Leading Educational Change: A Study of the Impact of Transnational University on China's Higher Education Reform

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Abstract—**This study investigates the external impacts derived from the development of Transnational Higher Education (TNHE) in China and how the impacts have driven individual practitioners and Chinese higher education institutions to promote China's Higher Education (HE) reform through the lens of individual learning and organizational learning. This study interviewed nine research participants from Chinese universities by employing a qualitative case-study focusing on the experiences of a Sino-foreign cooperative university in China. It examined various institutional documents to uncover the impacts and how they have been exerted. The findings indicate that TNHE can contribute to the transformational changes of the HE sector through exerting influences on individual cognition, which further triggers individual behavioural changes, and the aggregated individual change agent's initiatives lead to organizational cultural shift as an institutional response to social calls for changes. This process of impacts is an interactive, dynamic and continuous organizational learning process, which relies on both Chinese participants and TNHE universities to take intentional initiatives.**

Keywords—**transnational higher education, education reform, individual learning, organizational learning**

I. INTRODUCTION

Since establishing the Johns Hopkins-Nanjing University Centre for Chinese and American Studies as the first Transnational Higher Education (TNHE) programme in 1986, TNHE has been experiencing fast development and expansion over the past three decades in China and worldwide. According to the data from the Chinese Ministry of Education (MoE) (2019), around 1 million Chinese students were enrolled in about 2000 TNHE programmes and institutions in Mainland China, accounting for one-eighth of the national enrollment number. Until 2018, over 2 million Chinese undergraduate students have graduated from TNHE. This indicates TNHE has become an indispensable component of China's Higher Education (HE) sector. As an emerging and booming industry, the popularity of TNHE has been increasingly growing, attracting more and more HE stakeholders' attention and involvement in it, as a result, leading to phenomenal social impacts on the broader Chinese society.

The burgeoning emergence of TNHE in China can be seen as an active response from the Chinese government to cope with unpredictable challenges and opportunities caused by internationalization and globalization. This phenomenon has become a popular topic in educational studies on internationalization [1], soliciting a body of Chinese and international researchers' investigations [2–9]. As noted by the researchers [10], one major impetus for establishing and developing TNHE in China is to enhance academic quality and standards, meet the increased demand for HE, and internationalize the Chinese HE sector. So far, most relevant studies have treated TNHE as the "affected objects" by investigating challenges and various factors that could impact TNHE's development and raising suggestions to address them. Nevertheless, exploring the "spillover effects" that aim to understand how TNHE affects Chinese HE is scarce. Thus, this research intends to examine the external effects of TNHE that have led to the Chinese HE system and how TNHE's development promotes changes in China's HE sector. The research questions are formulated as follows:

- What are the external impacts that the development of TNHE has exerted on China's higher education sector?
- How does the development of TNHE drive those affected to change?

The paper is organized as follows: the literature review was provided in Section II, followed by the introduction of China's TNHE development in Section III. Section IV introduced the research methodology. Research findings and discussions were stated in Section V and Section VI, respectively. The article ended with conclusions and limitations in Section VII.

II. LITERATURE REVIEW

The current status quo of TNHE research has shown that numerous efforts have been made by the academic community since the new millennium onwards. Kosmutzky and Putty [11] synthesized six topics from 640 studies on the internationalization of HE worldwide,

covering overview and trends of TNHE, quality and regulation, teaching and learning, institutional and management issues, governance and policy, as well as student choice and student mobility. Grounded on Kosmutzky and Putty's investigation, Qin and Te [12] specifically explored how the TNHE studies have developed during an extended research period in China. In addition to confirming the six key research topics identified in [12], Qin and Te looked into the characteristics of the research field by focusing on the main research methodologies employed in these studies and the distribution of locations of investigated cases.

Researchers of relevant literature were interested in several issues of significance. For example, some researchers compared university governance with other countries to see how the governance systems differ across different contexts [13]. Student learning cultures and motivation in choosing to study with TNHE [14–16], particularly learning in English as a media of instruction learning environment [17] was the focus of the research field. Hence, researchers explored students' learning experiences and motivations in this special learning environment so as to support learning and teaching better. Staff and student management was another important topic that focused on institutional-level interactions with other tertiary institutions regarding student exchange, foreign ex-pats management, how to manage this process more efficiently [18] by developing institutional development strategy and enhancing institutional branding and risk management [19]. Some of the other researchers discussed how environmental factors, such as socio-economic factors, legal structure, Chinese culture, etc., could impact the development of TNHE [20–23].

There are also several studies that intend to uncover the impacts of TNHE on various participants of HE. Nevertheless, it was notable that most of these studies seemed to examine the effects on TNHE participants only as an institutional-level analysis. Researchers such as [24] aimed to offer theoretical insights to formulate governance and leadership strategies for TNHE programmes to guide THEN institutional management from a practical perspective. Examining how learning and teaching on international branch campuses could impact local students' intercultural learning behaviours [25, 26] and local teachers' intercultural communities of practices within an institution [14] were another two research foci of this group.

In terms of the "spillover" effects of TNHE, a lack of studies was identified during the literature review, and only a few studies were found. Within it, Wilkins [27] developed a framework to investigate how home and host institutions might be influenced by their collaboration to establish a branch campus. Chen *et al.* [2] extended the scope of the impact by focusing on the social community. As an important participant in the HE sector in China and worldwide, how the development of TNHE has exerted influences on the local HE sector in host countries is still significantly under-researched.

All in all, researchers engaged in TNHE studies have mostly positioned their studies on raising various

difficulties and challenges that TNHE institution leaders and policymakers should recognize, and researchers intend to call for their effort to strive to promote TNHE's further and sustainable development [9, 28]. This situation was evident across most of the literature reviewed. A possible explanation for this phenomenon might be that most studies and researchers reviewed in these two studies still treated TNHE as an emerging phenomenon at its "infant" stage of development. Nevertheless, it can not be denied that TNHE has been going through over three decades' growth, which has led them to reach a certain level of maturity and will be able to output their influences externally.

III. THE DEVELOPMENT OF TRANSNATIONAL HIGHER EDUCATION IN CHINA

This study used the definition according to the United Nations Educational, Scientific, and Cultural Organization, in which TNHE is referred to as "all types of higher education study where the learners are located in a country different from the one where the awarding institution is based" [29]. This definition suggests that TNHE is about academic programmes and HEIs moving across borders from developed to developing countries, offering local students opportunities and options to choose international learning experiences without leaving the country.

In light of TNHE's legal status, there are three major types of TNHE in China, as shown in Fig. 1. Unincooperated bodies (fei duli faren) and cooperated bodies (duli faren) are two different types of institutions in terms of the level of institutional autonomy [30].
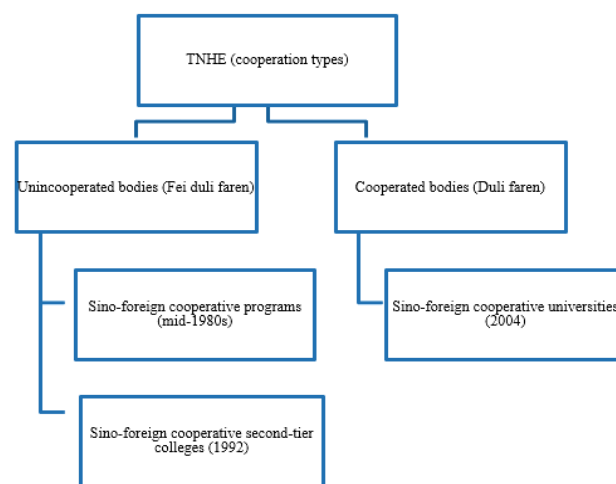

Fig. 1. Types of transnational higher education in China [30].

In nature, Sino-foreign programmes and second-tier colleges are constituent parts of public Chinese universities. They employ Chinese parent HEI's governance model, defined as the "President accountability under the leadership of the Party Committee", and widely adopted at traditional Chinese universities. They are fully affiliated with the Chinese parent and are under the central government's direct control.

Unlike the other two types of cooperation, Sino-foreign cooperative universities are independent legal entities without affiliation with another Chinese HEI. They adopt the board system to govern organizations' daily affairs. These universities can make decisions for daily operations, such as budget, leadership appointment, learning & teaching activities organization, personnel, etc. Therefore, they enjoy the highest level of autonomy compared with unincooperated bodies.

Due to the close affiliated relationship between the programme and college-level collaboration with their Chinese parent institutions, Sino-foreign collaborative projects might output their practices and philosophy in running programmes by influencing various activities at the Chinese parent institutions rather than those in the wider HE sector. Furthermore, the unincooperated projects are under solid government control and entitled to limited authority in decision-making, constraining their capacity for innovative development in management mechanisms, governance structure and organizational culture. According to the research, a possible innovation these institutions could make is learning and teaching activities collectively determined by the two degree-awarding institutions [5]. For Sino-foreign cooperative universities, as legally independent organizations with the least government control, power and authority, are vested in themselves, so they could have more autonomy to change learning and teaching, organizational management, staff and student management, quality assurance, etc., with more significant potential to spread new practices and deepen the development of the HE sector [6, 7]. Consequently, investigating the impacts of Sino-foreign cooperative universities would be able to offer more comprehensive answers to the research questions stipulated in this study.

Marked by the establishment of the University of Nottingham Ningbo, Sino-foreign cooperative universities have embarked on the journey since 2004. Until 2019, nine such types of TNHE have been founded in mainland China, which offer both undergraduate and postgraduate level of education to Chinese and international students. All of the nine universities are located in Yangtz River Delta and Pearl River Delta Economic Zones, the two most economically advanced and well-developed areas in China. A list of the universities and their locations is provided in Table I.

TABLE I.   SINO-FOREIGN COOPERATIVE UNIVERSITIES IN MAINLAND CHINA

	Universities	Locations
1	Xi'an-Jiaotong Liverpool University	Suzhou, Jiangsu
2	Duke Kunshan University	Suzhou, Jiangsu
3	The University of Nottingham Ningbo China	Ningbo, Zhejiang
4	Wenzhou-Kean University	Wenzhou, Zhejiang
5	New York University Shanghai	Shanghai
6	The Chinese University of Hong Kong, Shenzhen	Shenzhen, Guangdong
7	Shenzhen MSU-BIT University	Shenzhen, Guangdong
8	BNU-HKBU United International College	Zhuhai, Guangdong
9	Guangdong Technion-Israel Institute of Technology	Shantou, Guangdong

IV.   RESEARCH METHODOLOGY

A.   Research Design

This research project adopts a single case study by closely examining a Sino-foreign cooperative university in China as the research focus because a case study can facilitate developing an in-depth and thorough interpretation of the typical phenomenon being investigated [31]. The case study could be instrumental in unveiling in detail the efforts made by the institution to spread the effects on the Chinese HE system.

B.   The Setting of the Case Study

The selected University is a young Sino-foreign cooperative university, which was a product based on the partnership between a Chinese university and a foreign university. Like other Sino-foreign cooperative universities in China, this University has been putting a great deal of emphasis on developing innovative teaching pedagogies with the objectives of improving education, reshaping teaching and learning, and committing to future university studies in the context of uncertainty, ambiguity, complexity and changeability of the contemporary world. According to MoE, this institution has extensively endeavoured to promote its unique educational philosophy and innovative practices to the Chinese HE sector and beyond.

Under the guidance of the Vision and Mission, the University established a secondary institute. Since its foundation, the institute has been striving to become one of China's leading schools of education in advocating HE reform and improving the educational leadership of HE practitioners in China. It has been acting as one of the significant change agents in the Chinese HE sector to spread its influence via connecting educational practitioners who are enthusiastic and passionate about teaching innovation by integrating contemporary and advanced educational theories and practices.

The main approaches that the institute is employing to expand external influences are training, the annual national-wide "Teaching Award Competition" (hereafter, referred as TAC) and educational research. It delivers various training programmes to educational practitioners from traditional Chinese universities. The training programmes were based on the University's developmental experiences, particularly in forming its unique educational philosophy and university management features. With ten years' development, the institute has gradually constructed a professionalized, multi-layered and full-coverage training system to enhance learning and teaching for university teachers. Several key characteristics are embodied in this training system:

(1) The optimum objective of the training programmes is to assist students' learning and growth as the "whole person". The first stage of the training programme is to help teachers thoroughly understand the objective of teaching and discuss how students, as "customers", learn and their learning experiences.

(2) Provide whole-process support for enhancing professional practices for teachers. The training programme is an intensive face-to-face training programme organized during summer before the semester starts. During and by the end of the new teaching semester, online interactions to share insights and best practices among trainers and trainees usually occur to encourage self-reflection and peer learning as a way for self-improvement. This process assures teachers' learning, practices, and self-reflection are aligned to maximize learning outcomes.

(3) Instruct and support organizational leadership and management changes that significantly impact learning and teaching. To ensure the effective implementation of new practices in "student-centeredness" at traditional Chinese tertiary institutions, a school of education within the University developed "Leadership of Excellence" and "The Professionalization Enhancement Programme for Teaching Support Staff" to help university leaders, middle managers and various professional services staffs across different functions to shift their mindsets from "teacher centeredness" to "student-centeredness".

(4) Construct "communities of practices" to promote best practices in teaching innovation. The School intends to create an influential community of practices to nurture the development of teaching innovation in the HE sector. Through the organization of plat-form-based activities in the format of "Annual Conference", TAC, Teaching Forums & Salons, Teacher Developing Center, "Case-Studies of Teaching Innovation", etc. to create various opportunities for individual teachers who are passionate about teaching innovation to meet and talk with other peers; encourage practitioners to participate in a plethora of opportunities and provide support for their practices; at the same time, providing ideological and practical support for others who intend to continuously enhance their teaching skills.

(5) Stimulate stakeholders' mindset and behavioural changes using evaluation. Based on the notion of "student-centeredness", the School produced an evaluation system that can overall assess the degree of student-centeredness at organizational levels. With the attempt to help stakeholders fully acknowledge their strengths and weaknesses in learning and teaching support, this evaluation system entails five dimensions, namely educational objectives, teaching activities, extra curricula, management, and governance, as well as student growth to assess the added values to students obtained from their learning experiences at universities.

C. Data Collection

The principle of "fitness for purposes" [4] highlights the importance of aligning the research questions with the selected methodological paradigm and research design. Accordingly, this research utilizes semi-structured interviews and documentary analysis as the two methods for qualitative data collection.

The purposive sampling strategy is employed to select interview participants who previously attended the University's activities and have been striving to make changes at the workplace. After careful selection, nine participants finally agreed to participate. To ensure participant's diversity, university teachers and leaders are included in interviews. Furthermore, since the Registrar offices at Chinese universities are powerful divisions taking charge of quality assurance, teaching innovation, and teacher management, Heads of Registry Office are also included for consideration in this study. The number of participants for each of the three groups is evenly distributed.

Documentary analysis was defined as "a systematic procedure for reviewing or evaluating documents-both printed and electronic (computer-based and internet-transmitted) material" (Bowen, 2009, p. 27). In light of it, diverse institutional documents were selected for data collection, including historical development records, training materials, research outputs, activity brochures, websites, annual review reports, etc., which were useful data sources to generate informative themes. Documentary analysis in this study is considered a complementary tool to interview by adding extra values and information that couldn't be obtained from it. However, it is still highly accountable for the study. This is in line with the function of this method for its significance in serving the purpose of triangulation for investigating the same inquiry [5]. Eventually, the accountability and credibility of the research could be enhanced.

D. Data Analysis

The analysis of this study follows an inductive data-driven thematic analysis [32, p. 78], which was claimed as a "flexible and useful research tool, to potentially provide a rich and detailed, yet complex account of data". All collected data were examined in-depth to identify representative patterns across the whole data set.

Since all interviewees are Chinese and most documentations were written in Chinese, data were coded and analyzed in Chinese in the first instance. Till the main themes generation and final report writing, themes were translated into English. The transcripts quoted in this study were translated into English as well.

E. Ethical Considerations

To assure a high level of confidentiality for research participants' personal information, participants' names and institutions, wherever they appeared in interviews or documentations, were anonymized and coded to avoid identification. All participants agreed to participate in the interviews. Consent forms were signed in advance to ensure participants fully acknowledged what were expected from them.

V. FINDINGS

A. Deepened Perceptions on "Student Centeredness"

The investigation identified participants had developed new perceptions on "student-centeredness" due to their participation in various activities organized by the University, which was reflected in their contextualized understanding on this concept constructed based on their learning experiences and the circumstances encountered at their workplace.

In the first instance, they highlighted the values of students' engagement in the process of changes other than only limiting it to teachers. Students should be motivated to participate, and the organization should utilize their power to achieve reform objectives.

Secondly, participants raised a key point that the locus of the reform in the Chinese context should be classroom, which called for university teachers' broad participation in this initiative and implement it in their classroom teaching. For example, participant IN8U6 explained:

"*Becoming truly 'student-centeredness' requires this concept be used in classroom teaching activities. This is supposed to be our direction at present and in the near future, as the objectives for both teachers and teaching support offices. I believe starting making changes to classroom instructions is a good start. We hope to deepen everyone's recognition through training, and we hope training could help us to achieve this goal*".

B. Reshaped Teaching Approach for Teachers

Part of the research participants are university teachers. All of them reflected during the interviews that, based on the nature of the subjects they teach, they had been actively developing and trying new teaching pedagogy to promote student learning.

As a result of participation in the School's activities, and inspired by the "research-led teaching" philosophy, some participants integrated new teaching activities that were popular in the western style of teaching. For example, IN9U7 said "*during my class teaching, I tried to use project-based teaching activities, so students should learn by following the same way in conducting a research project to dig out in-depth the reasons and various possible answers to explain the issue under investigation*".

Some participants even carried out pedagogical changes at a wider scale by completely redesigning teaching activities for the whole class. Participant IN7U5, for example, noted:

"*By taking the characteristics of the subject and students I am teaching, I have developed a new multi-layered, multi-phased and multiple instruction approach. The principle of innovative practice is capability-oriented and is delivered at multiple layers in a cluster of different programmes and targets on the entire process of undergraduate student cultivation*".

Notably, some participants acknowledged the significance of technology-enhanced learning, so they creatively adopted modern technologies into teaching activities. IN6U4 explained, "*I was inspired by the Educational Technology Showcase demonstrated during the training, so I started to use online instruments to assist my delivering teaching. Based on the level of difficulty, I flexibility used technology to aid my instruction for more challenging classes*".

Furthermore, the School indirectly impacted the research participants' colleagues, who were inspired and encouraged by the innovative changes of participants to take part in training programmes, or TAC to improve their own skills in making effective changes.

C. Reshaped Pragmatic Working Approach for Teaching Support Staff

It was reported that becoming "student-centeredness" entailed a shift in teachers' mindset from centring teachers in classes to centring students instead. As a result, the adopted approach for classroom instruction was changed from teacher domination to student domination, which the research participants widely highlighted.

Participant IN4U1, as the Head of the Registry Office of a University, shared the changes in their staff after taking training programmes, and said that "*being inspired by the experience… The Student Affairs Office considered how to simplify their working procedures to provide more efficient responses to various students' requests…*".

Teaching support staff's enhanced proactivity in making change suggestions to the institution was identified as a prevalent pattern, further presented in two aspects.

On the one hand, external training has opened the horizon of vision and all participants realized its power in shaping new mindset, so they suggested the HEIs take advantage of external sources to promote their change initiatives. For example, participant IN8U6 noted:

"*We had good learning experience with [the School] before, so after we learnt that [the School] has established national-level 'Alliance of University Teacher Development Centre' that aims to support Registry or Teacher Development Centres at Chinese universities to implement innovative practices required by educational reform, I strongly made suggestions to the upper level to join in this Allianc*e".

Some interviewees also suggested developing collaborative relationships with TNHE HEIs to contribute to educational reform collectively. For example, participant IN1U1 suggested to the university, and said:

"*I wrote a report to my superior and suggested him that we could collaborate with the University to test the water*".

On the other hand, participants initiated constructive suggestions to their institutions on how to more efficiently make internal support for staff and students engagement in the change processes. IN1U1 suggested that "*we should create a university-wide resource-sharing mechanism to promote academic exchange in learning, teaching and pedagogical research*".

D. *Organisational Change – The Formation of the New Organizational Culture*

Based on interviewees' responses to how changes were evident at the organizational level, an organizational culture change in learning and teaching was identified from the qualitative data from two perspectives.

Firstly, the participants found that students were more engaged in various learning activities due to research paricipants' change actions at the workplaces. They reported students' initiative in learning and learning outcomes had been much more improved. The learning outcomes here were not specifically referred to as academic achievements or exam performances, which were articulated as student growth as a result of learning.

An improved student-teacher relationship with higher level of trust could be seen in the data. Students have adapted to questioning teachers in classes and started shifting their attitudes toward teachers by believing that teachers also have distinctive identities. Participant IN6U4 raised:

"The result of my changed instructions was not reflected in improved exam marks, and perhaps, this could not be shown in marks within such a short period. Rather, it needs a longer time to testify. However, the most impressive part was that I saw better communications between students and teachers occurring right now, and their relationship seemed to improve. Since teachers have put student growth in the foremost position rather than delivering key knowledge points, they focus more on the teaching process rather than exam results. As for students, they seemed to feel that teachers gave them more care, so they were less likely to refuse or deny talking to teachers".

Secondly, the data shows the scope of the scale of various change activities expanded. More teachers were inspired to collaborate in collectively designing innovative teaching pedagogy, which further encouraged other colleagues and formed a change culture at the workplace. Furthermore, teachers engaging in innovative teaching has largely increased (IN1U4). A notably increased number of applicants applied for teaching-based professional qualifications (IN3U2). Thirdly, more teachers are enthusiastic about pursuing external training and teaching competitions to enhance their skills (IN4U1). Eventually, all concerned universities observed the formation of a new organizational culture in which staff's enthusiasm and participation in change activities thrived.

E. *Intentional Promotion*

Intentional promotion, as reflected in the data set, was found from changes in institutional policies as well as personal endeavours.

The developed institutional policies provided funds and opportunities for active agents to initiate or participate in change activities, which acted as an infrastructural support system for teaching reform and innovation. For instance, at some universities, the organization motivated teachers to prioritize applying teaching awards for professional qualification accreditation.

The influences of various changes did not stop at the individual or institutional levels. Nevertheless, it had been further extended beyond via change agents' intentional promotions. This finding was derived from all interviewees as teaching staff. Some affected interviewees motivated their colleagues at the same HEIs to participate in the School's training and TAC after their own participation. Alternatively, they invite other colleagues to join in their innovations by carrying out collaborative innovation projects. By utilizing social media platforms, such as WeChat, blogs, etc., several interviewees updated their reflections after training or TAC to communicate to colleagues and others in the HE community about the newly acquired ideas and practices. Proactive participants also published articles about their teaching innovation practices to affect a wider group of HE participants.

VI. DISCUSSION

In summary, the research findings have provided a systematic understanding of the impacts of the development of TNHE HEIs on the Chinese HE sector through their impacts on a variety of practitioners and organizations which are dedicated to the innovative development of the HE sector. The summarized impacts on change agents' understanding of "student-centred" education and the improved practices aligned with the new educational philosophy have further expanded to others in the organizations and beyond, which has, as a result, promoted the development of new organizational cultures as the source of continuous change. Thus, this process somehow implies a path as to how the impacts have been exerted. This process is illustrated in Fig. 2.
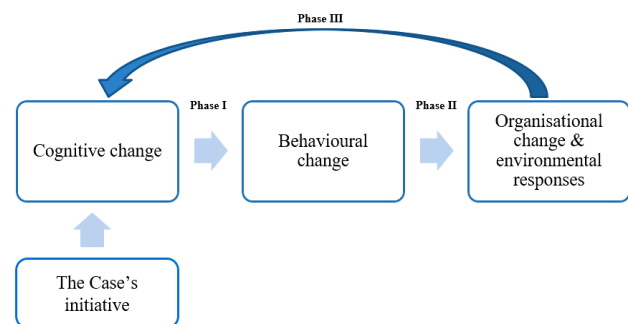

Fig. 2. Paths of the impacts.

March and Olsen [33] argue that the organizational learning model demonstrates a learning cycle at organizational level, which is considered a helpful tool to understand this path. The four constituent stages in the model somehow correspond with the four phases, respectively. This process was explained explicitly in this section.

Phase I: From cognitive change to behavioural change

The flow of influences from individual belief as the departure of the process to individual action in the organizational learning model [33] corresponds with Phase I. In nature, Phase I primarily explains how the

individuals' cognitive change could lead to behavioural changes.

The participants' cognition changes happen through the learning experiences in their activity participation. This concrete experience motivates them to continue making changes. It enhances their confidence in initiating change activities, encouraging them to self-reflect on what the concept of "student-centeredness" meant in their working contexts. Then, participants return to the working field, in which they test the knowledge about "student-centred" education by applying new ways of teaching and working, through which they could refine, improve and enrich their understanding of the concept theoretically and practically.

Phase II: From behavioural change to organizational culture change

March and Olsen's organizational learning model proves that there is a link between individual actions and organizational choices due to accumulative individual influences [33], so this is a transitional process from individual behaviours to organizational behaviours, in line with Phase II.

The core to understanding this process is to examine how individual behaviours as a part of individual learning [34] is connected to organizational learning. Fall [34] tried to integrate Kolb's experiential learning [35] with March and Olsen's organizational learning [33], and to argue that individual learning was a significant constituent of organizational learning from the theoretical perspective. As Kolb's model reflects, individual learning is an integral process combining two essential elements of individual cognitive development and behavioural changes [35]. Based on Fall's findings [34], we could conclude that the development of individual learning that is either demonstrated in improved cognition upon certain phenomenon, enhanced behaviors, or both, could lead to organizational response. This argument has been echoed by the latest research [36–38], but the authors did not investigate this issue empirically. The result of this research offers evidence to this argument and extends our understanding of the TNHE context.

After being affected by the School, the change agents investigated in this study intentionally promoted their learning experiences to other HE practitioners in two ways, to motivate other agents to act upon them.

One way is to affect colleagues inside the organizations so they work together to trigger changes at the organizational level. This case, in nature, exemplifies the agential effects that individual agents initiate as the source of changes at the organizational level, so this is a micro-meso level change, in other words, a bottom-up approach. A top-down approach has also been uncovered, which was manifested in organizations' initiatives to support change behaviours of individual staff by providing financial support and implementing new policies.

The other way is to affect HE practitioners outside of the HEIs they work at. This has been illustrated as an additional path from individual behaviours to social recognition. This could be realized from change agents'

behaviours in publishing papers or books about innovative practices and experiences in journals, broadcasting their reflections or practices via social media, *etc.,* which usually have broader audiences to view without time or geographical location constraints.

The two approaches explain how individual learning can be transformed into organizational learning in the given context. This result corroborates with early research by Campbell and Amstrong [39] and Liu *et al.* [37]. The authors explain that this transformation is internalized through a shared mental model within an organization, a process to generating shared understanding [39]. This research argues that this process has a spillover effect beyond a single organization, affirming the impacts of individual behavioural change as a result of the training can transcend different organizations by creating a shared understanding of new ideas and practices.

Phase III: Organizational change and the return to influence individual agent

As part of the influencing path, this process could be seen from the newly developed organizational culture in embracing changes by a larger number of students and teacher participants acting as the change agents. The accumulated individual effects caused this and finally formed a trend which resulted in the cultural changes at the institutional level as responses and calls to the transformational development of the HE sector in the wider society. This trend might further lead to the thrive of new social phenomena that could trigger individual reactions to new participants joining change activities or inspire extant practitioners to embark on the second round of learning.

VII. CONCLUSIONS AND LIMITATIONS

Based on the context of TNHE's rapid development in the past decades, this study particularly examines various impacts that are derived from this phenomenon on changing current situations in China's HE sector, as well as, how the changes are demonstrated in the processes of social interactions between TNHE HEIs and traditional Chinese universities. This study is grounded on a different research position than prior TNHE research by investigating TNHE's influences output rather than viewing TNHE as the object affected by contextual factors.

The findings of this study indicate that the development of TNHE has led to evident changes in the HE sector in terms of change agent's cognition, behaviours, as well as organizational culture. The formed change processes are iterative, cyclic and dynamic to demonstrate a systematic organizational learning process embarking on knowledge acquisition at the individual level as the starting point, then going through institutionalized process to develop new organizational culture, and further affecting individual learners to continue learning and development.

Based on the findings of this study, we can conclude that the development of TNHE plays a significantly

positive role in contributing to China's HE reform, which is premised on a very significant condition that TNHE should demonstrate desirability, initiatives and actions to promote their advanced educational philosophy and professional practices externally. This is not only a matter of raising awareness, as the public has given broader recognition and attention to TNHE's accountability in talent cultivation and its capacity for innovative teaching, which they believe will enlighten Chinese universities' future development. More importantly, TNHE HEIs, as powerful agents, should also take responsibility to actively respond to this social call and make the best use of their educational resources and knowledge to inform Chinese HEIs' change initiatives. On the other hand, Chinese universities, as another group of powerful change agents who want to pursue personal and professional development to contribute to China' HE reform, should be self-motivated and be proactive in seeking individual learning and knowledge acquisition by learning from various HE participants. With the endeavour of both groups of change agents, China's HE reform could come to a success.

This study adopts a single case-study by focusing on investigating an institute's experiences at a Sino-foreign cooperative university in particular. A single case study might be criticized for the generalizability of the results. However, as the only relevant case, the case still has significant practical implications for other TNHE HEIs to learn and take a more profound consideration on developing their own understating and reflections on their practices in past years. Furthermore, there seems to be a lack of comprehensive theoretical framework to explain the change processes, which should be worth further exploration in future studies.

CONFLICT OF INTEREST

This research doesn't have any conflict of interest.

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