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Editorial

Transformation in Higher Education Institutions in cross-cultural contexts during uncertain times

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Under the influence of global trends such as globalization, massification, and privatization, there is general agreement that most nation states are experiencing reform pressures and transformation process on all sector of society, including higher education (Maassen & Cloete, 2007). These challenges are increasingly global and requires universities to participate in basic and applied research and to educate students who will participate at the highest levels of science and the economy in uncertain times (Altbach, 2017). In order to remain the societies cohesive and manageable, HEIs are required to absorb those massive changes, adapt quickly and be resilient (Papandreou & Shapiro, 2017).

This leads HEIs to consider new configurations of societal, organizational, and technological aspects in times of uncertainty. They have to produce knowledge and train talented people as well as adopt

technological developments (Baptista et al., 2011; Peters et al., 2009; Nowotny et al., 2001). As increasingly global actors, they promote knowledge flows and train national and international students (Horta, 2009) with a different social, economic and ethnic backgrounds (Denson & Bowman, 2013). So public policies should promote more institutional autonomy and integrity of modern HEIs, that integrate HEIs and science policies (Papandreou & Shapiro, 2017). This is particularly relevant as HEIs are becoming partners of scientific institutions and industry sectors (Sidhu et al., 2011).

Similarly, HEIs should provide students with new learning environments in order to educate them for a sustainable society (Shriberg & Harris, 2012). Additionally, HEIs are pressed to fulfil societal roles. In on-going processes of institutional change threatened by corporate-like reforms and neoliberal thinking, they still have to contribute to democratic processes, support policy decision-making, and garner societal trust (Kwiek, 2005). Another essential role of HEIs is the generation and promotion of "cultural norms" in both substantive and procedural terms (Nowotny et al., 2001) as it is associated to claims for the maintenance of a "culture of liberal rationality" (Nussbaum, 1997).

Throughout the past decades, higher education institutions have coped with substantial changes and increasing challenges when it comes to their transformation in size and complexity (Sewerin & Holmberg, 2017). Concurrently, they drive economic change through several initiatives, including the promotion of technological development in firms through employment of graduates, the creation of new firms and university-industry relationships (Baptista et al., 2011), transformative development through innovation and reforms

(Handy, 2015). Another economic challenge is caused by transformational role of international university campuses. From a Western commercial perspective, these campuses were presented as a financial source which created an imbalance between the liberal ideas of the West and the local ideas and ideologies (Chan & Emmett, 2015; Lane, 2018). Equally important, the COVID-19 crisis will certainly bring forth a re-ordering of priorities for many higher education institutions especially in terms of transformation in governance and academic leadership (Hudzik, 2020). More importantly, this global crisis has offered an opportunity to HEIs to improve the process of digitalisation proving a quick switch to blended or hybrid delivery (UCISA, 2020). This results in discussion on transforming university governance, digital governance, and sustainability governance (Wolter, 2007). All of these changes increase the pressure on academic leaders in HEIs (Jarvis, 2018). Despite the uncertainty ahead of them, they have to adapt and find new ways in the tide of internal and external forces (Lliopis, 2012) as well as a style consistent with the context of the culture of institutions, the nature of the tasks and the characteristics and expectations of their team members (CMI, 2015). Thus, the role of academic leaders is becoming increasingly complex, multifaceted and stressful (Meek et al., 2010) and the existing research clearly indicates that this requires skills and experiences that many of them lack (Wolverton et al., 2005). Consequently, academic leadership development for enhancing leadership skills in the new context is strongly emphasized (Zhu & Zayim-Kurtay, 2019) to reduce on-going challenges and straighten the institutions' mission (Evans, 2014).

With such a background, this special issue is relevant of the main scope of the REAL journal (Research in Educational Administration and Leadership) to develop the understanding of the transformation of

HEIs in uncertain times. For this, we mainly engage studies from Chinese and European universities. The choice of Chinese and European universities is based on (1) the relatively long history in European and Chinese HE, (2) common global challenges in both contexts, (3) the need of international audience for understanding the transformation of HEIs in a more in-depth vision, and (4) knowledge gaps from a diverse and international perspective regarding the transformation in uncertain times.

Transformation in European and Chinese Higher Education

HEIs around the World are experiencing immense challenges both in external global needs as well as knowledge and structure required for their development and transformation. The pandemic, massification, online learning and teaching, deteriorating infrastructure, loss of key competences are some of the main drivers of change for the new decade (Moksel, 2022).

As two important players in the global higher education arena, China and Europe are not exempt from these imperatives to change. Apart from their distinctive contextual and structural characteristics, China and Europe have different strengths and weaknesses in higher education. This means that the way they experience and deal with these trends and reforms display variations (Zayim-Kurtay & Zhu, 2019).

The European higher education institutions have been transformed or transforming during the past decade. HEIs in the early nineteenth century have shifted from Humboldtian model of an elite institution giving priority to the acquisition of knowledge to the late 21st 's myth of knowledge (Baltaru & Soysal, 2018). In the past twenty years,

European HEIs most frequently focused on Bologna Process and thus increasingly became more autonomous. In addition, they took responsibility for their own future, the quality of education, financial and other resources (Floud, 2006). Moreover, the Bologna Process has offered many opportunities in creating a robust, productive and adaptable framework for European HEIs (EUA, 2020). Similarly, European Higher Education engaged in the Modernisation Agenda in order to enhance the performance and international attractiveness of Europe's higher education institutions (De Boer, Jongbloed, Benneworth, Westerheijden, & File, 2012). With the influence of globalization, European HEIs are facing 'an age of complexity' in which knowledge is not only accessible through HEIs (Smidt, 2015), but has become increasingly available through the private firms and non-academic organizations (Baltaru & Soysal, 2018). In such a context, HEIs in Europe, with full of reforms, are transformed into better managed higher quality organizations (Ramirez & Tiplic, 2014) that support the national progress, human capital and economic development (Baltaru & Soysal, 2018; de Boer et al., 2012). This, in turn, influences how HEIs are governed. Similarly, managing this transformation may present challenges for academic leaders as new forms drive the need for effective strategic planning and decision-making process (Bennett et al., 2018). In order to respond those challenges, HEIs need to improve their governance and train their leaders to run the institutions in a complex environment at the managerial, institutional, regional, and European level (Baltaru & Soysal, 2018; de Boer et al., 2012).

In Chinese HE context, education has been of great interest of Chinese government and citizens since the fourth century. During this long period, Chinese HE has experienced a wide spectrum of change in

perspectives and policies (Wu & Zha, 2018). After the 'open door' policy in 1978, China established international collaborations with other countries especially with Western countries (Liang, Dai, & Matthews, 2020). At that period, internationalization in China was largely limited to students and faculty members' being sent abroad (Huang, 2007). As a response to the arrival of a highly competitive global knowledge economy, China issued its first landmark policy in education. With this policy, Chinese government raised its awareness on the importance of HE development and internationalization (Wu & Zha, 2018) and started to send students and academic staff overseas, establish transnational programs for mutual mobility, merged international dimensions into their teaching and learning facilities (Liang et al., 2020). Among the most profound reforms, the Chinese government has implemented the '211 project' and 'the 985' programme. Besides, more Chinese universities have appeared in international rankings among the top 500 universities (Shanghai Ranking, 2017). Along with these implementations, students and academics in China have also experienced numerous changes in their educational practices. The 13th Five-Year Plan (2016-2020), proposed by the Chinese government as a formal commitment to internationalization, could be an example of this (Lin, 2019). Within the scope of this plan, higher education institutions were recommended to improve their education quality by changing the curriculum and making pedagogical reforms. In response, many scholars (Tan & Reyes, 2016; Wei, 2018) have emphasized the importance of innovative, student-centered pedagogies that focus on fostering student independence and autonomy.

The content of this Special Issue

In this special issue, we have collected six papers dealing with various issues about transformation in European and Chinese HEIs involving organizational, societal and digital aspects as well as the perspectives, roles and challenges of academic leaders during uncertain times.

The first paper by Chu, Wang and Gao documents the strategic change of industry-featured universities in China due to marketization process. This paper comprehensively covered the transformative development stages of China University of Geosciences (CUG) and summarized features and implications of its strategic change. Referring to the Second Curve Theory, this study reveals that in the context of globalization, marketization and informatization, CUG has set about its transformative development, with guidance and support from the government. Thus, it contributes to the literature on theoretic discoveries and experiences in this field.

Focusing on transforming governance in HEIs, Sziegat uses a holistic and integrated approach to review the governance of German Universities of Excellence, especially of those selected as Universities of Excellence. The findings reported in this study illustrate further discussion on transforming university governance, digital governance, sustainability governance, and good governance for organizational effectiveness and sustainable development.

The third paper on the case study determining the reasons for dropping out of university students, Yılmaz and Sarpkaya present findings from a qualitative data collected from both students and teachers in a Turkish HEI. Specifically, the authors discuss the dropout factors related to pre-admission and after admission process. All these

factors are found to affect their adaptation process, academic integration, social integration, and organizational commitment. The research findings further reveal that the reasons for and process of the dropout are interconnected and divergent.

In the following paper, Matos and Cunha present and discuss how a European public university develops transnational campuses in China and Egypt. With a comparison of governance and pedagogical models proposed for China and Egypt, they explored different expectations of Middle Eastern and Chinese authorities. Their reflection on the transformational role of these international campus offers opportunities for training of future generation of leaders in those regions. They also analyze how business models of these different proposals influence unexpected obstacles which would be helpful in optimizing cooperation.

By drawing on the Turbulence Theory, Örücü and Kutlugün investigate the experiences of academic staff as well as explore their perceptions on HE leadership and management during the initial phase of the COVID-19 in Turkey. This study illuminates on how leaders in HEIs could address the needs of the academic staff and the university as a whole organization during uncertain times. To achieve these ends, they suggest HE leaders to consider structural and emotional aspects of the pandemic as well as prioritize attributes, namely caring culture, trust, effective communication, and support.

Still on leadership and its development, the last paper by Dinh, Zhu and Caliskan investigates the effectiveness of leadership development program provided in a diverse context. Their survey of 101 respondents identifies the outcome assessment of leadership development program. The results present that self-growth and peer

interaction significantly contribute on leadership effectiveness while networking motivator has a nonsignificant impact. The study further implies the importance of leadership development and its potential to enhance the knowledge and skills of academic leaders due to radical changes and complexities in academic institutions.

Taken together, this special issue sheds considerable light on the transformation of university governance during uncertain conditions and the importance of academic leadership and its development in European and Chinese universities. It also provides unique studies as well as collaborative and comparative ones from an international perspective. Specifically, this issue highlights university governance systems and academic leadership in European and Chinese universities as well as broadens the perspectives on various systems, approaches, strategies or solutions on the transformation of university governance. It explains the importance of transformation of university governance for organizational effectiveness and sustainable development and presents the role of government during strategic change process. Equally important, it examines the recent changes because of COVID-19 and has raised important questions about the roles of academic leaders during uncertain times and touched upon leadership development process to enhance the knowledge and skills.

As we conclude this introductory editorial, it is noted that the space of this special issue is limited and therefore several questions still remain to be answered. Future work is needed to fully understand the transformations and new forms of university governance and academic leadership to generate theoretical and practical innovations to modernize HEIs in the World.

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The Strategic Change of Industry-Featured Universities in China in the Process of Marketization: A Case Study of China University of Geosciences

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Abstract

The 1970s witnessed the deepening of marketization because of the introduction of reform and opening up in China. Profound changes were observed in the ties among Chinese industry-featured universities, government competent authorities and the market. Faced with ever-evolving environment, China University of Geosciences (CUG) managed to transform itself from a single-discipline-group geological college to a multidisciplinary university with geological disciplines as its major feature, with integrated development of multiple disciplines. Drawing on the Second Curve Theory, this research presents a case study on CUG, with the strategic change concepts, practices, accomplishment and effects in various stages of its transformative development comprehensively covered and analyzed, making an attempt at summarizing

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features and implications of its strategic change. Findings of this research reveal that being adept at grasping well the timing for university change, establishing clearly-defined shared vision, developing the system of school running concepts and strategic planning, stressing management on strategic process and clearly identifying roles among leaders at all level, prove to be pivotal to the strategic change of CUG. The strategic change analysis framework of university transformative development could further add insights to theoretic discoveries in this field, and experience could be provided to transformative development of Chinese universities, and even those in other countries in the world.

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Introduction

The intensification of globalization, rapid development of science and technology and the emergency of competition prompt the transformation and development of universities (Muluneh & Gedifew, 2018). Strategy is one of the elements of university transformative development (Wu, 2021). As a forward-looking and systematic way of thinking and conducts, strategic management provides a set of holistic and long-term guidance framework of action for the transformative development of universities, achieving their survival and development (Kotten, 1997; Temple, 2011). Therefore, amid fierce competition, if universities, with limited resources, were to achieve

transformative development, strategic change should be facilitated and effective strategic planning and management should be conducted (Keller, 1983; Dill, 1999; Peterson, 1999; Duderstadt, 2000).

From the perspective of process, strategic change is the change of the form, nature and state of the organization's strategy in order to adapt to the changes of the external environment (Van de Ven & Poole, 1995). The strategic change of universities is affected by internal and external influencing factors (Brown, 2013). External factors include macro environmental changes, market preference and development direction, level of competition and so on (Keller, 1983). Internal influencing factors refer to leader's demographic characteristics and personality (Herrmann & Nadkarni, 2014), loosely-coupled organizational structure and unique academic culture (Mehari, 2016) and the divergence among stakeholders (Shattock, 2003) as a result of the highly-consultative nature of university decision-making and operation (Kirkpatrick & Ackroyd, 2003). Amid higher education marketization, reduced government financial support and the driving of knowledge economy facilitated the diversification of university funding structure. At the same time, closer ties were forged between universities and industry. In the context of globalization of higher education, the flowing of higher education resources globally put the university education resources at the hands of global market forces. All universities, as such, must participate in the global competition (Zhou, 2020). Therefore, scientific and effective management of it is necessary for universities strategic changes (Mehari, 2016) and comprehensive grasp of concept and practice of strategic change, still represent critical issues in the transformative development of universities.

Centering on university strategic change, theoretical studies were conducted in procedural issues, internal and external influencing

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factors and implementation pathways of strategic change (Bie, 2015; Liu, 2006; Zhou, 2020). Some studies focused on transformed universities or those in transition, generating discussion on various elements of the strategic change of those universities, such as policy-making, governance model, knowledge management, leading groups, performance, etc. (Block & Khvatova, 2017; Shattock,2003；Herrmann & Nadkarni, 2014). In reality, in the globe, transformative development experience is formed among universities that have accomplished transformation or those still undergoing such process (Wang & Zhang, 2012; Wu, 2021). In Chinese context, the reform and opening up in 1978 gradually reshaped China from a nation with planned economic system to one with market-oriented economic system. The marketization of higher education in China picked up its pace, fueling market competition faced by Chinese universities. Universities that develop by adapting themselves to China's planned economic system, especially those industry-featured universities - a kind of universities with prominent single subject characteristics and close ties with industries - also tried to strive for new transformative development through strategic reforms, with their own experience accumulated. Overall, a great deal of valuable studies was conducted on university strategic change, but there is still work to be done in reviewing experience, analyzing cases and understanding the processes, achievements and impact of these strategic changes. Also, few studies have addressed the issue of university transformative development in China. This study, therefore, aims to develop an analysis framework looking into strategic changes of the transformative development of universities. By adopting such a framework, this paper, with CUG as a case for study, aims to analyze its strategic change concepts and practices in the process of its transformative development. This research can potentially enrich the international theoretic discourse on

university transformative development, as well as generate reference for other universities in the pursuit of effective pathways to transform, by exploring the effects, features, and implications.

Theoretical Framework

The Second Curve Theory describes the development process of an organization or individual (Handy, 2015; Morrison, 1996), which provides a theoretical basis for this study. Based on this theory, the first curve represents the life cycle experienced by enterprises in carrying out traditional business in a familiar environment, and the second curve is the new life cycle where complete transformation is launched by enterprises in the face of radical changes in new technologies, new consumers, and new marketplaces in the future (Morrison, 1996). The focuses of this theory include, firstly, the process of organizational or personal development is the process of continuous alternating development of the two curves; additionally, decision-makers of enterprises should never stop looking for better strategies; thirdly, the key to success lies in "sensing and grasping changes"; last but not least, at the point where two curves alternates, abrupt change in enterprises objectives is experienced, representing fundamental changes taken place (Liu, 2002). According to the Second Curve Theory, timely changes are critical for organizations to achieve their sustainable development. Therefore, in order to achieve sustainable development, when the first curve of the organization is still in the rising stage, it is time to initiative its second curve, which means doing the right thing at the right time. In doing so, organizations need realize transformative development through innovation and reforms (Handy, 2015).

This research expands the application of the Second Curve Theory to university development research. Due to the fact that it takes

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a long period of time to finish the making of university education products and to form universities' core competitiveness, for this reason, the development of the second curve of universities features a gradual change; the second curve development of enterprises, quite differently, exhibiting a pattern of mutation. The first curve of the university is the life cycle of the discipline and specialty structure, level and overall core competitiveness. They are formed as a result of adaptation to the development environment in the past. The first curve has experienced the stages of development, growth, maturity and decline; and the second curve of the university is a brand-new life cycle in which discipline and specialty structure is continuously optimized and the overall core competitiveness constantly improved, while facing up to the changing social environment and future development trend. Its development model is diversified with more international school running vision. Whether a university could successfully move from the first curve to the second one is subject not only to the starting time of its strategic change, but is also decided by the outcome and effects of its strategic change. In that successful strategic change could result in stronger competitiveness of universities, thus propelling the transformative development of the universities (Liu, 2002).

According to the Second Curve Theory, the strategic change of university transformative development could be understood as the process in which universities move from the first curve to the second curve, and three stages constitute such process: input, change and output (Figure 1). The stage of input features external and internal influencing factors acting on the university, the buildup of momentum for universities to initiate its change from the first curve. External influencing factors include marketization, popularization of higher education, government adjustment and regulation and so on, whereas

internal influencing factors include the school running concepts, faculty development, school running conditions and so on. The stage of Change is the period where universities formulate strategic concepts and implement strategic practices after demands for strategic change are emerged. Strategic concepts entail the development concepts and goals, strategic planning and so on. Strategic practices include discipline structure adjustment, faculty development, students' cultivation, governance system reform, internationalization, improved school running conditions and so on. Then comes the stage of Output, where the accomplishments and effects of university strategic change show, or the period where competitiveness of university is improved. By experiencing three stages of Input, Change and Output, universities accomplish their transformative development from the first curve development to the second curve development (Zhou, 2013).

Based on the above introduction and literature review, this paper aims to analyze the following aspects based on the case of China University of Geosciences (CUG). 1) What is the development history of strategic changes of industry-featured universities taken China University of Geosciences as a case? 2) What are the achievements and effects of strategic changes of industry-featured universities taken CUG as a case? 3) What are the features and implications of strategic changes of industry-featured universities taken CUG as a case?

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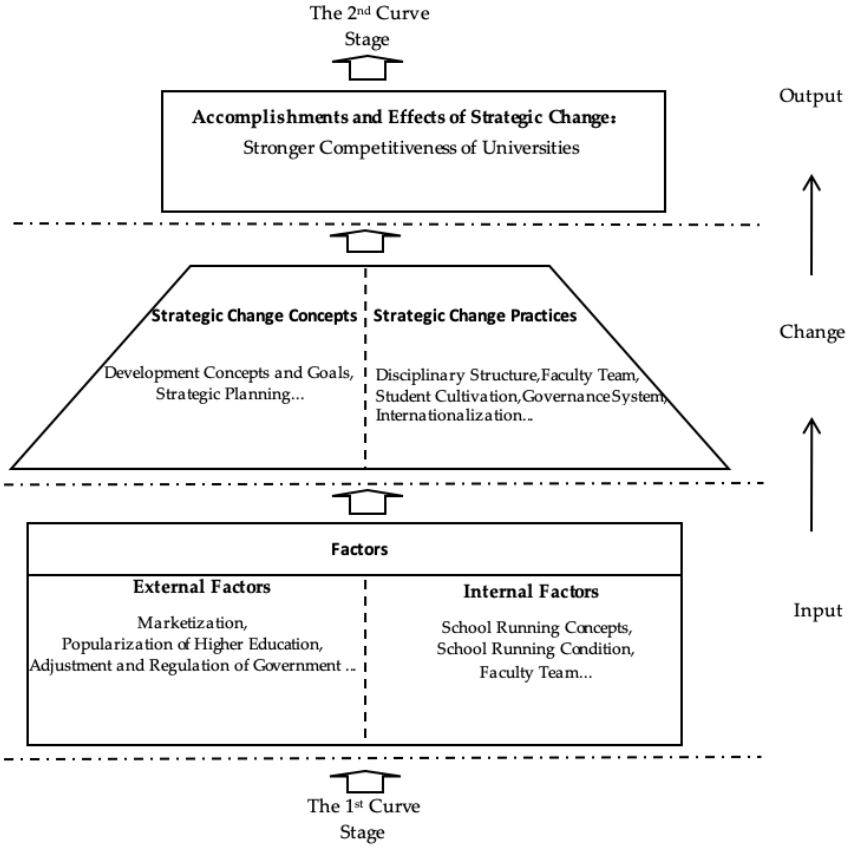

Figure 1. The Strategic Change Analysis Framework of University Transformative Development

Analysis Method

Based on this analysis framework, this study adopts the method of case analysis taking China University of Geosciences as a case of study while discussing Chinese industry-featured universities. CUG, as a university whose disciplinary structure are restricted only in field of geological exploration, and whose university running

mainly caters to demands of industrial development in China, before reform took place, represents a typical example. In that, by taking strong measures and launching strategic changes at an early time, significant effects were observed, including the forming of multidisciplinary structure and enabling its graduates employed in all sectors of the society. Though an in-depth analysis of related documents and archives, including university history materials, outlining its history, development background and major events (CUG, 2012); and strategic planning text, introducing its development goals and measures (CUG, 2016, 2021) ; as well as its Statistical Yearbooks, informing the changing number of students, teachers, disciplines and its condition of infrastructure construction over the years (e.g. CUG, 2019), in an effort to analyze the course of CUG's strategic change in its transformative development under the background of marketization.

Key information from relevant documents is organized into four parts: influencing factors, concepts, practices and effects of CUG's strategic change. As shown in Figure 2, firstly, the development history of strategic changes of CUG (RO1), including the internal and external influencing factors shaping CUG's development at different stages of its transformation towards the second curve, such as the marketization trend in China, the popularization of higher education and so on, are discussed. Meanwhile, based on various types of document and texts of CUG, concepts and practices of its strategic changes in different stages are analyzed. Secondly, based on the CUG Statistcal Yearbook, the achievements and effects scored by CUG (RO2) while transforming from the first curve to the second one is reviewed, with particular focus on those related to its enhanced overall competitiveness. Finally, the features and implications of the transformative development of CUG

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(RO3) are summarized, based on document analysis and correspondent author's 37 years' working experience and 17 years' experience in strategic management.

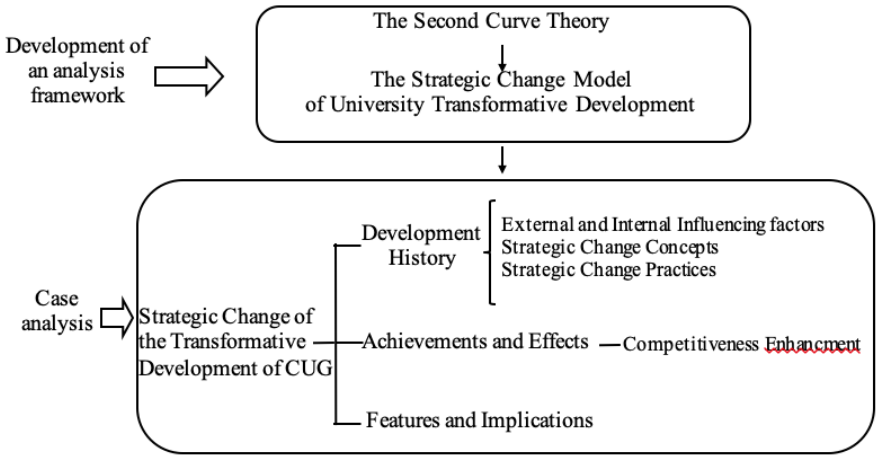

Figure 2. Analysis Method

Case Analysis Findings

The development History of Strategic Changes of CUG: Influencing Factors, Concepts and Practices (RO1)

Industry-featured universities in China could be traced back to the year of 1952, when a group of specialized colleges, with particular focus on the cultivation of talents and teachers contributing to national industrial development, were successively established or reorganized by the new China. For the purpose of meeting urgent demands for large numbers of specialized technical talents for economic and social construction. Industry-featured universities, by referring to the system

and institution of the Soviet Union, were built and developed into universities involving many fields such as agriculture, forestry, water conservancy and geology, as well as professional institutions of higher learning. In the early stage of their development, their size of student enrollment was relatively small, with distinctive single-discipline-group features. Their school running behaviors were subjected to the centralized leadership and management of relevant competent government authorities, with graduates uniformly distributed by authorities too, fully reflecting features of the socialist planned economy system.

The reform and opening up in China saw the growing demands for professionals, hence, industry-featured universities gradually enjoyed higher level of autonomy in self-management. Thus, their school-running pattern became increasingly more market-oriented, with their services orientation of student cultivation, scientific research and so on expanded from industries to the whole society. However, previous advantages in resources and policies from competent authorities became less prominent amid marketization. On the other hand, their limited service-orientation of social sectors after decades-long development, led to obvious lack of competitiveness. Faced with mounting challenges, it become inevitable for industry-featured universities to choose between remaining traditional pattern, and, alternatively, developing its second curve, by actively blazing new trails through exploring new pathways leading to transformative development, in pursuit of upgrading their core competitiveness amid market competition. After implementing the student enrollment expansion policy among colleges and universities in 1998, China embraced an era of higher education popularization since 2002. At the same time, "211 Project" (1995), "985 Project" (1998), "Double First-

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Class" (2016) and other higher education initiatives in China, aimed for quality enhancement, were promoted in acceleration, with a string of industry-featured universities selected as national key construction projects. Hence, new opportunities and challenges to further deepen their transformative development were encountered, adding momentum to their practices of active strategic change.

CUG, founded in 1952, an industry-featured university under the administration of the Ministry of Land and Resources, was initially a single-discipline-group university with major disciplinary and specialty focus on geological exploration. It was known as one of the national key universities wielding high-level impacts in the field of geological exploration research. The graduates' employment was all arranged uniformly by the Ministry of Geology and Mineral Resources, such employment system was later replaced by independent job hunting since 2000. Since 1978, in the process of the gradual government deregulation and marketization of universities, through strategic change, CUG successfully transformed from being a single-discipline-group geological college to a multidisciplinary university with geological disciplines as the main feature, with integrated development in multiple disciplines. It has undergone a 4-stage process of transformative development (Hao & Wang, 2012). In the following part, a detailed analysis of the influencing factors, concepts and practices during CUG's transformation from the 1st curve period to the 2nd curve period will be presented.

The Recovery Development of the 1st Curve Period of the CUG (1978-1985)

In 1978, Chinese government's shift of focus to socialist modernization created a stable external environment, generating opportunities for CUG's recovery development, after the "Cultural

Revolution" took a toll on its development. Actively initiating school running restoration, it has accelerated the reconstruction of the campus in Wuhan, prioritizing teaching reform and education quality improvement.

After the optimization of school-running conditions, in 1983, CUG put forward the strategic goal of growing itself into a "modern, open and international" university with prestige both at home and abroad (CUG, 2012).

In terms of discipline structure, in addition to restoring original majors, with geosciences, science and engineering being the main body, CUG newly set up 8 specialties of strong market demands including computer, economic, management and so on. In terms of discipline level improvement, faculties and students participated in pilot programs that integrate teaching, research and production. Meanwhile, the graduate education system was optimized and the graduate enrollment was gradually scaled up. The scope of international exchanges and cooperation was expanded, ties were forged with the United Kingdom, the United States, Federal Republic of Germany and other countries and regions (CUG, 2012).

Several-years-efforts saw the basic transformation of CUG as a single-discipline-group university of science and technology, with discipline level restored and promoted. However, employment and scientific research were mainly targeted at the geological industry, and the vitality of independent school running was to be improved.

The Germination Stage of the 2nd Curve of CUG (1985-2000)

Firstly, the government gradually granted universities greater autonomy in school running, and the system of student paying tuition fees and graduates' independent job-seeking was gradually

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established. Universities began to participate in the competition of enrollment market and employment market; moreover, the market demands for geological graduates were getting saturated. Third, the conservative school-running concepts limited their understanding on how to build a high-level university in a market-oriented environment. The doctoral-degree-holding rate among faculties was low and there were limited number of high-level faculties. Another grave concern was that the geological graduates, encountered difficulties in job hunting as a result of incapable of satisfying new capability requirement for undertaking geological work. CUG's first curve development faced the declining stage, and the second curve development must be initiated.

In 1987, the strategic goal of CUG was further identified, which is to develop itself into a comprehensive university of geosciences catering to the overall social sectors; and to grow into a modern, open and international university in earth sciences (CUG, 2012).

Advantages of geological disciplines were further consolidated. Applied disciplines were vigorously developed, new disciplines were established, and discipline structure was optimized. One the other hand, reforms were carried out to improve the discipline construction level. In-service teachers were supported with fund to obtain master and Ph.D. degrees abroad; outstanding young and middle-aged teachers were evaluated and progressed in tailor-made ways. Also, practices-based teaching was reinforced for undergraduate and graduate education; institutional reform was carried out by fulfilling the principle of simplification and efficiency, endeavoring to promote its discipline development (CUG, 2012).

After the strategic change, a discipline and specialty landscape, with geoscience as its major feature, science and engineering discipline

as the backbone, and coordinated development among multiple disciplines of science, engineering, culture and management, took shape. The core competitiveness of CUG was enhanced, student cultivation ways became more diversified, and the scientific research and social services grew further aligned with demands of social development. However, the school running concepts of CUG were narrow in vision and measures for strategic change were not forward-looking and systematic enough.

The Second Curve Development Stage of CUG (2001-2018)

Entering the 21st century, the marketization in China was accelerated. In 2000, in terms of higher education management system, rather than being affiliated to the Ministry of Geology and Mineral Resources to being under the direct administration of the Ministry of Education amid higher education system adjustment.

Firstly, greater autonomy of universities and the deepened market-oriented reform fueled the competition. *The Outline of National Medium-and-Long Term Education Reform and Development Plan (2010-2020) (2010)* and the *Work Plan for Streamlining Administration, Delegating Power and Improving Regulation while Transforming Government Functions (2015)* and other documents were successively issued in China, with the school running autonomy among universities continuously enhanced. This meant that other colleges and universities could also set up geological specialties, intensifying the market competition. Second, the rapid popularization of higher education has brought opportunities and challenges to CUG's development. CUG could get more tuition income through more student enrollment. The expansion of the enrollment scale would drive up the number of specialties, which would then generate new drivers to disciplines and specialties growth. Meanwhile, diversified educational needs required

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CUG's provision of adequate school running resources and cultivate higher-quality talents. Third, clear school-running requirements were put forward by the government, which is education quality enhancement and running a university that satisfies all. Since 2001, China released a series of documents to improve the quality of higher education, such as "*Undergraduate Teaching Quality and Teaching Reform Project in Universities*" (2011). And the government also promulgated a series of professional standards and evaluation standards, fueling pressure and reform impetus for CUG.

In 2004, CUG initially identified its phased goal as "building a First-Class University in earth sciences and growing into a high-level university with coordinated multidisciplinary development" and the long-term goal of "building a world-class university in geosciences" (CUG, 2012). In 2011, it further refined the goal into a "three-step" development strategy. The 1st-step (2020) was to achieve the phased strategic goal of basically growing into a First-Class University in earth sciences as well as a high-level university of coordinated multidisciplinary development. And the 2nd-step (2021-2030) was to become a well-known research university at home and abroad. And its 3rd-step (2031-2052) was to basically realize the long-term strategic goal of developing itself into a world-class university in the field of geosciences. In 2015, further elaboration was made in its phased goals and tasks of the "three-step" development strategy (CUG, 2016).

Firstly, it strengthened the organization and leadership of discipline construction, and built a dynamic layered and classified management system for its discipline and specialty development. Those advantageous disciplines of geosciences were supported with key financial support in an effort to accomplish expansive growth and strengthen their competitiveness by working at discipline frontiers.

With respect to non-geological disciplines, strategic planning task force for engineering and liberal arts disciplinary progress were established successively. Policies were improved for prompting the construction level of engineering, liberal arts and basic disciplines.

Moreover, concepts and measures for each discipline and specialty construction were further clarified. In 2014, the discipline development concept was formed in CUG: making our characteristics more distinctive, meeting mainstream requirements, striving for transformation, and nurturing a disciplinary ecosystem with positive interplay among and coordinated development in all disciplines. The "five-in-one" discipline specialty construction mode was identified: coordinating faculties development, discipline research, platform construction, student cultivation and international cooperation and exchange. Under such guidance, five-year development plans of each discipline and specialty were formulated, with construction measures refined.

Besides, competition mechanism was put in place and discipline structure was optimized. CUG prioritized tasks of urgency and significance, and efforts were made to downsize the disciplines, with a new discipline development and management mechanism, featured with the integration of competitive discipline evaluation and the increase of both input and rewards, implemented. Discipline self-evaluation was conducted since 2014, highlighting diagnostic evaluation in the pursuit of higher quality in discipline and specialty construction.

Fourthly, faculty and university internationalization were promoted as a strategy to advance university development. Talents were invited from both home and abroad in CUG since 2009. Meanwhile, classified evaluation, and ability-and-output-centered

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principle in faculty performance management were standardized as faculty competition mechanism. Moreover, the salary level of faculties was raised several times. Faculties were also encouraged to study abroad. In 2012, CUG led the founding of International University Consortium in Earth Sciences (IUCES). The setting up of such a long-term, sustainable and stable cooperation mechanism promoted joint sci-technical research on major issues in geosciences, and established a joint training mechanism for students, further expanding CUG's international vision in school running.

Fifthly, interdisciplinary education and education quality were highlighted and promoted. General education for lower-grade undergraduates was carried out and professional education was included for higher grades. After the first academic year, optional modules could be selected by students; a change of majors was also allowed. At the same time, the major-and-minor program encouraged students' pursuit of interdisciplinary knowledge, attempting to improve their comprehensive qualities.

Sixthly, CUG Promoted the rule of law and optimized its governance structure. 2015 witnessed the release of *The Constitution of CUG* for the first time. And CUG optimized and standardized the governance structure featured with leadership from the Party Committee, university affairs governance by the President, academic affairs governance by professors and implementing democratic participation. And rules and regulations of CUG were revised and perfected under the guidance of the constitution.

Seventhly, CUG built a new campus and broke new grounds in optimizing school-running conditions. With limited resources, as a result of school-running scale expansion, it set about building a new campus since 2011 and the construction was completed in 2019. The

new campus, equipped with modern teaching, scientific research facilities and living conditions, covers a construction area of 573,400 square meters, accommodating more than 10,000 students from 5 colleges and 2 national scientific research platforms, escorting the transformative development of CUG.

Comprehensive analysis revealed that in 2018, CUG achieved its first goal ahead of schedule, meaning that its discipline ecosystem -- all disciplines are mutually supportive, and advantageous discipline leading the field -- has basically taken shape, and its core competitiveness was continuously enhanced. The second curve ushered in its growth stage, but weak links still loomed large. For example, strategic scientists with international vision were limited in number, faculties' overall capabilities to undertake key scientific tasks were to be enhanced. There were still room for progress regarding its integrated development of various disciplines, specialties, and internal governance mechanism, so as to enhance school running vitality.

The Maturing of the Second Curve Period of CUG (From 2018 to Now)

First, the high-quality economy development in China has greater thirst for innovative and outstanding talents. Thus, Chinese universities need to play a fundamental and core role in such process.

Second, for contemporary Chinese universities, serving the national ecological civilization development strategy and seeking harmonious coexistence of humanity and nature represent their responsibilities of the time and their value pursuit. Third, the competition among universities becomes intensified, as a result of the "Double First-Class" higher education program implemented by the Chinese government and the a more developed market economic system. It is a strategic measure for Chinese universities to further

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reform on their education mode and governance system to adapt to the landscape of competition and accelerated transformation.

For CUG, after 21 months of in-depth studies, extensive discussion, consensus building and collective decision-making, the *Strategic Plan of Building a World-renowned Research University in Earth Sciences a Beautiful China & a Habitable Earth: Towards 2030* was formulated and released at the end of 2019 (CUG, 2021). Taking "building a beautiful China and a habitable earth" as the strategic theme of its future reform and development not only reflects CUG's advantages in earth sciences, but also reflects its value pursuit of "promoting the harmonious coexistence of mankind and nature". The plan further specified its next-decade development goal -- building an international well-known research university in the field of earth sciences by 2030. The main indicators of university running will include approaching or attaining level of world-renowned research universities. And earth sciences in CUG is expected to be positioned among those tops of the world, with all disciplines reaching higher standards and striving to be first-class disciplines. And it is to become a university with excellent education, scientific research, culture and management. The plan further specified 4 action principles, 5 strategic priorities and strategic guarantees, outlining the action roadmap for the high-quality development of CUG in the next decade.

A new round of deepened reform was initiated in CUG, aiming at meeting major social demands and finding solutions for bottleneck issues restricting its development. Further reform tasks for the next 2-3 years were identified, in discipline and specialty reform, student cultivation reform, governance capacity building, resource management and information technologies application. Secondly, the *Management Measures for the Construction of First-class Undergraduate*

Specialties was developed, in an effort to promote the progress of all undergraduate majors in targeted ways. Consistent explorations were made to establish a new student cultivation mode, in which cutting-edge technologies were the driving force and students were expected to harness future technologies. Students were expected to meet vigorous academic standard; reforms took place in student evaluation; student growth and honor system was improved, with the aim of promoting the all-round development of students; third, systematic scientific research training was conducted, the student cultivation mechanism of integrated production and education was strengthened. Interchange among disciplines and interdisciplinary talents cultivation were advanced, and postgraduate training mode was optimized; fourth, continuous efforts were made to enhance internal management, with particular efforts made to promote human resources development including faculties, administrative staff and logistics staff. Supervision and inspection were conducted in key management areas such as finance and assets, for efficiency improvement in asset allocation. Measures were taken to optimize the selection, training and assessment systems for faculties, leaders and managerial staff at all levels, striving to pursue higher quality among faculties.

The Overall Achievements and Effects of Strategic Change amid CUG's Transformative Development (RO2)

More than 3-decades transformative development has contributed to a boost in CUG's overall competitiveness, reflecting 3 major trends of sound development: its vision has been shifted from being domestic-oriented to outward-looking, and the awareness of competition has been greatly enhanced among faculties. Second, the focus of disciplines and specialties development has been shifted from

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increasing the number of degree programs and expanding student enrollment scale to striving for connotative construction and high-quality development. Third, the goal of development level has been transformed from emphasizing the output index of quantity to highlighting high-level faculties and improving education and teaching quality. Transformative development from the first curve development to the second curve one was preliminarily completed, and results of the strategic change were as follows:

The discipline structure of CUG has changed from what previously dominated by geology-related disciplines to a multi-disciplinary one of coordinated development with earth sciences as its major feature. In 1985, disciplines and specialties were mainly limited in field of geology, with about 4 first-level doctoral programs and 5 first-level master programs. After 35 years of development, as for the end of 2020, there were 16 first-level doctoral programs (including 4 doctoral programs in Humanities and Social Sciences), 34 first-level master programs covering 8 categories of science, engineering, economics, management, education, law, literature and art. The number of students has increased from 4,340 in September 1985 (including 515 graduate students and 54 doctoral students) to 30,239 by the end of 2020 (including 18,080 undergraduate students, 9,302 master's students, 1,916 doctoral students and 941 international students).

The discipline and specialty level at CUG were progressed consistently. Those competitive and advantageous disciplines since the past, such as geology, geological resources and geological engineering, were still ranked top in all previous national discipline evaluations. Through international comparison of major index, it showed that as of July 2021, 7 discipline fields of CUG including

Geoscience, engineering, environmental ecology, social science, material science, chemistry, computer science has entered the top 1% of ESI, with rankings continuously improved. Among them, geoscience and engineering have entered the top 1 ‰ in the globe.

The faculty profile of CUG was constantly optimized. In 1985, less than 10% of faculties had master's degree or above, and 79% of full-time faculties had doctor's degree as of 2020. The recruiting, training and evaluation system of high-level faculties were continuously improved, and the number of high-level, international and discipline leaders with interdisciplinary background grow significantly and young academic backbone teams were established, among which 5 were selected as Clarivate (formerly Thomson Reuters) "highly-cited scientists", 9 were selected as Elsevier "highly-cited scholars", and 61 were selected as ESI highly cited authors.

CUG's overall competitiveness and impacts continuously grew stronger. Since 2016, CUG was ranked 301st to 400th in the world universities academic ranking list released by Shanghai Soft Science (ARWU) over the years. Since 2017, CUG was ranked between 601st-800th in the world based on the THE World Universities Ranking list released over the years.

Features and Implications of Strategic changes in CUG (RO3)

The development of CUG in recent 40 years could be reckoned as the epitome of rapid development of higher education in China. Industry-featured universities in China are the "transplanted products" results from the higher education system of the Soviet Union. In order to address the challenges came along with deepened marketization and higher education reform, and to seek solutions of its current development problems and identify future goals, tireless

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efforts are made by industry-featured universities to explore their transformation, leaving us all with valuable lessons and experience regarding strategic change to reflect on. This study attempts to analyze and summarize features and implications of the transformative development of a single-discipline-group industry-featured university in a developing country, emerged and evolved in a planned economy era. CUG accomplished the transformation into a moderately-comprehensive multidisciplinary university with international vision and international impacts. This study therefore could enrich the development model of higher education in the world. It also could provide reference for universities in the world with relatively low school running level as a result of not meeting demands of social development. Therefore, this research would be worthy of attention or participation of each scholar dedicated to the higher education studies.

Features of Strategic Changes in CUG

Mandatory institutional change and induced institutional change coexist. Since the mid-1980s, reform on the university management system, student enrollment system and graduate employment system were implemented by the Chinese government. Professional evaluation and discipline evaluation were also carried out in full swing, so that strategic changes were in progress in a mandatory manner. In the process of gaining greater school running autonomy, CUG actively mobilized the enthusiasm of all parties. The gradual growth of enthusiasm and creativity among leaders of schools and departments as well as among scholars further stimulated and reinforced the awareness to change among senior leaders in CUG.

The strategic change of CUG is proactive, forward-looking and consistent. In the early 1980s, senior leaders of CUG realized the importance of changing the traditional first curve development mode,

with a single discipline group and specialties in geological discipline. They believed that without shaking off the first curve mode by developing new second curve, CUG would face backwardness and elimination. Successive leaders of CUG always adhere to scientific concept to guide the change. Whether it is the strategic goal in the early stage of change, or the "two-step" development strategy proposed in 2004 or the "three-step" development strategy proposed in 2011, consistent connotation was reflected throughout. The development goals were continuously deepened in a way that effectively guiding practice of reform in all aspects of work.

The strategic change in CUG follows a holistic view, took place in several stages, with flexibility in execution. The practice of change focuses on improving discipline competitiveness as the core, which involved both the discipline structure adjustment at the university level and the growth of various disciplines at colleges and departments levels. Different stages of the second curve development witnessed the shift of focus on the practice of strategic change in CUG. For example, the scale-speed-oriented discipline growth in the germination stage, gave way to the discipline growth mode of quality-efficiency-oriented in the development stage, fully reflecting the flexibility in its strategic change practices.

Experience of Strategic Changes in CUG

Historical footprint of any universities revealed that key factors that mold who they are from past to now, include practices throughout their strategic change, the devotion and contribution of “actors” at all levels from all functional areas.

The above analysis, together with the experience and reflections of correspondence author of this article, could contribute to

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a comprehensive reflection on strategic change in CUG, which could be presented as follows:

1) Being adept at grasping the opportunity of change

Practices adopted by leaders of universities towards the second development curve were subject to certain risks, such as the conflicts between various interest groups, the decline of school running quality or the falling of output over a period of time and so on. This required university president to timely grasp opportunities for its transformative development. These opportunities might occur when the school running mode or management system adopted in the development of the first curve was no longer applicable, or when the germination of the second curve was clearly recognized (Liu, 2002). When faced with critical opportunities for strategic change, several terms of CUG presidents took the lead in in-depth investigation and researches through various channels, including organizing middle-level cadres for seminars, inviting domestic and foreign experts to deliver consultative reports on university development, soliciting advices from faculties students and other staff. Their studies and consultation focused on areas of national strategic demands, discipline development trends, teaching and scientific research, the relationship between dominant disciplines and other newly built ones, as well as on the ways of balancing priorities and other issues. Exchange of opinions facilitated consensus reaching, which were translated to strategic decisions and implementation measures, promoting the strategic change of university development.

2) Establishing a clear shared vision, developing concepts and value system on school running

Kakabadse et al. (1998) believe that the creation of vision will bring together the organization's institution, intention and goal for a long time, and vision could and has been used as a way for the organization to revive and consolidate its presence, as well as means to shift the market focus and direction. For universities, its reform is essentially the transformation and innovation of their school running concepts. A clear vision that is of historical coherence and developmental momentum can contribute to university development. The process of vision creation is expected to harmonize the top-down leadership and bottom-up interaction; to be process of continuous learning and innovation. In the process of strategic change, CUG takes "gaining people's satisfaction" as the criteria for realizing school running values; reckons the "pursuit of excellence" as the ideal pursuit of school running and regards adhering to first-Class standards with international vision as the basic principle of promoting the reform and development. Through continuous exploration, school running concepts of its unique features become more systematic: firstly, students cultivation goals of CUG--being committed to cultivating talents of excellence “with lofty morality, solid foundation, profound expertise, and who pursue the unity of knowing and doing”; its motto--"striving to remain plain-living, truth-seeking and being pragmatic"; school running value system--"seeking the harmonious development of mankind and nature“; academic spirit--"embracing independent thinking, dedication to rigorous scholarship and bold exploration and pursuit of excellence". Shared vision could be effective in improving the efficiency and capabilities in leadership, facilitating the reaching of consensus in a way of promoting the effective strategic change of CUG.

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3) Building a strategic planning system and strengthening strategic process management

The planning system, composed of the university's overall development plans, targeted plans, as well as those at school and department levels, is the foundation of university's transformative development. Development plans at different levels specified the development goals, tasks and strategic measures of various undertakings. The formulation of a strategic plan represents the first step for its development strategy implementation. Without effective execution, the blueprint may only be a matter of paperwork. Therefore, the breaking down of the overall development plan into specific development indexes and tasks, reinforcing the supervision, inspection and feedback on the execution of its development planning system, are pivotal in reinforcing its strategic process management. Some disciplines and specialties of weak foundation and bleak prospect were suspended, so as to be fully focused on discipline construction.

4) Specifying the roles of leaders at all levels

High level leaders are the core of university reform. They should make strategic decisions and realize transformational leadership and full communication (Wu, 2005), for the purpose of uniting all members of the university towards the shared goal by including them in the decision-making process. All previous senior leaders of CUG are "never content with the status quo and never evade changes". They always overcome the fear of difficulties, emancipate their mind, get rid of stereotypes and behavioral inertia, striving to become the planners, practitioners and driving force of the transformative development of CUG. Middle-level leaders are the executors of university strategic change. Excellent middle-level leaders

and high-level leaders could generate greater power through integration (Wu & Li, 2007). And therefore, in the process of strategic change, middle-level leaders are expected to be self-motivated and creative in their work and support the development of faculties. At the same time, they are expected to formulate strategic plans that are in line with the actual development condition of schools and departments, in accordance with strategic goals developed by high-level leaders. And therefore, middle-level leaders could play an active role in achieving excellence at lower levels by integrating internal resources and strengths, and by prioritizing strategic focus. They could contribute to the alignment of tasks of various departments with overall transformative development goals of the university.

Discussion and Conclusion

By taking CUG as an example, this study looks into the development history, achievements and features of the strategic changes of the transformative development of industry-featured universities in China under the background of marketization, with implications summarized, in an attempt to provide reference for the strategic change of similar universities in China and other countries.

Discussions related to the ROs

RO1 focused on the development history of CUG's strategic change. In this part, the course of CUG's strategic change is reviewed and analyzed, which could be organized into 4 historical stages, through examining related historical documents and strategic planning documents. Both internal and external influencing factors of its development in each historical stage are explored. It is found that external influencing factors include the government's macro-control, market-oriented reform and the popularization of higher education,

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while the school-running philosophies and conditions, and faculties quality of CUG constitutes its internal factors. Shaped by various factors, CUG has adopted corresponding strategic concepts and measures, initiating systematic changes in aspectes of strategic development goals, discipline structure, faculties, student cultivation, governance system and international exchanges and cooperation.

RO2 analyze the achievements and effects of CUG's strategic change. In doing so, CUG's statistical yearbooks are examined. This study approaches the overall achievements and effects from aspects of discipline structure, discipline and specialty level, faculty profile, overall competitiveness and impacts, and find that CUG has experienced progress in all above aspects. And CUG has initially realized a transformation from the 1st curve stage to the 2nd curve stage -- the transformative development from a single-discipline college to a multi-discipline one, with geological discipline as its dominant feature and coordinated development of multiple disciplines.

RO3 is to summarize the features and implications of CUG's strategic change. Firstly, it is found that both mandatory institutional changes and induced institutional changes have been experienced by CUG. Being proactive, forward-looking and consistent in actions represent CUG's distinctive features of CUG's strategic change concepts; and its strategic change practices are distinctive of being holistic-thinking, flexible and taking staged approaches. Moreover, on such basis, drawn from correspondence author's rich experience and reflections, CUG's strategic changes experience were summarized, including being adept at grasping opportunities for strategic changes, establishing clear common visions, developing sound school-running philosophy systems, building strategic planning systems,

strengthening strategic process management, and defining roles of leaders of all levels.

Limitations and Future Research

This study has a few limitations. The study only focused on and explored CUG as a case study. The analysis framework of strategic change of university transformative development the strategic change could function as referential support for future university strategic change management. However, other similar Chinese universities have not been systematically investigated. Despite the fact that the strategic change of CUG is of representativeness among all industry-featured universities in China, this paper represents the output of only the initial phase of our research. In the future, we will continue our observation and reflections on CUG's development. Meanwhile, comparative studies among similar universities both home and abroad are advised to be conducted, endeavoring to enrich theoretical discussions on university strategic changes, and to generate renewed interpretation and theoretic innovation for the modernization of world higher education.

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Transforming Governance of German Higher Education Institutions

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Abstract

Since the implementation of the Excellence Initiative and the Excellence Strategy, German higher education institutions have been restructuring university governance, especially those selected as Universities of Excellence. This study uses a holistic and mission-related integrated governance approach to conduct a qualitative analysis of the governance transformation of German Universities of Excellence, aiming to provoke discussion on transforming governance to optimize organizational effectiveness and sustainable development of German higher education institutions. Transforming governance of German Universities of Excellence involves mission statements, strategic goals, institutional strategies, research, teaching, the third mission, internationalization, global engagement, governance relationships and structures, institutional leadership, funding, autonomy, innovation, digital transformation, quality assurance, and sustainable development, aiming to enhance accountability, performativity, transparency, openness and organizational effectiveness with efficient administrative management in alignment with institutional missions, vision, core values, and strategic goals.

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Introduction

The German higher education system is a federal system and consists of 16 independent sub-national systems that take the primary responsibility for higher education (Capano, 2011, p. 1631). Since the Bologna Declaration and the Bologna Process as the major impetus for restructuring the system of quality assurance in German higher education (Mause, 2011, p. 23) pioneered the reform (e.g., restructuring degree programs, accreditation structures, and ECTS), German higher education institutions started the transformation of governance to strengthen the growing managerial self-governance in the late 1990s.

The German federal and state governments have undergone a series of policies to enhance German higher education institutions' international competitiveness and visibility. With the growing global competition among world-class universities, the German federal and state governments agreed to launch the Excellence Initiative in 2005 to enhance top-level research and the quality of German universities with a total of €1.9 billion in funding (2005-2012) in three funding lines (Graduate Schools, Clusters of Excellence, and Institutional Strategies), jointly funded by the federal government (75%) and federal states (25%) (WR, 2020). The first round of funding was granted for 18 graduate schools, 17 clusters of excellence, and 3 universities in 2006 (WR, 2006). The second round of funding was granted for 21 graduate schools, 20 clusters of excellence, and 6 universities in 2007 (WR, 2007). In 2009, the federal and state governments approved the Excellence

Initiative with €2.7 billion in funding (2012-2017, extended to 2019). Funding was awarded to 45 graduate schools, 43 clusters of excellence, and 11 universities for institutional strategies in 2012 (WR, 2020).

Following the Excellence Initiative, the German federal and state governments started the Excellence Strategy to strengthen cutting-edge research in German universities in 2019. The Excellence Strategy is jointly funded by the Federal Government (75%) and federal states (25%) with a funding volume of €533 million per annum in two funding lines: 57 Clusters of Excellence and Universities of Excellence (10 universities and Berlin Alliance[1]) until 2026 (BMBF, 2019).

The federal and state governments have also initiated other joint programs, e.g., the Higher Education Pact (2007-2015), the Pact for Research and Innovation (2005-2015), and the Quality Pact for Teaching (2011-2020). Governmental funding incentives through the Excellence Initiative and the Excellence Strategy stimulated competition for funding among German higher education institutions and accelerated the governance transformation of Universities of Excellence to develop world-class universities and cutting-edge research in broader disciplines. However, there is a gap in knowledge on the ongoing governance transformation aligned with the digital

[1]Universities of Excellence include RWTH Aachen University, Berlin University Alliance (Free University of Berlin, Humboldt University of Berlin, Technical University of Berlin, and Charité-Universitätsmedizin Berlin), University of Bonn, Technical University of Dresden, University of Hamburg, Karlsruhe Institute of Technology (KIT), University of Heidelberg, University of Konstanz, LMU Munich (Ludwig-Maximilians-Universität München), Technical University of Munich, and University of Tuebingen.

transformation of Universities of Excellence since the implementation of the Excellence Initiative and the Excellence Strategy. This study conducts a qualitative analysis of the governance transformation of German Universities of Excellence for sustainable development since the implementation of the Excellence Initiative and the Excellence Strategy. It focuses on the institutional level of governance, aiming to provoke further discussion on transforming university governance, digital governance, sustainability governance, and good governance for organizational effectiveness and sustainable development. The research question guiding this study is "In what way will university governance enhance organizational effectiveness and sustainable development?"

Literature Review

A new approach to leadership and development

Studies are concerned with diverse models (Baldridge, 1971; Braun, 1999; Shattock, 2006), dimensions (Clark,1983) discourses (Magalhães & Amaral, 2009), concepts, and mechanisms in university governance from different theoretic perspectives in diverse national higher education contexts (e.g., Clark, 1983; Neave & van Vught, 1994; Amaral, Jones, & Karseth, 2002; Kezar & Eckel, 2004; Shattock, 2006; De Boer, Endres, & Schimank, 2007; De Boer, Huisman, & Meister-Scheytt, 2010; Van Vught & De Boer, 2015). "Five primary models of board-level governance in universities are the academic staff/faculty/collegial governance, corporate governance, trustee governance, stakeholder governance, and amalgam models of governance." (Trakman, 2008, p. 63).

Governance in higher education research involves "five instances of coordination and the relationships between them: the state regulation of higher education, the influence of external stakeholders (e.g., agencies, academic staff, and self-organization of universities), university management and administration, and the role of competition and market mechanisms" (Wolter, 2007, p. 1). Governance is "a specific mixture of state regulation (top-down authority), stakeholder guidance (intermediary bodies as goal-setters and advisers), academic self-governance (institutionalized in collegial decision-making at universities), managerial self-governance (university leadership as internal goal-setters, regulators, and decision-makers), and competition for scarce resources (mostly on quasi-markets)" (De Boer, Endres, & Schimank, 2007, p. 139).

University governance reform faces "the exclusive and distinct dilemma between representative democracy and organizational effectiveness, between integrated management structures and dual management structures, between external and internal influencing institutional decision-making, between centralization and decentralization in more autonomous universities" (Larsen, Maassen, & Stensaker, 2009, p. 45). Among three grand narratives (new public management, network governance, and neo-weberianism) on the systemic reforms and policies to modernize higher education institutions as part of the public sector and organizational actors, the new public management provides "the main instruments for a tighter coupling and a stronger hierarchization in the foreground of the instrumentalist perspective on universities as organizations" (Ferlie *et.al.*, 2008, p. 335; Kehm, 2013b, p. 6). The new public management, characterized by marketization, privatization, managerialism, performance measurement, and accountability, relies on "markets (or

quasi-markets) instead of planning and hierarchies; performance measurement, monitoring, management, and audit systems instead of collegial self-regulation; a powerful and entrepreneurial management instead of an interplay of collegial public sector professionals and administrators; and a focus on efficiency, value for money, and performance instead of democracy and legitimation" (Ferlie *et.al.*, 2008, p. 335; Kehm, 2013b, p. 6). Higher education reform in the organizational transformation and governance shift in higher education institutions is mainly based on the ideals of new public management (Bleiklie, 1994, 1998; Kogan et al., 2007; Schimank & Lange, 2009; Kretek, Dragšić, & Kehm, 2013, p. 39) with steering at a distance and the new managerialism model (strengthening the intermediate administrative level, the priority-setting, and the client-orientation) (Braun, 1999, p. 11). University governance reforms reflect the broader new public management reforms focused on increasing efficiency (Christensen, 2011, p. 503). The new public management is the crucial concept in the policy discourse that has driven the governance reform and reform of governance structures in German higher education (Wolter, 2007, p. 9). New public management reforms have attempted to structure the regulation of higher education institutions and higher education systems to ensure the efficient and effective achievement of goals" (Hüther & Krücken, 2018). "Governance with instruments of new public management characterized recent reforms of steering higher education systems and managing higher education institutions as parts of a reform agenda targeted to transform German higher education institutions to meet societal and economic needs in the emerging knowledge societies" (Kehm, 2013b, p. 1). German higher education institutions shifted to new public management as a model of managerial governance with a

focus on organizational effectiveness and efficiency to ensure autonomy at the decentralized level but reach central targets through competitive business instruments (Hartwig, 2006, p. 3; De Boer, Endres, & Schimank, 2007).

The traditional dominant governance regime of the German higher education system is "a combination of political regulation by the state authority and professional self-regulation by an academic oligarchy" (Clark, 1983, p. 140) whereas the market and the university management are rather weak (Wolter, 2007, p. 5). The reform of governance structures in German higher education institutions is influenced by "the Dutch model of steering at a distance for the relationships between state and institution and the American model of strong management for the decision-making processes within the institution" (Wolter, 2012, p. 129). Since 1999, German higher education institutions are transforming from the Humboldtism and classical academic self-regulation model to constrained marketization with market-oriented mechanisms (Dobbins & Knill, 2014, p. 139) toward the managerial university (Teichler, 2011, p. 225) and evaluative governance (Neave & van Vught, 1994; Neave, 1998). German higher education institutions' governance as the 'bureaucratic-oligarchic' model is under a reforming process but is strongly resistant to change (Lazzeretti & Tavoletti, 2006, p. 32). The dimensions of governance in higher education (state regulation and academic self-governance) are transforming into "new modes of governance in the form of 'steering at a distance, new public management approaches, communicative planning, and network approaches" (De Boer, Enders, & Leisyte, 2007, p. 42). Changes in the traditional governance structures result from the increased importance of the mechanisms of external guidance, managerial self-governance,

competition, the simultaneous decline of state regulation, and academic self-government in decision-making (De Boer, Enders, & Leisyte, 2007; Hüther & Krücken, 2013, p. 307).

Research Methods

This study adopts a descriptive multiple case study to conduct a qualitative analysis of the governance of Universities of Excellence in Germany. It uses a transformative approach with a purposeful sample to investigate the governance of the leading public research universities titled Universities of Excellence in Germany. Four research-intensive universities share international profiles with transnational networks with elite universities. The identities of four research-intensive Universities of Excellence are presented as A, B, C, and D. A and D are members of German U 15 (a network of German leading research universities). C is a member of the TU9 (German Universities of Technology Association, the alliance of 9 leading Technical Universities in Germany).

Data collection focuses on second-hand data from published documentation and official databases, websites of higher education institutions (e.g., annual reports of universities, Proposals for the Universities of Excellence Funding Lines, etc.), websites of universities alliances, foundations (e.g., the German Research Foundation), and German governmental authorities (e.g., the Federal Ministry of Education and Research, the German Science and Humanities Council, the Conference of Rectors, the German Council for Sustainable Development), and international organizations (e.g., the UN, the UNESCO, the OECD, the EU).

Data are categorized into mission statements and strategic goals; research and teaching; internationalization and transnational cooperation; innovations and digital transformation; governance relationships and structures; funding and autonomy; quality assurance and sustainable development for thematic analysis and content analysis. In terms of the validity and reliability of qualitative data, a general guideline of the criteria focuses on completeness of information, adequacy of interpretation, determination of inconsistencies in data, and multiple methods to gather data.

Findings and Discussion

The tasks of university governance include "the definition and implementation of the university's mission and the approval of long-range plans; the achievement of unified support for major university commitments; the determination of institution-wide policy standards and the delegation of authority; the determination of procedures and standards for appointment, advancement, and termination of key personnel; the approval of budgets and major financial components and the exercise of financial oversight; the provision of effective crisis management; and the integration of the mix of financial, academic, and institutional commitments" (Balderston,1995, pp. 64-65). Five highly interrelated elements of the university as an organizational actor are decision-making structures within universities, accountability, mission statements, organizational structures, and the rise of the management profession (Krücken, 2011, p. 5). Based on five elements of governance in higher education "institutional autonomy, financing/funding, quality assurance (research and teaching), institutional steering and management, leadership within institutions" (Wolter, 2007, p. 2), this study presents the following interrelated

aspects of university governance in German Universities of Excellence: mission statements and institutional strategic goals; research and teaching; internationalization and transnational cooperation; innovation and digital transformation; governance relationships and structures; funding and autonomy; quality assurance and sustainable development.

Mission Statements and Strategic Goals

Mission statements are one of the organizational instruments used to develop individual profiles and reinforce the branding activities of universities (Kosmützky & Krücken, 2015, p. 138), which provide a basis for higher education institutions' objectives and specific profiles (e.g., organizational tasks, goals, and images), promoting strategic management and marketing, and quality assurance (Kosmuetzky, 2012; Hladchenko, 2013, p. 230). Four universities show their organizational identities associated with their missions, core values, vision, and strategic goals.

A's mission statement states four aspects: research and training; ethics and academic freedom; equality; further training. A is committed to the highest standards of research and teaching; encourages international interdisciplinary cooperation; upholds academic freedom in research and teaching; supports equality and diversity as essential to academic excellence. A underlines its strategic goals in a globalized and connected world; focuses on research, relevance, and responsibility as an interdisciplinary, international, and innovative university to expand top-level research and cooperation to maintain its position as an outstanding research location with an international profile in the long term; recruits internationally

renowned researchers; develops a collaborative research environment; forms networks to enhance the competitiveness of research areas.

B is a research-oriented university with a responsibility to society, providing high-quality research and educational opportunities. Its strategic development is guided by organizational effectiveness and social responsibility. B's performance areas of the Excellence Strategy (research, teaching, and knowledge transfer) are intrinsically interlinked and mutually reinforcing. B implemented various strategic research, international positioning, and transfer measures to consolidate and advance existing and emergent research areas with its strategic support of research priorities including establishing research initiatives, network platforms, transfer platforms, the freedom for creativity program, strategic fundraising, relationship management, and academic support services.

C promotes and develops talents to become responsible, broad-minded individuals and empowers them to shape the progress of innovation for people, nature, and society with the highest scientific standards and technological expertise, with entrepreneurial courage and sensitivity to social and political issues, and a lifelong commitment to learning. Excellence, entrepreneurial mindset, integrity, collegiality, and resilience form the foundation of its relationships with cooperation partners. As a leading entrepreneurial university, C is a site of global knowledge exchange to shape the future with talent, excellence, and responsibility. C accelerates academic excellence for continuous change in the future-oriented and internationally benchmarked development of research, innovation, and education agendas.

D sees itself as a gateway to the world of knowledge; promotes international cooperation, the universality of knowledge, interdisciplinary cooperation, autonomy in research and teaching, and academic freedom within the bounds of social responsibility; educates responsible people, connecting theory and practice. D has six goals in the mission statement: strengthening responsibility, internationalization, improving quality, interdisciplinary cooperation, creating regional contacts, and improving access to education and academia.

Four universities present different institutional concepts and strategic goals as Universities of Excellence. A has set five main goals for the Excellence Strategy with the concept of "Research - Relevance - Responsibility: Open to New Challenges and a Global Scope of Action": Strengthening research excellence; Developing a collaborative research environment, first-class infrastructure, and networks to enhance the competitiveness of research areas; Changeability to engage with technological and social developments; Promoting global awareness in research and teaching; Expanding social commitment to promote new forms of research communication, public relations, and knowledge transfer. B systematically develops its culture of creativity with the concept of "creative together" and "towards a culture of creativity". C aims to advance its position from among Europe's most respected universities to join the top international league with the institutional strategy as an Entrepreneurial University to transform research, innovation, and education through its Agenda 2030 - Innovation through Talents, Excellence, and Responsibility. D has a flagship university concept (Innovating and Cooperating for a Sustainable Future) with five goals:

research, research-based teaching, knowledge transfer, research infrastructures, and internationalization.

"Higher education, particularly research universities, and science systems continue to experience transformation. The orientation to scientific 'excellence' or 'quality' and 'relevance' or 'impact' worldwide has led to innumerable initiatives to advance these often competing, yet sometimes complementary goals." (Powell et al., 2017, p. 5). Universities of Excellence have gone through a transformation process with their concepts as Universities of Excellence. Labeling and benchmarking Universities of Excellence further strengthens their comparative advantages as top research-intensive universities at the national and international levels.

Research and Teaching

Four universities show excellent top-level research profiles in their core research areas, characterized as Clusters of Excellence and research centers. They promote top-level research and research-led teaching to ensure high quality and standards of research and teaching. They have established graduate schools with excellent research and teaching performance in diverse fields.

A is committed to research and teaching across a broad spectrum of subjects; encourages interdisciplinary and international cooperation; upholds academic freedom in research and teaching; develops a collaborative research environment; promotes global awareness in research and teaching; cultivates young researchers in the long term.

B is a research-oriented university with a culture of "research-led teaching" and advances the principle of independence in research

and teaching; takes responsibility for society; provides high-quality educational opportunities and collaborative research across disciplines; generates scientific knowledge and close links between research and teaching to advance scientific knowledge. Knowledge transfer is an integral component of research and teaching. The "Code of Practice for Effective Teaching" provides a summary of effective practices for teaching and learning.

C establishes strong links with companies and research institutions worldwide; fosters an open and culturally diverse mindset and supports an innovative society; is committed to excellence in research, teaching, and interdisciplinary education, actively promoting young researchers. C focuses on both knowledge-oriented basic research and applied research.

D is known for its outstanding basic research as well as applied and transfer research projects as the largest and the most diverse center of research in northern Germany.

The quality assurance of teaching and learning in German higher education institutions as an important part of university governance aligned with quality management and accreditation has been greatly affected by German higher education policies and initiatives. Four universities have projects with funding from the Quality Pact for Teaching: A's project with the concept of "study successfully - teach successfully"; B's "QualiTut" project with "b³ - advise, accompany, assist" (b³ - beraten, begleiten, beteiligen); C's project "Agenda Lehre" to improve teaching and study conditions for excellent teaching; D's Universitätskolleg as a university-wide project provides a conceptual, institutional, and administrative framework for

a multitude of projects under the title "Bridges to the University - Pathways to Academia".

Among scholarship of discovery, integration, application, and teaching, "teaching means not only transmitting knowledge but also transforming and extending it" (Boyer, 1990, p. 23). Universities of Excellence are transforming traditional teaching into technology-enhanced teaching such as the integration of the Technological Pedagogical Content Knowledge (TPACK) framework into teaching. The hybridization of teaching and learning through digitalization and the growing assessment of teaching and learning through quality assurance mechanisms have greatly improved the quality of teaching and learning.

Internationalization and Transnational Cooperation

Four universities have established centers for international students and researchers to manage the increasing inward and outward mobility of international students and academic staff. They have introduced some structured English-mediated doctoral and master's programs and internationalized the curricula of degree programs with a focus on academic freedom, academic achievements, and their relevance to employability.

A supports first-class responsible research with a high level of competitiveness in an international framework and provides internationally oriented research-led education to students. A has diverse strategic partnerships, e.g., the Matariki Network of Universities, the CIVIS (the alliance of eight leading research higher

education institutions in Europe), and the Guild of European Research-Intensive Universities.

B aims to shape internationalization as a social responsibility; expand the internationalization of science and research at the institutional level; enhance international visibility and the number of outgoing and incoming students; develop international partnerships (e.g., the Network for Transatlantic Cooperation, the Network of European Institutes for Advanced Study, European Network of Academic Integrity, the University-based Institutes for Advanced Study, Young European Research Universities Network), research cooperation, academic mobility of doctoral candidates, international competitiveness, excellent academic networks, supporting international collaborations of researchers, and the international orientation of teaching.

C expands its global relations and works closely with its global partner universities such as partners of the European EuroTech Alliance for joint research. C actively engages in international networks, strategic alliances, academic collaborations, and branch campuses (an Offshore-Campus in Singapore).

D cultivates a welcoming environment and an international climate to attract international talents; enhances international mobility of students and faculty and the attractiveness of the study location; develops internationally experienced personnel and recruits excellent researchers; expands international research collaborations, global engagement, strategic alliances, and partner networks worldwide (e.g., European University Alliance for Global Health); strengthens international research, international presence, and partnership for innovation, education, and research.

The internationalization of higher education fosters international academic mobility and cultivates an intercultural learning environment. "Transnational mobility of academics reshapes the production and dissemination of knowledge, the geographies of knowledge economies, and related spaces of knowledge production" (Teichler, 2002). Global engagement of four universities facilitates multi-channel to share and reallocate resources and promotes international collaborations through transnational networks, strategic alliances, partnerships, increased memberships, and transnational collaborations in research and degree programs, especially international student mobility through diverse ERASMUS programs or others. Global alliances, networks, partnerships, and global rankings represent the collective interests of the members of elite universities, shared values, vision, mission, and norms, which enhance institutional symbolic power and differentiate them from others through the label of Universities of Excellence. Global strategic alliances, multi-lateral networks, and transnational partnerships of Universities of Excellence as an important part of institutional strategies to initiate diverse transnational collaborations not only increase opportunities for collaborations to enhance knowledge production and dissemination on the national and international levels but also form knowledge networks through strategic targeting and positioning. The shift of knowledge production to transnational and multi-disciplinary collaborations enhances close collaborations inside and outside academia at home and abroad. The selectivity and exclusivity of alliances, networks, and partnerships further enlarge the stratification of the hierarchy of higher education institutions. Enhancing multiple hierarchies or horizontal differentiation within higher education systems may soften the "iron law of hierarchy"

(Croxford & Raffe, 2015, p. 2). Academic excellence, scientific productivity, selectivity in admissions, social elitism, institutional reputation, status, prestige, and rankings have become important parts of institutional symbolic power and symbolic capital for universities to gain comparative advantages in the global higher education market.

Innovation and Digital Transformation

Four universities focus on knowledge transfer, especially technology transfer in collaboration with regional universities, research institutions, and industrial partners. A and B took part in the "PePP" Project (partnership for innovative digital examinations 2021-2024) for technical, didactic, and organizational innovations in digital examinations. Four universities have vice-presidents responsible for research and innovation as well as knowledge and technology transfer.

A has expanded its activities in innovation and knowledge transfer via the University Innovation Center, the Technology Transfer Office, the Start-up Center, the Innovation Lab & Coworking Space, and the industry liaison office to support companies, inventors, scientists, and business start-ups in collaboration between science and industry. The Cyber Valley Initiative is a cooperation between universities, research institutions, and companies in the field of artificial intelligence. The research campus model further intensifies cooperation among research institutions to collaborate on research projects; offers joint services; shares facilities; brings institutions, graduate schools, clusters of research, and all available resources together to optimize the allocation of resources, institutional research performance, innovation, knowledge production, and knowledge transfer; shifts knowledge production to an efficient way. The Digital Humanities Center provides researchers with high-performance

infrastructures and services on research data and research data management.

B appointed a vice-president responsible for sustainability, information, and communication technology as the Chief Information Officer (CIO) to lead strategic planning, controlling, and coordination in ICTs (information, communication, and technologies) for research, teaching, and administration.

C has its IT strategy to build a digital university and has the Chief Information Officer (CIO) responsible for improving the effectiveness of all information and communications processes and optimizing IT infrastructures. C has undertaken a series of reforms to transform itself into an entrepreneurial university since 1998. C promotes sustainable innovative progress and aims to build a global hub for knowledge exchange. The Innovation Networks promotes transdisciplinary research. The ForTe Office for Research and Innovation coordinates cooperative research and commercial venture as well as research funding support and technology transfer. The Industry Engagement Program serves as a platform between the university and the industry. The Center for Digital Transformation (CDT) research issues related to digitalization.

D has fostered knowledge and technology transfer through the Office for Knowledge and Technology Transfer as an intermediary between science and business for more than 30 years, supported by a cooperation partner since 2006. D has a vice president responsible for digitalization. The first chief digital officer (CDO) is appointed in 2021 to develop a digitalization vision and a corresponding digitalization strategy; to work closely together with actors from research, teaching, and administration to achieve successful digital transformation

The formation of new governance structures in four Universities of Excellence changes the present management board structures by introducing the CIO (Chief Information Officer) or similar positions to the management board to enhance digital strategies and innovations. Four universities have implemented blended learning and technology-enhanced teaching projects supported by ICTs, digital pedagogy, digital didactic, digital pedagogy, and digital resources in their teaching management systems. Four universities use official accounts on social media (e.g., Twitter, LinkedIn, Facebook, etc.) to disseminate information for greater transparency and visibility in the digital social space.

The integration of traditional university governance into digital governance to foster a dynamic and interconnected digital culture in teaching and learning in the ongoing process of digital transformation in German higher education institutions is greatly influenced by "three complementing axes (the federal digital agenda, the think tank 'Hochschulforum Digitalisierung', and calls for research proposals by the federal government to foster research on digitalization in higher education through funding by the German Ministry of Education and Research)" (Bond *et al*., 2018, p. 4). Some regional digital platforms are established to further develop regional collaborations in digitalization such as Virtuelle Hochschule Bayern (www.vhb.org) and Hamburg Open Online University (www.hoou.de). The development of MOOCs and online learning are pushing the digital transformation in German higher education institutions, especially during the COVID-19 pandemic.

The transformation of university governance involves digital transformation and digital governance including digital

infrastructures and digital service systems. Digital governance in higher education encompasses main dimensions different from traditional university governance and concerns the standardization of education, transparency, and digitalization (Landri, 2018). "A range of connected and ICT-centered changes (reintegration, needs-based holism, and digitization changes) shifts toward digital-era governance involves reintegrating functions into the governmental sphere, adopting holistic and needs-oriented structures, and progressing digitalization of administrative processes." (Dunleavy et al., 2006, p. 467; Dunleavy & Margetts, 2010, p. 2). Meanwhile, digital governance may drive the governance model to move toward the state control model based on rational planning and control rather than the state supervising model based on self-regulation (van Vught & de Boer, 2015, p. 38).

Digital transformation in the education sector involves "sustainable management to adapt to the changes imposed by new technologies" (Abad-Segura, 2020, p. 1). The increasing applications of digital technologies (e.g., artificial intelligence, blockchain, cloud computing, big data, internet of things, augmented reality/virtual reality/mixed reality, edge computing, machine learning) are reshaping university governance in terms of management, administration, research, teaching, learning, and the utilization of resources. Digital innovation in teaching and learning involves technical, academic, curricular, organizational, and structural innovations (Hochschulforum, 2016, p. 10). The ICTs "will affect the intellectual activities of the university (learning, teaching, and research) and change how the university is organized, financed, and governed" (Guri-Rosenblit, 2005, p. 471). Digital technology applications and digital infrastructures have become essential parts of

technology-enhanced teaching and learning in a hybrid-flexible learning environment in a hybrid university. The increased applications of social media and digital technologies will enhance social networked learning. Technology-enhanced courses with a blended approach change the process and management of teaching and learning as well as the traditional way of knowledge dissemination and transmission, which overcome the limitations of physical space to widen access and optimize services in a hybrid-flexible learning environment (including flexible time, open access, open education resources, and the diversity of supplies) in a hybrid university. The socio-cultural, economic, technological, and pedagogical impacts of digital transformation and innovations on university governance are transforming traditional models of administration, teaching, and learning in higher education institutions.

Governance Relationships and Structures

Four Universities have shown the changing governance relationships and structures. First, they have introduced the CIO (Chief Information Officer) or similar positions responsible for digitalization to the management board to lead digital transformation and innovation. "The changes caused by the new governance procedures mainly result in two fundamental shifts in the authority structure of the university: a considerable strengthening and professionalization of the central management and the increasing involvement of external persons (e.g., representatives from industry, the region, or the state) or committees in the institutional processes of decision-making" (Wolter, 2007, pp. 3-4).

Higher education governance needs to "combine the external (e.g., the relationships between state and university), the institutional

(focusing on a particular institution), and the internal dimension (inside the institution)" (Wolter, 2007, p. 1). "Higher education systems have three core centers of gravity - the academic 'oligarchy', the state, and the market, i.e., as reflected in entrepreneurial institutional leadership and the diffusion of competitive instruments into higher education governance" (Dobbins & Knill, 2017, p. 77). Shared governance with a balance between corporate-dominated and academic-dominated university governance (Shattock, 2002, p. 236) may optimize the allocation of resources, knowledge production, and knowledge transfer. For instance, A has actively engaged in the Cyber Valley partnerships to promote exchanges and collaborations with industrial partners. C has unique entrepreneurial governance.

Clark's (1983) triangle of coordination in university governance presents "the state authority, the market, and the academic oligarchy as three basic modes of governance and forces through their interaction to determine how a higher education system is coordinated" (Clark, 1983, p. 140; Lazzeretti & Tavoletti, 2006, p. 21). "Clark's (1983) governance triangle (professional/collegial at the apex, with government/managerial and market forms at the base) has been inverted and lost its equilibrium, such that remnants of professional/collegial governance are now strictly circumscribed by parameters set externally to universities" (Vidovich & Currie, 2011, p. 52). The Triple Helix model of university-industry-government relationships as "an evolutionary model of innovations" (Leydesdorff, (2000) has reshaped higher education institutions with a set of interactions among academia (the university), industry, and government to foster economic and social development in the knowledge economy and knowledge society (Etzkowitzn & Leydesdorff, 2000). Based on the triple helix model, the Quadruple

helix (industry-university-government-societies) and quintuple helix (nature-industry-university-government-societies) innovation models address socio-ecological interactions for sustainable development and university-industry-government-public-environment interactions for co-development and co-evolution of advanced knowledge production and innovation systems (Carayannis & Campbell, 2011, p. 342).

The reform of the governance procedure and management structure in Universities of Excellence aims to ensure internal efficiency, quality, institutional/ academic/financial autonomy, academic freedom, transparency, social responsibility, social accountability, and educational equity for the public good; to secure the right degree of (de) centralization; to improve decision-making (e.g., increasing the decision power of the leaders and simplifying the decision process); to incorporate leadership, management, and administration; to professionalize the decision mechanisms and the administration (Weber, 2006, pp. 67-72). The most important dimensions of management mechanisms in higher education are "the organizational structure, the mechanisms of planning and control, the incentive system, the information systems, and the coordination mechanisms" (Küpper, 2003, p. 7). Institutional leadership sets strategic direction; management focuses on achieving outcomes and monitoring institutional effectiveness and efficiency in distributing resources; administration implements procedures (Maassen, 2003, p. 32).

The current transformation of universities into competitive organizational actors involves reconfigurations of internal governance structures with a more powerful chief executive (university presidents/rectors) and boards of directors (university boards) (Kretek,

Dragšić, & Kehm, 2013, p. 40) and show its focus on national and international rankings, progressively hierarchical decision-making structures, increased organizational accountability, openness to management consultancy, a more differentiated organizational structure, the professionalization of university management, and growing branding activities (Hasse & Krücken, 2013). The transformation is connected to the construction of leadership towards a more managerial form of university governance to enable universities to act strategically to keep autonomous, competitive, entrepreneurial, and individual organizational identities (Krücken *et al.*, 2009, p. 2), which may challenge "the uniqueness of the national university system and the university as a specific type of organization" (Krücken & Meier, 2006; Krücken, 2011, p. 4).

Funding and Autonomy

Four Universities of Excellence have successfully received additional funding through the Excellence Initiative and the Excellence Strategy of the German federal and state governments besides the other resources of funding to develop top-level research in alignment with institutional strategies for building world-class universities. However, they still face financial challenges and funding constraints with the increasing costs of education and limited fundraising from the federal and state governments as well as the third-party fundraising and other funding resources because the funding of public universities mainly comes from governmental funding compared with fundraising from other sources. Financial dependence may threaten their financial integrity and financial autonomy as an important part of institutional autonomy.

The International Expert Commission for the Evaluation of the Excellence Initiative recommended the targeted funding of top-level research for institutional development (IEKE, 2016). The performance-based funding as an instrument of competition in German higher education through the Excellence Initiative and the Excellence Strategy stimulate higher education institutions to improve the quality of teaching and research in response to the increased accountability for using public funds and are required to demonstrate value for money, even though growing funding constraints may limit the availability of resources. The funding is mainly research funding and reflects governmental priorities in specific fields of research, which may mismatch the research development of certain areas. Besides policy and financial support from the federal and state governments, Universities of Excellence need to engage all actors and stakeholders to ensure the quality of teaching and learning, research outputs, adequate financial resources for funding, and human resource development (Kehm, 2013a, p. 91).

"The funding for German higher education institutions (expenditure for research and teaching, salaries, material, and operating costs) is part of each federal state's annual education ministry budget and traditional line-item budgets have been partially re-designed through performance-based allocations, although the redistributive effect of this measure has proven extremely limited" (Capano, 2011, p. 1631). "German public higher education institutes are mainly financed by federal states as their responsibility with some federal government framework legislation to set boundaries for the state laws" (Ziegele, 2006, p. 265). The expenditures of German public universities are granted through lump-sum budgeting in the three-pillars funding model: "basic funding, performance-orientated

funding, and innovation-/ profile-oriented funding" (Ziegele & Rischke, 2013, p. 6). Five major funding instruments in German higher education include "the institutional funding through state governments; earmarked project funding related to specific political purposes by state or federal governments; the federal government's Excellence Initiative promoting the top research; the federal-state co-funded Higher Education Pact; and the federal-state co-funding of research projects (e.g., DFG)" (Ziegele & Rischke, 2013, p. 4). "State baseline funding and third-party funding are the two most important funding sources, but two-thirds of the third-party funding is public money that flows mostly via competition arrangements (e.g., through the German Research Foundation) to higher education institutions" (Hüther & Krücken, 2018). It has been long-lasting debates about tuition fee as an instrument for financing German higher education institutions such as the diversified tuition fees, the renunciation of tuition fees, or low tuition fees.

The diversification of financial resources will expand fundraising channels from broader sources and diversified fundraising models as well as philanthropic fundraising and self-generated funding from multiple sources e.g., university foundations, research foundations, technology transfer, the licensing of patents, revenue through services, continuing education, fundraising, sponsoring, or business operation aligned with research and development. C is the first university to run a professional fundraising campaign in Germany. The other three universities also engaged in fundraising activities.

"The governance of public universities is significantly influenced by government policy, with particular emphasis on

efficiency and three guiding principles of governance (institutional autonomy, academic freedom, and openness)" (Trakman, 2008, p. 64). "Institutional governance arrangements are often shaped by national governance structures through legislation, funding systems, and systems for evaluation, accreditation, and control" (Bleiklie & Kogan, 2007, p. 486).

The fundamental tasks of university governance are to ensure "effective university autonomy to keep the operation of the university self-directed" (Balderston, 1995, p. 63). Autonomy enables higher education institutions to optimize the allocation of resources to achieve strategic goals and missions (Pandey, 2004, p. 79). Universities will be more efficient if they are endowed with a greater degree of autonomy (Neave, 1995, p. 65). University governance involves accountability and autonomy and should consider balancing the power relationship between government and universities. Universities need to act with clear internal management and decision-making structures with extensive autonomy from the state in external relations. However, to what extent should higher education institutions keep academic, institutional, and financial autonomy remain unclear. Decentralization of the higher education system does not automatically lead to a higher degree of university autonomy. The federal and state governments enhance their control over Universities of Excellence and preserve their influence through the funding policies instead of stepping out from their funding responsibilities, which may lead Universities of Excellence to move in the direction of the expectation of the federal and state governments and could mismatch their governance practice.

Quality Assurance and Sustainable Development

Four universities have undergone system accreditation as an instrument of quality assurance to ensure the quality of degree programs, research, and teaching through the system-accredited quality assurance system, following the European Standards and Guidelines for Quality Assurance in Higher Education (ESG) as well as the criteria specified by the Standing Conference of the Ministers of Education and Cultural Affairs (KMK) and the Accreditation Council in Germany. Accreditation as an instrument of quality assurance is an important part of university governance (Baumann & Krücken, 2019, p. 44) to link governance, funding mechanisms, higher education policies, and quality management in higher education institutions. Measures including assessment, benchmarking, and key performance indicators (e.g., research outputs, scientific productivity, knowledge transfer, etc.) shift judgments of research and teaching from the academic profession towards external bodies and institutional management.

Four universities highlight their international profiles and ranking placements in the global rankings of world-class universities, e.g., the Academic Ranking of World University (ARWU), QS World University Rankings, and the Times Higher Education World University Ranking. National and international ranking systems provide comparability, compatibility, and transparency to identify areas for further improvement, strategic positioning, branding, and benchmarking. Ranking as a third-party authentic instrument benchmarks Universities of Excellence to differentiate from others while pushing universities to enhance quality, reputation, competitiveness, and international visibility, providing transparency

and accountability for stakeholders. If universities give priority to ranking as institutional strategies, they may miss a broad concept of good governance to improve organizational effectiveness for internal efficiency.

The Times Higher Education Impact Rankings measure global universities' success in delivering the UN's Sustainable Development Goals by evaluating university performance on Sustainable Development Goals (SDGs) (THE, 2022). UNESCO's education for sustainable development (ESD) for 2030 education program aims to bring about personal and societal transformation. The 2030 Agenda for Sustainable Development with the 17 Sustainable Development Goals (SDGs) is adopted by all United Nations member states in 2015 (United Nation, 2015). Universities' commitment to the 17 Sustainable Development Goals (SDGs) as their response to the global discourses in higher education for sustainable development advocated by UNESCO evokes discussion on sustainability governance and "the emerging university function of co-creation for sustainability" (Trencher et al., 2014). Quality education is one of 17 UN Sustainable Development Goals (SDGs). Education for sustainable development is recognized as a key element of quality education and a crucial enabler for sustainable development. As part of the UNESCO Global Action Programme on Education for Sustainable Development (2014 to 2019), a National Action Plan in Germany was developed by the Platform on Education for Sustainable Development and led to a joint declaration of the Conference of Rectors (HRK) in Germany and UNESCO Commission (DUK) on sustainability as a guiding concept for universities in 2017.

Four universities have stated their Sustainable Development Goals (SDGs) on their websites. A regards sustainability as an integral part of research and teaching and established the Competence Center for Sustainable Development and the Innovation Fund for Sustainable Development. B integrates sustainability into degree programs as part of education for sustainable development and shapes research and teaching with the goals of sustainable development. Both A and D participate in the "Sustainability at Higher Education Institutions: Develop-network-report" (HOCHN) project to advance sustainable development (HOCHN, 2020) to the transformation of a sustainable society through the fields of action in research, teaching, operation, knowledge transfer and governance, following the joint HRK/DUK declaration "Higher Education Institutions for Sustainable Development" and the HRK recommendation "For a Culture of Sustainability at Higher Education Institutions" (HOCHN, 2020, p. 18).

C integrates sustainability into its educational mission and regards sustainability as a key element of its future development agenda with its objective to exert the full sustainability potential across its key action areas. Its sustainability statement provides an outline for institutional sustainable development including sustainability vision, sustainability mission, and its sustainability strategy in six interrelated action fields (research, education and lifelong learning, entrepreneurship; campus and operations: governance and engagement; communication and knowledge transfer). C is committed to sustainable innovation and progress for people, nature, and society. The Business School of C regards sustainability as its key priority and integrates sustainability into research and teaching, addressing sustainability in its key teaching modules (e.g., sustainable management, new sustainable ventures, and sustainable

entrepreneurship). In 2013, the Business School of C signed on to the United Nations Principles of Responsible Management Education (UN PRME), which was established in 2007 as a United Nations initiative and a global movement to transform business and management education.

D operated the Center for a Sustainable University to become a university for a sustainable future in research, teaching, education, and administration from 2011 to 2019. D adopted the guiding principle of "innovating and cooperating for a sustainable future" to achieve the UN's Agenda 2030 Sustainable Development Goals (SDGs) and is committed to sustainable science and scholarship as a sustainable university as well as sustainability in research and teaching for sustainable development as a "University for a Sustainable Future" to ensure its future viability in research, teaching, and university management; enhances responsibility, internationalization, quality, and interdisciplinary cooperation; creates regional contacts; improves access to education and academia; provides a diverse range of degree programs, numerous interdisciplinary projects, research opportunities, and an extensive partner network of leading regional, national, and international research institutions.

Sustainability has become an important part of institutional strategies in line with the sustainable development goals advocated by the United Nation. "Sustainability governance could be considered a self-evident part of the duties of a higher education institution in teaching, research, and campus management" (Bauer et al., 2018, p. 494). Sustainable development as an integral part of teaching, research, and operations is aligned with ''transformative environments and processes within higher education institutions, organizational

practices, transdisciplinary approaches as well as effective leadership for sustainability'' (Mader et al., 2013, p. 269; Bauer et al., 2018, p. 494). Actions to create an institutional culture of sustainability "encourage universities to engage in education, research, policy formation, and information exchange on population, environment, and development to move toward global sustainability" (Talloires Declaration, 1990).

Contribution and Implications

The governance transformation of Universities of Excellence has significant implications for institutional strategic decision-making in university governance for sustainable development and the emerging digital governance in a hybrid university, which evokes discussion on transforming university governance, digital governance, and sustainability governance in higher education institutions aligned with teaching, research, and the third mission of the university. The transformation of university governance indicates a trend to move towards the relevance of the market and knowledge transfer as the third mission. The impacts of global actors on shaping educational policies and university governance also bring global governance and network governance to the focus. This study has significant implications for good governance as a major factor in improving the quality of higher education to strengthen institutional identity and autonomy at the institutional level. The transformation of university governance draws attention to rethink "the typology of governance mechanisms in higher education: academic self-regulation, competition for resources, managerial self-guidance, stakeholder guidance, and state control" (Leisyte, 2014).

Limitations and Future Research

This paper only presents four Universities of Excellence as the leading public research universities. It does not reflect all types of German higher education institutions. Further research may explore all types of German higher education institutions and university governance in different national contexts from international and comparative perspectives.

Conclusion

The governance transformation of German higher education is pushing fundamental institutional changes, strategic management, and leadership to respond to challenges, competition, and autonomy (Mayer & Ziegele, 2009, p. 16). The increasing external pressures drive internal changes in university governance and the reconfiguration of internal governance structures toward the governance transformation of Universities of Excellence. The governance transformation of Universities of Excellence is significantly influenced by governmental higher education policies and funding incentives in alignment with digital transformation in German higher education institutions. The implementation of the Excellence Initiative and the Excellence Strategy as a political governance instrument accelerated the governance transformation of Universities of Excellence in line with internationalization, innovation, digital transformation, and sustainable development. Changes in governance relationships and structures lead to governance transformation with increasing convergence in traditional governance and digital governance in a hybrid university.

Transforming university governance for good governance and sustainable development in alignment with institutional missions, vision, core values, and strategic development goals will optimize the processes and structures for organizational effectiveness and efficiency in many aspects, e.g., global engagement (strategic alliances, partnerships, and networks), internationalization, ranking, funding, innovation, digitalization, research outputs, assurance of teaching and learning, quality management for continuous quality improvement, and the utilization of financial resources and human resources.

In the process of transforming governance, universities need to come up with strategies to mitigate challenges (e.g., insufficient funding and structural changes) in the global competition and establish an internal efficient governance structure through excellent academic leadership, democratic decision-making, and effective supervision without affecting institution autonomy and academic freedom. Research and teaching as two traditional missions of universities together with the third mission (service to society) should be a part of institutional strategic management in university governance. Universities should act proactively on a self-regulation base with a strong sense of ownership and the responsibility to ensure the effectiveness of management and governance arrangements, institutional autonomy, academic freedom, quality assurance, openness, transparency, social accountability, performativity, relevance, and sustainable development. Academic leaders need to optimize the utilization of human and financial resources with efficient administrative management to bring out the best synergy in innovation, global engagement, research, and teaching in alignment with institutional missions, vision, core values, goals, and strategies.

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A Case Study on University Dropout: Perspectives from Education Faculty Students and Academicians[1]

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Abstract

This case study investigated the reasons for students dropping out of a university and the experiences associated with the dropout process of individuals who dropped out of the faculty of education in Turkey. We collected data from 10 individuals who dropped out and 8 academic staff members who worked in the same faculty of state university in the Aegean region in Turkey between 2008 and 2018 using the criterion sampling technique. We collected data using semi-structured interview forms and conducted content analysis. The results revealed that pre-admission factors (I), which are the factors of guidance, personality, system, family, career, and city play decisive roles in the admission process of individuals.

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These factors can shape their intrinsic and extrinsic motivation before the faculty admission process. After admission, the university processes factors (II) such as psychological condition, academic condition, social condition, organizational situation, appointment factors, military service, family situation, and financial situation are determinant factors on individuals' intrinsic and extrinsic motivations in their university experience. After the dropout decision, individuals either drop out of the system or change department/university. Findings point out that the reasons for and process of the dropout are interdependent and divergent. Recommendations for future investigations and practices are presented based on our findings.

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Introduction

School dropout has been taken seriously considered in every stage of formal education in the last decades. The demand for university education has risen in recent years due to reasons such as changing nature of knowledge, national and international economic developments, changes in job market conditions, globalization and its effects on economic, social life and education, etc. Therefore, dropout from the university has become an urgent research topic in many countries as well. Universities and policymakers in education have

increasingly sought to evaluate the effects of dropouts in terms of both individual and educational outputs.

University student dropout has effects on various economic and social issues at macro and micro levels. It may cause failure to provide educated manpower and foster economic development (Shcheglova et al., 2020) and increase social costs (Bäulke et al., 2021). As Park (2014) suggests, university student dropout results in higher costs for countries in terms of tax losses. Because of dropouts, expected economic and social development is interrupted and returns to public spending on higher education decrease at macroeconomic level. Moreover, expected social externalities may also be interrupted, too (Saccaro & França, 2020). Higher dropout rates may cause increased demand for social support, reduced political participation, and reduced intergenerational mobility at macro level (Hayes et al., 2002; Park, 2014). University student dropout rates are also taken as a criterion for university rankings and higher dropout rates have a negative effect for a university and lower levels of dropout are taken as a criterion for university effectiveness (Sneyers & De Witte, 2017). When micro level effects are considered, university dropout has individual consequences, too. Individual investment in higher education cannot be translated into positive outcomes in the job market (Aparicio-Chueca et al., 2021; Archer, 2008; Szabó & Matar, 2021). It is still true that the earnings of university graduates are higher than those of non-graduates, especially in developing countries. (Ergen, 2017; Somani, 2021).

Considering dropouts in Turkey, it can be said that there is almost no definite data on dropout rates. There is only one official document taken from TBMM archives (TBMM, 2018b). To this official

answer to a parliamentary question (TBMM, 2018a) 1,115,530 students dropped out or suspended their studies between 2013-2014 and 2017-2018 in Turkey. When the document is analyzed, the number of dropped out or suspended students were 135,137 in 2013-2014; 161,193 in 2014-2015; 197,482 in 2015-2016; 212,770 in 2016-2017 and 408,948 in 2017-2018. It is seen that the number of dropped out or suspended students has risen in recent years. This implies that the dropout problem has an increasing importance for the future effectiveness of the Turkish higher education system, market conditions, and individual and societal outcomes.

While there are many studies (Gökşen & Cemalcılar, 2010; Köse, 2014; Yorğun, 2014; Zorbaz, 2018) at lower levels of education on dropout, university dropout studies are limited in Turkey. They are focused on many different faculties and there is a need to focus on a specific type of faculty to put forward the faculty specific reasons of dropout. Therefore, we investigated individuals' evaluations and views before the university admission process, their experiences at the university, the dropout process, the reasons underlying their dropout decisions, and their experiences in the dropout stage. Moreover, we also evaluated the opinions of the academic staff working at the same faculty in the period of student dropout. Thus, we aimed to understand the complex relationships between reasons for dropping out. Choosing a specific faculty also lets us infer whether the faculty and profession-specific dynamics affect the dropout decision and process. Also, considering the available studies, using a specific group (education faculty dropout) provided us a deep insight into the problem.

The main purpose of this study is to examine the reasons for dropping out of a university in Turkey based on the views of the students who dropped out of a faculty of education and the academic staff in that faculty in Turkey.

Reasons for university student drop out

University student dropout is among the important topics studied in higher education papers after the 70s. After the seminal papers of Spady (1970) and Tinto (1975), research on dropout has varied and intensified. Early studies focused on dropout reasons (Spady, 1970; Tinto, 1975), while later studies focused on relationships between the dropout reasons, the effect of them on the dropout (Bean, 1985), and interrelations among these reasons (Heublein, 2014; Kerby, 2015).

Dropping out of a university is a process that contains mutual interactions of several factors (De Witte et al., 2013; Troelsen & Laursen, 2014). These factors may be specific to each individual and need to be considered as multidimensional. These individual factors are of a broad and ambivalent nature. The factors behind university dropout can be summarized as pre-admission and individual factors, academic and social factors, internal and organizational factors, and external factors.

Considering pre-admission and individual factors, starting age (Araque et al., 2009) is one of the important causes of dropout. The higher the age to start university, the higher the probability of dropping out of school. Besides, Wolter et al. (2014) argues that the higher the class level, the less likely to drop out of school, especially for women. Gender is another factor for university dropout, as Şimşek

(2013) suggests. Male students may have a higher tendency to drop out compared to females. This may be because of higher education expectations of females, which is to overcome cultural and economic hindrances. Former educational achievement or background are also important personal factors (Bernardo et al., 2016; Paura & Arphiova, 2014; Wolter et al., 2014). Higher academic performance in high school may decrease the dropout risk and raises the possibility of completing the program. Parents' educational background is among the important determinants of university dropout because students coming from more educated families have lower risk of dropout (Aina, 2013). Besides family's educational background, socio-economic factors are also determinants of university dropout. Having low socio-economic background may cause financial problems and adaptation problems at university. It may also cause low level of preparedness for the university (Chies et al., 2014; Oragwu, 2020; Uslu Gülşen, 2017). Moreover, family support and encouragement are other pre-admission factors that play role in the dropout decision (Boyacı et al., 2015; Bülbül, 2012; Duque et al., 2013; Parr & Bonitz, 2015). Lack of family support can lead to adaptation or social problems at university and thus dropout, while higher support may encourage an individual to complete university. Apart from those factors, city is another important factor for university dropout. As Troelsen and Laursen (2014) state socialization facilities in and out of the university determines individuals' dropout decision. Individuals consider city life in pre-admission process and low levels of satisfaction of city facilities can lead them thinking of dropout (Calitz et al., 2019; Ceylan et al., 2017).

After university admission, academic and social factors get involved in the equation. Satisfaction from the courses and academic

achievement play a crucial role as feeling dissatisfied with the courses, academic failure, and consequently absenteeism raises the possibility of dropout (Parr & Bonitz, 2015; Uslu Gülşen, 2017; Wolter et al., 2014). Besides academic factors, social factors such as adaptation to university, friend support, and relations with academic staff may also affect dropout behavior (Aypay et al., 2012; Bernardo et al., 2016; Bülbül, 2012; Şimşek, 2013; Troelsen & Laursen, 2014). Negative friendship experiences, social integration problems, and lower levels of communication with academic staff may cause thinking of dropout option for students.

Organizational factors are on the other side of the coin in terms of internal factors. Quality of educational resources, faculty and university facilities, orientation and adaptation programs, and teaching program are among the organizational factors playing role in university dropout (Boyacı et al., 2018; Duque et al., 2013; Paura & Arphiova, 2014; Uslu Gülşen, 2017). Perceived low quality of teaching or resources may make students feel unsatisfied. Moreover, lack of support for adaptation and orientation programs –especially in the first semester- negatively affects students' integration to the university. Higher student per staff ratios, and low academic support from teachers or administrators may make students feel stressed or unhappy and this may cause both academic failure and commitment problems and dropout.

The organization of the educational system and market conditions after graduation are among the external factors of university dropout (Bülbül, 2012; Kerby, 2015; Lavrijsen & Nicaise, 2015). Students think of the possibility to participate in the job market as soon as possible after graduation. If there is a disequilibrium in the

job market (overeducation problem, excess supply, etc.), then students may feel demotivated to complete a program. Also, the excess supply of graduates to the job market raises the feeling of hopelessness among students and that may cause dropout risk.

Apart from those factors, motivation is an important determinant factor to university dropout. To Tinto (1975), expectations and variables of motivation sources of students are effective in their dropout decisions. Similarly, Krstić et al. (2019) and Jungert et al. (2014) express that dropout decision is related to motivation processes of students. Low levels of intrinsic and extrinsic motivation may determine a student's dropout decision. Paura and Arphiova (2014) state that low level of motivation toward the profession may lead individuals dropout in the long run. Moreover, as Parr and Bonitz (2015) state low levels of motivation in university process determines an individual's dropout decision. Although, we can take motivation as a basis factor to dropout, it may result from other factors, as well. For example, as Jungert et al. (2014) suggest, while payment conditions of a job determine extrinsic motivation, being ambitious of doing a job determines intrinsic motivation. Considering those studies, intrinsic and extrinsic motivation must be taken as important factors in analyzing dropout processes.

When the causes of university dropout are considered based on the literature, it can be said that the factors of dropout are complicated and interdependent. Not only individual and organizational factors but also national level factors play an important role in analyzing dropout phenomenon. Analyzing these factors and relations among them is crucial in terms of micro and macro level effects. As the dropout factors and processes are different for each individual and

faculties, analysis of a specific unit may provide deeper insight into the problem, possible solutions, and policy options. Based on the literature and the aim of the study, we tried to answer the following research question based on the views of individuals who dropped out from the university and their teachers:

What are the reasons of university student dropout according to the views of dropped out students and academicians?

Methodology

Study Design

Case study design was used in this study to deeply analyze the dropout reasons of the students who dropped out from a faculty of education in Turkey based on the views of the students and teachers working in the same faculty. A case study is a qualitative design in which researchers collect detailed and in-depth information from multiple sources (observations, interviews, visual materials, documents, and reports) and provide a description or themes of a situation (Creswell, 2015). In this study, dropout reasons of the individuals were deeply investigated through interviews with individuals who had dropped out and teaching staff working in the same faculty. The critical point in case studies is the objective of answering questions of *how* and *why* (Saban & Ersoy, 2016). Therefore, in this study, we aimed to answer these questions by focusing on the reasons (why) and experiences (how) of dropouts based on the views of dropouts and academic staff to understand the nature of the phenomenon. A real case study design is used in this study to better understand an experienced case (Glesne, 2012). Yin (2018) states that single case studies allow us to contribute to knowledge and theory

building by confirming, challenging, or extending the theory. Therefore, the phenomenon of dropout from faculty of education, which was not particularly focused on in previous studies in Turkey context, was narrowed down to education faculty in order to contribute to expanding the findings on dropout behavior and its causes. Thus, a more specific unit is determined and the reasons and experiences of individuals specifically for this unit are investigated (Merriam, 2015).

Study Group

We used the criterion sampling method to select the study groups, which consisted of ten individuals who dropped out (Study Group 1) and eight staff members (Study Group 2) of the faculty of education between 2008 and 2018. As the oldest records of the faculty on dropout starts from 2008, it was chosen as a starting point. Having at least one year of enrollment in the faculty was the basic criterion for individuals who dropped out (D1, D2, …) as first year experiences (Chies et al., 2014; Mannan, 2007; Montmarquette et al., 1996) are important to explain the dropout process. Having experienced a student dropping out from the faculty they work, and having academic mentoring duties were the basic criteria for the academic staff working in the same faculty through their academic profession (A1, A2, …) since experiences with the academic staff (Lavrijsen & Nicaise, 2015; Parr & Bonitz, 2015; Ramsdal et al., 2013; Şimşek, 2013) are highly determinant factors for a dropout. Therefore, we used these criteria on study group selection as well. We got participants' data from the faculty under official and ethical permission for use of the data on academic purposes and keeping them confidential, which allowed us to assess the data in terms of the criteria given above, which

are year of admission and dropout, gender, department, contact info, etc.

Demographics of the study groups are given in Tables 1 and 2:

Table 1. *Demographics of Study Group 1 (Dropouts)*

Participant	Gender	Major	University starting age	Year of dropout	Current occupation
D1	Female	Preschool Education	18	2nd Year (2013)	Trainee Lawyer
D2	Male	Social Sciences Education	19	2nd Year (2013)	Self-employed
D3	Female	Classroom Teacher Education	19	3rd Year (2013)	Classroom Teacher
D4	Female	Art Teacher Education	19	2nd Year (2013)	Art Teacher
D5	Male	Social Sciences Education	18	5th Year (2013)	Prison Guard Officer
D6	Male	Science Teacher Education	18	2nd Year (2011)	Aircraft Maintenance Technician
D7	Male	Classroom Teacher Education	19	2nd Year (2010)	Police
D8	Male	Music Teacher Education	18	3rd Year (2016)	Student
D9	Male	English Language Teaching	18	2nd Year (2018)	Student
D10	Female	English Language Teaching	24	2nd Year (2018)	ELT Teacher

As seen in Table 1, there are 4 females and 6 males in study group 1. At least one participant from each major was included in the study, whose university starting ages ranged between 18 and 24. All the participants meet the criterion of having at least one year of enrollment in the faculty and some of them have 2 or more years of enrollment. Faculty's dropout records start from 2008 but we could go back to 2010 since we could not contact the earlier dropouts or the ones we had reached did not want to be included in the study. Only three of the participants work as a teacher, while the others have different jobs.

Table 2. *Demographics of Study Group 2 (Academic Staff).*

Teaching staff	Gender	Title	Years of experience in the faculty
A1	Female	Assoc. Prof. Dr.	10
A2	Female	Assoc. Prof. Dr.	19
A3	Male	Res. Assist.	15
A4	Female	Assist. Prof. Dr.	19
A5	Female	Res. Assist.	10
A6	Male	Lecturer	14
A7	Female	Lecturer.	12
A8	Male	Prof. Dr.	22

As seen in Table 2, 5 of the academic staff are female and 3 of them are male. They all have mentoring duties and have at least one dropped out student in the faculty. At least one staff from all different titles was included in the study group, as each of them had different levels of communication with students (e.g. mentoring, teaching, both, etc.). Considering the experiences, it is seen that all staff have 10 years or more of experience in the same faculty.

Instruments

We used semi-structured interview forms to collect data. Related studies were reviewed, then draft questions were prepared focused on inquiring reasons of dropouts. A total of 10 experts reviewed the content, context and the language of the pre-application forms, which contains draft questions of the interview forms. After their suggestions we revised the questions proceeded to pre-application. The interview form for the dropouts had 13 questions and for the teaching staff consisted of 7 questions before the pre-application. After piloting, which was applied to 2 dropouts and 1 teaching staff member, and lasted approximately 30 minutes each, the

interview data were analyzed by 2 other researchers in terms of content, length, and practicability. Finally, interview forms were revised and contained 12 questions for the dropouts, including questions about their admission process, their individual, academic, economic, and social experiences as a student, idea of dropout and its reasons, the process of decision making for dropout, experiences after dropout and 7 questions for the teaching staff, including questions on their dropped out students, and students' dropout reasons.

Since this study reveals a part of a more comprehensive study conducted to determine the reasons behind dropout and the experiences of university students regarding the dropout process, the findings related to the reasons for dropout obtained from the analysis of the data are included here. In this context, the parts of the interviews with the individuals who left the education faculty and the lecturers working in the same faculty regarding the reasons for leaving the university were discussed and evaluated together.

Data Collection and Analysis

Interviews were conducted in 2018 and 2019, and lasted from 35 to 97 minutes. The lengths of the interviews differed. This is because some participants were wishful to give extra information about their memories, some were talkative, and in some interviews features of the place of the interview (café, home, etc.) affected the length of the interview. Before the interviews with Study Group 1, each participant was contacted by phone, e-mail, or social media and asked to set an appointment. Appointments were arranged at a time suitable for the participants, and interviews were conducted at a location of their

choice for them to feel comfortable and safe (Griffiths, 1998). The first author of the study interviewed one participant in her home, one in his workplace, and the others in different places (cafe, shopping center, etc.). The researcher recorded the interviews upon the permission of the participant by two recorders to avoid technical problems. After each interview, the researcher checked his notes and took extra notes on the interview, in general, to be included in the analysis process. After nine interviews with dropped out students and seven interviews with teachers, we observed the collected data, discussed its content, and agreed that no new information on the reasons of dropout would be provided by any other interview. We decided to conduct two more interviews one with dropped out students and one with teachers to be sure that our data has saturated enough for a deep understanding of the dropout phenomenon.

We used content analysis technique to analyze the data and extract the concepts and relations among them (Yıldırım & Şimşek, 2011). The content analysis process is shown in Figure 1:

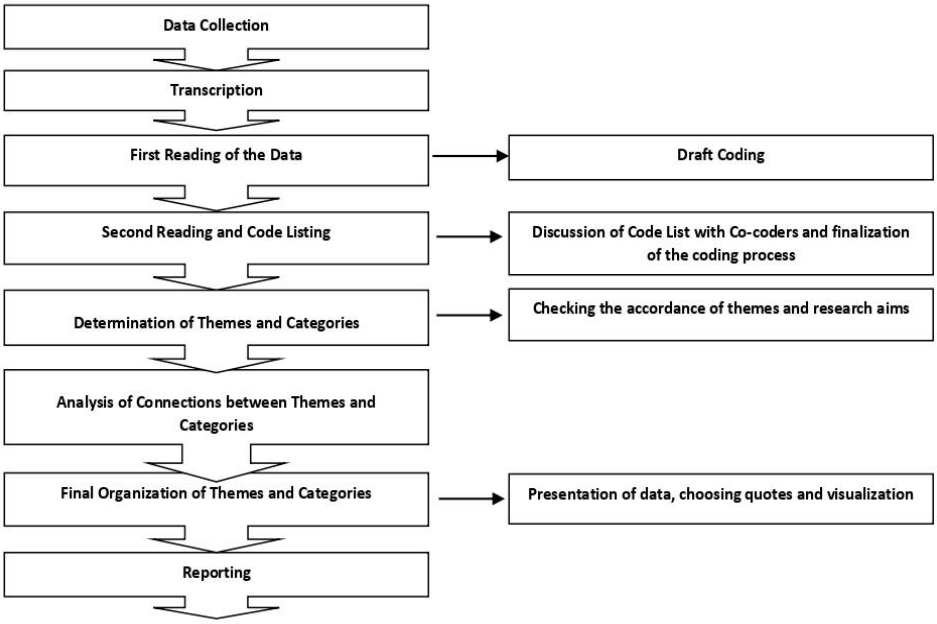

Figure 1. Content Analysis Process

Two researchers experienced in qualitative research and determined as co-coders were asked to check the coding process and codes to assess the reliability of the analysis process (Bilgin, 2014). For this, we made available the whole text of two interviews, and aim of the study and problem sentence, asked those researchers to code the whole data. Then, the codes of the researchers and co-coders were compared until we all agreed on the codes.

In the analysis of the data we considered the data from the dropped out students and the academic staff together as they both include dropout reasons. This common point allowed us to evaluate the case of dropout in depth. Although there are no questions of pre-admission process of the dropouts in academic staff interview form,

academic staff expressed their views concerning pre-admission stage. So, we included those ideas in the analysis process with students' views. Based on the analysis process we reached two themes regarding the reasons of dropout process which are "Pre-Admission Factors" and "Factors Associated with the University Process".

We provide detailed quotes of the participants for the credibility of the study along with detailed information on the entire process. The interview notes were also considered in the data analysis process for a detailed investigation of the dropout reasons and experiences. Collecting data from both dropouts and teaching staff as varying the data (Silverman & Marvasti, 2008) in addition to the external control of data analysis by co-coders (Long & Johnson, 2000) allowed us to ensure the credibility of the study and trustworthiness of data analysis process. Finally, the pre-application of the interview form enabled us to obtain quality data in terms of both content, length, and practicality (Perakyla, 2004).

Results

The study aims to present the dropout reasons of the students from a faculty of education in Turkey based on the views of the dropped out students and academic staff from the same faculty. The results are given under the titles of Pre-Admission Factors of University Student Dropout and Factors Associated with the University Process on University Student Dropout.

Pre-Admission Factors of University School Dropout

Pre-admission factors of dropout are guidance, personality, system, family, career options, and city where the university is located.

First, guidance factors are important for individuals to choose which university to attend. This factor covers getting career guidance in high schools, and which school counselors guide university candidates in terms of skills, ability, and future expectations. Below quote of a participant is given about how guidance affected the decision of admission to a university:

> *"After I got my score from the university entrance exam, nobody helped me on my university choices. I knew that my score was fine, but it was not clear to me where to choose… The school counselor did not help me." (D5)*

Personality is another preliminary factor in the pre-admission process as it reflects individuals' academic status, expectations from the university, their characteristics, etc. It may also reflect how individuals perceive themselves, if they are self-aware about their potential, motivations for attending a university, goals of attending university, etc. Below follows a quote from a participant on the issue:

> *"I did not have any expectations before being admitted to a university. All I wanted was to start university. I wanted to be away from my family and to be able to take care of myself… Being a teacher is not in my plans. I wished for an engineering training, but my scores were not high, so I had to come faculty of education." (D6)*

University entrance system is also an important factor in the pre-admission process. In Turkey, university entrance relies on the score taken from the university entrance exam. In some majors such as Art Teacher Education, there is an extra aptitude exam made apart from the entrance exam by faculties themselves. This means that some art teacher education departments may make the aptitude exam in July and some of them may in August or September. The entrance system,

time of the exam, and changes made in the entrance system (score coefficient, etc.) can affect the pre-admission process and later dropout. Some participants expressed this as below:

> *"My admission process was somehow compulsory. I was obliged to apply to that university as all the others had completed their application processes." (D4)*

> *"After the entrance exam, I made my university choices and expected to be accepted in my first choice. But that year, a transition option was given to the ones having higher scores in mathematics and science… so the threshold points rose. I couldn't get my first choice." (D3)*

Family is another pre-admission factor, once many reasons related to family issues may affect university choice. Being away from home or staying with the family, considering the expectations of family members and of other relatives, and an expectation of becoming independent may motivate individuals when choosing a university. When interviews were considered, they surfaced as determinant factors, for instance:

> *"I was not conscious in university admission process. I chose university X only to be with my mother. My second choice was university Y because of easy transportation. I could easily go there by bus and be with my mother as well." (D10)*

On the one hand, having a career goal is mainly a direct motivation for individuals in the pre-admission process. On the other hand, having no career goals can be a motivation for dropping out. Some participants expressed their career goals based on career options of being a teacher. Such as:

> *"I preferred this major as it is relaxing, has better working options. I would be a classroom teacher, civil servant after the university." (D3)*

> *"I did not know that major is entirely on teacher training. I had different goals of studying music. As I did not want to be a teacher, I didn't want to study lessons because my motive is to be a musician" (D8)*

The final pre-admission process factor is the city, i.e., the city where the university is located. Social life, socio-cultural structure of the city, having a seashore or not, being close to hometown or not, presence of contact, or presence of outstanding features of a city in the pre-admission process for individuals. Here is a participant's expression on the issue:

> *"I was expecting a coastal city when I first came here. When I saw that it was not, I was disappointed. The city is undeveloped. I came from a metropole. That was a shock. I still could not believe that there was not a seashore. I was thinking, what if it is at the end of that road? Then looked it up we are 50 kms away from the sea." (D2)*

The academic staff also expressed that city is an important factor that effects students' motivation in pre-admission process. Here is an example of the issue:

> *"One of them had come from a big city. She tried much but couldn't adapt here. She expressed that the city does not meet her socio-cultural expectations and this demotivates her…" (A8)*

Factors Associated with the University Process on University Student Dropout

Factors associated with the university process include the views of the individuals and teachers on the reasons of dropout

process after university admission. It has a broad range of interconnected factors as well. These factors are psychological condition, academic condition, social condition, organizational situation, appointment factors, military service, family situation, and financial situation.

The dropout process follows the feeling of unhappiness during university education. Below is an example from a participant's expressions on his/her psychological condition:

> *"… I was unhappy. Being there made me feel uneasy… I was more enthusiastic when I started, I would learn new things, have better friends… I started hoping for good things but it didn't occur. Both school and friends made me feel unhappy, I felt alienated." (D4)*

Similar to the dropout students, the academic staff also expressed that students' psychological condition is an important factor of dropout. An example is given below:

> *"They want to dropout time to time… which stems from feeling of anxiety and stress which is because of being away from their families or other reasons…" (A5)*

Negative feelings regarding academic integration, academic support, absenteeism, not having regular study habits, program's failure to satisfy participants' expectations, and anxiety over exams after the university are critical factors related to the academic status of the participants. Examples of them are below:

> *"I expected that university education should not give me basic definitions, it should be more practical. But I wanted to learn the reasons of something ... They did not give me such kind of training…" (D5)*

> *"I wasn't a good student. I did not use to go classes regularly. I'd never studied for the exams and projects." (D2)*

> *"I hoped that the university… independent… extraordinary teachers… But I saw that it is like a high school. Just normal classes. Campus was not a good one, too. This did not give me any motivation." (D7)*

The academic staff also expressed academic status as a crucial factor in the dropout decision. They emphasized mainly unmet expectations, such as an expectation of better education, absenteeism, and weak intrinsic motivation. Here is an example:

> *"There were some students dropped out for academic reasons… They did not consider dropping out at first, but after … campus life and academic dissatisfaction may have caused them to think about dropping out…" (A1)*

Dropped out individuals expressed that social experiences are important in staying or dropping out. Social factors include relationships with others and lecturers, cultural factors, having different memories, social activities in the university, city life and university facilities. Here is an example of the effect of social factors:

> *"Not generally speaking but, I had my worst friendship experiences there. That's part of the reason for my trauma… I didn't want to only chat with my friends. I also wanted to learn new things. I couldn't achieve it there, which was dissatisfying." (D1)*

The academic staff also expressed that social experiences are important factors for dropout. For example:

> *"Students coming from bigger or more developed cities may suffer from cultural difficulties. This city may not have met their*

expectations. There may not be many options of socio-cultural activities." (A2)

In addition to social factors, organizational resources are among the factors leading students to drop out. They are mainly related to social clubs and physical features, and directly affect an individual's academic and social integration with the university. Below is an example of organizational factors related to dropout:

"I do not have distinctive memory… Nothing positive or negative comes to my mind. The campus was not attractive. There was a real mess, landscape was not attractive either. Also, transportation was an issue, as the campus was located far away from the city center." (D6)

Academic staff also expressed that organizational factors are important factors leading students to dropout. Below is an example from the quotes of and academic staff:

"They transfer to other universities that have better training. They don't like the academic environment, campus life, physical conditions here… They think of other universities as having better opportunities." (A7)

One outstanding finding is that post-university work or assignment conditions have a pervasive effect on the participants' decision to drop out or change their major. Here is an example of the effect of being hired after university on dropout decision:

"The future was dark for me. Getting a job was so difficult. We can see that there are many non-working graduates…and their hard lives … They studied for 4 to 5 years, and took exams but couldn't achieve even if they got higher scores... I thought that I would not be

hired even if I got high scores or would have to wait many years." (D2)

Academic staff also mentioned appointment factors after university education is an important factor that determined the dropout behavior of the students. Here is an example about post-university appointment factor:

> *"They are unhappy with appointment conditions. They say that 'We won't be appointed no matter how successful we are'. Payment conditions of being teacher is another problem, too. They say that: 'I will earn 3.000 liras when started to job. I can earn more in another profession'" (A6)*

One participant expressed that compulsory military service was important for his decision to drop out. In Turkey, all the males have a compulsory military service duty. In the last years, some other options for this service became available, such as paid military service. However, when that participant dropped out, he had to serve at least five months. Completing military service is also necessary for many areas of social and professional life in Turkey.

A striking finding of the study is that although many studies suggest that financial and family variables cause dropout, no participant in this study dropped out due to financial or family reasons. In turn, academic staff reported that students who dropped out expressed financial or family problems as a reason for dropping out. That's why we used a dashed line between financial and family situation, and extrinsic motivation. Here are some quotes from the academic staff:

"…I had a student who dropped out because of financial problems... She loved this university, but financial reasons obliged her. She said that she couldn't afford it…" (A8)

"One of my students had to drop out because of health problems within her family. Her father had died, and her mother had health problems. She had to be with her mother. She dropped out involuntarily..." (A1)

Based on the obtained results from the study, university dropout factors and processes are given in Figure 2 below. University dropout is a process based on the pre-admission process and a combination of university process factors ending with dropping out of the system or major/department/university transfer (Figure 2).

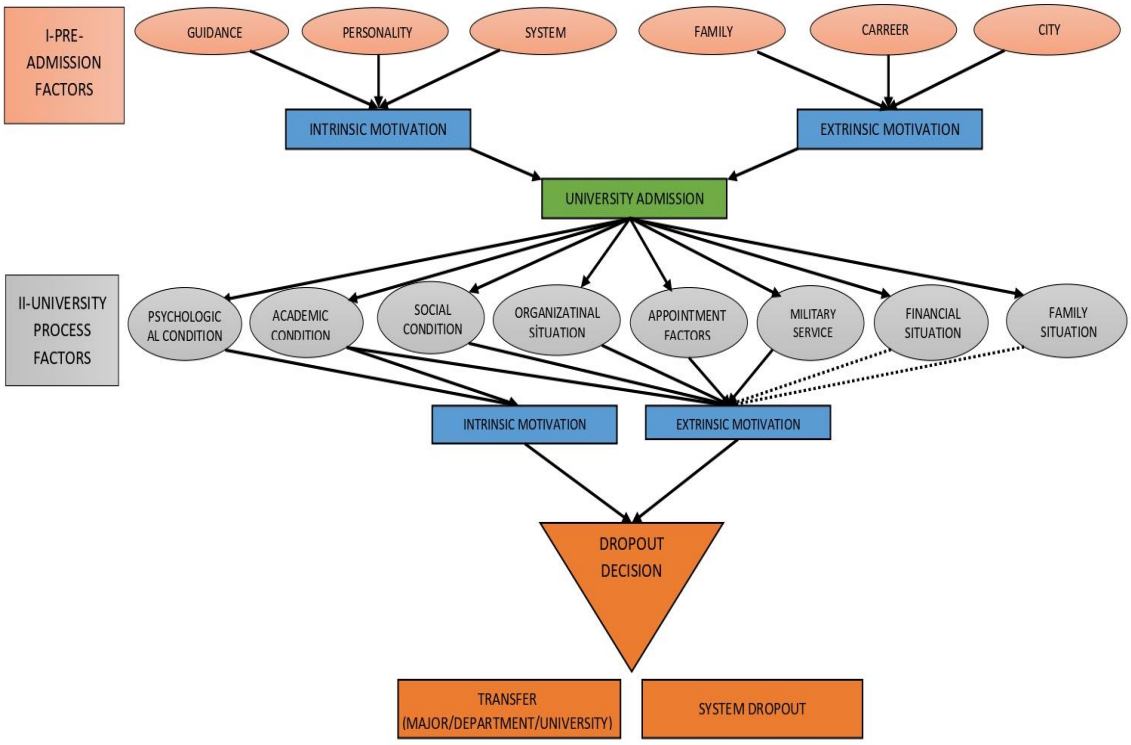

Figure 2. University Dropout Factors Expressed by Students and Academicians

Discussion

The aim of this study is to delineate the dropout reasons of the students from a faculty of education in Turkey based on the views of the dropout students and academic staff from the same faculty. To the results, the reasons of university dropout are pre-admission factors (guidance, personality, system, family, career and city) and university process factors (psychological condition, academic condition, social

condition, organizational situation, appointment factors, military service, financial situation and family situation).

This study suggests that pre-admission stage is crucial for student attrition or the dropout decision in subsequent years. Based on the results, negative experiences in pre-admission stage in terms of lack of effective guidance, personal preferences, university entrance system plays important role on dropout decision in later years. Similarly, studies in Turkey suggest that there are problems in services of guidance before university, and these problems can mislead choices of university education. Individuals without the necessary guidance services can be directed by their families and other people on their university choice (Atılgan, 2018; Gülcan & Cengizhan, 2009; Yanpar & Özen, 2004).

In this study, we have observed that family issues and guidance of relatives affected university and job preferences. In addition, personal factors are also important in the pre-admission process. Mainly, the expectations before admission are within the basic factors of the intrinsic motivation, and unfulfilled expectations cause a later dropout or transfer. Students who do not study in the majors they desire may have higher risks of dropping out (Gury, 2011; Lassibille & Gomez, 2008; Rodríguez-Gómez et al., 2015; Şimşek, 2013; Uslu Gülşen, 2017).

Our results showed that students consider social factors in the pre-admission process, such as social life in the city where the university is located. If the expectations are not fulfilled, a loss of extrinsic motivation is observed in subsequent years and is followed by the thought of dropping out. Similarly, Calitz et al. (2019), Herrero

et al. (2015), and İlgan et al. (2018) state that city is a variable that university candidates consider in the pre-admission process.

According to the results, when factors associated with the university process that affect the dropout decision are considered, the psychological status of the individuals plays an important role in academic satisfaction. Happiness is a significant predictor of academic achievement (Tabbodi et al., 2015). Ferreira et al. (2018) claim that academic quality affects the psychological well-being. They considered academic quality and psychological well-being (happiness) and detected a relationship where negative experiences on both issues may determine the dropout or transfer decision in the long run.

Based on our results, individuals' academic status is of primary importance to explain the dropout process. Academic dissatisfaction increases the intention to drop out (Truta et al., 2018). Similarly, the failure to meet educational expectations may direct individuals to transfer to another university/major (Boyacı et al., 2018). In turn, unmet academic expectations affect student motivation intrinsically, and unsatisfying academic support may reduce their extrinsic motivation. Weak teacher-student relations, unsatisfying academic support from academic staff, or unmet expected academic support may be reasons for low extrinsic motivation and can increase dropout risk (Bernardo et al., 2016; Parr & Bonitz, 2015; Şimşek, 2013; Terenzini & Pascarella, 1991; Uslu Gülşen, 2017).

Another critical factor of dropout is individuals' social status. Weak social relationships with friends and academic staff, adaptation problems, and unsupportive social environment cause dropout, as found in this study. Likewise, Troelsen and Laursen (2014) state that a reduced social integration may cause dropout. Social factors are

among the most important factors associated with being committed to the university (Kelly & Mulrooney, 2019; Russel & Jarvis, 2019), and students cannot integrate socially if they feel demotivated in their first years (Noyens et al., 2019). Social status influences extrinsic motivations and low-quality social interactions and support may reduce students' motivation and lead them to consider dropping out in the long run (Bülbül, 2012; Şimşek, 2013; Yüksel, 2004). Our results are in line with those studies.

One of the important findings in this study is that future work opportunities were among the primary factors on individuals' dropout decision. There is a huge gap between graduation and job market opportunities in Turkey, especially concerning education faculties. The gap between graduation rates and hiring rates is increasing yearly (Yılmaz & Sarpkaya, 2016), and this causes the education faculty students to feel hopeless, to say the least. Low future job expectations after graduation are one of the important determinant factors on dropout decision (Arendt, 2013; Belo & Oliviera, 2015; Roso-Bas et al., 2016; Uslu Gülşen, 2017). Parallel to the findings and according to previous studies, hopelessness concerning the possibility of being hired after graduation may be a primary factor of dropping out of the faculty of education.

Unlike many previous studies, financial status is not a primary factor for dropout in terms of dropped out participants in this study. But it was expressed as one of the main causes of dropping out, like family status by the academic staff. In a great deal of studies on dropout, financial problems (Aina et al., 2018; Bülbül, 2012; Duque et al., 2013; Gury, 2011; Lavrijsen & Nicaise, 2015; Uslu Gülşen, 2017; Yi et al., 2015) and family reasons (Aina et al., 2018; Bülbül, 2012; Esgice,

2015; Kehm et al., 2019) are listed as main causes. In the present study, while individuals, expressed the lack of family or financial problems in the dropout process, the academic staff expressed that they had students who dropped out due to financial or family reasons. This difference may be due to the unique nature of dropout for each individual which changes according to the economic situations of the dropouts while they were students.

Due to all the aforementioned factors, individuals in our study group 1, thought of two possible choices: transferring or dropping out of the system. Eight participants in study group 1 changed either their majors and universities or transferred to another university with the same major. Two participants dropped out of the system. A common point of all the participants is that they are all satisfied with their decisions, which indicates that dropping out or changing majors/universities may not be problematic at the individual scale. Dekkers and Claassen (2001) and Norton and Cherastidtham (2018) suggest that dropping out has not always negative consequences and may be a better choice for students. Because dropping out may be considered as a positive attempt in terms of both financial and time saving reasons. This supports our finding which is that nearly all the dropout students are satisfied with their decisions in various ways.

Conclusion

Based on the findings of this study, it would be safe to say that the dropout process begins with the pre-admission process. Guidance, personality, career aims, entrance system, family reasons, and city are primary factors that determine the primary motivation of individuals before university admission. Upon these factors, psychological

condition, academic satisfaction, social integration, job opportunities after graduation, and family and economic status in the university education process affect both initial motivation and later motivation of the individuals. It is worth mentioning that the dropout process is generally unique, based on individual characteristics and context. Moreover, the dropout is an output of a process that may have several reasons, and that output constitutes the combination of many factors given in this study.

Contributions and Implications

The study contributes to the literature in several ways. First, pre-admission factors may affect students' dropout decision in later phases. The process should be taken into consideration from the very beginning stage of the university, especially for faculties of education. Secondly, as university process factors determine students' dropout decision, any preventive actions or practices must focus on rising intrinsic and extrinsic motivations of the students. Thirdly, job market factors are important for faculty of education dropouts primarily. So, teacher supply policies must be reconsidered in the national level in order to provide a better future for faculty of education students. Fewer, internally motivated, and skilled students must be accepted into education faculties and the issue of excess supply of graduates should be handled with long-term plans, too.

As intrinsic motivation is effective for completing a program, we strongly suggest that an effective guidance service system before university must be ensured and the student selection system must be reorganized as assessing not only academic achievement but also personal interests, skills, and motives. Secondly, university process factors (especially academic and social status) are important to

students' intrinsic and extrinsic motivation and the first year is critical for dropout. So, effective academic and social activities, which will raise students' motivation and consequently their academic and social integration, must be provided for students in the early years, such as freshmen seminars, faculty-student meetings, student-staff, family-student-staff organizations.

Limitations and Further Research

The study has some limitations. Firstly, it is limited with dropped out students whose contact information was reached from the faculty student affairs office. Secondly, we studied on one faculty of education in Turkey as a case and interviews with dropped out students and academic staff from the same faculty. So, further qualitative and quantitative studies in other education faculties are needed. Another limitation is that we completed our study in 2020, before the COVID-19 pandemic. As a worldwide pandemic, COVID-19 has caused new circumstances and challenges in education, as in many other areas, studies investigating the effect of pandemic on university dropout are highly needed. As dropout has several dimensions and these dimensions have complicated relations with each other, further interdisciplinary studies are needed to explain those complex relations. Based on the study, it is clear that there are many factors based on the functioning of the university (university process). Further longitudinal studies may provide valuable knowledge of the dropout process. Last but not least, each factor given above can be studied separately for a deeper understanding of the choice of dropping out.

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The Paradoxes of Developing European Transnational Campuses in China and Egypt

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Abstract

Through the lens of paradox theory, we present and discuss the cases of two different proposals for a European public university, located in Lisbon, Portugal, to develop transnational campuses, one in China and one in Egypt. We discuss the three overarching goals of the transnational campus in our cases (funding through international cooperation, projection of soft power, and the development of human capital) and compare the structure of both proposals with particular attention to the governance and pedagogical models proposed for China and the Middle East, and shed light on the different expectations that Middle Eastern and Chinese authorities hold regarding the cooperation with European institutions in the area of higher education. We conclude that the development of transnational campus can be considered a paradoxical journey and the success of which depends on how the tensions between goals are tackled and synergies obtained – or not.

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This will help in designing adequate policies and strategies in order to optimize the cooperation.

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Introduction

This paper analyzes two different proposals made to a European public university, Nova University Lisbon (NOVA), for developing transnational campuses (see Cao, 2011 on the nature of the transnational campus), a strategic choice increasingly employed by Western universities, especially those with substantial academic credentials (Miller-Idriss & Hanauer, 2011; Wilkins, 2016). The first is in the Middle East (Egypt) and the second in China. We address two main topics. First, we consider the experience of transnational campuses in China and the Middle East. Clearly, the current proposals base their governance and pedagogical models on the past presence of transnational campuses in these parts of the world. Second, we discuss such proposals at the light of the expectations generated by the implementation of transnational campuses. The European higher education institutions involved may generate quite different expectations as compared to the national authorities, either the Middle Eastern or the Chinese. Such different expectations on these campuses

may reflect different goals, not necessarily aligned. One such comparative study will help in designing of adequate policies and strategies to optimize cooperation in a field in which there may be potentially contradictory goals, as will be discussed below.

In this comparative study, we ask: *how can different transnational campus models realize their plural and perhaps contradictory goals?* We focus on the transnational university campus as a tool in the broader process of the internationalization of higher education (Amaro de Matos et al., 2021) and emphasize the paradoxical challenges involved, i.e. the interdependent but opposing goals involved (Gaim et al., 2022), combining educational, diplomatic and business logics. Such goals are: (1) the development of human capital, (2) the projection of soft power by the European university, and (3) attraction of financial resources through international cooperation.

Transnational campuses are a natural experimental field for change implementation in light of both the distance and the cross-cultural challenges involved. NOVA, where both authors are based, was offered the opportunity to cooperate in the Chinese project, having decided three years ago for the implementation in Egypt. We perform the comparative analysis of the two cases using this recent experience in the process of negotiating and/or implementing transnational campuses and addressing the leadership challenges. The use of the transnational campus is not simply about the strategy underlying the implementation of these projects, but rather on how foreign brands and reputation are used, pedagogical and scientific knowledge is transferred, and quality control is implemented in order to truly benefit the shaping of a new generation of leaders. The bottom line to consider from a western perspective is (a) the governance structure in

place; (b) academic and intellectual freedom, and (c) the type of constraints that the project may face. We study the tensions that accompany the implementation of the initiative and the importance of managing the tensions inherent to the development of the transnational campus.

We organize the article as follows. First, we discuss the different political conditions under which the offers to cooperate in the development of transnational campuses in China and the Middle East occurred. Then we analyze how those circumstances influenced the way the offers were perceived and dealt with. We discuss the opportunities that led to the creation of transnational campuses and the business model. We then consider the paradoxical challenges involved. We contribute to the discussion of universities as constituting (1) a tool of cooperation between states, (2) levers of human capital development, and (3) instruments of soft power. These objectives are achieved via different means depending on national strategies and political contexts and how the actors involved manage the inherent contradictions between goals, given the plurality of motives and agendas involved.

Theory Development

To discuss the pursuit of the goals outlined above, one must consider five six contextual factors, which constitute the background for the subsequent analysis. First, there is the geopolitical and political context. Whereas in China, the initiative is clearly linked to the development of the center-west region of the country and its relationship to the new Silk Road Strategy, in the Middle Eastern campus, it is related to a demographic and urban deep restructuring

reform. In China, entrepreneurs will invest in the urban development of strategic areas, bringing benefit to those regions. In the Middle East, on the contrary, there is a specific governmental incentive for large multinational corporations to invest in such urban infrastructure with educational anchors. The young demographics benefits these investments by using the educational structures to attract growing families with a young population, feeding all its associated urbanistic plans (stores, restaurants, malls...). Second, we must consider the way these proposals came about. In China, this opportunity came through the initiative of a former student at a Portuguese university who is willing to invest and has become the bridge between the European institution and the local authorities who made it possible to bring the discussion to the table. In the Middle East, it was initially an inter-governmental diplomatic initiative that raised the issue of the project and made the contact with a multinational firm interested in investing. Third, the role of the states differs regarding the regulation of the initiative. While both states have an active role, as they should, the Chinese regulations prescribe that cooperation be coordinated through a well-established Chinese university, whereas in Egypt the cooperation and governance model will be developed jointly with the multinational investors. Fourth, the business models differ. Although in both cases all capital and operational expenditures are covered, in China the European university will receive a percentage of the revenues generated at the Chinese campus while in Egypt there is a fixed fee per student for their use of the middle east facilities (with a tuition rebate if the student spends a period in Europe). Fifth, with regard to the value creation strategy, the Chinese proposal is to have advanced interdisciplinary undergraduate programs, promoting strong internal cooperation across the different schools at the

European home institution in order to make a consistent pedagogical offer. The curriculum will prepare the Chinese students for immediate entrance to a European Master's program, undertaken in an additional year of intensive study – a clearly accelerating profile for Chinese youth. In Egypt, the strategy will reinforce the European brand while keeping talent at home.

The geographical and political context

After decades of strong development in Eastern China (the area covering the region from Beijing to Shenzhen, including Shanghai) the policy focus has turned to reinforcing the Center-West (Kirby, 2019). Between 1995 and 2002 most of the western transnational campuses were established in big cities and wealthy regions such as Beijing, Shanghai, and the Jangsu and Zhejiang provinces (Huang, 2008).

The current concern of the Chinese authorities is to ensure the development of western regions of the country with projects involving urban expansion, infrastructure, and industrial and knowledge centers across what is to be the integrative project of the New Silk Road, connecting China with neighboring countries, but expanding its connectivity across the whole European continent. The New Silk Road intends to extend its connectivity through Eastern Europe all the way to the rest of the Continent, from the Baltic countries to the Iberian Peninsula. The project aims to balance internal disparities existing in the vast Chinese territory and are an element of the Chinese strategy to fight exclusion and reduce inequalities across the different populations (Amaro de Matos *et al*., 2021). China is making a $250 billion-a-year investment in human capital, providing a system of scholarships and supporting the development of higher education. However, and as the other side of the same coin, as part of a policy of

the Chinese authorities to make education more affordable, regulations are changing to prevent institutions from accepting foreign investment.

In the Middle East and North Africa (MENA) region, the development of higher education reforms must cope with domestic and international pressures (Kohstall, 2021). In Egypt, the political movement known as the Arab Spring Revolution (Stepan & Linz, 2013) led to the election of extremist parties to the Parliament and government, with subsequent social instability and failure of the intended reforms. The military took power in order to stabilize society, leading to the later election of President El-Sissy. The priorities established by the current government of Egypt are twofold, targeting education and sustainable urban development for a large, young, and fast-growing population. The challenge in the higher education sector is to achieve greater access while fighting against exclusion and inequality (Buckner, 2013).

The strategy of the Egyptian government considers that only through a profound educational reform is it possible to fight extremism and regain the path of a democratic and participative society. In 2014 the Egyptian government announced a plan to invest US$5.87 billion in education by 2022, from the primary level to higher education. Substantial progress has been achieved – especially regarding gender parity[1] and among disadvantaged groups, but work remains to be done. The results of the initial education reform led the government to announce greater investment to reinforce the sector. For

[1] See Langsten and Hassan (2018) for the case of primary education.

the fiscal year 2021/22 about EGP 56.4 billion (approximately US$3.6 billion) were allocated to educational services – an increase of 18% from the previous year. This plan considered the demographic growth challenges associated with the quality of urban life of the large majority of the total population (around 105 million in 2017, according to the Central Agency for Public Mobilization and Statistics (CAPMAS)), which is concentrated in the big cities around the Nile (mainly Cairo, Giza and Alexandria). There has also been an increase in public-private partnerships in large-scale education investments. In addition to other private groups, in August 2021 Elsewedy Capital Holding announced that it is investing EGP 2.5 billion in building a new University, and in October 2021 Al Ahly Capital Holding announced EGP 2 billion in middle education. The national context in both countries – China and Egypt – provides fertile conditions for transnational campuses.

Opportunities for developing transnational campuses

While the importance of investing in education is clear for any country because of its role in the development of human capital, the choice to make investments in the realm of international cooperation is less obvious, given the additional costs and the potential misalignment of goals between outer institutions and local authorities. Additionally, the need for growing investments in local competences through education goes hand in hand with concerns regarding the brain drain – and the greater the exposure to international cooperation, the more likely is the brain drain. However, governments approach internationalization as a means to boost economic competitiveness and cultivate global visibility. This is the case of higher education leveraging on the presence of top reputational institutions, and the mass urban development as an attention-seeking effort, as Amaro de

Matos *et al*. (2021) puts it for China, and Lane (2018) and Adel et al. (2018) for Egypt.

Transnational education is characterized by "the mobility of an education program or higher education institution/provider between countries", according to Knight (2016, p. 36). An extensive cooperation of western universities with local institutions in the Asia-Pacific region begun in the late 1980s. Following the initial cooperation, new forms have become more visible since the 1990s (initially in Malaysia, Singapore, and Hong Kong), as local institutions were unable to satisfy the increasing demand for higher education, and private providers partnered with foreign universities to present new offerings that could appeal to local students fluent in English (Paniagua *et al*., 2022).

International branch campuses (the most visible example of transnational education) provide an educational system located in a country different from the one where the awarding institution is based. As resource intensive as these initiatives are, they are proliferating in the context of increasing international competition. Institutions based on countries exporting such international branches see these arrangements as an opportunity to raise awareness and strategic ties, generate revenue, and recruit students. Countries that import such branches see their potential to boost an internationally competitive educational system at home and meet the needs of the labor market, and regard them as the most suitable form of international cooperation to minimize the risk of brain drain – as the students remain in their own home country.

In China there are private investors promoting the urban development of the new strategic regions, seeing this development as a profitable investment opportunity. They are willing to anchor their

plans in institutions such as universities, which are natural attractors of youth and their families, allowing the development of dynamic communities, with consumption capacity. The large size of the country and its demographic dispersion require a national policy for developing the higher education sector in a coherent and consistent way that is internationally competitive, seeking to dispel regional inequalities and use resources to develop less favored regions as compared to the main international centers (see Amaro de Matos *et al*., 2021). In China the trend is thus to develop transnational education away from locations such as Shanghai and Beijing.

In Egypt the state provides incentives (Lane, 2018) for multinational Egyptian corporations to invest in large scale urbanistic projects. As in China, such projects may use universities as attractors to justify the development of residential, commercial, and leisure areas within the new cities. Examples are the new developments such as Heliopolis and New Cairo around old Cairo, a city of around 30 million. The government is investing in the construction of a New Administrative Capital to the south-east of Cairo, able to accommodate 6 million people, and include all the administrative buildings of the government. The massive urban development, together with the joint effort to invest and attract investors in basic, secondary, and higher education is a compelling combination for the Government. Political contexts help to understand the way the process unfolds, as we discuss next.

Method

To explore our research question, we consider the case of a Portuguese higher education institution in the social sciences has already been present in China for several decades, with a Master

Program in Business Administration. A Chinese former student from this program was seeking to invest in the development of a university in the Sichuan province and looking for a European University that could offer a comprehensive scope of subjects, from science and technology to health and social sciences. Among the Portuguese Universities, the Academic Coordinator of the above-mentioned Master Program suggested NOVA as a suitable partner. The contact was made during 2019, and a first site visit occurred, promoting direct contacts with the investor, municipal authorities, and a potential local academic partner, a university in Sichuan province.

In Egypt the energy multinational corporation El Sewedy is involved in the urban development of a section of the new Administrative Capital. A new education-based branch of the group, El Sewedy Education, developed The Knowledge Hub (TKH), a local facility that will serve as the operational basis for the campuses of top European universities. The Portuguese ambassador in Cairo took the initiative of bringing the group to visit five top universities in Portugal in 2018. Thereafter a high-level delegation of NOVA visited Cairo on March 11, 2019, where it met the Minister of Higher Education and Scientific Development, the Parliamentary Commission for higher education, and the representative of the rectors of the Egyptian universities. The high-level reception in Egypt compares very impressively with the Chinese case, where only local municipal authorities and second-rank representatives of the University received NOVA.

State Impositions

In China the decision to accept and implement a transnational campus is conditioned by the 2003 *Regulation of the People's Republic of*

China on Chinese-Foreign Cooperation in Running Schools (Huang, 2008), and implies that the central authorities in Beijing approve the initiative of the state government. Those initiatives, on the other hand, are based on the wishes of municipality authorities for their local development plans, in a sequence of hierarchical authorizations.

According to the above regulations, a NOVA campus in the region of Chengdu may operate only in partnership with a regional Chinese University, in this case (a university in Sichuan province), provided that the Chinese government authorizes the request for the opening of such a campus – submitted by the Chinese partner, and with the support of the regional authorities. The requirement for partnership with a Chinese university is the warrant of quality under the Chinese perspective. The programs offered under this partnership will award a Euro-Chinese degree, to be accredited by the Chinese agency (Huang, 2008).

In Egypt, the implementation of foreign university campuses is regulated by the International Branch Campuses Act, ratified in 2018, according to which the curricular structure must progress through a sequence of hierarchical state approvals (Lane, 2018), until the Campus operation receives a final Presidential decree that establishes the permission to operate.

The requirements impose that the curricular structure be exactly the same as the one offered in Europe, and that the programs offered in Egypt have the same European accreditation as those offered at the mother university. In the Portuguese case, the requirements of the national accreditation agency impose that at least two thirds of the faculty have direct affiliation to the mother university in Portugal. A campus in Cairo will thus help, by construction, in the

internationalization ratios of the European mother institution, whereas in China the requirements would not take into account these particular interests of the European counterpart.

Findings

The campuses' business models

We now discuss the business model for the two cases. We start with the financing and then examine the impact on the pedagogical models (teaching vs. research) and the value creation philosophies.

Financing

In the case of China all the financial metrics, such as CAPEX (Capital Expenditures) and OPEX (Operational Expenditures) for the operation will be covered by the local investor. Whenever the NOVA campus operation is approved, as it starts operations it will provide NOVA a proportion of the returns that are to be shared with the local Chinese academic partner, and with the local investor.

In Egypt, as in China, all the CAPEX and OPEX for the operation will be covered by the local investor, TKH. The proposed cooperating university is already operating in various areas including informatics, design, and accounting. NOVA will start with five undergraduate programs in areas related to Management and Technology.

In the cases described above the financing model implies that all the OPEX are the responsibility of the local investors. This means that these investors are looking for a return on their investment, leading to a natural incentive to reduce costs as much as possible. The trade-off here is to understand what the critical point is where costs compromise

the offering quality of the universities service: when does a research university program start looking like a teaching university offer?

The approach: teaching vs. research

The financing model described above has strategic implications. When establishing a campus overseas there are two different types of western universities: research-based or teaching-based. In Asia, as well as in the Middle East, the financing models described above are seeking to leverage on the western university's reputation. Reputations of universities as reflected in the rankings, however, are based on the capacity of higher education institutions to deliver a quality service on their three missions: knowledge generation, knowledge-based education, and knowledge-based value transfer to society. Providing quality services in these three components is costly, and this cost is reflected in the qualifications of the faculty and staff involved.

In the Chinese model, the association to a local top university seems to guarantee the scientific/scholarly reputation of the underlying western university. In the Egyptian case the guarantee of quality is driven via the European accreditation system and the overall reputation brought by the rankings and other related international accreditations. The question is whether the economic incentives underlying the financing model allow for the offer of the exact same quality of services for the program offer in spite of the curricula and accreditation.

On the other hand, China and Egypt are very different cases, in the sense that China has been implementing international campuses for a considerable time. According to Huang (2015), China has implemented effective national strategies in order to form its world-class research universities, characterized by a top-down policy as opposed to the

European and North American cases. This occurs with increasing funding from both the central government and from local authorities associated with a few elite universities. However, there is still a long way to go for China to play its desired influential role, as the Chinese system still systematically compares to the Western international ranking systems and uses the Western best practices as their benchmark (Yang, 2014, and Huang, 2015).

Egypt, on the other hand, is initiating in only the last few years a process of introducing international branches (with a few exceptions of long-established campuses such as the American University in Cairo – AUC and the German University in Cairo – GUC). At this stage, with the initial investment made, the only possible expectation is to start with high quality teaching institutions, to further develop a resident faculty with research capacity in the long run. Expectations are high, but the impact of international branches in Egypt is not yet understood (Bola, 2020). Some stakeholders hope that these transnational ventures will create momentum in the Egyptian higher education system, improving access, and encouraging quality through competitiveness. Other stakeholders, however, argue that transnational education may be perceived as exclusive to an elite, and that pedagogical and cultural barriers will prevent it from adequately integrating with the higher education sector. Only time will allow a fair evaluation.

Socioeconomic value creation

In China the undergraduate programs are four years long. The demand for curricula is strongly concentrated in science and technology, and should not be focused in a pure management degree – there are too many foreign universities offering this type of training but with no clear impact in local and regional development. The idea

suggested by NOVA to implement its educational offer in a future China campus is simple and implies offering four-year interdisciplinary programs, each of which involving two different schools within the university. For example, a student could follow the three-year undergraduate program in management from Nova School of Business and Economics and then follow classes with the curriculum of the first year of the Master in Health Management from NOVA's Public Health School. At the end, the candidate would have completed four years of study that would provide a Chinese undergraduate degree in Health Management. In the sequence, the Chinese student could apply to a 3-year master's degree in China.

However, having already done the first year of studies of a NOVA master degree, such students could be automatically admitted to the respective two-year Masters at NOVA, for which the first curricular year has already thus been completed, allowing them to finish the NOVA Master degree program in only one additional year. This model applies to several possible combinations, such as data science and informatics, or biotechnology and chemistry, among many others).

In Egypt, from the tuition fee paid by students in Cairo, NOVA receives 10%, but if a student decides to spend a period overseas at NOVA, there is a tuition rebate. The principle is that students should pay 90% of the tuition to the campus where they are benefitting from facilities, faculty, and local staff, and 10% to the sister campus. In its 4-year study program (already operating) NOVA includes a foundation year to bring credibility to the recruiting system, levelling, adapting, and integrating students into the European education mechanism, followed by the traditional 3-year undergraduate curricular structure.

The model creates an incentive for NOVA to attract students to spend a period in Lisbon, possibly a semester, preferably a full year. This incentive must be dealt with carefully, as it is in NOVA's best interest that the Cairo campus remain sustainable at the financial and operational level. In spite of the exchange dynamics between the Lisbon and Cairo campus, there is a significant recruiting potential of the top graduates from the Cairo campus to follow up their studies at the Lisbon campus for the master degree.

Paradoxical challenges in the development of international campuses

Universities have a number of roles in international relations. We mentioned three of these goals: as developers of human capital, as mechanisms of soft power, and as tools for international cooperation and resource attraction. We next discuss these three roles, which are also goals, and their paradoxical relationships regarding the two cases explored here (see Table 1). We contribute to the literature by uncovering the paradoxical tensions involved in the development of transnational campuses, as different logics are involved (education, business, international relations). We treat paradox as the persisting presence of mutually defining oppositions (Berti et al. 2021; Smith & Lewis, 2011). In this sense, paradox refers to the fact that complex and pluralistic organizations such as universities with their hybrid logics (educational and commercial), in which different interests and agendas coexist, are necessarily characterized by tension and the need to accommodate different points of view. In other words, they need to think paradoxically (Smith & Cunha, 2020). The relationship between the three goals of the transnational campuses is thus necessarily characterized by these paradoxical tensions, whose management can

produce more synergies or more tradeoffs (Li, 2016). Synergy and tradeoff coexist in paradox and the way paradoxes are tackled may create more of the first (when managed through a both-and approach; see Smith et al., 2016) or the latter (when approached as either-or types of problems). We now elaborate the three goals and subsequently consider the benefits from treating them with a paradox lens.

Developers of human capital. A critical function of the university is the development of human capital, the stock of skills possessed by the labor force (Goldin, 2016). The two projects share this goal, leveraging on the use of established European institutions to increase the skillset of their students. They differ in the following way: whereas China aims to train their graduates within the Chinese ideological system in hard technical competences, thereby being able to compete with Western top universities, Egypt is striving for more flexible graduates who may use their knowledge to adapt to the future (open) job market.

Yang (2014) considers four features as mechanisms for the internationalization in Chinese higher education and how they affect the actors involved: (a) the increasing role of English language as a criterion for academic excellence, (b) the focus on hard sciences, which are more objective and easier to communicate in their language, as opposed to social sciences and humanities, due to the "varied ideologies, paradigms, and discourses inherent in the humanities and social sciences and the high dependency on language to convey their meanings" (Yang & Yeung, 2015, p.20), (c) the concern with the potential loss of educational sovereignty, implying a policy that requires foreign universities to partner with Chinese institutions, and also impose governance restrictions, and (d) the impact of a homogeneous, centralized system applied to a landscape of

universities in China that is heterogeneous, in which only the top universities are becoming truly internationalized.

For Egypt, internationalizing is a recent process. Traditional Egyptian universities are already based on the Western model and accept the challenge to develop mass education for an increasing demand, driving close cooperation with foreign institutions (Adel *et al*., 2018). The launching of international branches aims to initially develop high quality teaching institutions in order to: (a) develop a resident faculty with research capacity in the long run, (b) increase the number of students by 50 percent – national and international, and (c) develop a better fit between the educational offer and the increasingly flexible requirements of the labor market (Lane 2018), as the employability of higher education graduates in Egypt has been a well-identified problem (Abou-Setta, 2014).

Mechanisms of soft power. Universities can be regarded as tools of soft power, the capacity to influence others without coercion or imposition, through attraction (Nye, 2004, 2008). In this case Portuguese players seek to establish their reputation as important international partners in the higher education setting. Attractive universities may help to establish a country's reputation and institutional strength (Porter, 2021), as well as cosmopolitan ethos, in addition to securing income. For the Chinese and Egyptian players there are also soft power issues involved such as communicating an open and cosmopolitan ethos. China and Egypt differ in this regard in the following way, however: whereas China aims to become a recognized global power in knowledge creation and transfer, Egypt expects that the implementation of international branches may work as public

diplomacy, accelerating the relationships with Europe and North America.

Yang (2012) approaches the soft power of the Chinese higher education policy from the perspective of international power relations. He discusses how Chinese higher education institutions have developed a new distinctive model of international exchange and cooperation in higher education, whereby China wants its top universities to become good universities in the world and invests heavily in its top universities, aiming for an influential role in the global system of higher education; while educating talents for the job market remains a main aim. However, as pointed out by Yang (2014) and Huang (2015), while the Chinese system still systematically compares itself to the western best practices and benchmarks, there is still a long way to go for China to play its desired influential role.

In the Egyptian case, the expectation of the government is that international branch campuses may work as catalysts for future relationships with developed regions such as Europe and North America. A stressed by Lane (2018), such international branches may be used to strengthen geopolitical relationships and be a basis for recruiting other forms of investment. International branches may create cultural and physical links between two different regions, becoming a new form of public diplomacy.

Tools for international cooperation. Universities constitute important diplomatic tools (Metzgar, 2016). Institutions such as the Chinese Confucius Institutes and the Portuguese Instituto Camões illustrate this (Chey, 2008). Our cases illustrate this, as they involve the universities as well as governments and diplomats. The cooperation involves important challenges for leaders as it contains tensions, such

as between centralization and decentralization at various levels (governments, universities, schools, accreditation bodies). The management of tensions is a common issue in academic leadership (Bush, 2016) as well as in leadership and organizations in general (Cunha et al., 2021), but the number of stakeholders involved raises the challenges of tension management to new levels.

According to Frezghi and Tsegay (2019), the process of higher education internationalization in China is highly centered in the government, leveraging on financial and diplomatic advantages. The government greatly influences higher education institutions through regulations, financing, planning, and evaluation. Additionally, the authors provide evidence that internationalization of higher education in China is providing the country with economic and cultural capital.

According to Lane (2018) the Egyptian government set an agenda for higher education, according to which internationalization will have a main role, implying (a) private institutions to partner with highly ranked foreign partners, (b) improving quality through importation of accreditation processes, (c) increasing by 50 percent the number of international students, and (d) aligning the academic offer with the changing market demands. Through these interactions the government expects to obtain a greater number of higher education institutions ranked in the top 500 worldwide, thus attracting more and better students.

Discussion

Returning to our main research question (i.e., *how can different transnational campus models reach their plural and potentially contradictory goals?*), we conclude that different campuses are vehicles for different

objectives (Table 1): whereas in China the goal is to increase economic competitiveness and strengthen the economic status of the country, in Egypt these goals are also present in the official speeches, but are less visible on the horizon. The primary goal of the Egyptian Government is to use the internationalization of the educational reform as a means to fight extremism and to control the brain drain. Regarding talent leader development, in China the goal consists of the capacitation of talent leaders aligned with the system and with strong technological skills, whereas Egypt aims to develop talents leaders aligned with the vision of creating a more open society, free from extremism.

For the European universities involved some objectives are common such as reinforcing international presence and status as well as increasing their influence abroad as a form of soft power (Wojciuk, 2018; Wojciuk et al., 2015). In the EU, the ability to deliver higher education across borders became the norm for national states (Brandenburger et al., 2013), a factor that partly explains the concerted effort of the state in supporting these projects. For the partnering universities, this management effort involves the preparation of administrators with proper managerial and cross-cultural credentials, which could be a challenge (Webber, 2016; Webber & Okoko, 2021).

Table 1. Goals of transnational campus in China and Egypt

China campus	**Egypt campus**

International cooperation	Chinese education competitiveness Recognized educational power Attract and develop talent Technological capacitation Help develop mass education	Improve society to fight extremism Increase training quality Control brain drain Develop local research capacity Increase # of students by 50%
Soft power	Increase # of universities in top 100 Increase publications in top global journals	Increase # of universities in top 500 Increase in applied research Increase in the number of graduates
Human capital development	Develop talents aligned with the system and with strong technological capacities	Develops talents aligned with the change of the system, building a more open society

Contributions and implications

We contribute to the discussion of the transnational campus as a paradoxical journey. The three goals of developing human capital,

cooperating internationally, and projecting soft power, introduce a number of paradoxical tensions that may be valid beyond the boundaries of our two cases, an avenue to be further investigated elsewhere. We highlight three paradoxical tensions: opening up while seeking protection from undesired influence, human development as ideological influence, and search for development that stimulates soft forms of power.

First, there is tension between opening up while seeking protection from undesired influence. Openness to foreign universities may create tension between the liberal ideas of the West and the local ideas and ideologies. This is not exempt from tensions regarding how foreign and local ideas and traditions meet one another. The desire to open up while protecting local modes of thinking involves a paradoxical need to search for an acceptable balance between openness and closure. This balance requires an effort of adjustment from both parties as well as a pragmatic understanding of the different realities involved.

Second, there are paradoxes involving human development as capacitation and ideological influence. On the one hand the transnational campus aims to increase the capacitation of students. Higher education serves to transmit an educational curriculum and the related technical core. But there is necessarily an ideological subtext permeating the technical core, as every management theory reflects a given understanding of the world, an ideology (Guillén, 1994). When a management curriculum is taught in a different context, there are layers of meaning that need to be articulated and that necessarily involve some contradictory elements (Cunha & Cunha, 2008).

Finally, there is the search for development that stimulates softer forms of power. But this soft influence, to close the circle, can be perceived as

a source of covert undesired influence from outside cultures and managerial ideologies. Research suggests that management models can be exported (Djelic, 1998). On the other hand, however, soft power may amount to a form of intercultural negotiation that encourages peace through education, which, as we will discuss next, constitutes a possible avenue for future research. As Figure 2 graphically depicts, human development may convey ideology through management theory; management theory may be a vehicle of soft power, which may in turn be a form of external interference. For these reasons, the transnational campus is both an educational and a political endeavor, and the articulation of these dimensions, with their respective contradictions, requires paradoxical competences from the managers in both the educational and the political side. It may also benefit from a paradoxical way of thinking from the parties involved.

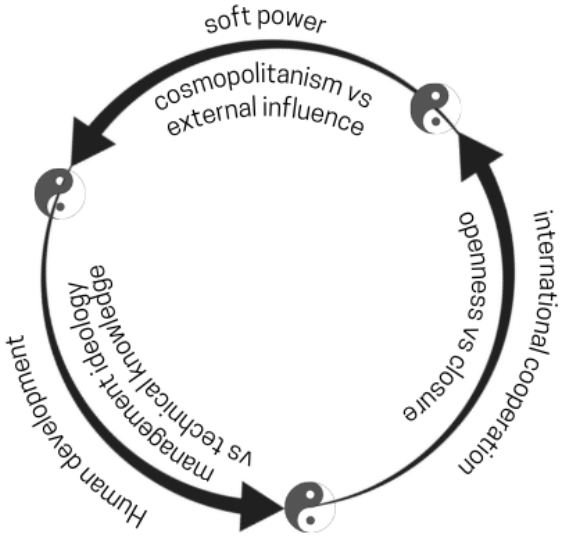

Figure 2. Three dimensions of the transnational campus

Our contrasting cases suggest that the transnational campus works as a multi-purpose vehicle, including but not limited to the development of human capital. Transnational campuses can be adopted to promote the acquisition of hard skills or as tools to create the educational infrastructure to nurture more democratic institutions and to fight extremism.

We thus stress the important role of universities and international partnerships not only in terms of the development of human capital but also as a form of diplomacy and soft power. In addition to peace through commerce initiatives (e.g., Westermann-Behaylo et al., 2015),

international university collaborations such as those we have discussed may promote cultural and cosmopolitan capital (e.g., Nam & Jiang, 2021), important attributes for higher education development in a global world.

Limitations and future research

The study is limited by the fact that it involves a limited number of cases that makes generalization difficult. Case studies are not intended for statistical generalization but even theoretical generalization should be conducted with care. The process of creating international campuses involves important political dimensions that may also limit the value of theoretical transference to other settings. Yet there is promise in the study of the topic as well as important avenues for future research, namely the role of higher education in the promotion of peace. Previous work considered peace through commerce (e.g., Trivedi, 2016), with its capacity to promote the diffusion of shared practices and mindsets (Spreitzer, 2007) as well as peace through tourism (Levy & Hawkins, 2009). Scholars might explore peace through study and education and in particular the role of transnational campuses in this process. The role of peace through education has been discussed (Lauritzen, 2016) but there is space to explore peace through business education, as a pragmatic approach to combine the spheres of business, education, and government. We invite scholars to operationalize peace through study and academic training, namely in the transnational campus.

Conclusion

We have discussed the transformational role of international university campuses and their respective challenges. Very often in the

past the Western perspective has been commercial, and these branches were represented as a source of revenues, either via tuition fees, or through the power to capture talent. The process involves tensions and paradoxical choices: the development of transnational campus constitutes a paradoxical journey, the success of which depends on how the tensions between goals are tackled and synergies obtained – or not. These considerations set the limits for cooperation in both cases, far beyond the original commercial perspective. In Egypt there is a moral responsibility of helping to build a more sustainable society from inside via education, whereas in China it is the role of Western campuses to accept the effort by the Chinese institutions, discussed by Yang (2014), to embrace the Western way of making science ultimately reflected in the way the rankings are accepted and used as a benchmark in that country. The tradeoffs between the benefits expected from cooperation and the circumstantial, political and cultural obstacles are the key ingredients that will help designing adequate policies and strategies in order to optimize cooperation and will allow to overcome the paradoxical tensions described above. Overall, what defines the transnational campus is the power of the university to allow cultures to dialogue around contradictory interests and to integrate national interests under a logic of collaborative knowledge creation-diffusion. The transnational campus can thus be represented as a force for international collaboration geared toward the development of human talent and exportation of higher education, participating in the construction of more cosmopolitan societies, or as a positive expression of politics by other means.

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Navigating the Covid-19 Turbulence in Higher Education: Evidence from Turkish Faculty Members

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Abstract

Covid 19 was the first pandemic of the modern era to strike with such virulence. We sought to understand this recent phenomenon and contribute to the empirical findings on the expectations from HEI leadership and management in Turkey. Drawing on the Turbulence Theory, we explored how the academic staff experienced the initial phase of the pandemic in Turkey and how they perceived the HE leaders' navigation of the crisis at the selected universities. Within qualitative phenomonology, data from semi-structured interviews with a convenient sample of 10 academic staff in five public and five private universities in Turkey, was analysed through content analysis. Findings highlighted the opportunities and challenges of the pandemic for

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the faculty at personal and organizational level in an intersectional pattern. Moreover, the ways HEI leaders navigated the crisis created binaries in the form of experience vs. inexperience and trust vs. distrust. The challenges derived from the rapid but ineffective decision-making processes and the heightened surveillance mechanisms over the academic staff; which in some cases resulted in lack of trust. Hence, the turbulence level was shaped by how the universities and their leaders addressed it. In such cases, practices of building trustworthy connections, more distributive forms of leadership and robust communication; which would help the leaders to navigate the turbulence at times of crises are significant. Further recommendations are provided for research, policy and practice.

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Introduction

Covid-19 in 2020 as the first pandemic to strike with such virulence of the modern era (Tourish, 2020). Educational organizations encountered an immediate shift to address the disruptions and disjunctions that the pandemic created. This unforeseen crisis had adverse implications on higher education institutions (HEIs), whereas higher education (HE) is inherently a problematic domain globally (Davis&Jones, 2014; Drew, 2010). Universities had to navigate the pandemic through various means such as migrating their courses online (Samoilovich, 2020), taking different measures in their processes

and prioritizing their responsibilities (Fernandez&Shaw, 2020). Yet, such turbulent situations (Gross, 2016) and crisis require a rapid response and certain capabilities and skills (Gurr&Drysdale, 2020) from the educational leaders.

Since the pandemic started in 2020, educational researchers have contributed to the literature, exploring its challenges, implications and strategies within educational contexts. (Agasisti & Soncin, 2021; Gurr&Drysdale, 2020; Harris, 2020; Marinoni et al., 2020). The responses in HE during the first outbreak were the sudden closure of the universities, migrating classes online, employing remote and alternative working practices for the staff; which all led to immense pressure on all parties ranging from students to university governors (Kerres, 2020; Netolicky, 2021). For HEIs, it was a global emergency with a turbulence of challenges particularly during the first stage of lockdowns- the initial six months just after March 2020.

Some studies have explored the implications of Covid19 on educational leadership in HEIs with its diverse impact on research, teaching and community engagement (Altbach & de Wit, 2020; Marinoni et al., 2020). Thus, as Tourish (2020) asserted, "coronavirus crisis is also a crisis of leadership theory and practice" (p. 261), which brings more responsibility to the HE leaders. Decision making, building trust and accountability, dealing with various organizational issues related with different stakeholders within uncertainty was challenging; especially with poor evidence to guide us and face unpredictable outcomes.

Hence, how HEIs in different countries respond in policy and leadership to such emergency situations is important, while HEI policy

and leadership already experience shifts in theory and practice (Davis&Jones, 2014). In this sense, what academic staff experienced in such unprecedented crisis and turbulence is significant, as their personal and professional challenges heightened with the uncertainty and complexity of the pandemic state (Garretson et al., 2021). Moreover, the impact of the senior-level university leaders' practices are significant for the academics in coping or struggling with this crisis.

Therefore, drawing on the Turbulence Theory (Gross, 2020), we sought to explore how the academic staff experienced the initial phase of the pandemic (between March and September 2020) and how they perceived the HE leaders' navigation of the crisis at the selected universities in Turkey.

The pandemic was defined by international contagion and the disruption of domestic processes by an unseen threat (Saxena, 2020); and it was an unexpected crises and impacted all domains of life in the first phase. Therefore, we explored particularly the initial reactions of the HEIs during the first phase of the pandemic in Turkey from the perceptions of the faculty members. The guiding research questions are:

1. How did academic staff experience the Covid-19 crisis in terms of opportunities and challenges?

2. How did the academic staff perceive the navigation of the pandemic by the HEI leaders at their universities?

Theoretical Framework: Turbulence Theory and Higher Education Contexts

The outbreak of Covid-19 pandemic ostensibly led to turbulence regarding the different systems and subsystems of politics, economy, health and education. Universities, at the intersection of all, had to respond to this crisis immediately (Karademir et al., 2021).

Turbulence is characterized as "a time in which events, demands, and/or persons interact in highly uncertain, changing, inconsistent, variable, unexpected or unpredictable ways" (Emery & Trist, 1965, p. 26) as it yields surprise, volatility, rapid strategies and decisions, complex demands, and uncertainty (Ansell et al., 2021). Turbulence during the crisis reveals the decision-making competencies of leaders under threat, urgency and uncertainty (Gross, 2016). In this regard, Gross's (1998) Turbulence Theory could be utilized to analyze the responses of the educational organizations in such instable and volatile state of crises as in the case of Covid-19. Gross and Shapiro (2004, p. 56) explicates the four levels of turbulence in educational organizations. The turbulence degrees and general definitions are summarized below:

Table 1. *Degrees of Turbulence in Educational Organizations*

Degree of Turbulence	General Definition
Light	Associated with ongoing issues, little or no disruption in normal work environment, subtle signs of stress
Moderate	Widespread awareness of the issue, specific origins
Severe	Fear for the entire enterprise, possibility of large-scale community demonstrations, a feeling of crisis
Extreme	Structural damage to the reform movement is occurring. Collapse of the reform seems likely

Source: *(Gross and Shapiro, 2004, p. 56)*

Although Gross & Shapiro's (2004) turbulence levels are related with response to change initiatives; this framework could explain the impact of Covid-19 in HEIs and other educational organizations. Hence, "the intensification of speed, complexity and conflict appear to be the common factors producing turbulence" (Ansell & Trondal, 2018, p. 2). Despite the impetus of turbulence for HEIs to stabilize their operations, they encountered the pressure of the unexpected change with high volatility. In this sense, stabilization and adaptation are the categories recommended for the public organizations to respond to such instant turbulence (Garretson et al., 2021). In case of light or moderate degree, there is room for the development of plans to navigate the crises. Yet, proactive planning is at risk during severe or extreme turbulence (Gross, 2020). When the first phase of Covid 19 outbreak in Turkey is considered within this framework, the initial phase created moderate to extreme turbulence dominating the macro and micro systems in various levels. The organizations had to shift from routine program action to rapid response leading to pressure for rapid and unexpected change with high volatility (Garretson et al., 2021).

Thus; crises and turbulence necessitate certain leadership capacity and vision under unexpected conditions. As the crises create threat, urgency and uncertainty (Zhang et al., 2018), HEI leaders are at the crossfire of different stakeholders. Research hints at certain leadership approaches in lieu of turbulent situations (Bigley & Roberts, 2001; Harris, 2020; Horton, 2020). Hence, resilience of the HE leaders is significant in shifting from the routine to alternative forms of operations (Izumi et al., 2020). In this respect; trust, support, communication and adaptable leadership styles receive attention (Dumulescu and Mutiu, 2021; Yokuş, 2022) . Fernandez& Shaw (2020)

propose three best practices as building individual connections with people through establishing mutual trust, distributing leadership and clear communication with all stakeholders; while prioritizing responsibilities. The credibility of the leader at times of such ambiguity and emergency also requires sensemaking (Spillane, 1999) and relevant crisis management skills such as communicating the complexities in simpler terms, while outlining the potential plausible solutions (Agasisti & Soncin, 2021). During the emergency, university leaders should consider its structural impact on teaching and learning, research and innovation, decision-making structures, and on their own role in providing the academic community with a strong vision by adopting a test and learn attitude (Samoilovich, 2020).

In Turkish context, university students' expectations from the HE leaders revealed five aspects as "networking, enhancing educational practices, calmness & compassion, analytical & strategical thinking and transparency" (Yokuş, 2022; p. 383). Similarly, in Italy, a clear governance, transparent decisions, straight communication and ongoing support to the university community were significant factors in navigating the new normal (Agasisti&Soncin, 2021) . Garretson et al. (2021; p. 32) further recommended a move from control-based systems to more flexible and adaptable systems in leadership by adopting a new kind of organizational leadership; which requires rational decision-making based on deep analyses (Baer & Duin, 2020) with an agile and adaptive mindset (Gurr & Drysdale, 2020). Likewise, Ansell et al. (2021) claimed that public institutions should be more flexible, agile and adaptive to transform in response to turbulent situations. Therefore, the response of HE to Covid19 in Turkey necessitates further exploration.

Context: Higher Education Structure in Turkey and Covid 19

Turkey, with a centralized HE system, has 129 public and 78 private universities with over 176.000 academic staff of different ranks (CoHE, 2020). The CoHE is an autonomous institution, officially in charge of planning, coordination and governance of the HE system in accordance with the Turkish Constitution and the Higher Education Laws (CoHE, 2022). Public and private universities are legally accountable to CoHE in their operations with limited institutional flexibility. Since the pandemic outbroke, the CoHE has made some emergency decisions, such as the suspension of face to face classes and migrating to distant education, urging universities to form Coronavirus Boards and take the necessary precautions through healthy campus regulations. The theoretical courses were delivered online; while the majority of the practice-based courses remained face to face. Moreover, they asked universities to take measures regarding travel and overseas meetings, international participation and measures against discrimination (Saraç, 2020).

The main challenge was having to migrate classes online in a week for the universities in March 2020. Although CoHE had already allowed and encouraged the universities to deliver 30% of the courses online for ten years and the global trends had already emphasized the significance of distance learning long before the pandemic; surprisingly, the universities and academic staff still had challenges in adapting to the new modes of delivery (Karadağ&Yücel, 2020). The ongoing Digital Transformation in Higher Education Project contributed to distance education process in Turkey, as 6000 academics and 50,000 students in 16 universities had been offered a course titled

'digital literacy'. Over the past years, more than 120 distance education centers were founded in universities in Turkey (Saraç, 2020).

In this regard, while some universities were ready for this new form of instruction, others with weak technological infrastructure experienced chaos in the initial phase. Evidence shows that the evaluation of CoHE and universities during this period by the students and the academic staff does not seem satisfactory through different variables (Karadağ&Yücel, 2020). In many cases, even if the university was competent in remote instruction, students may have had poor technological facilities at home; which led to the digital divide between students (Karaköse, 2021). Thus; the academic staff had a pivotal role in reaching the students and navigating the various dynamics across the students, colleagues and university leadership teams. Given this challenge, how fast-changing decisions by CoHE and the university administration as well as the academic staff's individual issues with the pandemic and digital transition could affect their experience and the ways in which university management could facilitate such turbulence requires exploration.

Methodology

Research Design

Given our purpose, we utilized a phenomenological approach in the realm of qualitative research (Denzin, 1997; Marshall & Rossmann, 2012) to capture the subjective perceptions and understandings of faculty members on the first six-months of the pandemic and how the university administrators navigated this urgent crisis from their perceptions. Phenomenology is the most appropriate design for this purpose as it provides an opportunity to describe the

lived experiences of individuals about a phenomenon (Creswell, 2014). Based on the research questions, semi-structured interview questions were prepared to seek the individual views of the participants, who directly experienced the phenomenon under exploration.

Participants of the Study

The participants of the study were identified based on convenience sampling (Patton, 2012) due to the limitations of social distancing rules in the first six months of the pandemic. Ten academics of various academic titles and university types participated in the study to receive diversity of views. Table 2 demonstrates the participants' codes and demographic information:

Table 2. *Demographic Information about the Participants*

Participant Codes	Gender	Age	Academic Title	University Type	Years of Experience
Academic 1 (A1)	M	42	Professor	Public	18
Academic 2 (A2)	F	45	Assistant Professor	Public	8
Academic 3 (A3)	F	65	Professor	Public	35
Academic 4 (A4)	M	38	Research Assistant (Dr)	Private	6
Academic 5 (A5)	F	35	Assistant Professor	Private	12
Academic 6 (A6)	F	40	Lecturer (Dr)	Private	13
Academic 7 (A7)	F	45	Lecturer (Dr)	Private	10
Academic 8 (A8)	M	44	Research Assistant (Dr)	Public	18
Academic 9 (A9)	M	50	Professor	Public	20
Academic 10 (A10)	F	44	Associate Professor	Private	20

Data Collection Instrument

A semi-structured interview form was prepared by the researchers based on the related literature and research purpose. It has 3 parts as: Description of the study and consent, demographics form and interview questions. Expert opinion was sought from a professor specialized in qualitative research in HE field. Based on the feedback, some questions were modified. That second form was piloted with two academics, beyond the actual participant group. Modifications were made and the final version was utilized during the interviews. Interview questions addressed the views of the academics on the pandemic, its challenges and opportunities regarding the personal, professional and organizational implications at their universities, their perceptions on how/if the HE leaders responded during the crisis and their expectations from the university leaders.

Data Collection Procedure

Ethical permissions were received from the university. Individual appointments were made with the participants. Interviews were conducted through Zoom video stream online between April and October 2020 due to the lockdown, covering the first 6 months of the pandemic as the level of turbulence was severe to extreme during that period. The participants were informed about the aims and their consent was sought for the interviews and recording. Participants were informed that they could withdraw anytime during the interview without any excuse. Each interview took between one- hour or one hour and a half; typically conversational and interactive. With flexibility, we used prompts and developed new questions based on the replies to grasp the individuals' unique experience, as an element of phenomenology (Denzin, 1997; Salmons, 2014). After each

interview, the researchers transcribed the dialogues, adding the notes they took and discussed their insights about the session.

Data Analysis

As for the data analysis, we transcribed audio recordings and followed Marshall and Rossman's (2012) four stages of content analysis as "organizing the data," "generating categories, themes and patterns," "testing any emergent hypothesis," and "searching for alternative explanations". Through this, we identified the central themes seeking to reveal the pros and cons of the pandemic for the academic staff and their views on the HEI leadership. Additional inductive and deductive coding processes were employed (Strauss & Corbin, 1998) where necessary in the secondary coding stage. Then we coded and reduced the units of information and formed different categories to help to answer the research questions. The systematic data collection and analysis procedure contribute, it is assumed, to the credibility and authenticity of the data. Structured analysis and intercoder reliability as well as member check was performed for validity and reliability. Validity and reliability were also ensured through analysis of the findings separately by each author following the same method (Marshall and Rossman, 2011). We used participant codes as A1, A2, A3…, to facilitate our qualitative data reporting for anonimity (see Table 2). By fully providing details of the systematic data collection, being as transparent as possible and relying on detailed thick descriptions, the credibility and authenticity of the data was enhanced. Moreover, we, as academics, continually questioned and reflected on our the positionality, on our own assumptions and preconceptions and how these could have impact on the interview questions, discourse and our contact with the participants.

Findings

Given our purpose, the data revealed some contradictory patterns across public and private universities pertaining to the phenomenon as the initial experience of the academic staff showed some contrasting patterns. In relation to our research questions, data yielded two main categories with opposing patterns within under two headings as "Faculty Views on the Opportunities and Challenges of the Pandemic" and **"**HE Leaders' Navigation of the Pandemic as Perceived by The Academics".

Faculty Views on the Opportunities and Challenges of the Pandemic

Regarding the faculty experiences of the pandemic, the themes can be categorized into four groups as "personal challenges and opportunities" and "organizational challenges and opportunities". Online collaboration among colleagues and improved digital literacy are opportunities at a personal level, while increased readiness for turbulence, increased trust, more autonomus learning, improvement in academics' discourse in the classroom can be regarded as organizational opportunities. When the themes reflecting the challenges at personal and organizational level are grouped together, the challenges encountered at individual level are digital challenges, psychological challenges, increased workload, survelliance mechanisms and invasion of in-class privacy.

The themes categorized under organizational challenges are ambiguity across all levels, top-down decision changes by the CoHE and university administration, grade inflation, changing nature of the job, weakening organizational culture, heightened competition, severe turbulence level, job insecurity in private universities and students'

lack of technological facilities. We will discuss the findings in this respect as the opportunities and challenges since they overlap and show contrasting patterns across different universities. The table below shows this pattern:

Table 3. *Opportunities and Challenges of the pandemic at individual and organizational level*

	Individual level	Organizational Level
Opportunities	- collegial collaboration -Improvement of digital literacy	-Increased readiness for turbulence -increased trust between leaders and faculty members in some cases -students' flexibility to rewatch the recorded sessions -Improvement in the Faculty discourse in the class
Challenges	-Digital challenges -Psychological challenges -Increased workload -Survelliance mechanisms-invasion of in-class privacy	-Ambiguity across all levels - Top-down decision changes by the CoHE and university administrations -Grade inflation -Changing nature of the job -Weakening organizational culture -Heightened Competition -Severe Turbulence level -Job insecurity in private universities -Students' lack of technological facilities

Digital teaching in the new normal appeared to be both an opportunity and a challenge for the academics. Half of the participants hinted at the improvement of their digital skills in using online tools. Some of them had never used such tools and suffered from getting

used to them; while a few of them were experienced in Moodle and Zoom to a certain extent. Those already familiar with the digital software had improved their teaching skills online through learning to use more advanced techniques such as break-out rooms and material development for the distance education systems. Yet, the academics whose institutions could not immediately migrate to synchronous classes had difficulty in recording the courses initially. A4 explicated this as:

> *It was a huge challenge to shoot and record videos for Youtube until moving to synchroneous live classes. For a 3-hour class, I had spent 10 hours for recording and editing the videos. However, this provided me with the necessary digital skills that I had never thought of earlier. It was a positive outcome of the pandemic.*

Even A8, already familiar with distance education, narrated that he did not have the chance to deliver live courses because he had over 500 students while Zoom could accommodate 100 at a given time. Moreover, the students, especially in public universities had constraints and lack of technological facilities. Due to these limitations, some of the academics preferred to deliver classes in the first months via written notes, powerpoint slides, written discussions and feedback. This means, they were not able to use the synchronous tools during that stage. In contrast, the students' opportunities to rewatch the recorded sessions in other universities, was a positive aspect of the "new normal", as they called it. The recordings of the classes also led the academics to be more careful about the discourse and language they used during the online classes.

On the contrary, a few academics referred to how online collaboration with the international academic community enhanced

during that time. For example, a couple of participants mentioned the easy access to remote international conferences and online webinars for different national and international audiences. More importantly, one academic invited internationally recognized scholars to his online graduate courses; which he thought was inspiring for the students. Further, A3 elaborated on the new insights that this new normal could bring to the HE:

> *I think pandemic will bring transformation to academic lifestyle. Those who are able to cope with digitalization will survive. In this period, students had the chance to meet and listen to a variety of academics on the social media. This should be considered as an awakening for all parties. The old-fashioned traditional academic image is not worthy anymore. Agility will be the key! Those who manage to be agile and transformative will survive.*

As for the challenges of the pandemic at personal level, in addition to the digital challenges, psychological challenges, increased workload and the invasion of class privacy upon synchronous class records were among the difficulties stated. The majority of academics alleged that their wellbeing was under threat during the initial phase of the pandemic. The Covid phobia, the ambiguity, feeling of isolation, lack of socialization, missing face to face interaction in classes and the increased workload due to the remote working conditions; all led to psychological issues and discontent for them.

At organizational level, nearly half of the participants highlighted their increased readiness for emergency within the first 3-months of the pandemic. The beginning was a chaos, yet after a while the university administrative processes got more regulated. Herein, the intersectionality of the issues at work and home led to strains on

the part of the academic staff. Herein, the challenges related with the university organization, the ambiguity across all levels, top-down and instant decision changes by the CoHE and university administrators led to severe turbulence, changing the nature of the profession. The majority of the participants reflected that the adaptation to the new rules and the instant announcements had increased their workload. What had not been their responsibility prior to the pandemic had bureaucratically become their responsibility to track and report. This led to disjunctures in work-life balance as the working hours had totally altered. There were instances where some academics had to teach late-night classes at weekends because the digital capacity of some universities were not adequate to host large numbers of students simultaneously during the workday. A5 narrated her observation and experience as follows:

> *In digital classes, interaction was weak with the students. This could be because it was recorded. Remote learning requires more preparation and more material development. And it was hard for the students to get motivated. We were given tasks by the management every single day and the majority of the faculty assigned too many assignments to students, which led to burnout on the students.*

A few participants related to the weakening of organizational culture as a result of the remote working routine and communication was not as effective as before. Moreover, the cuts in the research and academic funds as a result of the financial constraints nationally heightened the competition among the staff for securing funds. One aspect of this issue was about the academic staff working in private universities, some of them were worried about their job security, when the government and accordingly the private universities employed the

short term working grant for the non-public institutions and firms. A7's reflections were somewhat a summary of the intersectionality of the phenomenon on personal and organizational levels:

> *When we started working from home, the university employed the short term working grant, while we still worked full time and over time. This way our social security benefits decreased. Meanwhile, there was always a hidden pressure that we might lose our jobs anytime as the economic crisis was around the corner. I was pulled to different angles by different parties. Multitasking is the nature of our job, but with the pandemic it got worse. To name a few: Teaching and tracking hundreds of students online, only a few of whom turned on their cameras; the faculty administration asked for more and more paperwork even every single day, more than ever. I couldn't pull myself together to concentrate on my research. We were stressed by handling online exams. And we witnessed the grade inflation at the end of the semester because whatever you do, you can't stop student cheating in remote exams. I also had to manage the domestic life while at home. All together, I developed anxiety and feeling of alienation to my job and life.*

Organizational demands in the form of increased workload and red tape led to top down decisions within the HE organizations and more control-fixated adminstrative style. The responses and coping strategies of the academic staff varied across 4 main ways as prioritising tasks and methods, sensemaking of the procedures and new decisions and self-care. A2, an academic in a public university, reflected on her experience as:

> *This was an extreme situation. My priority was my students and reaching out to the majority. I was in a survival mode. I couldn't even get depressed because of the workload. I You had to reconsider your whole methodology. It was an exhausting process. Those who were good teachers before the pandemic managed well.*

A9, a senior academic from a public university, also narrated his experience as:

> *The work load and demands increased heavily since the outbreak of the pandemic. As we can't gather in person, anything that could be resolved in face to face communication, has become a mail thread, which you have to allocate time. Submitting eveything on the online systems, filling in too many forms, communicating with colleagues, admin and students simultaneously put me in pressure.*

Academics from the private universities seemed to have more challenges related with the control-fixated administrative processes during the pandemic. Organizational challenges showed an overlapping pattern with the organizational demands during the first phase of the pandemic, which leds to the personal coping strategies on the part of the academic staff.

HE Leaders' Navigation of the Pandemic as Perceived by The Academics

Our data revealed that the HEI leadership takes various forms and styles based on the experience, approach and strategies of the university governors and sub-system leaders in navigating the turbulence during the first 6 months of the pandemic. Building upon the new demands and challenges as well as the advantages of the pandemic as experienced by the academic staff, the academics' perceptions over the HE leaders' (Rectorate, Faculty Deans and Department chairs) implementations revealed contradictions in the administrative and leadership approaches as perceived by the academics. Table 4 below demonstrates the pattern:

Table 4. *HE Leaders' Navigation of the Pandemic as Perceived by The Academics*

HE Leaders' Navigation of the Pandemic	**Level of Trust**
Leading with Experience	
Team Building	
Transparency	
Humanistic approach	
Bottom-up decision-making	Higher level of trust towards the management
Consultation	
Communication	
Support	
Leading with Inexperience	
Creating Tension	
Authoritarian/ Control-fixated strategies	Lower level of trust towards the management
Top-down decisions	
Create tension	
Higher level of accountability	

When the HEI leaders' navigation of the turbulence and their responses to the pandemic from the views of the faculty members is analyzed, trust and distrust emerge as two striking themes. These are binaries in the form of *Experience vs. Inexperience and Trust vs. Distrust* within the groups. However, the CoHE's state as the main supervisory body and cental policy-making function is critical as the central decisions are conveyed through top and mid-level HE leaders across the universities. This was also mentioned by some participants, where one of them (A1) explicated thoroughly:

> *The CoHE considers the issue with a standardized perspective. Different universities and departments have unique needs and*

practices. They need to consult and consider the regional and departmantal differences. In an engineering department, where 95% of the courses are theoretical in the 2nd year, you can do the courses and exams online; while in the faculty of Dentistry and Medicine, you can't do this because the majority of the courses are practice-based. It is a Turkish tradition to make short-term plans, but under these new conditions, we want to know what is ahead of us in the long run. We can't get anywhere with last minute decisions and implementations. For instance do we have a B or C plan in case of a new emergency situation?

In this regard, to navigate these decisions at the universities requires expertise and experience on the part of the university leaders, especially amidst turbulence. The data revealed this pattern clearly as the first binary regarding the management processes at the selected universities is about the leadership experience and the capacity. This main finding highlighted that universities with more experienced and robust academic leadership teams navigated the storm more comfortably and flexibly; whereas the academic leaders who relied more on the more control-fixated administrative style created more strain and stress on the faculty members. Experience, in the way participants described, in this sense relates to the transparency, accessibility, bottom-up decision making processes and paying attention to the human needs of the staff and the students; ongoing support and building team-spirit. Inexperience was associated with the top-down decisions changing each week, control-focused authoritarian approach, excessive workload and heightened levels of accountability that leads to too much paperwork and tension. One of the academic staff, A 10, commented on the approach of their rector as:

> *Our rector is experienced in crises management and is a good communicator. He and his team were accessible to us at all stages 7/24 and they created a specific Q&A section on the website for us and the students to facilitate the urgent problems alongside the routines of the university. I felt comfortable and I can say that they managed the process effectively.*

In contrast, A2 described the opposite form of administrative style hindering their work processes during the lockdown:

> *The decision-makers did not leave any space for us. Based on the instructions and regulations sent by the CoHe, they almost always conveyed implied messages about the high level of control and accountability. The hidden message was about easing the life for the students and keeping all reports and paperwork in place for the quality checks and accreditation. Meanwhile, I was trying to deal with my students and my own Covid 19 without access to technological facilities. This was more important to me than filling in the same form for many times for the performative processes.*

Secondly, the contradictory pattern, which results from the first binary is Trust vs. Distrust. The pattern revealed that the effective leadership style at all levels led to trust among the faculty members; while the opposite occured with less experienced teams. For instance, a couple of academics found the senior management ineffective in the administration of the pandemic and thought that the way they acted was pure rhetoric; which left the staff with distrust in the implementations. The views of A6 highlighted this as:

> *I reckon the HE administrators in our university failed this test. They put forward decion areas, asked for our opinion saying …today*

> *the agenda is this and that…pretending as if they were encouraging our participation in decisions. Yet, they did what their agenda was. I think more informed –decision making processes could have been employed. On the surface, it was informed and participative but I'm sure they did what the CoHE urged them to do. I would expect a more direct and transparent approach. Just tell us CoHE wants this way, and there was no need to waste time in pretending to be participative decision-makers. That way they would be more honest.*

Another academic (A5) emphasized the loss of trust because of the variety of implementations across different universities although the CoHE was the main supervisory institution. She narrated this as:

> *When the rules and regulations by policy makers in the CoHE change too swiftly, our university plans accordingly. Then we lose our accountability. For example, one day they said fully remote teaching, then moved to hybrid, then left it to the discretion of the individual universities. Our students kept saying…this university did this…that university doesn't do this…etc. First, they said asyncronous classes, then urged synchronous…added TV shootings…Now move to YouTube…Our governors had to follow the CoHE but they lost their credibility in some way by these fast changes.*

Further, A7 elaborated on the rise of control- focused management style in her university as:

> *The senior management was not transparent enough. They did not inform us immediately about the next steps and realities; especially concerning job security. I felt threatened many times as they kept asking who is doing what in a recurring manner. Too much email*

> *traffic… we weren't left with any autonomy… I was short of reaching out to my students while reporting on what I did to the authorities… This pandemic revealed the different capacities and adaptation level of the collegues in the faculty. As some colleagues criticized the others' work patterns and kept complaining about anything and everything, those who paid more effort felt annoyed and the trust within the groups weakened. However, our departmant chair navigated the tension by mediating between us and the upper management succesfully; which eased the challenges at least a bit.*

On the contrary, the academics working with more supportive HE leaders were more content and built more trustful relations with their colleagues and the university governors as A3 explicated:

> *We tried to produce solutions together with both the Dean and the Head of Department. We had strong communication. Sticking together, we helped each other in preparing the online course contents. The rectorate was highly supportive and attentive to our needs and hardships. During this period, I developed more trust in my department colleagues and the administrators. I now feel the groups cohesion more here.*

In sum, the pattern, revealed by the data, demonstrated that the personal and organizational challenges and opportunities are interrelated with how HE leaders navigated the pandemic at Turkish universities. Those with more experienced management teams had more opportunities than the challenges. The repercussions of the challenges that the organizational and inevitably the policy demands around the work of the academics were related with how HEI administrators navigated the turbulence. Hence, trust and distrust

within the departments were also interrelated with leading with experience or inexperience as perceived by the participants.

Discussion and Conclusion

To recall, we aimed to understand how the academic staff experienced the initial phase of the pandemic in Turkey and how they perceived the HE leaders' navigation of the crisis at the selected universities. Hence, we had two main research questions which addressed the initial experience of the academic staff related to the Covid-19 crisis- the pros and cons that the pandemic created and how HE leaders navigated this crisis at the selected universities from the perspectives of the academic staff. The findings revealed that the level of turbulence with the pandemic in HEIs was moderate to severe (Gross, 1998) in Turkey during the first 6 months; which had implications on the academic staff's professional and personal lives and how they perceived the HEI leadership responses.

As of the first research question, the participants' experience, during the initial 6 months of the pandemic with lockdowns under the moderate to severe levels of turbulence, was shaped by both the opportunities and challenges through personal differences and organizational demands. In this sense, we came up with an interrelated matrix which demonstrates how organizational demands such as excessive workload, buraucracy, migrating urgently to the remote teaching systems and working practices and heightened accountability measures of the universities. The sudden move to the digital outlets were challenging to those with less familiarity with the technology. On the other hand, those with familiarity, considerd it as an opportunity to improve themselves to adapt to the new normal. For some, it was

also an opportunity to build easier international networks through digital migration (Samoilovich, 2020). As part of the roadmap for distance education by the CoHE, the participants had experienced swift modifications in their universities' curriculum, infrastructure, human resources, content, and implementation (Bozkurt et al., 2020). Furthermore, some of them had psychological and physical issues due to the screen fatigue, Covidphobia, workload and feeling of isolation. Both at presonal and organizational levels, they experienced the turbulence in either moderate or severe forms regarding the HE organizations (Gross&Shapiro, 2004). There was urgency, fear, a feeling of crisis and complexity at various levels (Ansell & Trondal, 2018) as they encountered the pressure of the unexpected change. Yet, the experience differed across the public and private universities within the limits of our research. Those universities who were able to stabilize and adapt their procedures (Garretson et al., 2021) were more comfortable with navigating the turbulence of the pandemic.

As for the second research question addressing the perspectives of the academic staff about how HE leaders navigated this crisis, the participants had diverse views in the form of binaries related to two domains as the experience and building trust. The participants' remarks revealed that the universities with the experienced leadership teams were more succesful in navigating the crisis (Gross, 2020). The "experience", in this sense, involved transparency, support, strategic management, bottom-up approach, less control but more care and support through open-door policy (Izumi et al., 2020); while the "inexperience" was associated with top-down decisions, high level of control and authority and ambiguous implementations (Harris, 2020; Horton, 2020)

Secondly, in some HE organizations that the participants labeled as "experienced", where the care, support and collaboration was present, the bond of trust was the gluing force in the organization. In contrast, the HE leaders who acted indifferently and lacked transparency were labeled as "inexperienced" by the relevant participants. In such cases, the faculty experienced the loss of trust within the university and towards the university leaders; which resulted in negative feelings and alienation heightening the turbulence level to severe for them (Izumi et al., 2020; Yokuş, 2022).

These findings confirm the proposition that prioritizing care and support systems before accountability measures brings trust and cohesiveness (Samoilovich, 2021; Yokuş, 2022); especially at times of severe turbulence (Garretson et al., 2021; Gross, 2020). This could also apply to the relationship between HE leaders and faculty members but also for the faculty and student relations ((Karadağ&Yücel, 2020), as the findings of this study also demonstrated. Thus, the expectations of the university students from the HE leaders (Yokuş, 2022) are similar to those of the faculty in this study, as transparency and mutual trust is the core concepts for the whole organization.

It is once more confirmed that Covid-19 had a turbulent impact (Gross & Shapiro, 2004) on the world education systems, in our case, the HEIs in Turkey. That is; the HE system had already its inherent challenges (Bozkurt et al., 2020) when hit by the pandemic, which raised the turbulence level for the academic staff, students and the HE leadership and policy (Karadağ&Yücel, 2020). The challenges derived from the rapid but ineffective decision-making processes and the heightened surveillance mechanisms by the HEIs over the academic staff; which in some cases resulted in lack of trust. Hence, the

turbulence level is also shaped by how the universities and HEI leadership implementations address it. Those with high trust and support systems across the whole university have the capacity to ease and facilitate the turbulence level (Fernandez& Shaw, 2020; Samoilovich, 2021) within the HEIs.

Contributions and Implications

In such turbulent times, the HE leaders need to consider the structural as well as the emotional impact of the phenomenon for the whole community in their universities.The caring culture around a common purpose, building trust and prioritizing the vision and strategies through effective communicaton and support are pivotal (Samoilovich, 2021). Moreover, the findings of this study attune with Fernandez& Shaw's (2020) three best practices of building trustworthy connections, more distributive forms of leadership and robust communication.

Our findings hint at the ambiguity of decisions and frequent decision changes at policy level may lead to distrust and anxiety, unless the university leaders at different levels have the capacity to ease the turbulence (Gross &Shapiro,2004) for the faculty. Hence, engaging in adaptive leadership (Goode et al., 2021), flexibility and building trust through transparent implementations and decisions could be working strategies for the HEI leadership.

This study, we reckon, would contribute to the research and practice in HEI leadership in terms of fathoming the impact of unprecedented crises and turbulence on the organizations and individuals. That is; the HEIs are significant in transforming the societies through research, teaching and service. Under turbulent

conditions, the way the leaders navigate large-scale crises (Tourish, 2020) is crucial for the survival of the staff, organization and the stakeholders. Our endeavour was to shed light on the experiences of the academic staff and their views on the HEI leaders during the pandemic. Obviously, our world and education systems will face different forms of pandemics and other crises in the future; therefore, the findings of this study could illuminate on how HEI leaders could address the needs of the academic staff and university organization in times of such unexpected crises.

Limitations and Future Research

This study is limited with the perspectives of ten different academic staff from different universities around Turkey. We do not claim that the findings could be generalized to all the HE institutions in Turkey. We were urged to understand the phenomenon and portray a picture of the initial experience of the academics related with the pandemic turbulence and its management in the HEIs.

It is still ambiguous what the new forms of HEIs will look like in the post-pandemic era. Yet, new forms of educational leadership would be crucial as the turbulence could appear in various scales and shapes. Therefore, policy-making practices in such turbulent situations and HEI leaders' navigation of such emergency policies is an area that would require further exploration. We were not able to delve in detail into the policy level within this paper; yet, future research could explicate the governance systems during such crises. In any form of the "new normal", prioritizing care before the strict accountability measures could be an asset for the educational leaders, especially in health and disaster related crises. Our participants were the faculty members without any senior administrative roles. Hence, the picture

could be way more complex for the senior HEI leaders and administrators of different ranks. Their first-hand experience could be explored utilizing different research methods, which would contribute to research, policy and practice.

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Perceived Effectiveness of Academic Leadership Development Training: The Contribution of Motivational Factors and Peer Interaction

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Abstract

Due to the radical changes and complexities within academic institutions, leadership development addressed to academic leaders in the digital age has become more critical. In the available literature, the outcome assessment of leadership development and its related factors have not been evaluated rigorously. The current study investigated the contribution of peer interaction and two subscales of motivation to the effectiveness of the leadership development programs perceived by training participants in a diverse context. Of 101 participants, the majority of training workshop attendees were junior and middle-level leaders from both European universities and Chinese universities who participated in the leadership development programs organized under an EU project. PLS-SEM was exploited to validate the measurement model and test the hypotheses. The results showed that self-growth and peer interaction significantly contribute to perceived effectiveness, whereas networking motivator shows nonsignificant impact. The findings also illustrated that the two

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motivation patterns have significant effects on interaction quality. The mediating role of peer interaction on the relationships between the two motivational factors and perceived effectiveness, respectively, were not found in the current study. The findings contributed to identifying the role of different contributors to the effectiveness of the leadership development program in HE contexts and the potential of such a program to enhance knowledge and capacities of academic leaders regarding university governance and leadership.

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Introduction

Throughout the past decades, higher education institutions have coped with substantial changes and increasing challenges when it comes to their transformation in size and complexity (Sewerin & Holmberg, 2017). More importantly, academic institutions tend to alter themselves towards entrepreneurship, innovation, and accountability (Antoine & Van Langenhove, 2019). In this respect, the successful functioning of the higher education institutions and maintaining their competitive advantages rely on university governance and the new generation of academic leaders who can cope with on-going challenges and facilitate the institutions' mission (Dinh et al., 2021; Evans, 2014). This issue is more important for those in junior or middle-leadership positions including the department head or dean of the faculties (Dinh et al., 2021; Hundessa, 2019). Not surprisingly, academic leadership

development, which strongly supports leaders and staff in enhancing their leadership capacities in the new context, is increasingly in the interest of researchers (Dinh et al., 2021; Dopson et al., 2018; Evans, 2014; Kovacevic, 2019; Liu, 2019).

Concerning leadership and leadership development in the 21st century, recent studies indicate that leadership development goes beyond traditional features of professional training (Day et al., 2021; McCauley & Palus, 2021). To be specific, previous leadership development frameworks mainly focus on an individualistic perspective rather than a collective emergent perspective that considers leadership a group activity (Day et al., 2021; McCauley & Palus, 2021). Recent studies in leadership underline relational theory, which considers leadership means of collaboration within a group of people (McCauley & Palus, 2021). Thus, inclusive leadership development that simultaneously enhances knowledge and competencies for leaders and strengthens professional networks, collaboration in order to create institutional values for their organizations is emphasized (Day et al., 2021; Liu, 2019). To date, empirical research that evaluates training effectiveness and its' vital contributors to this type of leadership program has not been implemented in the literature. Nevertheless, participants' perception towards the effectiveness of the program and related factors represents a fundamental construct as it is related to both crucial training outcomes and behavioral changes (Dopson et al., 2018). In higher education settings, in particular, study on the effectiveness of leadership development and its related factors have not been evaluated rigorously (Dopson, Ferlie, McGivern, et al., 2016). According to Dopson (2016), there were just a few studies focusing on the effectiveness and impact assessment of higher education leadership development programs. Nevertheless, in the new context of

digital age, theoretical and empirical research on leadership development needs more attention in order to have an optimal and effective leadership program for leaders in new academic settings.

With such a background, this research endeavored to identify the contribution of motivational factors and peer interaction with levels of perceived effectiveness of leadership development workshops addressed to leaders at different levels in academic settings.

Theoretical Framework

A new approach to leadership and development

Over the last decades, leadership has been conceptualized in multiple ways, from the traditional approach to the modern perspective (Tedla et al., 2021). Traditionally, a large number of studies consider leadership as a property of individuals and their interactions with followers (McCauley & Palus, 2021; Reyes et al., 2019). Rooted on relational theory, a modern perspective of leadership promotes democratization of leadership and defines leadership as a "collective phenomenon that is distributed or shared among different people potentially fluid and constructed interaction" (Denis, Langley, & Sergi, 2012, p.212). Accordingly, leadership is contextual and located in the relational processes through which the communal achievements of organizing, collaborating, and adapting were constructed and produced. When it comes to higher education contexts, Dinh et al. (2021) conceptualize leadership as "an influence of one or more people with an academic profile on academic behavior, attitudes, or intellectual capacity of others based on commitment and power in order to achieve managerial, structural, and institutional vision values (p.14).

Conceptual perspectives on leadership consistently relate to how leadership development is designed and implemented. Day et al. (2021) highlight that it is crucial to distinguish between leader development and leadership development. Leader development, which is based on the traditional approach, focuses on enhancing competencies and skills for individuals. Leadership development, which is rooted in relational theory, goes beyond the purpose of individual skill enhancement to nourish networked relationships within a group of people and collegially accomplish institutional values or visions (Day et al., 2021; McCauley & Palus, 2021).

In the 21st century, academic institutions are demanding leadership development training that is not only well adaptive to the organizational context but also supportive for transformation (McCauley & Palus, 2021; Zhu & Zayim-Kurtay, 2018). In the recent study on academic leadership in the time of COVID 19, Dumulescu & Mutiu (2021) also raised a call for academic leadership training in which networked relationships and collaboration among learners are fostered. Unfortunately, leadership training that comprises individual competence and relational competence is scarce in literature as current leadership programs predominantly follow the traditional approach to leadership to design a competency-based or behavior based training curriculum (Day et al., 2021; Liu, 2019). Following studies conducted by Day et al. (2021), Liu (2019), and McCauley & Palus (2021), we perceive academic leadership development training as a type of professional development addressed for leaders in academic settings which aims at enhancing capacities for learners and simultaneously promoting networked community and collaboration regarding academic leadership.

Perceived effectiveness of leadership development program

Perceived effectiveness of the training course is generally defined as a perception of learners towards the quality of the training program. The approach for evaluating perceived effectiveness, however, varies in the literature. Some studies examine perceived effectiveness via the level of satisfaction or the extent to which skills and competencies developed (Levin et al., 2018; Zhu, 2017). Some evaluate perceived effectiveness via course outcomes or course design parameters (Cooper et al., 2017; Malik et al., 2015). Several studies prefer to use a global scale to examine the role of perceived effectiveness (Hone & El Said, 2016; Jung et al., 2019; J. Peltier et al., 2007).

As any other disciplines, measuring the success of leadership development training is crucial to better understand the usefulness and impacts of such program (Newcomer et al., 2015). In addition, it is promising to offer opportunities for revision and progress (Dopson, Ferlie, McGivern, et al., 2016). The current research adopted an evaluation model of training outcomes proposed by Kirkpatrick (1996) as mean of the theoretical basis. The model consists of 4 levels: reaction, learning, behavioral change, and organizational performance. Although exploring all levels of the evaluation model is equally essential (Kirkpatrick & Kirkpatrick, 2006), this study intentionally focuses on the first level (reaction), which is considered an essential level to evaluate perceived trainees' engagement in the training program. Concerning measurement instruments, a three-item scale for measuring perceived effectiveness globally, which was successfully validated in previous studies, was adopted (Hone & El Said, 2016; J. Peltier et al., 2007).

Peer interaction and perceived effectiveness of leadership development program

Interactivity is conceptualized as a way in which education involves communication, participation and feedback (Muirhead, 1999) or as an interplay and exchanges in which various people or groups influence each other (Roblyer & Ekham, 2000). Peer interaction, accordingly, is perceived as the degree to which the learners perceive the process of actively engaging with their peers in constructive and reflective ways in order to enhance motivation, knowledge and skill instruction (Diep et al., 2017; Ke & Kwak, 2013).

In educational settings, many studies indicate the related factors that affect the effectiveness of the training programs, including course contents, course structure, learner interaction, instructor support, and mentoring (Gray & Diloreto, 2016; Lagat & Concepcion, 2022; Xie & Ke, 2011). Of this, peer interaction is considered a vital indicator that positively associates with learning effectiveness (Diep et al., 2016; Green & Cifuentes, 2011; Lagat & Concepcion, 2022). When it comes to leadership development addressed to academic leaders, particularly in the present study's context, the training design is uniquely different. As a training addressed for adult learners, it intentionally goes beyond knowledge and competency construction to promote a community of practice where participants have more opportunities to interact, share personal experiences and broaden their professional network (Loizzo et al., 2017). Thus, collaborative learning is emphasized in several leadership studies on leadership (Cullen et al., 2014; Lester et al., 2017). Along the same line, Dopson et al. (2018) highlight that leadership program design should be based on problem-based learning and organized under workshops, seminars that interactively address on-going obstacles and challenges faced by leaders. In this regard, understanding peer interaction is a

fundamental step that may provide insights into enhancing academic learners' perception of learning. Therefore, it is crucial to examine whether this factor leads to a productive and successful leadership program tailored to academic staff and higher education leaders.

While there are implications that peer interaction plays a preeminent role in perceived learning effectiveness in academic leadership training, empirical studies that investigate the relationship between the two features are scarce. Based on the literature, the following hypothesis was put forward:

H1: Peer interaction is positively related to perceived effectiveness

Motivation, peer interaction and perceived effectiveness of leadership development program

1. Self-growth and networking: two essential forms of motivation in leadership development program

Motivation: conceptualization

The notion of motivation, which was initially conceptualized by Gardner et al. (1976), describes the reasoning that directs individual behaviour and consists of beliefs, perceptions, interests, and actions. In this light, a broader concept of individual motivation, proposed by Ryan and Deci (2000), refers to reason or the intention to do something, which takes place either intrinsically or extrinsically. Intrinsic motivation is usually developed by personal interests, curiosity (Wasko & Faraj, 2000), or enjoyment and delight (Ryan and Deci, 2000). Extrinsic motivation is usually identified by related indicators such as perceived usefulness or reputation (Nov et al., 2010).

Self-growth

Self-growth is psychologically defined as the intentional growth process (rather than nonconscious growth) of individuals in the ways that are important to them towards self-actualization (Luyckx & Robitschek, 2014; Robitschek et al., 2012). Woerkom & Meyers (2019) highlight that self-growth is not only a central individual need but also an essential requirement for organizational success.

Previous studies on motivational orientation towards professional development revealed that personal interest and practical enhancement are among the most important reasons that encourage learners to join the programs (Kao et al., 2011; Loizzo et al., 2017). Personal interest is perceived as intrinsic motivation for inherent joy of the program that compels learner participation (Kao et al., 2011; Ryan & Deci, 2020). Practical enhancement, which could also be categorized as a subtype of autonomous extrinsic motivation, refers to the desire to enhance their knowledge, skills and competencies within the field (Kao et al., 2011; Ryan & Deci, 2020). In the recent study on intrinsic and extrinsic motivation from a self-determination theory perspective, Ryan & Deci (2020) posit that while intrinsic motivation and autonomous extrinsic motivation are distinguished by enjoyment and sense of value, they mutually share the quality of being highly volitional or willing to act. In the empirical study on the formation of teachers' intrinsic motivation in professional development, Liu et al. (2019) found that sense of professional development value contributes to self-development for a long time as it helps teachers to build their own meanings of development, so as to nourish their motivation. The findings are consistent with Ryan & Deci (2020)'s study.

Following theoretical and empirical studies implemented by Liu (2019; Luyckx & Robitschek (2014); Ryan & Deci (2020), in the current study, we perceive motivation for self-growth as an individual's intentional desire to enhance their skills and competencies within the field for personal change and the inherent joy of the program that may impels learners to engage in the training course.

Networking

Networking is generally understood as the configurations of connectivity that occur when people interact with each other via communication, resource sharing, etc., supported either through face-to-face interaction or virtual connectivity using digital technology tools (Haythornthwaite & De Laat, 2012). In the context of professional development, networking is perceived as interaction between participants for knowledge co-construction, skill enhancement and professional development (Haythornthwaite & De Laat, 2012; Vaessen et al., 2014). Previous studies point out the importance of building a professional networked learning community that not only contributes to individual capacity enhancement but also organizational development (Chen et al., 2020; Lester et al., 2017; Vaessen et al., 2014). In professional development with networked learning approach, the individual plays an essential role as the primary source and destination of learning (Haythornthwaite & De Laat, 2012; Meijs et al., 2016; Vaessen et al., 2014). As the leadership development training exploited in the current study aimed at enhancing leadership capacities for learners and simultaneously strengthening a professional network community, we intentionally placed emphasis on exploring the contributing role of participants' motivation for networking to learning engagement and training effectiveness.

2. Motivational factors and perceived effectiveness

As motivation is considered a key factor in learner success (Fischer, Malycha, & Schafmann, 2019), the association between learner motivation and the effectiveness of the training program are among the faster-growing areas of investigation in an adult education setting (Chia et al., 2011; Kao et al., 2011; Osman & Warner, 2020; Truong & Murray, 2019). Cave & Mulloy (2010) conducted research that aimed to understand the motivational orientations that either assisted or direct teachers' behavior in an intervention program. The findings demonstrated that learning motivation, along with time, resources, and interactions are essential to promoting effective and sustained program implementation. Similarly, Osman & Warner (2020) endorse the view that teachers' motivation plays an essential role in determining learners' behavior after participating in professional development. In other words, motivation to join the training is crucial to the success and failure of a professional development program. Those studies support the importance of evaluating the relationship between motivation and the perceived effectiveness of professional development training. The findings are practically helpful for policymakers or designers in order to design an effective training program that meets the needs of learners based on different levels of motivation.

H2a: Motivation for self-growth is positively related to perceived effectiveness

H2b: Motivation for networking is positively related to perceived effectiveness

3. Motivational factors and peer interaction

Several studies in educational settings endorse the view that motivation has a significant correlation to learning interaction quality (Barak et al., 2016; Xiong et al., 2015; Zainuddin, 2018). For example, Xiong et al. (2015)'s study revealed that the higher unit of intrinsic and extrinsic motivations may increase the unit of student engagement in the course. Barak et al. (2016)'s study indicated a positive correlation between motivation gain and the learners' social engagement quality including the participation in group discussion. In the context of professional development particularly, Durksen et al. (2017) also found a positive relationship between motivation constructs and learners' engagement in the professional training course. We propose the hypothesises upon the relationship between motivation and learners' interaction

H3a: Motivation for self-growth is positively related to peer interaction

H3b: Motivation for networking is positively related to peer interaction

The mediating role of peer interaction

As discussed, there is a potential bivariate relationship between perceived effectiveness, peer interaction, and motivation in a leadership development program. Nevertheless, studies have not addressed the triangular relationship between these three dimensions. Moreover, it has been found that there is a significant association between the individuals' motivation and interaction quality among learners (Xie & Ke, 2011). Hence, it is possible to hypothesize that peer interaction can play a role as the mediator of the relationship between perceived effectiveness and motivation. Based on the literature,

research questions are formed in the current study, which will be discussed in the following part.

H4a: Peer interaction mediates the relationship between self-growth and perceived effectiveness

H4b: Peer interaction mediates the relationship between networking and perceived effectiveness

The research model

The primary objective of the present research was to examine the statistical significance of motivation and peer interaction effects on the perceived learning effectiveness of academic leadership development (ALD) programs in academic settings. Based on the literature review and the hypotheses proposed, the research model is depicted in *Figure 1.*

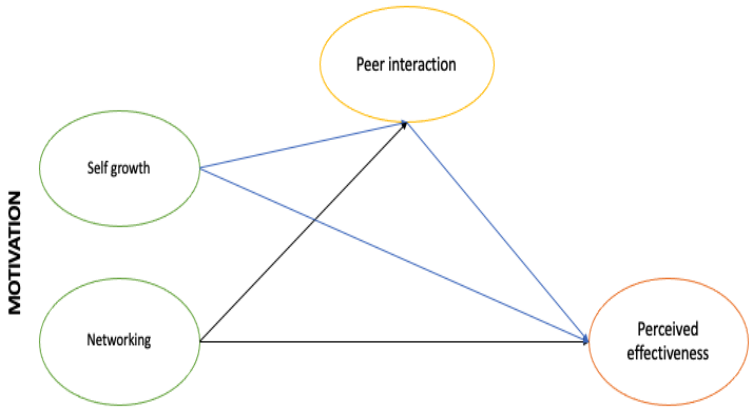

Figure 1. The research model

Methodology

Research context

This study was conducted during the three series of face-to-face (F2F) training workshops for academic members and leaders. The three workshops were consistent in terms of format, contents, and activities. The ultimate goals of the training workshop series were to foster knowledge and capacities of academic leaders at different levels of university governance and academic leadership and simultaneously develop an international network of collaboration and partnership on professional development, research, and teaching among participants from different institutions. Each workshop series was organized for 3 to 5 days hosted by the project partner university. The training program include keynote speeches on knowledge sharing and structured discussions addressing situated knowledge and on-going challenges faced by academic members and leaders. These learning formats are highlighted as optimal program designs for leadership training in the digital age (Scott et al., 2008; Turnbull & Edwards, 2005; Wolverton et al., 2005). Training contents were consistently selected under three main themes, including university governance, academic leadership, networking and collaboration. For example, for the first workshop series, the main contents included university governance from senior leaders and administrators' perspective, the roles of middle-level academic leaders, governance of research-based universities, etc. During the second workshop series, main contents were about academic rankings and university governance, governance of doctoral education, case studies on academic leadership, etc. Concerning the third workshop series, main contents were surrounded by key topics including policy recommendations for university governance and academic leadership, internationalization, diversified

education and academic leadership. In addition to the main training workshops, social learning and informal activities including interpersonal exchanges, peer-to-peer learning and cultural exchanges were organized to provide more opportunities for networking and social interactions. Concerning participants, attendees of the three workshops included leaders and academic staff from partner universities and non-partner universities. There were 75 participants who took part in the first series of training and 45 participants who participated in the second series. There were 23 participants who joined the third series of workshops.

As the three series of training workshops offer the same training format, training themes and similar duration, survey data were collected at the end of each workshop series. After cleaning up of the data and eliminating of missing data, the final dataset consists of 101 valid responses categorized by each series of training workshops (Table 1).

Research design

The current research presents the results from a quantitative study of F2F training on academic leadership in higher education settings. We used a quantitative study design as it enables researchers to examine the potential relationships between the two motivational factors, namely self-growth and networking, and peer interaction to the perceived effectiveness of the training (Creswell, 2009). The findings provided essential guidelines for designing leadership development programs in academic settings. The study could serve as a starting point for more large-scale research examining related factors affecting the outcome of such leadership development program

addressed to academic leaders and staff from an international perspective.

Sample

Within limited time resources available, heads are mainly preoccupied with administrative duties, leaving the guidance of teachers as an additional burden (Brauckmann & Schwarz, 2015; Windlinger & Hostettler, 2014).

Respondents originating from European and Chinese higher education institutions voluntarily completed the surveys. As several participants joined more than one workshop, we used demographic information to eliminate duplicate responses. In total, 101 valid responses were used with no cases of missing data. Female participants accounted for 45.5%, and male respondents accounted for 50.5%. The two most dominant age groups were those between 30-39 and 40-49, which accounted for 67.3%. On the contrary, a minority of the respondents who were less than 30 years old (6.9%). **Table 1** summarizes the socio-demographic information of the survey respondents.

The sample size was sufficient enough to empirically examine the research model by exploiting the Partial Least Squares (PLS) statistical regression method based on the minimum R-squared method. Specifically, the maximum number of arrows pointing at a latent variable is 3, the minimum R^2 in the model is 0.35. By using G*power analysis, a minimum of 53 cases were efficient to evaluate the research model in the current study (Hair et al., 2017).

Table 1. Demographic information of the survey respondents (N=101)

Variables	Category	Statistics	Percentage (%)
Gender	Male	51	50.5
	Female	46	45.5
	Missing	4	4
Age (M= 43.7; SD=9.80)	22-29	7	6.9
	30-39	30	29.7
	40-49	38	37.6
	50-more	26	25.8
Academic leadership experience (M= 6.613; SD=6.268)	Junior level (0-5 years)	58	57.4
	Middle level (6-10 years)	20	19.8
	Senior level (>10 years)	21	20.8
	Missing	2	2.0
Series of Workshops			
	The first series, June 2019	50	49.5
	The second series, Oct 2019	32	31.7
	The third series, Oct 2021	19	18.8
Contexts			
From Chinese universities	Chinese participants	61	60.4
From European universities	European participants	40	39.6

Instrumentation and procedures

In this study, a questionnaire was developed predominantly from the literature with the wording modified to fit the context of leadership development program. Concerning the measurement scales, two forms of motivation, namely self-growth and networking, were developed from Kao et al. (2010). Peer interaction scale was taken from Diep, Cocquyt, Zhu and Vanwing (2016), while perceived effectiveness was developed from Peltier et al. (2003). The questionnaire items were initially written in English using 5-point

Likert scales anchored on "1=strongly disagree" and "5=strongly agree". Socio-demographic information was collected on gender, age, and academic leadership experience. To collect evidence of validity for the adapted instrument, a two-step procedure was implemented. First, we consulted two experts with expertise in Education for content validity and face validity of the items. Second, we conducted a pilot study with a small subset of survey participants. Based on the results of principal components analysis, several items were retained or eliminated. The final instrument for the main study consisted of four constructs with five items for self-growth, three items for networking, six items of peer interaction, and three items of perceived effectiveness. The measured constructs with Cronbach's alpha and item loadings can be found in **Appendix A.**

As part of the target group include participants from Chinese universities, the survey questionnaire was translated into Chinese. To ensure equivalent meaning of the instrument, the translated survey was backtranslated by a native English speaker. In addition, before respondents received the questionnaire, researchers briefly introduced the primary objectives of conducting the survey as well as the importance of precise answers provided by attendees. Besides, voluntary contribution, anonymity and confidentiality of respondents were informed.

Data Collection

Regarding data collection, a cross-sectional study was exploited using a self-administered questionnaire. On the last day of each conference, the participants were invited to complete the 5-minute survey. In order to minimize the systematic bias and enhance respondents' ability and motivation to answer surveyed questions,

procedural controls suggested by MacKenzie and Podsakoff's (2012) were followed.

Data Analysis

Data screening and descriptive analysis were carried out in SPSS. Afterwards, measurement validation and path model analysis were respectively implemented by exploiting Partial Least Squares (PLS) (Hair et al., 2017). The two main motivations to exploit of this technique include the possibility of working with small samples and the capability of solving the possible problems of data non-normality (Hair et al., 2017). As mentioned by Hair et al.(2017), the model fit evaluation in PLS-SEM includes two main steps: Confirmatory Factor Analysis (CFA) and structural model. To that end, a two-step procedure was implemented. First, composite reliability, convergent validity, discriminant validity, and measurement invariance assessment were evaluated by CFA using Smart PLS software ver.3.3.3. Subsequently, the structural model was performed using PLS algorithms and bootstrapping analysis in Smart PLS software ver. 3.3.3. As the dataset consists of two distinct groups (Chinese vs European participants), measurement invariance assessment was conducted following MICOM procedure to check whether the pooled data analysis is supported (Hair et al., 2017). To that end, three steps were implemented: (1) configural invariance, (2) compositional invariance, and (3) the equality of composite mean values and variances. If most of the structural effects are invariant across groups, pooling data is allowed (Henseler & Fassott, 2015).

Results

Measurement validation

Composite reliability and convergent validity are depicted in **Table 2**. The findings reveal that the four scales performed acceptable internal consistency as Cronbach's alpha exceeded the minimum threshold of 0.60 (Gde Agung Yana et al., 2015; Mueller & Hancock, 2018). As for composite reliability, which evaluates whether the scale items indicate the latent construct, met the cut-off value of 0.7 (Hair et al., 2017). Concerning convergent validity, the statistical results indicate that the Average Variance Extracted (AVE) exceeded the cut-off value of 0.5 (Hair et al., 2017).

Table 2. Descriptive Statistics, Composite Reliability and Validity

Construct	Number of items	M(SD)	Cronbach's α	CR	AVE
Self-growth (SG)	5	4.413 (0.561)	0.746	0.829	0.501
Networking (NW)	3	4.458 (0.587)	0.641	0.804	0.580
Peer interaction (PI)	6	4.174 (0.547)	0.806	0.861	0.511
Perceived effectiveness (PE)	3	4.412 (0.540)	0.789	0.874	0.703

Concerning discriminant validity, Fornell and Larcker's (1981) proposed that the square root of average variance extracted (AVE) for each construct should be greater than the correlations with the other constructs. **Table 3** illustrates the square root of AVE (in bold) and the correlations between constructs. Significantly, the data in the table satisfy the conditions for discriminant validity. Henseler & Fassott (2015) argue that the Fornell & Larcker (1981) criteria are not adequate

to capture a lack of discriminant validity happened in common research situations. Alternatively, the heterotrait-monotrait (HTMT) criterion was proposed (Henseler & Fassott, 2015). According to (Kline, 2011), the HTMT value should be smaller than the $HTMT_{.85}$ value of 0.85 to avoid multicollinearity problems. The results of the discriminant validity test using the new method (Table 4) illustrate that all of the values surpassed $HTMT_{.85,}$ meaning that the discriminant validity is adequately supported.

Table 3. Discriminant validity results

Constructs	1	2	3	4
Self-growth (SG)	**0.708**			
Networking (NW)	0.613	**0.761**		
Peer interaction (PI)	0.446	0.439	**0.715**	
Perceived effectiveness (PE)	0.556	0.466	0.452	**0.838**

Table 4. Heterotrait-monotrait (HTMT) results

Constructs	1	2	3	4
Self-growth (SG)				
Networking (NW)	0.846			
Peer interaction (PI)	0.570	0.573		
Perceived effectiveness (PE)	0.702	0.652	0.557	

Measurement invariance assesment

In order to evaluate measurement invariance, the 3-step MICOM procedure suggested by Hair et al. (2017) and Henseler & Fassott (2015) were implemented. In step 1, the configural invariance, we ensure that the three aspects are identical for both groups: setup of measurement model and the structural model, data treatment for the model estimation using the full set of data and each group of data, algorithm settings for all model estimations (Table 5). In step 2,

compositional invariance assessment, we ran the permutation procedure with 5000 permutations (Henseler & Fassott, 2015). To evaluate compositional invariance, we compared the original composite score correlation c with the empirical distribution of the composite score correlations resulting from the permutation procedure c_u. If c exceeds the 5% quantile of c_u, compositional invariance is established. The results depicted in table 5 revealed that compositional invariance was established in the structural model.

Table 5. Configural invariance and compositional invariance results

Construct	**Configural invariance**	**Compositional Invariance assessment**			
		Original Correlation ($c_)$	**5% quantile of c_u**	**Permutation p-Values**	**Compositional Invariance**
Self-growth (SG)	Established	0.989	0.956	0.703	Established
Networking (NW)	Established	0.950	0.902	0.189	Established
Peer interaction (PI)	Established	0.990	0.961	0.593	Established
Perceived effectiveness (PE)	Established	0.996	0.983	0.502	Established

As for step 3, we examined the composites' equality of mean values and variances across groups. As depicted in table 6, the results reveal that most of the composite means, and variances are equal across the samples from the two groups (except for the equality of means of self-growth). As most of the structural effects are invariant across groups, pooling data is recommended (Henseler & Fassott, 2015)

Table 6. Equality of composite mean values and variances results

Construct	Full measurement model invariance assessment								
	Mean-original difference	Confi-dence interval	Permuta-tion p-Values	Equality of means	Variance -Original Differen-ce	Confi-dence interval	Permuta-tion p-Values	Equality of variances	Measure-ment invariance
Self-growth (SG)	0.438	[-0.410, 0,406]	0.030	Not equal	-0.503	[-0.537, 0.615]	0.051	Equal	Partial
Networking (NW)	-0.139	[-0.410, 0.406]	0.504	Equal	0.636	[-0.618, 0.701]	0.061	Equal	Full
Peer interaction (PI)	-0.163	[-0.414, 0.399]	0.435	Equal	-0.258	[-0.426, 0.468]	0.247	Equal	Full
Perceived effectiveness (PE)	-0.260	[-0.400, 0,405]	0.206	Equal	-0.110	[-0.476, 0.522]	0.690	Equal	Full

Controlling variables

In order to evaluate the extent to which socio-demographic characteristics have effects on the two dependent variables, *t*-tests and ANOVA were performed. The *t*-tests findings revealed that there is a nonsignificant difference in peer interaction between male and female respondents with t (95) = 0.859, p>.05. Similarly, there is no difference in perception of perceived effectiveness between groups in gender with t (95) = 1.990, p>.05. Besides, the findings illustrated that there is no difference in perception of perceived effectiveness and peer interaction between Chinese and European attendees, with t (99) = -0.805, p>.05 and t (99) = -1.040, p>.05, respectively.

ANOVA results showed that age group has a non-significant effect on peer interaction (F(3) = 1.714, p>.05) and perceived effectiveness (F(3) = 1.540, p>.05). Similarly, the finding revealed that leadership experience has non-significant effect on peer interaction

($F(2) = 1.984$, $p>.05$) and perceived effectiveness ($F(2) = 2.062$, $p>.05$). **Table 7** illustrates the ANOVA results.

Table 7. Effects of gender, age and leadership experience, and contexts on peer interaction and perceived effectiveness

Grouping variables	Dependent variables	Df	t	p-value
Gender	Peer interaction (PI)	95	0.859	0.064
	Perceived effectiveness (PE)	95	1.990	0.056
Contexts (Chinese vs European universities)	Peer interaction (PI)	99	-0.805	0.423
	Perceived effectiveness (PE)	99	-1.040	0.301
		Df	**F**	**p-value**
Age group	Peer interaction (PI)	3	1.714	0.169
	Perceived effectiveness (PE)	3	1.540	0.209
Leadership experience	Peer interaction (PI)	2	1.984	0.143
	Perceived effectiveness (PE)	2	2.062	0.133

Given the nonsignificant effects of demographic variables on dependent variables, none of the four socio-demographic variables was included as covariates in subsequent analysis. In other words, the four socio-demographic variables did not perform as explanatory factors which affect peer interaction and perceived effectiveness in the main analysis.

Structural model evaluation

To test the research hypotheses, the structural model was measured using the bootstrapping of SmartPLS® 3 (Ringle et al., 2015).

Table 8 illustrates the results of the PLS-SEM, indicating the direct and indirect effects of the independent variables.

Concerning the hypothesis H1, the findings reveal that peer interaction was significantly associated with perceived effectiveness (β=0.226, $p < 0.05$). Thus, it is reasonable to postulate the more effective the interaction quality the participants perceived, the better the perceived effectiveness of the leadership training program. Therefore, H1 is supported.

With regard to the hypothesis H2a, the results empirically demonstrate that self-growth has a positive correlation with perceived effectiveness (β=0.369, $p<0.001$). Thus, H2a is confirmed. Concerning the hypothesis H2b, the results indicate that networking shows a nonsignificant effect on perceived effectiveness (β=.141, $p>0.05$). Therefore, H2b is not supported.

In relation to the H3a and H3b, the empirical evidence shows that both self-growth and networking have a positive correlation with peer interaction (β=0.283, $p<0.05$ and β=0.265, $p<0.05$, respectively). Thus, H3a and H3b are supported.

Regarding H4a and H4b, the mediating effects of peer interaction on the relationship between self-growth and perceived effectiveness (H4a) and the relationship between networking and perceived effectiveness (H4b) respectively were examined in accordance with Preacher & Hayes (2008)'s methods of bootstrapping indirect effect. The findings illustrate that the mediating role of peer interaction which intervenes the relationship between self-growth and perceived effectiveness was not found in the current study (β= 0.064, $p>0.05$). Similarly, the triangular relationship among motivation of networking, peer interaction and perceived effectiveness was

nonsignificant (β=0.060, *p>0.05)*. Therefore, H4a and H4b are not supported.

Table 8. PLS-SEM results of the structural model (N=101)

Hypotheses	Path	Standardized coefficient (β)	t-statistics	p-value	Confidence Interval	Decision	R^2	Q^2	f^2	VIF
H1	PI => PE	0.226**	2.383	0.018	[0.047;0.387]	Supported	0.373	0.240	0.062	1.320
H2a	SG=> PE	0.369***	3.903	0.000	[0.194;0.558]	Supported			0.127	1.707
H2b	NW=> PE	0.141	1.397	0.163	[-0.063;0.330]	Not supported			0.019	1.694
H3a	SG=> PI	0.283**	2.669	0.008	[0.095;0.512]	Supported	0.243	0.111	0.066	1.601
H3b	NW=>PI	0.265**	2.599	0.010	[0.055;0.457]	Supported			0.058	1.601
H4a	SG=>PI=> PE	0.064	1.718	0.086	[0.003;0.135]	Not supported				
H4b	NW=>PI=> PE	0.060	1.704	0.089	[0.009;0.145]	Not supported				

Significance: *** = p<0.001; ** = p<0.05
R^2 values: >0.20 = weak; >0.33 = moderate; >0.67 = substantial (Chin, 1998).
Q^2: > 0 = The model has predictive relevance for a specific endogenous construct (Stone, 1974)
f^2 effect sizes: >0.02 = small effect; >0.15 = medium effect; >0.35 = large effect (Cohen, 1988)
VIF values: largest VIP value <5 = a multicollinearity problem is absent (Hair et al., 2017)
Source: Own contribution from results obtained with SmartPLS® 3 (Ringle et al., 2015)

The model overall explains 37% of the variance in perceived effectiveness and 24% of the variation in peer interaction. This means that the three independent latent variables, which are self-growth, networking and peer interaction, moderately explain 37% of the variance in attendees' opinions about the effectiveness of the leadership program (Chin, 1998). The two forms of motivation, self-growth and networking, in their role as endogenous constructs have

explanatory capacity to explain the variance in peer interaction as the values of R^2 are higher than 0.20 (Chin, 1998). Thus, the model has good quality.

When examining the predictive relevance of the endogenous constructs of the model using the blindfolding techniques of the Stone-Geisser Q2 test (Geisser, 1974; Stone, 1974). Accordingly, Q2 value exceeding zero for a specific endogenous reflective type constructs denotes the predictive relevance of the path model (Hair et al., 2017). In this study, the results indicate that the model has predictive relevance for self-growth, networking, peer interaction in their role of endogenous constructs.

Effects sizes (f^2), which measure the impact of exogenous latent constructs on endogenous latent constructs, were evaluated in the current study. According to Cohen (1988), the obtained f^2 value of 0.02 denotes small effect, 0.15 denotes medium effect, and 0.35 denotes large effect. As shown in **Table 8**, most of the relationships in the current study denote small or medium effects except the networking-perceived effectiveness relationship, which shows non-effect.

The variance inflation factor (VIF), which determines the degree of multicollinearity present, was measured in this study. In this vein, a largest VIF value exceeding 5 shows a multicollinearity problem (Hair et al., 2017). As can be seen in Table 8, the VIF values in the current study are between 1.320 and 1.707 (i.e., less than 5). Therefore, multicollinearity issue is absent.

Discussion

In the present study, the effectiveness of the leadership program in a higher education context perceived by workshop participants has been examined from peer interaction and two major sources of motivation. The empirical findings from a survey of 101 participants, predominantly leaders at the junior and middle levels, uniquely provide deep insights into the contributing role of motivation and peer interaction to the effectiveness of the leadership program perceived by participants.

In line with the previous studies on professional development (PD), the current findings indicate the significant role of peer interaction in predicting the variance of perceived effectiveness in the academic leadership development program. The present work, therefore, supports previous research and studies, thus reinforcing the role of peer interaction in leadership training (Dopson et al., 2018; Loizzo et al., 2017). It also explains Ladyshewsky and Flavell's (2011) argument indicating that learning through experience and knowledge sharing is crucial for learning about leadership. Thus, interactive collaboration among attendees during the training is even more essential.

The present study endorses the view that self-growth plays an essential role as a strong predictor of perceived effectiveness in terms of leadership development training. This finding is highly consistent with a number of studies regarding professional development (PD) programs (Nasser & Shabti, 2010). In addition, a new contribution of this study was identifying the mediating role of peer interaction regarding the effectiveness of the leadership program. More specifically, it showed that peer interaction did not play a mediating

role which mediates the relationship between motivation for self-growth, networking and perceived effectiveness, respectively. Further research is recommended in order to verify the hypothesis.

On the contrary, networking, which is highlighted as a key motivator to join the leadership development training in the digital age (Day et al., 2021), shown to have a nonsignificant association with the perceived effectiveness of the program. The reason could be due to the mixture of networking types in the measurement scale including professional networking, personal or social networking. Even though the significant importance of networking was not identified in our model, further research with larger sample size and a reliable measurement scale to testify this hypothesis is recommended.

It is interesting to note that overall, these constructs explained 37% of the variance of perceived effectiveness of the leadership program. These results can be explained by the argument that there are different indicators which also influence the outcome of the training program such as course structures, course content, and so on (Reeves & Pedulla, 2011). The findings provide an excellent starting point for future research on outcome measurement of a leadership development program. Further research is necessary to determine the comprehensiveness of related factors which contribute to effectiveness of the leadership program.

Implications

Practical implication

By attempting to identify the effects of motivation and peer interaction on the perceived effectiveness of the leadership development programs addressed for academic leaders at different levels, our study provides practical implications in terms of the design,

implementation, and enhancement of leadership development program in a new HE context.

First, as the current research aimed at examining the contribution of predicting variables to effectiveness of the leadership development training, it is expected that the application of this finding will bring in professional development (PD) workshops on academic leadership that participants will find effective. In this light, we hope that these research results could be used to design a leadership development program addressed to academic leaders at higher education institutions with high quality and impacts. As a result, academic leaders and staff would feel satisfied and eager for performing higher levels of improvement in academic leadership quality.

Second, given the primary purpose of the current study was to examine relationship between selected indicators and learners' opinions about the leadership program, it is recommended that workshops on university governance and academic leadership in the digital age should be designed to enhance interactive collaboration among workshop participants. Besides, the training program tailored to learners' needs and expectations is vital. In addition, the design of the training programs must focus on different patterns of motivation in order to engage them in interactive activities. In this way, quality and effective outcomes of the leadership development program will be enhanced.

Third, given that the academic leadership workshops in this study are part of an EU project, and one of the very first projects on leadership addressed to academics and staff in a higher education setting, our research provides empirical lessons learned which could

practically be applied to design and implement professional development (PD) programs for junior and middle-level leaders in diverse contexts. While PD of leadership as a form of capacity building for academic leaders is not a cure-all for university renovation efforts, taking into consideration of its impact does offer potential.

Theoretical implications

As a first theoretical implication, this study suggests that motivation for self-growth, motivation for networking, and peer interaction are crucial factors to perceived effectiveness of academic leadership development training. These results are well consistent with existing studies regarding face-to-face and online PD programs in educational settings (Dopson et al., 2018; Loizzo et al., 2017; Nasser & Shabti, 2010). In other words, the significant correlations between contributing variables and perceived training effectiveness can also be supported in terms of leadership development in a higher education setting. In regard to encouraging PD on academic leadership addressed to leaders and staff in higher education institutions, this study proposes a new viewpoint.

Furthermore, the second theoretical implication is a confirmation of the direct links between motivation for self-growth, networking and peer interaction in the program. The study provided additional evidence that it is essential to clarify learners' motivational orientations in order to facilitate interaction activities.

Limitations and future work

Regardless of significant contribution and implications yield from the current study, there are certain aspects that should be approached with caution. Firstly, due to the limitation of the sample

size, we resolved to focus on three indicators that have a likelihood of affecting perceived effectiveness in the chosen setting using PLS-SEM. Consequently, it might have impacted the power of statistical analysis. Further research with a larger sample size is recommended to see if the findings can be replicated as well as to identify other factors that co-vary with perceived effectiveness such as PD program, design, content, etc. Second, as the instrument was used in two languages, there might be potential issues regarding the cultural understanding of each item although the translation of the instrument was ensured to have the same meaning of each item. The cultural understanding of the instrument may be investigated through qualitative approaches in future studies. Third, as random sampling or quota sampling was not feasible, it was not possible to ensure the equality of group sizes across countries, educational levels and academic experiences. Hence, more purposive sampling could be applied in further studies to increase the generalizability of the findings. Forth, as the current study followed quantitative design, it could be interesting to investigate the effects of motivation and peer interaction on effectiveness of academic leadership development in a qualitative way to further substantialize the results.

Conclusion

This study aimed at evaluating the relationship between the two motivational factors, peer interaction, and the perceived effectiveness of leadership development program. The findings have contributed to the literature on academic leadership development in higher education contexts based on four features. First, a research model evaluating the effect(s) of motivation and peer interaction on the perceived effectiveness of leadership development program in higher education settings was designed. The findings significantly

supported to explain the substantial variance for perceived effectiveness in the training workshops for academic leaders and staff in an academic setting. Second, a critical finding of this study was that the two patterns of motivation and peer interaction are strong predictors for explaining the variance of perceived effectiveness regarding the workshops on academic leadership development. The results of the research affirm for program personnel the importance of these factors for future workshop offerings. Further research which explores different patterns of motivation and the interaction of individuals, who participate in the leadership development workshops, will have potential value for both researcher and leadership program designers. Fourth, the research was implemented in diverse contexts, which is different from previous studies exploring the effect of motivation and peer interaction on the effectiveness of leadership training in a specific country context. The findings could serve as a starting point for more large-scale research examining related factors affecting outcome of such leadership development program addressed to academic leaders and staff from an international perspective.

Appendix 1. The questionnaire

Motivational factors	
Self-growth (M = 4.413, SD = 0.561, Cronbach's alpha = 0.746)	Loadings
I registered the workshops for enhancing self-growth in university governance and academic leadership	0.634
I registered the workshops for satisfying my enquiring mind	0.664
I registered the workshops to adapt to new academic leadership styles in the future	0.724
I registered the workshops because I want to develop my competence by learning from other experts within the field	0.804
I registered the workshops to enhance competence in university governance and academic leadership	0.678
Networking (M = 4.587, SD = 0.587, Cronbach's alpha = 0.641)	Loadings
I registered the workshops to exchange ideas about academic leadership	0.808
I registered the workshops to make more friends with the same interest	0.634
I registered the workshops to learn with other leaders and academic staffs.	0.828

Peer interaction ***(M = 4.174, SD =0.547, Cronbach's alpha = 0.806)***	Loadings
During the workshops, I shared information (references, interesting websites and projects), which I find useful to my colleagues	0.652
During the workshops I provide information related to the topic under discussion	0.782
During the workshops, I provide examples to illustrate my points	0.760
During the workshops, I contribute to the discussion by evaluating the information and arguments provided	0.763
During the workshops I express my agreement or disagreement on my peers' arguments provided	0.703
During the workshops, I comment on other peers' thoughts and ideas to keep the discussion going	0.612

Perceived effectiveness (M = 4.412, SD =0.540, Cronbach's alpha = 0.789)	Loadings
I have enjoyed following the workshops	0.862
I have learned a lot in the workshops	0.831
I would recommend the workshops to friends/ colleagues	0.821

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