction, administrative input, educator development, and learner growth are endogenous (the names in the structural model are the same below). Table 4.23 presents the model fitting results.

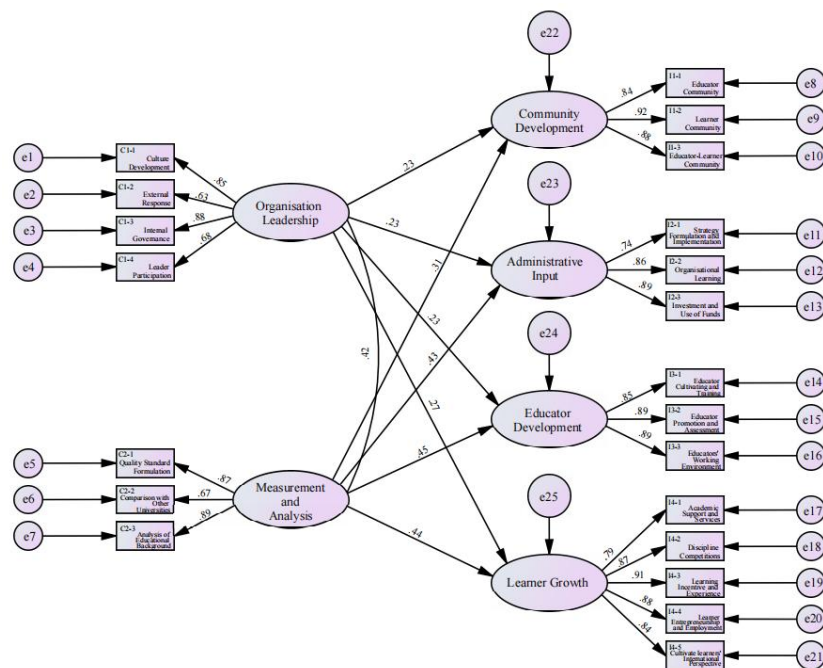


Figure 4.5 Path Structure Model of the Impact of Context Evaluation on Input Evaluation

In Table 4.23, the Standardised Path Coefficient is a core parameter in the

SEM that reflects the strength and direction of the causal relationship between variables, with a value range of $[-1, 1]$. A larger absolute value yields a stronger relationship (Wu, 2022). The path coefficient of 0.2-0.3 is common and may be significant, while ≥ 0.5 is a strong effect (Kline, 2023). S.E. (Standard Error) is a vital indicator denoting the accuracy of the path coefficient estimation. The path coefficient estimation with a smaller S.E. is more stable (McNeish & Wolf, 2023). C.R. (Critical Ratio) is the core indicator for measuring the statistical significance of the path coefficient. At the 0.05 significance level, a $|C.R.| > 1.96$ indicates significant parameter estimation (Wu, 2022). Moreover, paths with larger C.R. values are more statistically robust (McNeish & Wolf, 2023).

Table 4.24

Fitting Results of the Relationship Between Context Evaluation and Input Evaluation

		Standardised				
Path		Path	S.E.	C.R.	p	Conclusion
		Coefficient				
Organisation Leadership	→ Community Development	.234	.052	4.546	***	Support
Organisation Leadership	→ Administrative Input	.233	.050	4.536	***	Support
Organisation Leadership	→ Educator Development	.227	.059	4.587	***	Support
Organisation Leadership	→ Learner Growth	.269	.046	5.580	***	Support
Measurement and Analysis	→ Community Development	.313	.049	6.000	***	Support
Measurement and Analysis	→ Administrative Input	.435	.049	8.093	***	Support
Measurement and Analysis	→ Educator Development	.455	.056	9.009	***	Support

Measurement and Analysis	→ Learner Growth	.436	.045	8.786	***	Support
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The fitting results demonstrate that among the paths of context evaluation on input evaluation, a total of 8 (all) paths are significant at the level of $P < 0.05$. Specifically, “organisation leadership” has a positive relationship with “community development”, “administrative input”, “educator development”, and “learner growth”. Organisational leadership has a positive promoting effect on input evaluation. Similarly, measurement and analysis also yield a positive promoting effect on input evaluation, thus supporting hypothesis H1. Both organisation leadership and measurement and analysis have a significant impact on input assessment. Context evaluation has a significant impact on input evaluation.

4.4.2 Impact of Input Evaluation on Process Evaluation

The confirmatory analysis results demonstrate that the input evaluation section primarily comprises four dimensions: Community Development, Administrative Input, Educator Development, and Learner Growth. Therefore, the current study explored the impact of input evaluation on process evaluation based on these four dimensions to verify the hypothesis proposed in the previous article:

H2: A significant relationship exists between input evaluation and process evaluation of curriculum leadership in the University of Sanya,

China.

The following were discussed:

H2-1: Community Development has a significant impact on Process Evaluation.

H2-2: Administrative Input has a significant impact on Process Evaluation.

H2-3: Educator Development has a significant impact on Process Evaluation.

H2-4: Learner Growth has a significant impact on Process Evaluation.

Based on the above assumptions, the present study developed a path diagram of the structural equation model for the impact of input evaluation on process evaluation (see Figure 4.6) and employed AMOS 26.0 to assess the assumptions. The four latent variables of community development, administrative input, educator development, and learner growth are exogenous. The seven latent variables of major development, curriculum development, teaching management, resource development, integration of industry and education, academic promotion, and monitoring and feedback are endogenous.

Table 4.25 presents the model fitting results.

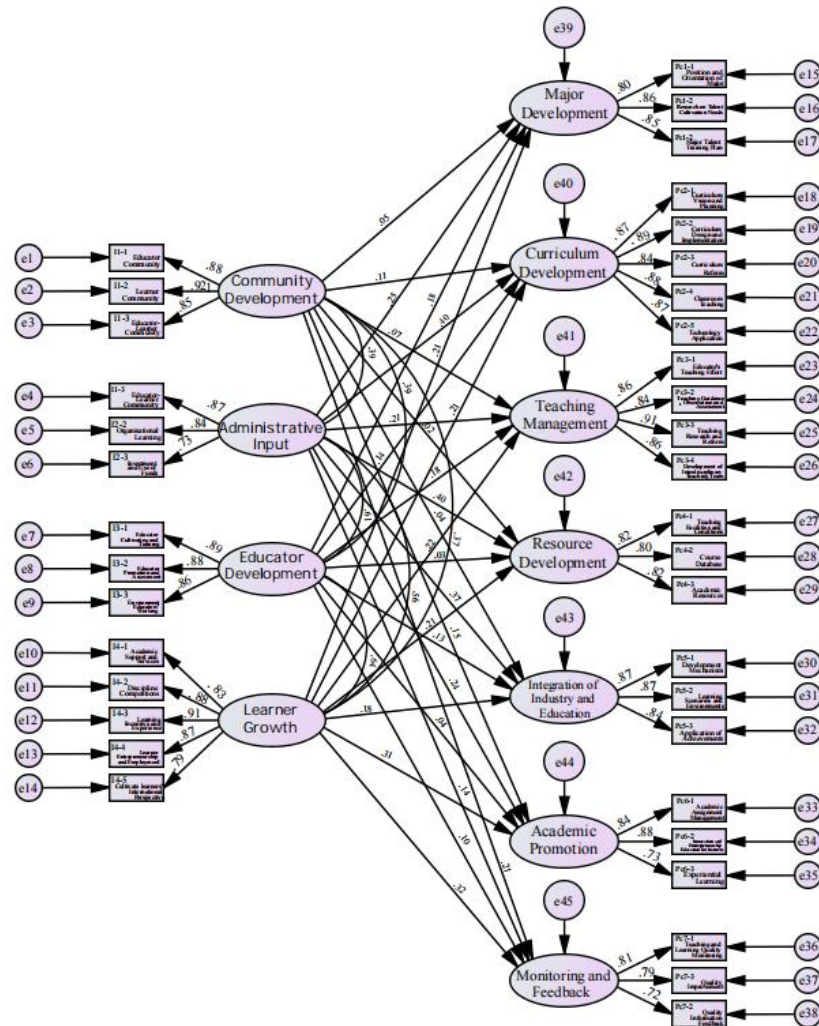


Figure 4.6 Path Structure Model of the Impact of Input Evaluation on Process Evaluation

Table 4.25

The Results of the Relationship Between Input Evaluation and Process Evaluation

			Standardised				
	Path		Path Coefficient	S.E.	C.R.	p	Conclusion
Community Development	→	Major Development	.047	.043	.976	.329	Not supported
Community Development	→	Curriculum Development	.111	.047	2.646	.008	Supported
Community Development	→	Teaching Management	.074	.044	1.591	.112	Not supported
Community Development	→	Resource Development	.024	.048	.483	.629	Not supported
Community Development	→	Integration of Industry and Education	.035	.055	.750	.454	Not supported
Community Development	→	Academic Promotion	.146	.045	3.177	.001	Supported
Community Development	→	Monitoring and Feedback	.211	.040	4.269	***	Supported
Administrative Input	→	Major Development	.254	.064	3.736	***	Supported
Administrative Input	→	Curriculum Development	.401	.078	6.044	***	Supported
Administrative Input	→	Teaching Management	.240	.069	3.460	***	Supported
Administrative Input	→	Resource Development	.400	.079	5.090	***	Supported
Administrative Input	→	Integration of Industry and Education	.371	.087	5.149	***	Supported
Administrative Input	→	Academic Promotion	.244	.068	3.678	***	Supported
Administrative Input	→	Monitoring and Feedback	.145	.055	2.247	.025	Supported
Educator Development	→	Major Development	.183	.051	2.716	.007	Supported
Educator Development	→	Curriculum Development	.135	.057	2.233	.026	Supported

Table 4.25 (Continued)

		Standardised	S.E.	C.R.	p	Conclusion
Path	Path	Coefficient				
Educator Development	→ Teaching Management	.182	.053	2.740	.006	Supported
Educator Development	→ Resource Development	.026	.058	.365	.715	Not supported
Educator Development	→ Integration of Industry and Education	.126	.065	1.870	.062	Not supported
Educator Development	→ Academic Promotion	.038	.053	.584	.559	Not supported
Educator Development	→ Monitoring and Feedback	.096	.046	1.438	.151	Not supported
Learner Growth	→ Major Development	.207	.058	3.356	***	Supported
Learner Growth	→ Curriculum Development	.206	.063	3.850	***	Supported
Learner Growth	→ Teaching Management	.224	.059	3.754	***	Supported
Learner Growth	→ Resource Development	.208	.065	3.229	.001	Supported
Learner Growth	→ Integration of Industry and Education	.183	.073	3.049	.002	Supported
Learner Growth	→ Academic Promotion	.368	.061	6.161	***	Supported
Learner Growth	→ Monitoring and Feedback	.318	.055	4.965	***	Supported

In Table 4.25, the meaning of the parameters is similar to that in Table 4.24 (see page 164). The fitting results reveal that among the paths of input evaluation on process evaluation, 20 paths are significant at the level of $P < 0.05$, and 8 paths are not significant at the level of $P < 0.05$.

Specifically, “administrative input” and “learner growth” have positive promoting effects on “major development”, “curriculum development”, “teaching management”, “resource development”, “integration of industry and education”, “academic promotion”, and “monitoring and feedback” respectively. Nonetheless, “community development” only yields a positive promoting effect on “curriculum development”, “academic promotion”, and “monitoring and feedback”. Similarly, “teacher development” only yields a positive promoting effect on “major development”, “curriculum development”, and “teaching management”. Therefore, administrative input and learner growth have a significant impact on process evaluation, while community development and educator development have a partial impact on process evaluation. Therefore, input evaluation has a significant impact on process evaluation, thus supporting hypothesis H2.

4.4.3 Impact of Process Evaluation on Product Evaluation

The confirmatory analysis results indicate that the process evaluation part primarily comprises seven dimensions: Major Development, Curriculum Development, Teaching Management, Resource Development, Integration of Industry and Education, Academic Promotion, and Monitoring and Feedback. Therefore, the present study examined the impact of process evaluation on product evaluation based on these seven dimensions to validate the hypothesis in the previous section:

H3: A significant relationship exists between process evaluation and product evaluation of curriculum leadership in the University of Sanya, China.

The following were discussed:

H3-1: Major Development has a significant impact on Product Evaluation.

H3-2: Curriculum Development has a significant impact on Product Evaluation.

H3-3: Teaching Management has a significant impact on Product Evaluation.

H3-4: Resource Development has a significant impact on Product Evaluation.

H3-5: Integration of Industry and Education has a significant impact on Product Evaluation.

H3-6: Academic Promotion has a significant impact on Product Evaluation.

H3-7: Monitoring and Feedback has a significant impact on Product Evaluation.

Based on the above assumptions, the current study established a path diagram of the structural equation model for the impact of process evaluation on product evaluation (see Figure 4.7) and employed AMOS 26.0 to evaluate the assumptions. The seven latent variables of major development, curriculum development, teaching management, resource development, integration of industry and education, academic promotion, and monitoring and feedback are exogenous. The three latent variables of evaluation of government and society, teaching effectiveness, and cultural formation are endogenous. The model fitting results are presented in Table 4.26.

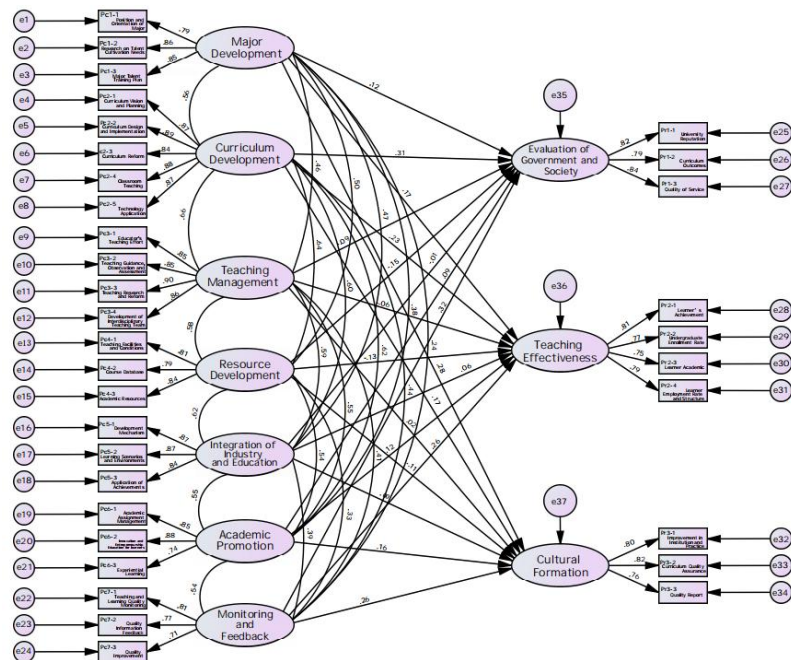


Figure 4.7 Path Structure Model of the Impact of Process Evaluation on Product Evaluation

Table 4.26

Fitting Results of the Relationship Between Process Evaluation and Product Evaluation

	Path		Standardised Path Coefficient	S.E.	C.R.	p	Conclusion
Major Development	→	Evaluation of Government and Society	.116	.049	1.895	.058	Not supported
Major Development	→	Teaching Effectiveness	.166	.051	2.737	.006	Supported
Major Development	→	Cultural Formation	.277	.045	4.611	***	Supported
Curriculum Development	→	Evaluation of Government and Society	.312	.058	3.980	***	Supported
Curriculum Development	→	Teaching Effectiveness	.229	.061	2.946	.003	Supported
Curriculum Development	→	Cultural Formation	.175	.053	2.309	.021	Supported
Teaching Management	→	Evaluation of Government and Society	-.091	.053	-1.350	.177	Not supported
Teaching Management	→	Teaching Effectiveness	-.060	.056	-.885	.376	Not supported
Teaching Management	→	Cultural Formation	-.017	.049	-.250	.802	Not supported
Resource Development	→	Evaluation of Government and Society	-.153	.055	-1.997	.046	Supported
Resource Development	→	Teaching Effectiveness	-.129	.058	-1.706	.088	Not supported
Resource Development	→	Cultural Formation	-.111	.050	-1.506	.132	Not supported
Integration of Industry and Education	→	Evaluation of Government and Society	-.009	.050	-.127	.899	Not supported
Integration of Industry and Education	→	Teaching Effectiveness	.056	.053	.809	.418	Not supported

Table 4.26 (Continued)

			Standardised				
Path			Path	S.E.	C.R.	P	Conclusion
			Coefficient				
Integration of Industry and Education	→	Cultural Formation	.001	.046	.013	.989	Not supported
Academic Promotion	→	Evaluation of Government and Society	.123	.071	1.667	.096	Not supported
Academic Promotion	→	Teaching Effectiveness	.091	.067	1.223	.221	Not supported
Academic Promotion	→	Cultural Formation	.165	.062	2.276	.023	Supported
Monitoring and Feedback	→	Evaluation of Government and Society	.320	.064	4.910	***	Supported
Monitoring and Feedback	→	Teaching Effectiveness	.262	.067	4.022	***	Supported
Monitoring and Feedback	→	Cultural Formation	.260	.058	4.105	***	Supported

In Table 4.26, the meaning of the parameters is similar to that in Table 4.24 (see page 164). The fitting results demonstrate that among the paths of process evaluation on product evaluation, 10 paths are significant at the level of $P < 0.05$, and 11 paths are not significant at the level of $P < 0.05$.

Specifically, “curriculum development” and “monitoring and feedback” have positive promoting effects on “government and social evaluation”, “teaching effectiveness”, and “cultural formation”, respectively. Nonetheless, “major development” only has a positive promoting effect on “teaching

effectiveness” and “cultural formation”. “Resource development” only has a positive promoting effect on “government and social evaluation”. “Academic promotion” only yields a positive promoting effect on “cultural formation”. Nevertheless, neither “teaching management” nor “industry-education integration of industry and education” yields a significant positive promoting effect on any element of “product evaluation”. Therefore, monitoring and feedback, and curriculum development have significant effects on product evaluation, major development, resource development, while academic promotion have partial effects on product evaluation. Teaching management and integration of industry and education have no significant effects on product evaluation. Thus, process evaluation has a significant effect on product evaluation, supporting hypothesis H3.

4.4.4 Impact of Product Evaluation on Context Evaluation

The confirmatory analysis results reveal that the product evaluation section includes three dimensions: Evaluation of Government and Society, Teaching Effectiveness, and Cultural Formation. Therefore, the current study explored the impact of product evaluation on context evaluation based on these three dimensions to confirm the hypothesis proposed in the previous section:

H4: A significant relationship exists between product evaluation and context evaluation of curriculum leadership in the University of Sanya,

China.

The following were discussed:

H4-1: A significant relationship exists between the evaluation of government and society and context evaluation.

H4-2: A significant relationship exists between teaching effectiveness and context evaluation.

H4-3: A significant relationship exists between cultural formation and context evaluation.

Based on the above assumptions, the present study developed a path diagram of the structural equation model for the impact of product evaluation on context evaluation (see Figure 4.8) and utilised AMOS 26.0 to evaluate the assumptions. The three latent variables of Evaluation of Government and Society, Teaching Effectiveness, and Cultural Formation are exogenous. The two latent variables of Organisation Leadership and Measurement and Analysis are endogenous. Table 4.27 presents the model fitting results.

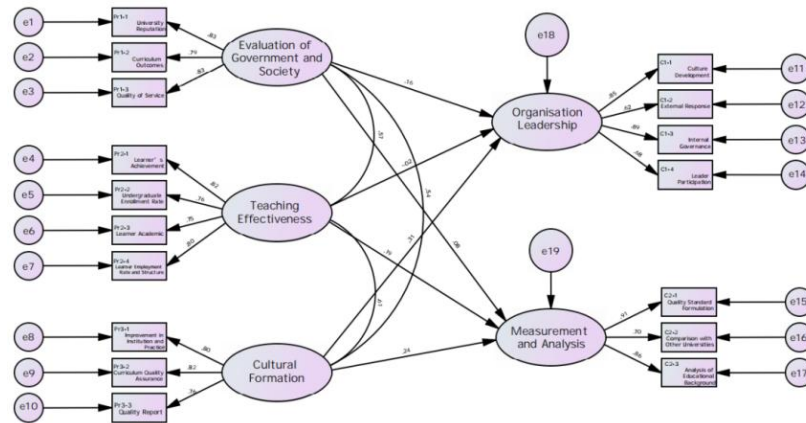


Figure 4.8 Path Structure Model of the Impact of Product Evaluation on Context Evaluation

Table 4.27

Fitting Results of the Relationship Between product Evaluation and context Evaluation

Path		Standardised Path Coefficient	S.E.	C.R.	p	Conclusion
Evaluation of Government and Society	→ Organisation Leadership	.157	.081	2.403	.016	Supported
Evaluation of Government and Society	→ Measurement and Analysis	.081	.091	1.286	.199	Not supported
Teaching Effectiveness	→ Organisation Leadership	-.016	.081	-.223	.823	Not supported
Teaching Effectiveness	→ Measurement and Analysis	.188	.093	2.664	.008	Supported
Cultural Formation	→ Organisation Leadership	.306	.093	4.304	***	Supported
Cultural Formation	→ Measurement and Analysis	.243	.104	3.543	***	Supported

In Table 4.27, the meaning of the parameters is similar to that in Table 4.24 (see page 164). The fitting results indicate that among the paths of the

effect of product evaluation on context evaluation, four paths are significant at the level of $P < 0.05$, and two paths are not significant at the level of $P < 0.05$.

Specifically, “cultural formation” has a positive promoting effect on “organisation leadership” and “measurement and analysis”. Nonetheless, “government and social evaluation” only yields a positive promoting effect on “organisation leadership”. “Teaching achievements” only yield a positive promoting effect on “measurement and analysis”. Therefore, cultural formation has a significant impact on context evaluation, while government and social evaluation and teaching achievements have a partial impact on context evaluation. Therefore, product evaluation has a significant impact on context evaluation, supporting hypothesis H4.

4.5 Chapter Summary

This chapter conducted confirmatory factor analysis on the curriculum leadership model constructed in the previous section through a statistical analysis of 512 large sample data from the University of Sanya. The results confirmed that the four parts of the curriculum leadership model have good validity.

This chapter systematically examined the relationship between the four parts of context evaluation, input evaluation, process evaluation, and product

evaluation via structural equation model regression analysis. The data results confirmed the basic assumptions between the four sections.

Organisational leadership, measurement, and analysis in context evaluation have significant impacts on all elements of input evaluation. Moreover, community development, administrative input, educator development, and learner growth in input evaluation have varying degrees of effect on each element in process evaluation. Administrative input and learner growth have significant influences on each element of process evaluation, while community development and educator development have partial influences on each element of process evaluation.

The degree of influence of numerous factors on product evaluation during the process evaluation varies. Specifically, curriculum development and monitoring, and feedback significantly impact product evaluation. Major development, curriculum development, and academic promotion have a partial impact, while teaching management and the integration of industry and education do not significantly impact product evaluation.

As for the product evaluation, the influence of the evaluation of government and society, teaching achievements, and cultural formation on the various elements of context evaluation remains distinct. Cultural formation has

a significant impact on the multiple elements of context evaluation, and evaluation of government and society, and teaching achievements have a partial impact on the numerous elements of context evaluation.

The abovementioned conclusions verify the effectiveness of the curriculum leadership evaluation model, while exploring the internal action path and logical connection of curriculum leadership. An empirical basis for higher education institutions was provided to perform better quality management activities.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

5.1 Introduction

This chapter discusses and summarises the conclusions of the study, including the main findings, the theoretical and practical implications, limitations, and recommendations for future research.

5.2 Overview of Findings

The following provides an overview of the conclusions based on the respective hypotheses.

The issue is whether a significant relationship exists between context evaluation and input evaluation of curriculum leadership in the University of Sanya, China.

Table 5.1

Hypothetical Results of the Relationship Between Context Evaluation and Input Evaluation

Hypothesis No.	Hypothetical content specific description	Conclusion
H1-1-1	Organisational Leadership has a Significant Impact on Community Development	Supported
H1-1-2	Organisational Leadership has a Significant Impact on Administrative Input	Supported
H1-1-3	Organisational Leadership has a Significant Impact on Educator Development	Supported

Table 5.1 (Continued)

Hypothesis No.	Hypothetical content specific description	Conclusion
H1-1-4	Organisational Leadership has a Significant Impact on Learner Growth	Supported
H1-2-1	Measurement and Analysis has a Significant Impact on Community Development	Supported
H1-2-2	Measurement and Analysis has a Significant Impact on Administrative Input	Supported
H1-2-3	Measurement and Analysis has a Significant Impact on Educator Development	Supported
H1-2-4	Measurement and Analysis has a Significant Impact on Learner Growth	Supported

The results indicated a total of 8 (all) pathways in the impact of context evaluation on input evaluation that are significant at the $P < 0.05$ level, thus supporting hypothesis H1. Hence, context evaluation significantly impacts input evaluation.

Another issue is whether a significant relationship exists between input evaluation and process evaluation of curriculum leadership in the University of Sanya, China.

Table 5.2

Hypothetical Results of the Relationship Between Input Evaluation and Process Evaluation

Hypothesis No.	Hypothetical content specific description	Conclusion
H2-1-1	Community Development has a significant impact on Major Development	Not supported

H2-1-2	Community Development has a significant impact on Curriculum Development	Supported
H2-1-3	Community Development has a significant impact on Teaching Management	Not supported
H2-1-4	Community Development has a significant impact on Resource Development	Not supported
H2-1-5	Community Development has a significant impact on Integration of Industry and Education	Not supported
H2-1-6	Community Development has a significant impact on Academic Promotion	Supported
H2-1-7	Community Development has a significant impact on Monitoring and Feedback	Supported
H2-2-1	Administrative Input has a significant impact on Major Development	Supported
H2-2-2	Administrative Input has a significant impact on Curriculum Development	Supported
H2-2-3	Administrative Input has a significant impact on Teaching Management	Supported
H2-2-4	Administrative Input has a significant impact on Resource Development	Supported
H2-2-5	Administrative Input has a significant impact on Integration of Industry and Education	Supported
H2-2-6	Administrative Input has a significant impact on Academic Promotion	Supported
H2-2-7	Administrative Input has a significant impact on Monitoring and Feedback	Supported
H2-3-1	Educator Development has a significant impact on Major Development	Supported
H2-3-2	Educator Development has a significant impact on Curriculum Development	Supported
H2-3-3	Educator Development has a significant impact on Teaching Management	Supported
H2-3-4	Educator Development has a significant impact on Resource Development	Not supported
H2-3-5	Educator Development has a significant impact on Integration of Industry and Education	Not supported
H2-3-6	Educator Development has a significant impact on Academic Promotion	Not supported

Table5.2 (Continued)

Hypothesis No.	Hypothetical content specific description	Conclusion
H2-3-7	Educator Development has a significant impact on Monitoring and Feedback	Not supported
H2-4-1	Learner Growth has a significant impact on Major Development	Supported
H2-4-2	Learner Growth has a significant impact on Curriculum Development	Supported
H2-4-3	Learner Growth has a significant impact on Teaching Management	Supported
H2-4-4	Learner Growth has a significant impact on Resource Development	Supported
H2-4-5	Learner Growth has a significant impact on Integration of Industry and Education	Supported
H2-4-6	Learner Growth has a significant impact on Academic Promotion	Supported
H2-4-7	Learner Growth has a significant impact on Monitoring and Feedback	Supported

The results suggested that among the pathways of input evaluation impact on process evaluation, 20 pathways are significant at the $P < 0.05$ level, and 8 pathways are not significant at the $P < 0.05$ level. Therefore, H2 is supported and input evaluation significantly impacts process evaluation.

The present study addressed whether a significant relationship exists between process evaluation and product evaluation of curriculum leadership in the University of Sanya, China.

Table 5.3*Hypothetical Results of the Relationship Between Process Evaluation and Product Evaluation*

Hypothesis No.	Hypothetical content specific description	Conclusion
H3-1-1	A significant relationship exists between major development and evaluation of government and society	Not supported
H3-1-2	A significant relationship exists between major development and teaching effectiveness	Supported
H3-1-3	A significant relationship exists between major development and cultural formation	Supported
H3-2-1	A significant relationship exists between curriculum development and evaluation of government and society	Supported
H3-2-2	A significant relationship exists between curriculum development and teaching effectiveness	Supported
H3-2-3	A significant relationship exists between curriculum development and cultural formation	Supported
H3-3-1	A significant relationship exists between teaching management and evaluation of government and society	Not supported
H3-3-2	A significant relationship exists between teaching management and teaching effectiveness	Not supported
H3-3-3	A significant relationship exists between teaching management and cultural formation	Not supported
H3-4-1	A significant relationship exists between resource development and evaluation of government and society	Supported
H3-4-2	A significant relationship exists between resource development and teaching effectiveness	Not supported
H3-4-3	A significant relationship exists between resource development and cultural formation	Not supported
H3-5-1	A significant relationship exists between integration of industry and education and evaluation of government and society	Not supported
H3-5-2	A significant relationship exists between integration of industry and education and teaching effectiveness	Not supported
H3-5-3	A significant relationship exists between integration of industry and education and cultural formation	Not supported
H3-6-1	A significant relationship exists between academic promotion and evaluation of government and society	Not supported
H3-6-2	A significant relationship exists between academic promotion and teaching effectiveness	Not supported
H3-6-3	A significant relationship exists between academic promotion and cultural formation	Supported

Table 5.3 (Continued)

Hypothesis No.	Hypothetical content specific description	Conclusion
H3-7-1	A significant relationship exists between monitoring and feedback and evaluation of government and society	Supported
H3-7-2	A significant relationship exists between monitoring and feedback and teaching effectiveness	Supported
H3-7-3	A significant relationship exists between monitoring and feedback and cultural formation	Supported

The results indicated that among the pathways of process evaluation impact on product evaluation, 10 pathways are significant at the $P < 0.05$ level and 11 pathways are not significant at the $P < 0.05$ level. Therefore, H3 is supported and process evaluation significantly impacts product evaluation.

The study examined whether a significant relationship exists between product evaluation and context evaluation of curriculum leadership in the University of Sanya, China.

The results suggested that among the pathways of product evaluation impact on context evaluation, four pathways are significant at the $P < 0.05$ level and two pathways are not significant at the $P < 0.05$ level. Therefore, H4 is supported and product evaluation significantly impacts context evaluation.

Table 5.4

Hypothetical Results of the Relationship Between product Evaluation and context Evaluation

Hypothesis No.	Hypothetical content specific description	Conclusion
H4-1-1	A significant relationship exists between evaluation of government and society and organisation leadership	Supported
H4-1-2	A significant relationship exists between evaluation of government and society and measurement and analysis	Not supported
H4-2-1	A significant relationship exists between teaching effectiveness and organisation leadership	Not supported
H4-2-2	A significant relationship exists between teaching effectiveness and measurement and analysis	Supported
H4-3-1	A significant relationship exists between cultural formation and organisation leadership	Supported
H4-3-2	A significant relationship exists between cultural formation and measurement and analysis	Supported

5.3 Discussion on Major Findings

5.3.1 Discussion on the relationship between context evaluation and input evaluation of curriculum leadership in the University of Sanya, China

The finding presented that in terms of “Organisational Leadership” and “Measurement and Analysis”, context evaluation is significantly related to input evaluation factors. This result is consistent with the previous insights of scholars, such as Northouse (2021), Li (2023), and Zhu (2016).

1. Organisational leadership has a significant impact on community development (H1-1-1).

Organisational leadership is a dynamic process, which enhances the leadership scope and ability of the organisation and encourages the collaborative construction of all staff. Moreover, the process provides knowledge on the

changes of external policies and environment, identify potential opportunities, and facilitate the formulation and implementation of strategies. The process also penetrates all levels of the organisation (including strategy, administration, and teachers and students), which shapes and promotes the quality culture and improve the quality of education (Northouse, 2021).

“Cultural factors are not only necessary but also crucial in leadership in the field of education” (Xia, 2017, P13). As an organisation for personnel training and knowledge exploration, universities should respond to the new requirements of social development and technological change on the quality structure of workers (Yang & Wang, 2022) promptly and make external responses. Similarly, effective internal governance improves the quality of education and encourages organisational development (Lie, 2023). The quality management level of a university first depends on the presence of strong leadership support.

Northouse (2021), Harris and Jones. (2023), and Soncin et al. (2024) emphasised the impact of organisational leadership on the collaboration of all staff. Meanwhile, the current study focused on the impact of organisational leadership on the educational community, confirming the invisible collaborative culture via entities and mechanisms, hence making the educational quality construction actions more practical. The results demonstrated that the impact of

organisation leadership on the educational community is equal to other factors input into the evaluation. Compared with the results in Zito and Larwin (2024), which emphasise the potential for impact, the results of the current study revealed the significant impact of organisation leadership on the educational community.

2. Organisational leadership has a significant impact on administrative input (H1-1-2).

The results demonstrated the impact of organisational leadership on administrative input. Harris and Jones (2023) were more refined in exploring the priority of resource allocation during the investment process. Meanwhile, the current study concentrated on clarifying the impact on strategy, learning, and funding in investment, which aligns with the penetration effect of “organisation leadership” (Northouse, 2021).

3. Organisational leadership has a significant impact on educator development (H1-1-3).

In the role of organisation leadership, Zheng et al. (2022) discussed similar findings in their research on “How culture and context affect teacher learning”, disclosing that the impact of leadership practice on educators’ development is also significant (0.97), which resonates with the results of the present study. Nonetheless, in the area of educational management practice, another critical

issue that warrants attention is stability. Mullins (2024) has further elucidated, through one-way ANOVA, that the leadership style of school principals significantly affects the stability of teacher communities. Based on the perspective of organisational leadership, the finding underscores the necessity of the element of “Leader Participation” of the current study.

4. Organisational leadership has a significant impact on learner growth (H1-1-4).

This concept underscores that leaders foster students’ cognitive, professional, and social adaptation through distributed decision-making, resource optimisation, and cultural reshaping (Trinidad, 2024). Empirical evidence indicates that, within the entrepreneurship education framework, curriculum integration supported by leaders elevates students’ entrepreneurial intentions by 22% and enhances employment stability (Ni & Ye, 2018). The findings revealed that university organisational leadership significantly influenced learners’ growth and further demonstrated that the factor directly strengthened the academic support and service system by optimising resource allocation and institutional design, thereby promoting learners’ development.

5. Measurement and analysis has a significant impact on input evaluation (H1-2-1, 2, 3, 4).

Contrary to organisational leadership, measurement and analysis are

similar to neurons, allowing universities to reach the real status quo of curriculum leadership construction and comprehend the gap with peers through data comparison (Zhu, 2016^b).

Based on the path analysis, the impact of measurement and analysis on various elements of input evaluation exceeded the impact of organisational leadership on various elements of input evaluation. This result further illustrated that universities can only collect information on other vital evaluation components via measurement and analysis. This condition helps with the rational allocation of resources and timely detection of issues in various educational processes and provides the scientific basis for the formulation of educational policies and institutions. Therefore, measurement and analysis have a certain impact on input evaluation.

In comparison to the findings of earlier researchers, such as Zhu (2016^b), a highlighted aspect is the influence of organisational leadership and measurement analysis on input evaluation that varies between public and private universities.

Zhu (2016) discovered that the impact of organisation leadership on teacher management and student management in public universities is greater than the impact of measurement and analysis (path average coefficient OL0.23 > MA0.19). First, public and private universities are equal in the function of

organisation leadership (Qureshi & Khawaja, 2021). Nevertheless, the existence of “different phenomena” also indicates that the measurement and analysis of private universities demonstrate a more outstanding performance. This performance suggests that private universities are sensitive to the “market” and are quick to respond and alert to the impact of political, economic, cultural, policy, and other backgrounds during their operations. This performance also responds to the purpose of measurement and analysis - “all actions taken by organisations are the result of adaptation and adjustment to the environment. To understand the behaviour of organisations, one must understand the environment in which the organisation is located” (Tan, 2025, P. 78).

In the context of higher education, public universities depend on government funding, while private universities rely on tuition and market-based income (Wang, 2008; Xu, & Mo, 2020; Wang, 2021). This discrepancy is one of the reasons why the two respond distinctly to contextual changes. Hence, the influence of the market-oriented context on private universities is more significant in terms of strategic adjustment and performance (Huang, 2024). Public universities are embedded in a rigid institutional environment due to their public attributes and are subject to bureaucratic systems and regulatory requirements. Private universities, due to their greater autonomy, can more flexibly adjust their curriculum, enrolment strategies, and degree of internationalisation to adapt to market demand (Huang, 2024). Therefore,

contextual changes, as an external pressure, tend to be transformed into substantive changes in the organisational behaviour of private universities.

5.3.2 Discussion on the relationship between input evaluation and process evaluation of curriculum leadership in the University of Sanya, China

The findings indicated a significant relationship between input evaluation and process evaluation elements, specifically concerning administrative input and learner growth. As for community and educator development, a partially significant relationship exists between input and process evaluation elements. Additionally, notable differences are present in how educator development and learner growth affect process evaluation elements. These findings align with past studies conducted by numerous scholars (Shi et al., 2024; Zhu, 2016b; Ouyang et al., 2020; John & Bert, 2020; Wang, 2024), as reflected in the following statements.

1. Learner growth has a significant impact on observation variables of process evaluation (H2-4-1, 2, 3, 4, 5, 6, 7).

China completely agrees with the basic concept of “learner-centred”. This concept facilitates Chinese education to focus on learners’ learning, learners’ development, and learning outcomes. Several Chinese universities have conducted in-depth research and practice on this concept in education management (such as the Tsinghua University team). The connotation definition of “learning-based” was proposed. This connotation definition of the word

“learning”, composed of subject, content, and scene, integrates multiple elements that are closely connected to and inseparable from university learners’ learning (such as professional construction, curriculum construction, teaching management, and resource construction) (Shi et al., 2024).

Based on the “learner-centred” approach and similar research, Chinese universities attach significant importance to learner growth support, overcoming the traditional situation of solely emphasising teacher management and development, in order for learner growth investment to be well integrated with the talent training process system. Therefore, in the path analysis, the various factors that significantly influence the process evaluation of learner growth are presented.

2. Educator development has a significant impact on major development, curriculum development, and teaching management (H2-3-1, 2, 3).

The level of educator development determines the overall level of a university faculty. Whether educators are effectively motivated, whether educators can fully develop in their academic careers, whether they can continuously improve their knowledge and teaching skills, and whether educators are allowed to devote themselves to teaching through a reasonable assessment and evaluation mechanism, all directly affect the operating level of the multiple links of the talent training process system (Zhu, 2016^b). Therefore,

in the path analysis of the present study, educator development significantly affected major development, curriculum development, and teaching management.

The study on the impact of educator development on multiple factors in process evaluation is consistent with previous studies (such as Cui, 2017; Hong, 2024). Nonetheless, the reasoning process of the study indicates that people can view the impact of educator development on major development, curriculum development, and teaching management. Various studies can determine varying aspects of conduct that are affected in educational practice. For example, the measures adopted from the major development end in this study are major positioning, demand research, and major talent training plans. Hong (2024) adopted major certification measures in the reasoning process.

Cui (2017) explored the effect of educator development on curriculum development by emphasising the diversified major development activities of educator development at the input end. The current study adopted a more macro-level training system establishment method. The present investigation of the influence on teaching management outlined evaluation tools and data analysis. The study concentrated more on methods for educators, such as educators' teaching efforts, teaching research, and reform.

Regardless of the disparities or similarities between the numerous studies, educational practitioners can be inspired by the impact of multiple input evaluation factors and process evaluation factors in the actual education quality management and development process is complex with diverse measures to perform construction. This strategy requires educational managers to contemplate the targeted issues of quality construction work.

Another influence is formed by the strong demand of society for interdisciplinary talents: the efficient implementation and excellent results of interdisciplinary courses rely on educators' training (Chen & Tang, 2023). Educators' interdisciplinary education experience and training process provides a basic condition for the opening of interdisciplinary courses. An educator with an interdisciplinary background and interdisciplinary education ability has an innate advantage in interdisciplinary research and must be willing to open interdisciplinary courses, performing teaching activities with ease, which benefits the construction of interdisciplinary teams (Chen & Tang, 2023).

3. Educator development has no significant impact on resource development, integration of industry and education, academic promotion, alongside monitoring and feedback (H2-3-4, 5, 6, 7).

Educator development in the current study did not significantly impact

resource development, integration of industry and education, and academic promotion. This finding may be due to the integration of industry and education as a strong proposal by China recently to deeply integrate education and industry to encourage the improvement of talent training quality (Zhu et al., 2025). This proposal requires strong “dual attribute” capabilities of educators in education and industry, and educators’ capabilities remains in the process of formation (Ge et al., 2025).

Another reason is that the integration of industry and education policy experiences challenges in fulfilling its actual needs. The existing policy focuses more on attracting enterprises to voluntarily participate in the integration of industry and education, with limited actual implementation effect (Liu et al., 2025). This limitation results in an incomplete institutional guarantee for the joint training of teachers by schools and enterprises, which is challenging to effectively encourage the construction of educators’ “dual attribute” capabilities.

The rapid development of world technology has positioned society in a digital transformation and development era, which establishes new requirements for educational resource construction and learners’ academic promotion. Educators remain in the stage of adapting to and achieving these requirements. Nonetheless, educators’ development in Chinese universities in the AI era is mainly at the policy advocacy level, lacking systematic curriculum design, or

interdisciplinary collaboration mechanisms. Educators' digital literacy training is often limited to instrumental issues, dismissing innovative teaching practices involving these technologies (You & Chen, 2025).

In practice, educators' digital transformation experiences numerous disagreements, such as deviation from educational goals, an insufficient guarantee system, a lack of cutting-edge technology, and deprived of subject characteristics, which must be clarified (Mei, 2024). This limitation hinders educators to change AI resources into a driving force for teaching innovation, thereby reducing their impact on higher education resources. Additionally, the academic evaluation system of Chinese universities is based on scientific research output, and teaching innovation is not encouraged (Zhao et al., 2022).

The weak influence of educator development on monitoring and feedback suggests that university management, specifically curriculum leadership development, should emphasise more on the role of educators and learners in monitoring and feedback on quality construction, and should not limit "monitoring and feedback" to university behaviour or departmental responsibility.

4. Administrative input has a significant impact on integration of industry and education (H2-2-5).

Administrative input is necessary for the development of university curriculum leadership. For example, strategic implementation can aid universities achieve vital goals and create public value (John & Bert, 2020).

In the field of higher education, strategy supports industry-education cooperation via extensive integration of teaching projects and technical assistance with the industry (Shao, 2024). This condition is consistent with the current study, which clarified the significant impact of administrative input on industry-education integration via path analysis. One of the process measures aims to form a community model of industry-education integration (Zhu et al., 2025) and the mechanism.

This situation is consistent with the research represented by Foster's "Industry-University-Research Cooperation Theory" (Gong, 2024) regarding industry-university-research cooperation as a model for cultivating applied talents contrary to ordinary higher education, advocating that universities and enterprises should collaborate to overcome the issue of "mismatch between learner education and enterprise needs" (Gong, 2024).

5. Administrative input has a significant impact on observation variables of process evaluation (H2-2-1, 2, 3, 4, 5, 6, 7).

The increase in administrative input significantly improves the quality of

education, specifically the input of education funds (Ji, 2017; Wang & Wu, 2022). Regardless of the external conditions, the scale of input has a certain degree of statistical impact on the quality of various stages of the teaching process (Xu & Hu, 2023).

Xu and Hu (2023) investigated the impact of undergraduate teaching funds on teaching quality in “Double First-Class” universities, data analysis revealed that the impact coefficient of teaching funds on the quality of the teaching process was 0.417 (single variable function). Moreover, a larger scale of funds results in a higher quality of starting point, process, and results. Compared with the current study, the impact coefficient is slightly higher than the impact coefficient of administrative input on multiple factors of process evaluation.

The abovementioned situation is mainly due to the various sources of funds for public universities (the research objects of Xu and Hu) and private universities (Wang, 2021). Therefore, apart from financial investment, private universities should also strengthen their educational quality construction capabilities (such as strategies, measures, and learning) in the process of operating schools, based on national policies and regulations, combined with their actual conditions, and based on reasonable positioning, lead the high-quality development of universities with their distinctive culture (Hou & Zhao, 2022).

6. Administrative input has a significant impact on major development, curriculum development, and monitoring and feedback (H2-2-1, 2, 7).

Organisational learning in administrative input enables employees working in a school environment to have a common social understanding of their work purpose (Leithwood & Louis, 2021). Organisational learning could encourage the adaptation of universities to shifts in the external environment, thereby optimising the major and curriculum settings (Li, 2024; Yu, 2024; Huang et al., 2025). Therefore, based on the abovementioned impact of administrative input, the mechanisms of common values, common understanding, and quality assurance constructed by administrative input have a positive impact on the essential activities of process evaluation.

7. Community development has a significant impact on curriculum development, academic promotion, and monitoring and feedback (H2-1-2, 6, 7).

The current study was inspired by the idea of “community of shared future for mankind” proposed by the Chinese government (Cheng Hua, 2025), who applied this concept to the field of higher education using the concept of community as an input factor for assessing curriculum leadership development. In educational practice, the continuous enrichment and development of the community results in the diversity of human development, and the community provides the necessary field and basic conditions for the development of individual subjectivity (Wang Pengwei, 2024).

In the community, educators and learners actively participate in the process of learning, guidance, and social environment construction, maintain positive interaction, communication, and action, and collaboratively construct knowledge and design (Ouyang et al., 2020). Therefore, when educators and educators, learners and learners, and educators and learners jointly realise shared values and goals, the educational co-construction behaviours and activities performed are mapped to their corresponding education-related carriers, such as majors, courses, and resources. Therefore, in the path analysis, community development has a significant effect on the multiple elements of process evaluation.

Based on the analysis data of the path, the community has a greater impact on “monitoring and feedback”, “academic promotion,” and “curriculum construction” than other elements of process evaluation. The main reasons are: First, human metacognitive skills include self-monitoring and feedback, which are human high-level thinking, monitoring, and control capabilities (Liu, 2024). Second, “curriculum construction” is the fundamental element of curriculum leadership development. The issue regarding academic promotion is whether the aspect concerns subject competitions or educational activities such as innovation and entrepreneurship education and social practice, they are all “educators and learners actively participate in the construction process of learning, guidance and social environment” and “jointly construct knowledge and design” (Ouyang, 2020). This process provides full range to the effectiveness of the community.

8. Community Development has no significant impact on major development, teaching management, resource development, and integration of industry and education (H2-1-3, 4, 5).

Community development has no significant impact on major development, teaching management, resource development, and the integration of industry and education. This finding may be due to the following reasons: at the practical level, the impact of communities is constrained by structural barriers and resource allocation mechanisms within institutions. First, universities often adopt bureaucratic management models, which hinders educator and learner communities to participate in decision-making processes. For instance, educator communities experience challenges, such as insufficient time and excessive administrative burdens in major development, thereby restricting their contribution to curriculum reform (Price & Regehr, 2022). Similarly,, regarding resource development, although learner communities can provide feedback, limited formal channels prevents their input from being translated into actual resource allocation decisions, resulting in resource distribution that tends to prioritise administrative considerations (Luo et al., 2024).

In the context of industry-education integration, cross-boundary collaboration between educator and learner communities is impeded by limited access to external industry partners (Chen et al., 2025). Additionally, practical barriers to interdisciplinary integration exacerbate this issue. For example, when

promoting programme development, communities among faculty encounter departmental silos, complicating the process to achieve resource sharing or curriculum innovation (Iram & Mahmood, 2025).

Theoretically, highly institutionalised organisations, universities are subject to isomorphic pressures that tend to preserve traditional disciplinary boundaries and administrative hierarchies, thereby restricting the innovative role of communities. For example, the complex management structures of universities lead to bureaucratic inefficiencies, impeding educator and learner communities from penetrating and integrating into governance frameworks (Luo et al., 2024; Kroll & Schubert, 2023).

Social capital theory reveals the constraints of internal networks within communities: communities among educators tend to accumulate social capital primarily within their disciplines, while lacking bridging capital with administrative layers or external industries. This situation explains the challenge in exerting systemic influence in areas, such as academic management and industry-education integration (Gunasekara, 2004).

The theory of power dynamics underscores that power asymmetries within university governance position learner communities as passive participants rather than decision-making partners, thereby marginalising their voices in

resource development and programme construction (Becker et al., 2023).

5.3.3 Discussion on the relationship between process evaluation and product evaluation of curriculum leadership in the University of Sanya, China

The findings revealed that in terms of monitoring and feedback and curriculum development, process evaluation and the elements of product evaluation are significantly related. In terms of major development, resource development, and academic promotion, a partial significant relationship exists between process evaluation and product evaluation, thereby aligning with Xu and Hu (2023) with certain varieties:

Xu and Hu (2023) discovered a significant correlation between process quality and product quality (the correlation coefficient was 0.567) in the quantitative analysis of process quality and product quality. Contrary to their research, the present study quantitatively analyses the impact of process evaluation on product evaluation from seven dimensions. Based on this perspective, the current study enables educational practitioners to concentrate more on unambiguous development links.

1. Curriculum development has a significant impact on teaching effectiveness (H3-2-2).

The role of curriculum development is significant. Professors Lattuca and Stark (2020), curriculum experts of American universities, highlighted that to achieve a truly constructive discussion and decision-making, educators and

managers should first concede on the connotation of the curriculum and the aspects of the curriculum that need improvement. Their exploration reflects the progress of curriculum development on educators and education quality.

In the development of education quality, curriculum development demands curriculum leaders to strictly consider curriculum content, curriculum progress, curriculum evaluation, and teaching methods, which are the core of teaching. This situation explains why curriculum leadership should receive more research attention and focus in the discussion of school and system improvement (Harris & Jones , 2023). The curriculum development is directly responsible for the teaching results. As the carrier of “valuable knowledge”, the curriculum is essentially the common meaning construction of teachers and students in the field of education. Educators promote learners’ personality development, internal drive development, innovation development, and lifelong development by developing the entire chain leadership for curriculum value, curriculum design, curriculum development, curriculum implementation, and curriculum evaluation (Jiao, 2022).

Based on the perspective of employment and the demand of the labour market for graduates’ compound ability, the new goal of teaching involves how to use the curriculum to enable learners to have a broad multidisciplinary and multidisciplinary knowledge base and knowledge integration and application

ability, and improving individual innovation and creativity (Chen & Tang, 2023).

2. Curriculum development has a significant impact on government and society, and cultural formation (H3-2-1, 3).

From the perspective of stakeholder theory, curriculum development enhances the interaction between higher education institutions and their stakeholders, including society and the government, thereby affecting the perceptual dimensions of social assessment. Theoretically, curriculum development should incorporate social needs, such as cultural responsiveness and career readiness, which can enhance the reputation and legitimacy of higher education institutions in social evaluations (Kamour & Altakhayneh, 2021). As the core of the quality cycle, curriculum can indirectly develop the sustainability and effectiveness of assessment outcomes (Posillico et al., 2022).

3. Monitoring and feedback has a significant impact on government and society, teaching effectiveness, and cultural formation (H3-7-1,2, 3).

The university teaching quality system has the characteristics of openness and self-organisation (Barnett, 2024). In higher education, the characteristics of self-organisation are represented by continuous observation, evaluation, and information feedback on the teaching process, resource allocation, and output of achievements through monitoring and feedback. Monitoring implements the

real-time tracking of teaching activities using data collection, and index analysis; Feedback transmits the monitoring results to stakeholders (such as educators, learners, and managers) systematically to encourage teaching improvement and optimisation (Xu & Yang, 2024).

The continuity of monitoring and feedback ensures the systematic and long-term improvement of teaching reform. This mechanism supports the reconstruction of the curriculum system or the integration of interdisciplinary teaching, which is conducive to the formation of national teaching achievements with academic value and social impact (Xue et al., 2021; Xu & Yang, 2024). In the present study, the impact of monitoring and feedback on the “government and social evaluation” in the outcome evaluation is the most significant (0.32, the other two 0.26), encompassing the impact on the national curriculum teaching results.

An effective monitoring and feedback system requires the joint involvement of teachers, students, managers, and external evaluation institutions. This monitoring and feedback mechanism with complete participation facilitates in forming shared quality values (Chen et al., 2024). Additionally, monitoring and feedback embed quality management into daily operations through standardised processes (such as teaching quality database and feedback reporting system) will gradually form a quality culture of continuous improvement (Hao et

al., 2021).

Alongside the development of artificial intelligence, big data, and other modern information technology means, unstructured data information is broadly valued, such as teaching videos, academic reports, classroom discussion records, online social information, and media reports. These new unstructured data can better represent the process and state of higher education quality management (Yu & Hu, 2023). Therefore, universities should comprehend the role of “big data”, concentrate more on the dynamic data of higher education, and use online processing, data mining and other technical means to analyse these teaching process data, giving full range of the role of these feedback data in the evaluation of results, and encourage the quality management from “data-based” to “data-driven” and “evaluation and prediction”.

4. Major development has a significant impact on teaching effectiveness (H3-1-2).

Major development can directly enhance the quality of teaching effectiveness by optimising the curriculum framework and resource allocation. Tian and He (2023) established a collaborative ability evaluation system for joint graduation projects within new engineering specialty clusters and discovered that the integration of digital technology and interdisciplinary

collaboration in specialty development significantly enhances learners' cognitive, behavioural, and emergency management capabilities. Empirical data revealed that the average score for collaborative ability increased from 7.2 to 8.1 between 2020 and 2022, suggesting that the gradual professional reform has developed the practicality and innovation of teaching outcomes (Tian & He, 2023). Based on the stakeholder theory, major development strengthens the interaction and collaboration among teachers, students, and industry partners, impacting the qualitative features of teaching outcomes. Theoretically, major development demands the integration of diverse needs, such as career orientation and practical training, which enhances the relevance and effectiveness of teaching (Chankseliani et al., 2021).

5. Major development has a significant impact on cultural formation (H3-1-3).

Major development changes external quality requirements (such as certification standards, industry norms, and policy guidelines) into specific institutional arrangements, including internal curriculum outlines, faculty standards, and teaching norms, thereby integrating quality requirements into the daily teaching and management frameworks and providing institutional blueprints for the development of a quality culture. Yan (2022) analysed the development path of medical major at Chinese engineering universities, highlighted that the construction of the “four new” disciplines (new engineering,

new medicine, new agriculture, and new liberal arts) encourages interdisciplinary integration between medicine and engineering, dismantles knowledge barriers, and establishes a composite curriculum system. This situation enhances the innovation and practicality of talent cultivation and fosters a “new quality culture” at universities, emphasising a win-win cooperation and self-restraint.

Kuffuor (2025) employed empirical methods, such as SERU data and IDI assessments to analyse the cross-cultural competency development of international students at Midwestern universities in the United States, disclosed that major development mitigates cross-cultural gaps and encourages a collective sense of responsibility and a consistent improvement mindset within the quality culture (Kuffuor, 2025).

The findings revealed three dimensions through which major development affects the formation of quality culture: the curriculum assurance system, the development of institutional policies and practices, and the establishment of a quality reporting mechanism. These aspects collectively facilitate the development of a quality culture within universities. Therefore, the results of the formation of quality culture in various institutions via the major development suggests that universities builds quality culture with varying emphasis on content via multiple paths.

6. Major development has no significant impact on evaluation of government and society (H3-1-1).

Major development often complies with the principles of “normative isomorphism” (Guil & Rubio, 2026) (national professional standards established by the Ministry of Education, engineering education accreditation criteria) and “mimetic isomorphism” (Guil & Rubio, 2026) (benchmarking against top-tier programmes domestically and internationally). Based on a homogenised design, institutions can rapidly gain recognition from the government and society. Therefore, the level of major development serves as a “quality signal,” conveying institutional capability to the government, society, prospective students, and employers. Nonetheless, the path analysis results of the present study indicated that major development did not significantly impact government and societal evaluations. This result may be due to government and societal evaluations primarily focusing on academic reputation, curriculum achievements, and social service capacity. This situation suggests that locally applied university, such as University of Sanya still must strive for improvement in these areas from the perspective of major development.

Staring et al. (2025) discovered through empirical research that the impact of major development on social and governmental evaluations is usually diminished or absent due to multiple structural barriers and implementation biases. In discussing the cultivation of excellence in higher and vocational

education, the OECD Higher Education Policy Team (2025) outlined that rigid regulatory frameworks constrain the flexibility of major programme design, exemplified by mandatory online learning quotas and the administrative burdens linked with micro-credentials. Hence, curriculum updates lag behind emerging skill demands, thereby hindering competitiveness in governmental evaluations. Empirical data suggest that while higher education enrolment rates in OECD countries have increased, the “academic drift” between vocational higher education and regional skill requirements has enhanced evaluation inequalities. Professional development initiatives often operate under financial incentives of only 5-10%, which tend to foster “creative compliance” rather than genuine innovation.

7. Resource development has a significant impact on evaluation of government and society (H3-4-1).

Resource development has been examined and advocated by several scholars (Fullan, 2007; Malen & Rice, 2020), emphasising that high-quality curriculum resources are the basis for improving curriculum leadership and the guarantee of results. Hou (2025) added in the summary of the conference on the high-quality development of private education that resource development exerts a vital impact on private colleges and universities, and that their competitive edge in government and social evaluations can be improved via standardised guidance. Institutions with substantial resource investment display outstanding

performance in satisfaction and retention rates, encouraging a context-sensitive quality culture (Hou, 2025).

Universities that engage in systematic resource development (establishing diversified funding channels, cultivating top-tier faculty, and forming distinctive disciplines) (Dong et al., 2025) have scarce and irreplaceable core resources (such as academic reputation, cutting-edge research outcomes, and outstanding alumni). This situation enables universities to reduce their reliance on a single evaluation system (Zheng & Li, 2025), actively participate in and even form the evaluation system, demanding that the evaluation system acknowledge diverse models of excellence.

8. Resource development has no significant impact on teaching effectiveness and cultural formation (H3-4-2, 3).

Universities also pursue the improvement of learners' learning outcomes and lifelong learning abilities in the process of curriculum leadership development, and encouraging learners' academic performance is a crucial strategy to achieve this goal. Nevertheless, resource construction and academic promotion have a partial impact on product evaluation, signifying that these aspects of construction should be consistently cultivated and strengthened in the current educational practice of this category of university.

The Resource Dependence Theory (Pfeffer & Salancik, 2015) explains that excessive reliance by universities on external resources can cause superficiality of internal resource development, which hinders from stimulating teaching innovation or cultural transformation. Resource development that does not mitigate external uncertainties diminishes contribution to teaching effectiveness. Kenny and Fluck (2022) outlined the allocation principles of academic work in universities, where despite the presence of resource development in high-pressure environments, often undermines teaching quality rather than enhancing it (Kenny & Fluck, 2022).

9. Teaching management has no significant impact on observation variables for product evaluation (H3-3-1, 2, 3).

The contradiction is observed in teaching management and the integration of industry and education do not significantly impact the numerous elements of result evaluation. Effective teaching management in the educational process helps to enhance teaching quality, encourage student development, improve curriculum arrangements, and optimise educational resources. Nonetheless, outdated teaching management ideas, methods, and measures fail to encourage the development of curriculum leadership and the development of educational quality, constraining their progress and improvement (Fu, 2024).

Wang et al. (2024) discussed the impact of the imbalance between teaching

and research evaluations, revealing that teaching management is often marginalised by a system that prioritises research. Educators shift their focus to research for career advancement, resulting in reduced investment in teaching and minimal contribution to teaching effectiveness and quality culture. The investment of teaching time also negatively predicts salary and does not encourage positive feedback from social evaluations (Wang et al., 2024). Meanwhile, teaching management is impacted by isomorphic pressures, leading to convergence without differentiated innovation. Normative isomorphism standardises management, albeit overlooking local needs, thereby failing to significantly encourage government evaluations and quality culture (Hornstein, 2017; Cook et al., 2024).

10. The integration of industry and education has no significant impact on observation variables for product evaluation (H3-5-1, 2, 3).

The integration of industry and education aims to address the division between education and market demand and close the gap between student employment and enterprise employment needs. Close cooperation between education and industry enhances curriculum leadership to achieve a win-win situation between education and industry (Li & Wang, 2020). The impact is not significant, which may be due to the current low maturity of industry education integration in universities, such as the University of Sanya.

The practice of industry-education integration normally appears fragmented and lacks in-depth cooperation mechanisms, preventing the practice from being translated into stable teaching innovations or evaluation metrics. For example, Liu et al. (2025) discussed the challenges of industry-education integration in local application-oriented universities and revealed that fragmented school-enterprise collaborations (such as those dominated by short-term projects) and inconsistent policies impeded the systematic implementation of integration, revealing no statistically significant correlation with improvements in teaching effectiveness. Integration practices exist but have not uniformly permeated teaching, resulting in delayed formation of a quality culture (Liu et al., 2025).

5.3.4 Discussion on the relationship between product evaluation and context evaluation of curriculum leadership in the University of Sanya, China

1. Cultural formation has a significant impact on organisational leadership, monitoring, and analysis (H4-3-1, 2).

The findings disclosed that in terms of cultural formation, the product evaluation is significantly connected to the factors of context evaluation. This result is consistent with previous scholars, such as Zhao (2023) and Wu (2022). This result is mainly due to the university quality culture being the quality value orientation and quality behaviour code of the university organisation (Zhao, 2023). The ultimate goal of the institutional pursuit of quality assurance and standards is to achieve a quality culture with an “ecological” nature, which is an indispensable and unique culture for higher education systems and institutions

(Wu, 2022).

The quality culture within a university environment reflects the institutional collective commitment to continuous improvement and excellence. The culture serves as a crucial driving force for improving the quality of talent development and is a critical achievement in the construction of curriculum leadership. Strengthening the construction of university quality culture is the only means for the high-quality development of higher education (Li, 2022). In the rapidly evolving educational landscape, a strong quality culture enables universities to adapt to emerging trends and market demands. This adaptability allows universities to effectively engage in organisational leadership, monitoring, and analysis.

2. Government and social evaluation has a significant impact on organisational leadership (H4-1-1).

The current study revealed that in terms of government and social evaluation and teaching achievements, a partial significant relationship exists between product evaluation and the factors of context evaluation. This finding aligns with Zhao and Zhou (2023).

Government and social evaluation highlights national strategy, public interests, and long-term development, and undertakes the function of planning

and macro-management of education (Zhao & Zhou, 2023). This management function has an impact and requirement on the organisation leadership and measurement and analysis work of universities. In the evaluation of teaching quality, universities are not merely passive evaluation objects, but behavioural subjects with subjective initiative. Universities cannot completely passively accept external evaluation information, but must re-evaluate and reconstruct meaning based on their cognition, thereby forming new cognition (Zhao & Zhou, 2023), ultimately truly assuming a role.

External evaluation encourages universities to focus on optimising their internal governance structures (Tayyaba et al, 2023). Quality assurance activities (especially government-led external evaluations) encourage universities to modify their organisational structures (such as setting up quality departments) and transform their decision-making models (such as from collegiality to bureaucracy or democracy), thereby influencing university internal governance (Zhao et al, 2024). In the path analysis of the current study, government and social evaluations have a partial effect on background evaluation, where the scope of the impact is on organisation leadership (including internal governance).

3. Government and social evaluation has no significant impact on measurement and analysis (H4-1-2).

Government or third-party evaluation directly influences the direction of university quality standards via the selection and weight of indicators (Tayyaba et al, 2023), affecting the measurement and analysis of universities. Nevertheless, in the present study, the impact of government and social evaluation on measurement and analysis is weak and not significant. This finding alerts universities that only when external evaluation results are recognised by universities can they truly be transformed into the internal driving force for reform and development (Zhao & Zhou, 2023). This situation also allows universities to actively analyse the educational background in which they are located. The multiple subjects of education quality evaluation are in an interactive relationship, which should reflect “inter-subjectivity” (the correlation and unity between subjects) (Zhao & Zhou, 2023), and form a circular mechanism for continuous improvement of teaching quality with internal and external linkage.

4. Teaching achievement has a significant impact on measurement and analysis (H4-2-2).

Teaching effectiveness serves as the core indicator of higher education quality, exerting a significant influence on the measurement and analysis efforts within universities. This influence is primarily reflected in reshaping the quality standard system, facilitating horizontal comparisons among various universities,

and integrating multi-dimensional analyses of economic, social, and technological contexts. This impact stems from quantitative and qualitative data on teaching outcomes, which can boost the innovation and application of measurement tools via empirical validation and theoretical frameworks. Hernández-Campos et al. (2025) developed and validated nine standardised evaluation scales in their proposal for directly measuring learning outcomes in higher education, specifically tailored for engineering programmes. Empirical evidence demonstrated that these scales significantly improved the capacity for continuous improvement in quality standards. Liu et al. (2012) presented the dimensions of effective teaching in higher education and discovered that teaching outcomes emphasise clarity and structured behaviour, thereby optimising the quality standard framework; empirical analysis integrating multiple studies demonstrated that the impact coefficient of teaching achievements on standard setting reached 0.45 ($p < 0.01$) (Liu et al., 2012).

Teaching achievements exerted a significant influence on the measurement and analysis in context evaluation, as this factor furnishes foundational information for “establishing quality standards” and “benchmarking against other universities”.

5. Teaching achievement has no significant impact on organisation leadership (H4-2-1).

The impact of teaching achievement on the elements of the context evaluation is also partially significant. In the path analysis results, the impact of teaching achievement on the organisation leadership in the context evaluation is negative and weak (the coefficient is -0.02). In other words, good teaching results reflect the effectiveness of organisational leadership, where good teaching results do not need to significantly adjust organisational leadership. Poor teaching results need to be reflected by the organisation and leadership, and the impact of the two is reversed.

5.4 Implication of Studies

5.4.1 Theoretical Implication

Firstly, theoretical contribution and extension of CIPP model.

The study applied the CIPP evaluation model to university management evaluation. This model was initially employed to evaluate systematic education projects. The core contribution is to overcome the limitations of the traditional “goal result” linear evaluation and to emphasise the evaluation function in decision-making. The theoretical foundation includes the target evaluation theory of Taylor Principle (Ashari et al., 2023); Cronbach’s formative assessment concept (Clinton & Hattie, 2024); Scriven’s summative evaluation and meta evaluation ideas (Clinton & Hattie, 2024). Based on the original systematic project evaluation, the present study extended to the evaluation of curriculum leadership in higher education institutions to demonstrate the

relationship between the ability to enhance the quality of education and the ability to educate people in universities.

Based on the CIPP evaluation model and combined with the characteristics of university education activities, the current study formed a university curriculum leadership evaluation model comprising four parts: context evaluation, input evaluation, process evaluation, and product evaluation. The content of each component in the model comprises the vital elements of the quality development of higher education. The study addressed the gap of the curriculum leadership evaluation tool based on CIPP, and the issue regarding current curriculum leadership evaluation tool, enriching the curriculum leadership evaluation theory.

The present study introduced the CIPP model into curriculum leadership evaluation, which inherits its systematic and dynamic advantages and achieves certain innovations. The evaluation concept was extended from “decision support” to “value co-construction”. The original CIPP evaluation model contributes to managers’ resource allocation and project decision-making (Stufflebeam, 2003). The curriculum leadership model also incorporates the “stakeholder consultation principle” of the fourth-generation evaluation theory (Guterman et al., 2024) and considers curriculum leadership development as a value negotiation process. The model can build a shared curriculum quality view

via multiple subjects, including educators, learners, enterprises, and managers in university education quality improvement and curriculum development. Additionally, this aspect encourages higher education institutions to shift from “accountability culture” to “learning culture” (Druga, 2024) and “quality culture” (Li & Li, 2022; Liu, 2024).

Secondly, extend the structure of curriculum leadership theory.

As a core issue in the field of educational management, the clarification of the concept of curriculum leadership has crucial theoretical guiding significance for educational practice. The present study extended the theory of the essential attributes, structural dimensions, and mechanisms of curriculum leadership via literature review, and combined with educational practice, which is reflected in the following aspects:

At the level of essential attributes, the present study overcomes the traditional cognitive constraint of simply equating curriculum leadership with administrative authority, such as principal curriculum leadership (Ling & Cai, 2025). The compound characteristics were revealed as a professional influence and driving force for change. The current study embodied curriculum leadership as the ability of a school to respond to the external environment, its ability to guide the inside world, its organisational ability to act, and its ability to impact society in the process of consistent construction, exploration, practice, and

curriculum change. This definition transfers the focus from bureaucratic power to professional empowerment and administrative coordination, considering the dual attributes of education and management.

In terms of the structural dimension, the current study constructed a “four-dimensional model” to deconstruct curriculum leadership into: context evaluation, input evaluation, process evaluation, and product evaluation. This multidimensional framework extends beyond the traditional technical rational orientation (Ashari et al., 2023) and emphasises the contextual and systematic nature of curriculum leadership. The present study integrated discrete quality factors (curriculum leadership evaluation elements) into a logical relationship via four dimensions. The present study also addressed the current management needs of quality management from empirical judgment to evidence-driven.

Finally, in terms of the interaction relationship, the present study explored the path relationship between the multiple parts of the university curriculum leadership evaluation model. The structural equation model was applied to evaluate the hypothesis, and the interaction relationship was analysed based on the explanation of behavioural performance to the interaction relationship in the study of the university curriculum leadership evaluation model. Compared with other studies based on the CIPP evaluation model, which focused more on the evaluation content of CIPP, the current study further and more comprehensively

explored the path interaction relationship between context, input, process, and product, alongside the content research.

Thirdly, the development of research tools.

The present study developed a questionnaire for evaluating curriculum leadership, which can comprehensively comprehend the effectiveness of university curriculum leadership from these aspects: top-level design, input, process operation, and achievement of results, and provide “cognitive clues” for analysing and improving the construction of university curriculum leadership. The current study verified the questionnaire with good reliability and validity via a large data sample.

5.4.2 Practical Implications

Firstly, the model improves the decision-making effectiveness of educational leaders.

The model provides context, input, process, and product evaluation for higher education curriculum leadership assessment. The systematic and multi-dimensional evaluation framework can completely capture the complexity of curriculum leadership and compensate for the shortcomings of traditional evaluation methods (such as single result orientation).

The curriculum leadership of a university involves various elements of

school-running activities and the systematic relationship between the elements. A systematic curriculum leadership development system can be effectively formed only when the university controls the vital links and processes concerning curriculum leadership development in the internal management process. Therefore, the current study provides university organisations and their employees with an evaluation tool that can review university curriculum leadership and the ability to cultivate talents in real time.

The university can conduct evaluations for educators and managers of all colleges of the university via its special work department and based on the index system of the curriculum leadership evaluation model and its item descriptions. Multi-subject evaluation methods can be adopted, such as expert group evaluation or stakeholder evaluation. The quantitative and qualitative evaluation of the questionnaire can be employed.

Based on the perspective of institutional isomorphism theory, the institutional logic developed in the construction of the evaluation system of localised private universities can be diffused to other educational institutions via these mechanisms: coercion, imitation, and regulation (Giner et al., 2025; Li & Li, 2025). Public universities can learn from the market response mechanism of private universities, while foreign universities can gain from their cultural embedding experience, remove specific institutional elements in China, and

integrate them in the institutional environment of the target country. Therefore, the curriculum leadership evaluation model in the current study can be used for reference in cross-institutional or cross-culture by “imitation” and “standardisation”.

Secondly, the model supports the achievement of higher education institutional strategic goals.

This model helps institutions manage external challenges (such as digital transformation and global competition) and modify curriculum leadership strategies via context analysis. Context evaluation helps educational leaders identify the fit between university curriculum education objectives and institutional missions and the external environment to clarify curriculum positioning and reform priorities.

The requirements for the elements of educational background analysis in context evaluation can rigidly trigger the perception of higher education actors on the influence of economic, social, and technological development. For instance, under the framework of situational analysis, universities should analyse the future development mode of university curriculum education and the degree of technological integration based on technological development trends. “Measurement and analysis” of this model can facilitate universities in fully understanding that the application of technology has catalysed the

transformation of higher education forms and enriched the organisational forms of higher education. Complete comprehension of the high-quality development of higher education requires the support and empowerment of new technologies (Wang & Hu, 2025).

The model develops a guarantee system for curriculum leadership implementation. The input evaluation section of the model can effectively test the consistency from strategy to practice. The essence of strategic formulation and implementation evaluation is to assess the degree of coupling between the university top-level design (such as curriculum development planning and talent training positioning) and the actions of the department executive level. Through evaluation, the “attenuation effect” in the decomposition of strategic goals can be identified, such as resource mismatch or institutional barriers (Giroud et al., 2022; Zhang et al., 2022).

Through input evaluation, higher education institutions can develop timely, dynamic, adaptive adjustments. Barnett’s (2024) “supercomplexity” theory suggests that the higher education environment is unpredictable. Regular evaluation of curriculum leadership input allows universities to revise strategic assumptions via “double-loop learning” (Clark, 2021; Pietersen, 2025) and prevent quality management falling into path dependence. For example, upon evaluation, the existing capital investment process can be optimised, and the

investment priority level can be questioned. The process provides a basis for whether to adjust the time for educator training and the reconstruction of the educator evaluation system. Hattie's "Visible Learning" study confirmed that every increase of 1 standard deviation in educator professional development investment can result in a 0.62 standard deviation increase in learner performance (Aryana et al., 2024).

Thirdly, the evaluation model encourages continuous improvement of educational quality.

The practical significance of the process evaluation of this model lies in quality control and the improvement and generation of quality, transforming university courses from static knowledge carriers to dynamic response systems. This process can analyse the dynamic matching of professional construction with university missions and social needs. For instance, process evaluation can determine path dependency issues (such as inertia of traditional disciplines) or market disconnection (such as lags in emerging fields) in professional circumstances. This process can also evaluate whether the implemented courses match the positioning of higher education institutions and whether they respond to social needs (such as digital transformation). Process evaluation enables the optimisation of resource allocation and operational measures for curriculum reform and curriculum collaboration.

Process evaluation can gain basic information on whether the school-enterprise cooperation has formed a mechanism for knowledge sharing and cooperative education. This process can also review the achievement of the continuous improvement function of monitoring and feedback, and prevent the integration of industry and education, and quality control from becoming a mere formality.

Fourthly, the model advocates the development of a conscious quality culture.

Quality culture of product evaluation helps universities realise the value rationality of curriculum leadership development, “the conscious belief in the unconditional intrinsic value contained in a specific way of behaviour”, or concentrating on the meaning of behaviour (Huang et al., 2024, p.12). A conscious quality culture can provide an atmosphere and values in educational institutions that concentrate on curriculum quality, pursue educational excellence, and strive for constant improvement, which has a vital impact and an encouraging effect on curriculum leadership.

Conscious quality culture is the aspiration of policy makers, university leaders, and quality assurance personnel, which reshapes quality assurance into a core value of the university rather than an externally imposed task. The culture reflects the transformation of quality management concepts from quality control,

emphasising accountability and supervision, to emphasising university autonomy, trust and continuous improvement (Li & Li, 2023).

The introduction of the concept of “quality culture” enables the development of curriculum leadership to be viewed as a shared value system and a collective responsibility among all members of the organisation. Cultivating a “quality culture” enables universities to solve the issue of the external utility of tools in curriculum leadership evaluation, extracting their intrinsic value (Li, 2023^b).

5.5 Study Limitations

The current study mainly conducted a course leadership evaluation on local universities in Sanya, China and adopted a more convenient sampling method (university samples that are easy for researchers to obtain). Therefore, the sampling scope only included one university, which is a private university. In terms of application, the results are theoretically more suitable for private universities with similar attributes as the University of Sanya. To a certain extent, the universality of the results is affected. Moreover, the self-report questionnaire needs to be improved in cross-cultural ability, and the quota sampling method may result in selection bias.

5.6 Recommendation for Future Research

The curriculum leadership evaluation model constructed in the current study should develop towards a more open and universal principles. Standardised thinking is a process that regards labour as “manufacturing” rather than “creation” (Wang, 2024). The enthusiasm for standardised thinking evaluated in the field of higher education focuses only on the perceptible and controllable areas of higher education. Combined with computationalism, the situation has alienated the evaluation into “typical technical variables, the collision of hard indicators and the digital ranking of scientific standards” (Wang, 2024). Therefore, the future “evaluation tools” should practice better openness to highlight the process value of education. The tools should also have better universality to enhance the scientific level of evaluation:

Firstly, future research is recommended to be conducted in a wider regional scope. Based on the level, geographical region, and nature of higher education institutions (public and private universities), a random sampling method was used to expand the number and representativeness of effective samples. Hence, the objects of this type of exploratory research can be extended to higher education institutions outside of China. Future studies should aim to reach the universality of the results and increase the number and diversity of consulting experts, fulfilling the universality of research results via the feedback iteration of numerous suggestions and questionnaire data analysis.

Secondly, research should expand the openness of indicator content and evaluation methods. More factors that help to sublimate the humanistic spirit of universities should be considered, and multiple evaluation methods should be matched to achieve more developmental and humanistic education evaluation. Based on systematisation, evaluation indicators can be selected and combined in various ways based on the nature, development stage, and evaluation goals of the university. Meanwhile, the critical effect of the threshold interpretation of vital evaluation factors can also be explored in depth in the research. Studies should develop a more scientific, practical, and targeted evaluation process.

Thirdly, exploring the prioritisation of the core elements in curriculum leadership evaluation is essential. As curriculum leadership serves as the pivotal driving force behind the quality of higher education, the innovation of its evaluation paradigm is critical in addressing the challenges of future education. Consequently, future research should be based on the exploration of existing elements and conduct priority ranking based on satisfaction classification. This approach exposes the intrinsic structure and dynamic interplay among leadership elements, thereby enhancing the development of curriculum leadership evaluation towards greater precision, foresight, and actionability.

The development process of the curriculum leadership evaluation model remains distant from future academic exploration, requiring further theoretical

innovation. The responsibility of quality assurance for universities has become a theme and requirement. In the dual context of globalisation and intelligent education in higher education and universities experience a new survival environment similar to enterprises. The transformation and innovation of quality behaviour is the inevitable way for universities to encounter higher education competition and economic and social development challenges. Achieving connotation development and improving the educational capacity of a university is an extremely complex, systematic project, involving multiple theoretical and practical issues. The current study is only a preliminary attempt from the viewpoint of curriculum leadership evaluation, requiring further research to improve and extend the subject.

5.7 Conclusion

The present study constructed a curriculum leadership evaluation model based on the CIPP model. The essential factors of the four sections of this model in the evaluation of higher education were identified. The results revealed significant impacts between the context evaluation, input evaluation, process evaluation, and product evaluation of the model in sequence. Specifically, the model developed in the current study embodies the ideological advocacy of conscious quality culture, giving evaluative tools value rationality.

The present study verified the applicability of the CIPP evaluation model in

evaluating university education curriculum leadership and expanded the function of CIPP in traditional static project management to the dynamic university education quality management of leadership development. Moreover, the present study enriched the meaning of the operational concept of curriculum leadership, and structures curriculum leadership as “universities’ ability to respond to the outside world”, “universities’ ability to guide internally”, “universities’ ability to act”, and “universities’ ability to influence externally”. Curriculum leadership must have the advancement of educational thought and culture, the progressive talent training education reforms and measures, and the adaptability of talent training positioning to social development. These core concepts directly guide the design of research tools.

The empirical analysis disclosed that context evaluation is a more significant quality management tool for private universities than for public universities, considering that the measurement and analysis of private universities has a more prominent performance. Empirical data also demonstrated that the formation of university quality culture has a significant effect on the top-level behaviour and design of universities (context evaluation). The formation of quality culture encourages the top-level design to develop in a more scientific, collaborative, and quality-oriented direction, while proposing higher requirements for the ability to change and governance wisdom in universities.

The intended exploration and objectives were fulfilled. The current study enhanced the current curriculum leadership theory, closed the gap in evaluating curriculum leadership tools, and provided universities with an effective quality management decision-making tool, providing university employees with an effective quality management tool. Meanwhile, a constructive inspiration is provided for universities and employees in developing curriculum leadership. Additionally, a reference research perspective and theoretical content were provided for researchers investigating this related theory in the future.

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APPENDIXS

Appendix A



UNIVERSITI TUNKU ABDUL RAHMAN

Questionnaire for Curriculum Leadership

Development of Curriculum Leadership Education Model in a Higher Education Institution(HEI) in Sanya City ,Hainan,China

Dear educators,

The purpose of this survey is to understand the development activities of school curriculum leadership and provide reference for quality monitoring and improving the quality of education and teaching. The survey is anonymous. Thank you very much for your support and help.

Please be informed that in accordance with Personal Data Protection Act 2010 ("PDPA") which came into force on 15 November 2013, Universiti Tunku Abdul Rahman ("UTAR") is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

Acknowledgment of Notice:

(Please tick " ✓ " accordingly)

- ☐ I have been notified by you and that I hereby understood, consented and agreed per UTAR notice.
- ☐ I disagree; my personal data will not be processed.

Section A: Demographic Details

Please place a tick " ✓ " or fill in the blank for each of the following:

1.School:

- | | |
|---|--|
| ☐ School of Law | ☐ School of Foreign Languages |
| ☐ School of Social Sciences | ☐ School of New Energy and Intelligent Networked Automobile (School of Science and Technology) |
| ☐ School of Finance and Economics | ☐ School of Information and Intelligent Engineering |
| ☐ School of Management | ☐ School of Music |
| ☐ School of Tourism and International Hotel Management | ☐ School of Physical Education |
| ☐ School of Humanities and Communication | ☐ School of Health Industry Management |
| ☐ School of Art and Design | ☐ School of Digital Economics |
| ☐ School of Marxism | |

2.Designation:

☐ Professor ☐ Associate Professor ☐ Lecturer ☐ Tutor

3.Identity:

☐ Educator ☐ Administrator

4.Age:

☐ 35 and below ☐ 36 – 45 years old ☐ 46 – 55 years old ☐ 56 and above

5.Gender:

☐ Male ☐ Female

6.Discipline:

☐ Philosophy ☐ Science
☐ Economics ☐ Engineering
☐ Law ☐ Agriculture
☐ Education ☐ Medical Science
☐ Literature ☐ Management
☐ History ☐ Art

7.Years of Education Work

☐ 2 years below ☐ 2 – 5 years (including 2 years) ☐ 6 – 10 years ☐ 11 and above

Section B: Curriculum Leadership

First of all, please read the five-level scale carefully, 1 - Strongly disagree; 2 - Disagree; 3 - neutral; 4 - agree; 5 - Strongly agree, and then make your choice according to the implementation of the school's curriculum leadership activities. Thank you for your cooperation!

Context Evaluation							
Primary Indicators	Secondary Indicators	Items This institution has:	1	2	3	4	5
C1 Organisation Leadership	C1-1 Culture Development	Developed a quality culture of self-awareness, self-introspection, self-discipline, self-examination, and self-correction.					
	C1-2 External Response	Responded with keen insight to the social changes through development of the university curriculum.					
	C1-3 Internal Governance	Established a two-tier decision-making system between the university and the faculties, including improving the rules of procedure and decision-making processes, setting up a robust system of joint meetings for department party government, and creating academic committees.					
	C1-4 Leader Participation	Established a proper leadership system among top management teams, which enables leaders to actively participate in and conduct frontline research, attend lectures, and proactively understand various aspects of talent cultivation work.					
C2 Measurement and Analysis	C2-1 Quality Standard Formulation	Established guidelines for quality education evaluation and curriculum development standards.					
	C2-2 Comparison with Other Universities	Established a reasonable quality comparison system among universities in China.					
	C2-3 Analysis of Educational Background	Analysed the changing trends in the environment, policies, stakeholders, resources, and technology in global education context.					
Input Evaluation							
Primary	Secondary	Items	1	2	3	4	5

Indicators	Indicators	This institution has:					
I1 Community Development	I1-1 Educator Community	Established a developmental and communicative learning platform and mechanism that is conducive to promoting long-term cooperation among educators.					
	I1-2 Learner Community	Established systems and measures to guide learners to participate in each other, learn from each other, and develop together.					
	I1-3 Educator-Learner Community	Created a mechanism to help educators and learners spontaneously form equal relationships that help each other grow and develop.					
I2 Administrative Input	I2-1 Strategy Formulation and Implementation	Maked strategic arrangements for the curriculum development.					
	I2-2 Organisational Learning	Organised university administrators and educators to conduct regular and periodic learning activities on various aspects of curriculum education.					
	I2-3 Investment and Use of Funds	Established and completed management methods to prioritise the use of funds for curriculum development.					
I3 Educator Development	I3-1 Educator Cultivating and Training	Established a training system that promotes the sustainable development of educators.					
	I3-2 Educator Promotion and Assessment	Established a constructive assessment system highlighting teaching contributions for educator promotion.					
	I3-3 Educators' Working Environment	Continuously to enhance constructive working environment for educators.					
I4 learner Growth	I4-1 Academic Support and Services	Emphasized on the development of learner academic guidance service system.					
	I4-2 Discipline Competitions	Established mechanisms to help learners effectively integrate learners' learning with subject competitions.					
	I4-3 Learning Incentive and Experience	Established mechanisms that enable effective learning experiences for learners.					
	I4-4 Learner Entrepreneurship and Employment	Taken effective measures to promote learner employment and entrepreneurship.					
	I4-5 Cultivate learners' International Perspective	provided sufficient opportunities and a series of diverse platforms for learners to study abroad that integrate digital technology.					
Process Evaluation							
Primary Indicators	Secondary Indicators	Items This institution has:	1	2	3	4	5
Pc1 Major Development	Pc1-1 Position and Orientation of Major	A clear talent-training positioning that meets the needs of economic, social, and industry development.					
	Pc1-2 Research on Talent Cultivation Needs	Established a system to research on talent cultivation needs.					
	Pc1-3 Major Talent Training Plan	Provided detailed regulations for all aspects of talent cultivation.					
Pc2 Curriculum Development	Pc2-1 Curriculum Vision and Planning	Developed directional curriculum vision guidance, including phases of curriculum planning.					
	Pc2-2 Curriculum Design and Implementation	On the basis of industry or enterprise participation in curriculum design or revision, publicized major's curriculum plans for university and faculty.					
	Pc2-3 Curriculum Reform	Continuously updating the concepts and methods of teaching and learning.					
	Pc2-4 Classroom Teaching	Provided conducive classroom teaching to increase learners learning.					
	Pc2-5 Technology Application	Continuously promoting the integration of digital technology into education and teaching processes.					
Pc3 Teaching Management	Pc3-1 Educator's Teaching Effort	Developed an effective measurement to ensure the active engagement of educators in their teaching work.					
	Pc3-2 Teaching Guidance, Observation and Assessment	Established an effective teaching guidance, observation and assessment measurement.					
	Pc3-3	Encouraged educators to participate in teaching research					

	Teaching Research and Reform	and reform.					
	Pc3-4 Development of Interdisciplinary Teaching Team	Developed relevant systems for interdisciplinary teaching team.					
Pc4 Resource Development	Pc4-1 Teaching Facilities and Conditions	Strengthened the teaching facilities such as smart classrooms and smart laboratories.					
	Pc4-2 Course Database	Provided support for the development of a major course resource database.					
	Pc4-3 Academic Resources	Provided books, an online database, academic journals, and other resources for research activities.					
Pc5 Integration of Industry and Education	Pc5-1 Development Mechanism	Formed a community model and mechanism for industry education integration in the industry sector.					
	Pc5-2 Learning Scenarios and Environments	Provided learners with new experimental scenarios and real work environments based on industry and market changes.					
	Pc5-3 Application of Achievements	Regions, industries, and enterprises have benefited from the practical and research achievements of universities.					
Pc6 Academic Promotion	Pc6-1 Academic Assignment Management	Created a structured, diverse learner academic evaluation strategy guidance mechanism that is closely linked to the development of learner abilities.					
	Pc6-2 Innovation and Entrepreneurship Education for learners	Designed an innovation and entrepreneurship course modules to cultivate a culture of innovation and entrepreneurship.					
	Pc6-3 Experiential Learning	Integrating social practise projects with educational value into the curriculum system.					
Pc7 Monitoring and Feedback	Pc7-1 Teaching and Learning Quality Monitoring	Subdivided and collected information on the quality of talent cultivation activities.					
	Pc7-2 Quality Information Feedback	Established a feedback system for quality talent cultivation information.					
	Pc7-3 Quality Improvement	Conducted an in-depth analysis of the collected quality information for improvement.					
Product Evaluation							
Primary Indicators	Secondary Indicators	Items The institution has:	1	2	3	4	5
Pr1 Evaluation of Government and Society	Pr1-1 University Reputation	Developed a good academic reputation, and an employer reputation.					
	Pr1-2 Curriculum Outcomes	Achieved continuously increasing the results of highly recognised course development.					
	Pr1-3 Quality of Service	Continuously improved the satisfaction of society, industry, educators and learners with the university.					
Pr2 Teaching Effectiveness	Pr2-1 Learner's Achievement	Increased the number and level of awards for learners participating in various subject competitions year by year, including patents.					
	Pr2-2 Undergraduate Enrollment Rate	Increased the enrollment rate and quality of learners year by year.					
	Pr2-3 Learner Academic	Increased learner's academic achievements year by year, including academic paper publication and participation in academic conferences.					
	Pr2-4 Learner Employment Rate and Structure	Increased quality of learner employment year by year.					
Pr3 Cultural Formation	Pr3-1 Improvement in Institution and Practice	Implemented new institutions, procedures, and practices based on evaluation results.					
	Pr3-2 Curriculum Quality Assurance	Formed a curriculum quality assurance system that includes one framework , two systems, and three supports.					
	Pr3-3 Quality Report	Generated annual education quality reports, undergraduate employment data analysis report, and graduate tracking survey report, and publicise them..					

Appendix B

Comparison of Curriculum Leadership Evaluation Indicators with Existing Education Guidelines

Context Evaluation		Existing Evaluation Documents for Education Quality					
C							
Items		China's Ministry of Education Qualification Evaluation (since 1994)	China's Ministry of Education Audit Evaluation (First Round,since 2014)	China's Ministry of Education Audit Evaluation (Second Round,since 2021)	China's First-Class Curriculum (since 2019)	QS World (Regional) University Ranking (since 2004)	Outline of University of Sanya (since 2017)
C1 Organisation Leadership	C1-1 Culture Development		√ Campus culture	√ Quality culture Consciousness, self-examination, self-discipline, self-inspection and self-correction of quality culture construction			√ Quality culture is one of the mainstream cultures of University of Sanya
	C1-2 External Response			√ The situation of cultivating newcomers of the era who will take on the great task of national rejuvenation around the national strategic needs			√ Respond appropriately to the environment; √ Always anticipate and accurately assess changes in the environment and policies; √ The innovative model of teaching is to respond to future market demands; √ Sensitively predict, perceive, and respond to changes brought about or likely to be brought about by factors such as competitors, learner sources, and policies and regulations.
	C1-3 Internal Governance						√ Establish collaborative mechanisms among various levels within the university; √ Establish more parallel organisational interactions,

							cross-border project cooperation, and specialised committee work systems.
	C1-4 Leader Participation	✓ Leadership role	✓ University leaders' emphasis on undergraduate teaching	✓ The formation of a good atmosphere for undergraduate education under the leadership of the principal and implemented by the dean			✓ Establish collaborative mechanisms among various levels within the university; ✓ Establish more parallel organisational interactions, cross-border project cooperation, and specialised committee work systems.
C2 Measurement and Analysis	C2-1 Quality Standard Formulation	✓ Quality standards for teaching links	✓ Construction of quality standards	✓ University Quality Standards			✓ Establishing quality standards in various aspects of teaching management and elements of education
	C2-2 Comparison with Other Universities			✓ Submit an analysis report			
	C2-3 Analysis of Educational Background						✓ Always anticipate and accurately assess changes in the environment and policies.
Input Evaluation I		Existing Evaluation Documents for Education Quality					
Items		China's Ministry of Education Qualification Evaluation (since 1994)	China's Ministry of Education Audit Evaluation (First Round,since 2014)	China's Ministry of Education Audit Evaluation (Second Round,since 2021)	China's First-Class Curriculum (since 2019)	QS World (Regional) University Ranking (since 2004)	Outline of University of Sanya (since 2017)
I1 Community Development	I1-1 educator Community						✓ Community of interests.
	I1-2 learner Community						✓ Community of interests.
	I1-3 educator-learner Community						✓ Community of interests.
I2 Administrative Input	I2-1 Strategy Formulation and Implementation	✓ Development Plan and Goals.	✓ Development planning.				✓ Prioritise and centrally allocate resources to key success factors and selected strategic

							growth points; ✓ Determine the mission, strategy, and goals of Sanya University; ✓ Implement school strategies and plans
	I2-2 Organisational Learning						✓ Learning from peers both domestically and internationally, cross-border learning
	I2-3 Investment and Use of Funds	✓ Funding investment; Teaching funds input.	✓ Teaching Fund; Teaching funds input; ✓ Annual changes in funding; Fund allocation method, proportion and use efficiency.	✓ Teaching Fund.			✓ Prioritise and centrally allocate resources to key success factors and selected strategic growth points.
I3 educator Development	I3-1 educator Cultivating and Training	✓ educator cultivating and training.	✓ Cultivation and training.	✓ Policies and measures to improve educators' teaching ability and professional level; ✓ Emphasise educator training and career development; ✓ Policy measures to enhance educators' teaching, practical, scientific research, and information technology application abilities; ✓ educators' overseas exchanges, visits, participation in international conferences, collaborative research, etc.	✓ Measures to Improve educators' Teaching and Educating Ability and Level; ✓ Policies and measures to improve educators' teaching ability, industry-university-research ability, and information technology application ability, and encourage educators to practice in the industry, take up postings, and undertake horizontal projects; ✓ educators' overseas exchanges, visits, participation in international conferences, cooperative research, etc.	✓ Improve educators' teaching ability with cultivation and training as the key point.	✓ educator quality; ✓ Encourage enterprising awareness and behaviour; mobilise the creativity and initiative of various talents; ✓ Professional skill training for teaching staff; ✓ Continuously improve the training system and organise internal and external training.
	I3-2 educator Promotion and Assessment		✓ Policies and measures to serve educators' career development.		✓ Increase rewards for outstanding courses and educators.		✓ educator quality; ✓ Encourage enterprising awareness and behaviour; mobilise the creativity and initiative of various talents; ✓ Implement goal management for all employees and establish a performance management system

							based on it.
	I3-3 educators' Working Environment						✓ Believe that all positions can contribute, and actively provide conditions for them.
I4 learner Growth	I4-1 Academic Support and Services	✓ learner services	✓ learner guidance and services.	✓ Support service; ✓ The situation of the university's learner guidance services (study, career planning, employment, financial aid for learners from families with financial difficulties, mental health consultation, etc.); ✓ The university's implementation of learner guidance services (academic, career planning, employment, financial assistance for financially disadvantaged learners, mental health counselling, etc.), as well as the allocation of academic mentors, psychological counselling educators, school doctors, and the construction of specialised venues for educator-learner exchange activities.			✓ Provide satisfactory services for learners; ✓ Pleasant interaction, with a positive, fair, and diverse growth mechanism, a systematic and thoughtful learner service platform, a dedicated and professional team of ideological mentors, and a beautiful and friendly campus environment and culture, helps learners; ✓ The school provides learners with a full range of services, including academic, ideological, social, psychological, professional, and daily life services, which run through the entire process of learners attending school and are moderately extended to alumni.
	I4-2 Discipline Competitions		✓ Science and technology activities.				
	I4-3 Learning Incentive and Experience	✓ Policies and measures to mobilize learners' learning enthusiasm.	✓ learner satisfaction with self-learning and growth.	✓ learners (graduates and current learners) satisfaction with learning and growth; ✓ Emphasis on learner learning experience	✓ Let learners experience the learning challenge of 'jumping to get it'.	✓ Scholarship.	✓ learning experience of a comprehensive campus.
	I4-4 learner Entrepreneurship and Employment.	✓ Entrepreneurship education guidance, employment guidance and services.		✓ Innovation and entrepreneurship education work system and innovation and entrepreneurship education platform construction situation			✓ High-quality employment platform.
	I4-5		✓ learners' domestic	✓ International		✓ Outbound	

	Cultivate learners' International Perspective		and foreign exchange and study situation.	vision; ✓ Cooperation with foreign (overseas) universities in running schools, cooperative education, and international exchange activities related to undergraduate education and the development of education for international learners in China; ✓ learners' overseas exchanges, study visits, internships, competitions, participation in international conferences, cooperative research, etc.		exchange learners.	
Process Evaluation		Existing Evaluation Documents for Education Quality					
Pc							
Items		China's Ministry of Education Qualification Evaluation (since 1994)	China's Ministry of Education Audit Evaluation (First Round,since 2014)	China's Ministry of Education Audit Evaluation (Second Round,since 2021)	China's First-Class Curriculum (since 2019)	QS World (Regional) University Ranking (since 2004)	Outline of University of Sanya (since 2017)
Pc1 Major Development	Pc1-1 Position and Orientation of Major	✓ Can reflect the development direction of the discipline and the needs of economic and social development.	✓ Majorl cultivating objectives, standards, and determination bases.	✓ The fit between major development and national needs, regional economic and social development, and industrial development is critical to the demand for applied talents.			✓ Capacity of major development; ✓ Forming a major with advantages and characteristics.
	Pc1-2 Research on Talent Cultivation Needs			✓ Adapt to the needs of social and economic development; ✓ The establishment of a professional setting management system that integrates autonomy, flexibility, standardization, and			✓ Capacity of major development; ✓ Forming a major with advantages and characteristics; ✓ Determine talent training plans based on future talent market demand and cultivate

				stability around the industrial chain and innovation chain.			according to quality standards.
	Pc1-3 Major Talent Training Plan	√ Training program	√ Training program	√ Training program	√ Form a multi-type and diversified teaching content and curriculum system		√ Capacity of major development; √ Forming a major with advantages and characteristics; √ Determine talent training plans based on future talent market demand and cultivate according to quality standards.
Pc2 Curriculum Development	Pc2-1 Curriculum Vision and Planning	√ Curriculum is planned	√ Curriculum development planning and execution	√ Improve the planning and systemic situation of curriculum development	√ The goal of the course is to adhere to the organic integration of knowledge, ability, and quality, and to cultivate learners' comprehensive ability and advanced thinking to solve complex problems; √ Curriculum Development Planning		
	Pc2-2 Curriculum Design and Implementation	√ The syllabus is well-regulated and strictly enforced			√ Strict curriculum management; √ Curriculum design adds research, innovation and comprehensive content		
	Pc2-3 Curriculum Reform				√ Promote curriculum reform and innovation; √ Create a good atmosphere that emphasizes the reform and construction of undergraduate curriculum		√ Innovative educational and teaching models; √ Compatible with advanced educational concepts and methods from both East and West
	Pc2-4 Classroom Teaching	√ Classroom teaching; Good teaching effect	√ Classroom teaching	√ Classroom teaching	√ The teaching content reflects the cutting-edge and contemporary, and timely introduces academic research and cutting-edge scientific and technological development achievements into the curriculum; √ Teaching methods embody advanced and interactive; √ Classroom come alive.		
	Pc2-5 Technology Application	√ The teaching effect of multimedia courseware is good, and the network	√ Teaching informationization conditions and resources construction	√ Promote the integration of information technology and teaching process,	√ Vigorously promote the deep integration of modern information technology and teaching;		

		teaching resources can be effectively used		and strengthen the construction of information-based teaching environment and resources; ✓ The construction and use effect of teaching facilities and conditions such as smart classrooms and smart laboratories to meet the teaching needs of 'Internet +' courses	✓ First-class courses in virtual simulation experiment teaching.		
Pc3 Teaching Management	Pc3-1 educator's Teaching Effort	✓ Policies and measures to encourage educators to actively participate in teaching method reform	✓ educators' teaching input	✓ educator input; The establishment and implementation effect of the incentive and restraint mechanism for educators to devote themselves to teaching and all professors to teach undergraduates; ✓ educators, especially professors and associate professors, carry out teaching research, participate in teaching reform and construction, and their results; ✓ The establishment and implementation of incentive and constraint mechanisms for educators' efforts in teaching and teaching for undergraduate learners by all faculty members			✓ Efficient academic management; ✓ Caring academic services; ✓ Provide a platform for educators and staff to enjoy their careers.
	Pc3-2 Teaching Guidance, Observation and Assessment				✓ New educators must go through various stages, such as assisting in classes, giving lectures, and conducting assessments.		✓ Efficient academic management; ✓ Caring academic services
	Pc3-3 Teaching Research and Reform		✓ Teaching reform	✓ Measures to carry out the construction of teaching research and reform projects	✓ Intensive teaching research		✓ Efficient academic management ✓ Believing that possessing academic spirit and conducting scientific research are the responsibilities of educators, and

							educators need to improve their academic literacy, innovation ability, and teaching level through scientific research.
	Pc3-4 Development of Interdisciplinary Teaching Team			✓ Measures and results of strengthening the construction of educator teaching development centers, grassroots teaching organizations and young educators	✓ Consolidate grassroots teaching organization; ✓ Universities should realize full coverage of grassroots teaching organizations		✓ Efficient academic management
Pc4 Resource Development	Pc4-1 Teaching Facilities and Conditions	✓ Teaching basic facilities; ✓ Teaching conditions and utilization.	✓ Teaching facilities.	✓ Facility conditions.			✓ Scientific and standardized allocation of majors, courses, and teaching resources.
	Pc4-2 Course Database	✓ Curriculum resources.	✓ Curriculum resources.	✓ Teaching resource conditions; ✓ Construction and sharing of industry and enterprise curriculumresource databases and real project case databases.	✓ Share high-quality course resources; ✓ Rich and diverse teaching resources.		✓ Scientific and standardized allocation of majors, courses, and teaching resources.
	Pc4-3 Academic Resources	✓ Books and reference materials.	✓ Research transformation teaching.	✓ The compliance of books, materials, campus networks, and so on . with teaching requirements; ✓ Participation in international conferences, collaborative research, and so on.			✓ Scientific and standardized allocation of majors, courses, and teaching resources.
Pc5 Integration of Industry and Education	Pc5-1 University- Industry Collaboration	✓ Co-construct teaching resources.	✓ Co-construction of teaching resources.	✓ The number of courses co-constructed and co-taught with industry enterprises Dual-qualified and capable educators; ✓ Policies and measures to encourage educators to practice in the industry, take up postings and undertake horizontal projects; ✓ The situation of joint construction of internship and training bases by schools,	✓ Deepen the integration of production and education and collaborative education.		

				enterprises, and industry units.			
	Pc5-2 Development Mechanism						√ Actively exploring various forms of external and internal cooperation based on mutual benefit and win-win situations, promoting deep integration of industry, education, and research.
	Pc5-3 Learning Scenarios and Environments	√ Able to work closely with enterprises and institutions to carry out internships and practical training.	√ Practice teaching.	√ Strengthening practical education and constructing a practical teaching system.	√ A first-class course in virtual simulation experiments teaching.		
Pc6 Academic Promotion	Pc6-1 learner Assignment Management			√ Strengthen exam management, strictly enforce exam discipline, improve the academic evaluation system that organically combines process assessment and outcome assessment, and strictly control the examination and graduation exit.			
	Pc6-2 Innovation and Entrepreneurship Education for learners			√ Innovation and entrepreneurship education √ The measures and effectiveness of integrating innovation and entrepreneurship education into the entire process of talent cultivation and professional education			
	Pc6-3 Experiential Learning	√ Social practise.	√ Social practise.	√ Social practise.	√ A first-class course in social practise.		
Pc7 Monitoring and Feedback	Pc7-1 Teaching and Learning Quality Monitoring	√ Follow up and investigate the development of graduates.	√ The construction of the basic state database of teaching in the school.	√ The establishment of the continuous tracking evaluation mechanism for the quality of graduates and the results of the tracking evaluation.			
	Pc7-2 Quality Information Feedback		√ Quality information statistics, analysis, feedback mechanism; √ Quality	√ Quality information disclosure system and annual quality report.			

			information disclosure and annual quality report.				
	Pc7-3 Quality Improvement		✓ Quality improvement	✓ Continuous quality improvement mechanism construction and improvement effect; ✓ Continuous improvement of university personnel training			
Product Evaluation		Existing Evaluation Documents for Education Quality					
Pr							
Items		China's Ministry of Education Qualification Evaluation (since 1994)	China's Ministry of Education Audit Evaluation (First Round,since 2014)	China's Ministry of Education Audit Evaluation (Second Round,since 2021)	China's First-Class Curriculum (since 2019)	QS World (Regional) University Ranking (since 2004)	Outline of University of Sanya (since 2017)
Pr1 Evaluation of Government and Society	Pr1-1 University Reputation	✓ University reputation.		✓ Employer satisfaction.		✓ Academic reputation; ✓ Employer reputation.	✓ The quality of running a university ✓ Excellent quality of running a university; ✓ The comprehensive quality of private universities is leading in China; ✓ Establishing a high-quality university environment and image.
	Pr1-2 Curriculum Outcomes				✓ To achieve full coverage of first-class undergraduate course development in different types of universities ✓ Recognise around 10,000 national first-class undergraduate courses ✓ Recognise around 10,000 provincial-level first-class undergraduate courses		✓ The quality of running a university ✓ Excellent quality of running a university; ✓ Quality meets national conventional third-party evaluation requirements; ✓ Quality and work quality meet the strategic goals and cultural requirements of Sanya University.
	Pr1-3 Quality of Service	✓ learners are relatively satisfied with the teaching work and	✓ learner evaluation of guidance and services.	✓ educators' satisfaction with school education and teaching			✓ Provide intellectual and talent support for regional development;

		effectiveness and have a good evaluation; ✓ educators are relatively satisfied with the school's teaching work and learners' learning situations.		work.			✓ Make contributions to society. ✓ Provide satisfactory services for learners; ✓ Provide a platform for educators and staff to enjoy their careers; ✓ The quality of running a university; ✓ Excellent quality of running a university; ✓ Focusing on providing more diverse and personalised products for learners to choose from; ✓ Using learner satisfaction as the basic standard and scale for measuring related work; ✓ Serving the country and society with intelligence.
Pr2 Teaching Effectiveness	Pr2-1 Learner's Achievement			✓ The number of learners who won prizes in subject competitions.			
	Pr2-2 Undergraduate Enrollment Rate			✓ Enrollment rate (including domestic and foreign).		✓ Enrollment rate.	
	Pr2-3 Learner Academic			✓ The number of papers published by undergraduates as the first author/corresponding author in public journals and the number of national invention patents approved by undergraduates.			
	Pr2-4 Learner Employment Rate and Structure	✓ Employment rate Employment quality.	✓ Graduate employment rate and career development.	✓ The initial employment rate and structure of fresh undergraduates; ✓ Employment quality.		✓ Employment rate.	
Pr3 Cultural Formation	Pr3-1 Improvement in Institution and Practice			✓ Construction and effectiveness of continuous quality			✓ The university will conduct comprehensive

				improvement mechanisms			management, inspection, supervision, and timely adjustment of all work and actions; ✓ The university will continue to improve its management system, quality, and work quality assurance system; ✓ Strive to innovate ideas and actions in teaching, research, management, and serving society; ✓ Quality meets national conventional third-party evaluation requirements; ✓ Quality and work quality meet the strategic goals and cultural requirements of University of Sanya .
	Pr3-2 Curriculum Quality Assurance			✓ The construction of a quality culture characterised by self-awareness, self-Introspection, self-discipline, self-examination, and self-correction			✓ Culture; ✓ Quality Culture; ✓ The university will conduct comprehensive management, inspection, supervision, and timely adjustment of all work and actions; ✓ The university will continue to improve its management system, quality, and work quality assurance system.
	Pr3-3 Quality Report			✓ Quality information disclosure system and annual quality report.			✓ Curriculum Quality

