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Exploring the Paradigms of Higher Education Research: Emerging Research Discourses in China and the UK

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Background and introduction
Higher education as a field of study emerged in the mid-20th century (Clark 1973) and the field has evolved alongside globalisation and the massification of higher education worldwide. Despite its global development and shared significances, HE research has long been dominated by scholars from the developed and predominantly Anglophone world, notably Australia, USA, Canada and the UK or the countries that are broadly categorised as 'the West' (Marginson 2012). Thus, HE research has been institutionalised, but often from western or English speaking perspectives[1] (cf. Kehm 2015; Musselin & Kehm, 2013; Teichler, 2014). Despite the fact that higher education research in China developed at the same time as the western field, with the establishment of the Institute of Higher Education Research by Professor Pan Maoyan at Xiamen University in 1978, higher education research in the UK seldom quotes this parallel Chinese research and does not take account of its perspectives (Maoyan, 2015).

Institutionalised initiatives in higher education research, whether they originate at the national or international levels, have established their own hierarchies of knowledge where certain kinds of knowledge claim higher standing and greater influence over other kinds (Lyotard 1984; Shahjahan 2011, Filippakou 2017). Knowledge about higher education research that is validated internationally, typically through publications in North American or European journals, commands a higher status than work published in 'non-western' contexts, often regardless of how relevant or closely connected it may be to the issues of those higher education systems (Said 1978; Naidoo 2008). Similarly, higher status is conferred upon work that conforms to the evidentiary and analytical standards of 'western' social sciences, often regardless of how pertinent the questions it asks are to the realities of those systems (Engels-Schwarzpaul & Peters 2013; Marginson & Sawir 2011).

These 'western' perspectives are increasingly being challenged by a range of scholars who refer to the more complex histories, ideologies and policies of international higher education from local, 'non-western' perspectives (cf. Leite, 2010; Yang, 2014). In recent years, a number of common issues and trends in HE research have been highlighted in the literature and there is increasing awareness in reviews commissioned by governments and international organisations of the need for new policy frameworks to acknowledge the emerging similarities and differences in international research discourses (Altbach et al 2009; Tight 2008, 2012).

This aim of this project was to open and develop a new and emerging area of higher education research, one that acknowledges the contribution of 'non-western' perspectives on higher education research. The project set out to open a dialogue between 'western' and 'non-western' conceptions of higher education and the ways these play out in higher education research in order to challenge any paradigmatic hegemony of knowledge norms, which have their origins in western societies and their scientific institutions. The purpose of the project was to consider how the research paradigms in the two different countries have developed both independently and in tandem with each other. Similarities and differences in the two systems were studied in order to illustrate trends and issues in global higher education. In recent years, a number of common issues and trends in higher education research have been highlighted in the literature and there is increasing awareness in reviews commissioned by governments and international organisations of the need for new policy frameworks to acknowledge the emerging similarities and differences in international research discourses (Altbach et al 2009; Tight 2008, 2012). Research which aims to equally valorise non-western literature, research and perspectives remains rare, however, and this research aspired to scope out ways in which this imbalance could be readdressed.
The research falls into two interrelated areas: (i) The evolution of higher education research in China and the UK between 1995 and 2015: It was in the mid1990s when Chinese higher education began its phenomenal growth and started developing more international partnerships and links with foreign institutions across the globe (Gallagher et al, 2009; Hou, Montgomery and McDowell, 2014; Montgomery, 2016). (ii) The key themes and methodological frames that high-ranking Chinese and UK journals of higher education have embraced: these hierarchies represent the classic manifestation of power and reflect structures of authority and power (cf. Foucault 1975; Lukes 1974).

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1 There are significant differences between different European traditions (cf .Teichler 2007) and it has to be acknowledged that often mistakenly the terms 'western' and the 'Anglosphere' are used interchangeable. In this paper the 'West' is presented as counterpart to the Eastern World, the 'Occident' (Buruma & Margalit 2004) – as ideological representations of the West as applied in Orientalism (Said 1979, Filippakou & Yen 2015).

Methodology
The project was based around an extensive literature search of journal publications and reviews from, and about higher education research between 1995-2015 from mainland China, Hong Kong and the UK. As Marginson (2012) suggests, 'global rankings inexorably push governments and universities alike towards the model of the comprehensive Anglo-American science university that makes up the ranking template' but 'the days of neo-imperial domination of higher education are drawing to a close'. Focused on the UK and China[2] as two key players in global rankings, this study, therefore, was an attempt to explore the relationships, if any, between higher education systems and higher education research paradigms. It was hypothesised that the global trends gradually transcend any sharp divides between the 'East' and 'West' (cf. Marginson 2016, Phan 2017) and that higher education research reflects the trend of homogenisation in global higher education.

Three snapshots were taken of three key years at decade intervals, 1995, 2005 and 2015 (cf. Tight, 2012) and a selection of higher education research journals in the UK and China were identified in order to build two extensive higher education literature libraries. Two separate libraries were constructed, one in English and one in Chinese. The systematic literature search of conceptual and empirical studies addressing higher education research was interrogated primarily quantitatively and to some extent qualitatively shedding light on the development and state of higher education research in China and the UK across a 20 year period. Key policy papers have also been selected to highlight recent or embryonic developments that may lead to new emerging trends. A number of initial key themes are being identified and these include: research on higher education policy; research about pedagogy; research about the organisational nature of higher education.

Pilot study
A pilot study was carried out before the main study was initiated, beginning with three selected UK journals, *Studies in Higher Education; Higher Education Quarterly;* and *Higher Education*. In the pilot study, search terms were used to select journal articles from the three journals over the three selected years (for example, aiming to select out papers which dealt with European higher education or research which was focusing on higher education in other continental contexts). This approach generated some challenges of comparability with the Chinese literature as search terms could not be used in the same way for the Chinese journals due to differences in the electronic platforms where the journals were being sourced. Therefore, once the pilot study was completed the approach to compiling the databases was to include all papers in the three journals in both the UK and the Chinese literature.
Thus it became clear that it would be necessary to collect all papers from all the issues of the selected journals within the three years chosen for the snapshot (1995, 2005 and 2015). As a result of this the main literature search generated much more data than was at first anticipated. In particular, on the Chinese side the amount of data was extensive because of the publishing conventions in China involve many more issues per year than on the UK side. Some of the Chinese journals selected publish twice a month, producing 24 issues a year in comparison with the four to six issues per year which are usual in the UK. Consequently, for the Chinese library, only two journal were selected, *Journal of Higher Education* (高等教育研究) and *China Higher Education Research* (中国高教研究). Despite this, the data on the Chinese side was still substantially more than the data in the UK databases with 2471 articles (i.e. approx. 90% of the data) constituting the Chinese database and only 274 papers (i.e. approx. 10% of the data) in the UK database.

The selected Chinese journals concentrate solely on the field of higher education and are all published in the Chinese language. During the period of 1990s to the present, the field of higher education in China has been consolidated by emerging groups of researchers and institutes who engage in higher education research and the studies in higher education have become increasingly professionalised, policy-driven and practically-informed (Chen and Hu, 2012). These Chinese journals cover a wider scope of themes and topics but they are exclusively focused on higher education issues and they are all published in Chinese language. In some respects, the selected Chinese journals are in parallel to the selected English journals which concern the status and quality of the journals. Impact

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2 China as leading the way in the 'East' both in terms of the volume and intensity of research (Marginson 2016).

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factors were also considered. However, two different types of impact factors were found attached to each Chinese journal, which are 'Integrated Impact Factor' ('Fuhe Yingxiang Yinzi') and 'Comprehensive Impact Factor' ('Zonghe Yingxiang Yinzi'). The difference is explained in the China Knowledge Resource Integrated Database (CNKI 2016) webpage as follows:

> *'The major difference between integrated impact factor and comprehensive impact factor lies in the coverage of statistics. The scope of Integrated IF contains the statistics from not only journal articles but also master & PhD thesis and conference papers'* (复合影响因子与综合影响因子的区别在于统计范围的不同，复合影响因子的统计范围不仅包含期刊，还包含了博硕士论文和会议论文)'

The focus of analysis is on the 'articles' published periodically in each journal and therefore neither the conference papers nor thesis are included. Based on this, 'comprehensive Impact factor' is used to select the journal. As shown in Table 1, two Chinese journals and three English journals. They all calculated the impact factor based on how many times the articles published in each journal are cited on average basis in the previous two years.

	Journals	*(Comprehensive) Impact Factor*
Chinese	Journal of HE	1.391
	China HE research	1.372
English	Higher Education	1.207
	Studies in Higher Education	0.982
	Higher Education Quarterly	None[3]

Table 1: Selected journals and their impact factors[4]

Sources: CNKI (2016) and Springer (2016)

The selected Chinese journals are sponsored respectively by Hua Zhong University of Science and Technology (*Journal of Higher Education)* and China Association of Higher Education (*China Higher Education Research*). This is in parallel to the three English journals of which two of them are sponsored by the Society of Research into Higher Education (SRHE). *Higher Education* is 'recognised as the leading international journal on higher education studies' (Springer 2016) and the *Journal of Higher Education* is equally recognised at the leading journal of higher education studies in the Chinese speaking world.

String for search of themes and methodology
Following the pilot study, work began on the main data collection and analysis. Once the papers were collected into the two libraries searches were carried out on the two libraries in order to compare and contrast themes and methodologies in the two countries' higher education research literature. Approaches to analysis of the libraries were based on the searches that were used by Tight (2012, p731) for the methodology and Ramirez and Tiplic (2014, p447) for the themes. These studies were used in order to build the analysis of the literature on existing research, using searches that had already generated results and findings.

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3 The HEQ does not claim any impact factor on its website. However it is widely recognised as one of the leading journals on higher education administration (e.g. see SCIMAGO).

4 For this project we used the impact factors as presented by the journals' websites – an alternative approach would be to use the SCIMAGO metrics.

As mentioned in the previous section, the pilot study highlighted the challenge of what is often called 'translation equivalence', i.e. in this project the translation of the key terms and themes into Chinese so it has the same meaning in each context. The goal of translation equivalence is commonality in understanding the key terms and themes. Therefore, equivalence of meaning, rather than literal translation, was most important. Translation problems may arise from different causes – for instance, sometimes terms cannot be directly translated without losing their meaning (for example, the term 'performance' in Chinese papers is usually related to students performance while in Europe most of the papers are concerned with institutional performance), and sometimes a term does not exist in the other language (a characteristic example is that of 'stakeholders' which was traditionally used in the English language but now has become a key term in global higher education). Regarding the topic being explored, we tried to remove the influence of the dominant culture (i.e. the UK). Ideally in cross-cultural teams researchers should isolate, to the extent that it is possible, the tendency to allow their own beliefs and values to influence the question analysed. It would help them to distinguish the relevant topics, constructs or relationships to be studied in each context. It is also important to identify the role of mediating and moderator factors embedded in each socio-cultural context and assess how this can be related to the focal topic. (For example, in the UK the NSS and the HEA mediate our understanding of 'the student experience' which is a rather neutral concept in the Chinese context.)

For this project, it was decided to combine the two main approaches that have dominated cross-cultural research in social sciences as described by the eminent cultural anthropologist Kottak (2006): the 'emic' and 'etic' approaches. The emic approach examines the phenomenon studied from within a specific context (i.e. here examine independently the two contexts – China and the UK) and holds that theory, constructs, and so on, are specific to this context. Hence, this approach requires developing specific measures for each unit of analysis and, taken to its extreme, limited or no comparisons are possible. For example, this approach would imply developing different measures of a construct, such as 'globalisation', for each context. By contrast, the etic approach examines the phenomenon analysed from outside a specific context (i.e. a construct as developed by the OECD or EU). It is concerned with assessing universal constructs, theories, and so on, and allows for developing universal measures that can be applied to all contexts. That is, following with the previous example, this approach would imply using the same instrument to measure a construct, such as 'globalisation', regardless of the context. As Morris et al (1998) suggest the emic approach offers more reliability and internal validity but the etic approach is considered more practical, in terms of time and cost and makes comparisons easier and increases external validity. Thus, researchers often use the etic approach. Accordingly, theories, conceptual models and research designs used in one culture or country are applied in others in the same way.

Within this context and following up on the challenges of the pilot study, the team reviewed the literature to identify possible 'etic' constructs – primarily focusing on meta-analysis of literature on the current state of higher education studies (cf. Altbach 2014; Kehm 2016). As a result, two constructs were identified and calibrated by the team and approaches to analysis of the libraries (one for the UK database and one for the Chinese database) were based on the searches that were used by (i) Tight (2012) for the *methodology* (Table 2); and (ii) Ramirez & Tiplic (2014) for the *themes* (Table 3). These somehow 'etic constructs' were further developed by the team to reflect some particularities and nuances of the UK and China contexts – therefore, a small number of 'added' terms emerged as a result of the calibration exercise and the study has incorporated some elements of the emic approach. The two searches of each database are constructed as follows:

(i)   **Methodology:** search for themes under the methodology terms used by Tight (2012) with a short list added of our own.

Methodology terms	Added terms
Documentary	Quantitative
Interviews	Qualitative
Multivariate	Mixed methodology
Conceptual	

Phenomenography	
Biography	

Table 2: Methodology (an adaptation of Tight's approach)

(ii)   **Themes:** a search for themes under the strings presented as developed by Ramirez & Tiplic consisting of single and group keywords (Table 2)

Group keywords	**Single keywords**
Quality	Quality, Standards, Rankings, Assessment, Evaluation
Market	Market, Competition
Management	Management, Organisation, Governance, Leadership, Transformation, Transition, Restructuring, Administration
Globalization	Globalisation, Internationalisation, Europeanisation
Technology & Innovation	Technology, Innovation, Knowledge
Performance	Performance, Effectiveness, Efficiency, Excellence, Responsibility, Accountability
Students	Students, Brain drain, Access, Equality, Inequality
Teaching & Research	Teaching, Learning, Curriculum, Research
Policy	Policy, Funding, Massification, Gender, Privatisation, Reform, Participation, Development, System

Table 3: Themes (Ramirez & Tiplic, 2014)

Findings

Overview
The project has generated both epistemological and methodological findings and surfaced the similarities and differences in the development of higher education research in the two countries. For example, differences in research and publishing conventions mean that the volume of research in China is noticeably greater, with Chinese journals publishing much more frequently than UK journals, in some cases as much as twice per month. Selection of the parallel Chinese journals to be focused on was also challenging, given the different systems of impact factors operating in the two countries and the fact that in 1995 few Chinese journals published their abstracts in English, an increasing trend over the 20 year period. Challenges of translation of language and concepts and technological incompatibility of search engines have also been interesting methodological findings. Emerging findings regarding the approaches to policy making in the two countries have indicated that 1990s policy in China tended to be presented as edict with an increasing tendency to negotiation of policy over the last 10 years. In contrast, in the UK, where policy has traditionally been based around independent inquiries such as the Dearing report, the UK appears to be moving towards centralisation of policy development, with recent White and Green papers being examples of this (Filippakou & Tapper 2016).
The project as a whole raises complex intercultural ethical issues, underlining the significance of context, time and place in research ethics. The emerging findings outlined above highlight the 'western' and 'non-western' interpretations of the research process and demonstrate the significance of this dichotomy in engaging in cross-cultural research of this kind. Despite the methodological, cultural and linguistic challenges inherent in this work, further research of its kind is crucial in developing a nuanced understanding of global themes emerging in higher education.

Detailed findings
The following sections present a more detailed overview of the findings of the project. The three snapshot years suggest a number of similarities and differences in the English and Chinese literature included in the study. This section will first highlight some key similarities and differences between

findings from journals in both countries, identifying key themes within the broad categories and following that some illustrative graphs will underline the significant elements.

Key thematic similarities and differences
As indicated in the methodology section the two libraries were searched thematically under 9 key areas based on the search terms generated by Ramirez and Tiplic (2014). These themes were quality; the market; management; globalisation; technology and innovation; performance; students; teaching and research and policy. Whilst there were some limitations offered by this framework the benefits of using an established set of themes outweighed these limitations, as discussed above. Appendix IV is the spreadsheet showing the complete results of the search of the two libraries and this section will draw out the main issues with each of the nine categories.

- **Quality:** it is interesting to see that in the Chinese research literature over the three selected years there is an increasing emphasis on quality, peaking in the 2005 sample but remaining high in 2015 (incidences are 62, 165, 142). This is consistent with China's increased policy emphasis on the importance of quality in HE, particularly with regards to transnational higher education, during the 1990s (Hou, Montgomery and McDowell, 2014). In constrast in the English literature issues of quality remain constant with a slight dip in 2005, although themes around quality are evidently an important issue as the incidence of research covering this theme is high (at 35 incidences in the literature in 1995, dipping to 21 and rising again to 37 in 2015). As mentioned above the quantity of the Chinese literature is higher so incidences in the Chinese library are greater but the growth in research on quality in China is notable.

- **The Market:** the concentration of research around higher education and the market is higher in the Chinese literature than in the English literature. There is a slight increase in incidences of research on this theme in the 2005 literature in China and a slight falling away in 2015. The theme of the market seems to be of less importance in the English literature. This theme was divided into competition and the market and in both libraries the issue of the market itself was more significant than the issue of competition. Again, it is interesting to note the Chinese HE literature's concentration on this against the changing political and economic context of China itself, as it moved closer to a free market economy during the 1990s and early 2000s and this being reflected in research in higher education.

- **Management:** this was a very strongly represented theme in both the sets of literature but it was a particularly strong theme in the Chinese literature. In terms of the subthemes in this category, in the Chinese literature the areas of administration and management stood out in particular as being frequently written about in the Chinese journals. In the English literature there was also an increasing intensification in concentration on management, reflecting the increase in emphasis on new public management and neoliberal in English higher education over the 20 year period.

- **Globalisation:** the theme of globalisation showed an increase in both the sets of literature but surprisingly the incidences of research on this theme was relatively low in relation to other themes both in China and in England. In both countries there was a rise in incidences of research in this area over the 20 year period but incidences were low in both countries. In both China and England the literature particularly concentrated on internationalisation as a theme rather than globalisation more broadly. This is unsurprising given that internationalisation is seen as the manifestation of globalisation in the higher education sector.

- **Technology and innovation:** it is interesting to note that technology and innovation was a much more significant theme in the Chinese research literature than it was in the English literature. The emphasis on technology and innovation peaked in the Chinese literature in 2005 but overall there was a notably high occurrence of research in this theme in China. The subtheme of innovation was particularly prominent in the Chinese literature in comparison to the English literature. This reflects China's significant investment in technology and innovation generally but also China's funding of Scientific collaboration with higher education and its emphasis on funding Science and Technology disciplines.

- **Performance:** this theme generated interesting results as the incidence of concentration on the issue of performance was much stronger in the English literature than in the Chinese literature. In particular, research on effectiveness in the English literature stood out as being a much more significant issue in England than it was in China. Both countries saw an increase in this literature over the 20 year period but it was much more of an issue in England overall

and in 2005 it reached a peak in England. This is a particularly interesting finding and reflects the increase in managerialism and performance management in England whereas this is not as strong in China, as represented through the research literature.

- **Students:** this theme also generated interesting results as it was a more significant theme in the English literature than in the Chinese literature. The focus on students was also strong in the Chinese literature but it was more prominent in the English research. In the Chinese literature the focus on students peaked in 2005 and saw a decrease in 2015 whereas in the English literature the concentration of research literature on students saw an increase over the 20 year period. This is interesting in the context of changes in higher education policy in England and the emphasis of 'students at the heart of the system' in English HE policy documents.

- **Teaching and research:** this was the second most important theme in both the Chinese and English literature. However, this theme was the major flaw of the Tiplic and Ramirez (2014) framework as it conflated the themes of teaching and research into one category and on reflection two separate categories would have been more helpful. However, the subthemes of the category made a distinction between teaching and research and it was interesting, if unsurprising, to note that in both the Chinese and English literatures research was more significant than teaching as represented in the higher education research literature collected here.

- **Policy:** in both the Chinese and the English literature policy was the most significant issue in the higher education research literature. In the English literature focus on policy grew steadily over the 20 year period and in the Chinese literature the concentration on policy was highest in 2005. In this category the subthemes also generated very important findings, with development being the most important subtheme in both countries' literature but of particular significance in China. The other two important subthemes for China were reform and the system and whilst these were also important in the English literature, they were particularly prominent in China. In particular, the issue of reform in higher education was a much more prominent theme in China than it was in England, peaking as a theme in China in 2005. This reflects the higher education context in China with their higher education reform beginning in the late 1990s and evidently being researched in higher education literature well into the next decade.

In addition to the analysis of individual themes above, it is interesting to see the differences in the emphasis in research when the themes are ranked in overall importance. Policy and teaching and research were the first and second most important themes respectively in both countries. However, following these top themes there is a divergence in emphasis between the two countries with Chinese literature focusing more on technology and innovation as its third most important theme and the English literature focusing on performance as its third most important theme. The Chinese literature's fourth most significant theme was management whereas the English literature's fourth theme was students. These findings are particularly interesting in identifying priorities in the two sets of research literature and the findings reflect the priorities and political contexts of the two different countries over the 20 year period.

Further analysis and representation of key similarities and differences
The following graphs present a more diagrammatic representation of the findings and demonstrate key similarities and differences across the two countries' literatures, presenting graphs which represent some of the key issues generated by the analysis of the data in the two literature libraries.

Includes: Assessment, evaluation, quality, rankings and standards

Similar focus on quality

The graph shows the changes in the percentage of the theme 'quality' in both the Chinese and English database over 1995, 2005 and 2015. The figures suggest a similar trend in both the English and Chinese literature for *Quality* with the term dropping in usage from 1995 to 2005 followed by an increase in usage from 2005 to 2015. This increase is more prounounced in the Chinese literature, increasing from 30% to 41% of abstracts and titles including quality and assoiated terms. While the trend is the same, the drop from 50% in 1995 to 32% in 2005 for the English literature is particularly interesting.

Unsurprisingly, the strongest featuring keyword was *quality*, followed by *assessment* and *evaluation* in the Chinese dataset when accounting for all years. Interesingly, *standards* showed the strongest upward trend growing from 3% of abstracts in 1995, to 7% in 2005 and then 14% in 2015. For the English dataset, quality remains the strongest featuring term across all three years, although it experiences an overall drop. Of particular intrest is the movement in *rankings*, starting at 2% in 1995, dropping to 0% in 2005 before climing to 9% in 2015 in the English literature.

Similar focus on the market

The graph shows the changes in the percentage of the theme *market* in both Chinese and English database over 1995, 2005 and 2015. *Market* has one of the lowest incidences of all the themes in both the Chinese and English literature. While there is an upward trend from 1995 to 2015 in the English literature, there is a steep drop in the Chinese papers falling from 17% of papers in 1995 to 10% in 2005, plateauing into 2015 at the same level.

Although *market* is the strongest featuring keyword for both datasets, *competition* follows an interesting pattern in both the English and Chinese dataset, starting at a lowpoint of 2% and 3% respectively in 1995 before hitting 5% for both in 2005, plateauing for the Chinese dataset to 2015, while dropping in the English dataset to 3%.

Very similar focus on globalisation

The percentage of the research which explored *globalisation* was low and kept at a low level from year 1995 to 2015, under 6% in both of the two countries, even though the ratio increased from around 1%. The change of this percentage follows the same trend in both England and China. From year 2005 to 2015, this ratio jumped from around 2% to slightly more than 5%.

Includes: Development, funding, gender, massificaiton, partification, policy, privatisation, reform and system

Similarities in policy

The emphasis on policy was strong in both literatures. Between 1995 and 2005, higher education articles in the UK data shows a steady increase from 63% in 1995 to 67% in 2005, whereas those that have a *Policy* focus in China demonstrates a slight decrease from 72% in 1995 to 70% in 2005. Between 2005 and 2015, research in the UK data shows a moderate increase in the emphasis on *Policy* (67% in 2005 and 70% in 2015), though not as steep as the increased emphasis on *Policy* in China (70% in 2005 and 84% in 2015).

Differences in management

From this graph it is clear that there are two totally opposite trends in the research which focused on *management* in China and England from year 1995 to 2015. In the Chinese data, the amount of this kind of research hovered at the similar level at around 35% from 1995 to 2005. From 2005 to 2015, Chinese research on *management* was more common and the percentage among all the research rose to nearly 50%. In contrast, in the UK data, the percentage of the research which talked about *management* increased slightly from 30% to 38% from year 1995 to 2005. From 2005 the percentage went down to 28%. In 1995, the difference of the percentage was around 5%; and in 2005 the research on *management* in the two countries was on a par; but the difference grew to 20% in 2015.

Differences in technology and innovation

The graph shows the changes in the percentage of the theme 'Technology and Innovation' in both the Chinese and English database over the years of 1995, 2005 and 2015. In general, the Chinese papers exhibit an overall higher frequency of studies centring on themes of technology and innovation. Especially in 1995, the percentage was stable at 54% which means that nearly half of the papers in the selected Chinese journals related to technological and innovative issues. However, this number dropped down to 37% in 2005 but increased in 2015 to the percentage of 49%.

The fluctuation in the English papers is not as dramatic as in the Chinese counterpart but shows a different trend. 2015 is the year when 'Technology and Innovation' became more of a hot topic in the selected English journals, and accounted for 24% in the total number of English papers. This percentage was similar to 2005 (23%) but was significantly higher than in 1995 (11%).

In all, the two curves show that the theme 'Technology and Innovation' remains very strong in the Chinese academic sphere despite a slight dropping in year 2005; the focus on this theme become increasingly popular in the English academic sphere over the past decade but its relative occurrence is still not on a par with the Chinese literature in 2015.

Differences in students

Across a 20 year period with 1995, 2005 and 2015 at decade intervals, research interests in *students* both in UK and China shows a pattern of decrease with the distinction that higher education articles in China were considerably less likely to engage with *students* (30% in 1995 and 25% in 2015) than those in England (59% in 1995 and 55% in 2015).

Differences in performance

This graph shows the changes in the percentage of both Chinese and UK papers being published on the theme *Performance* in the respective year of 1995, 2005 and 2015. Performance is more common in the UK papers in contrast to the Chinese papers across the three years and the percentage gap in each respective year is significant.

The largest gap is shown in 2005 when 51% of the UK papers concentrated on the theme of *Performance* but only 13% of Chinese papers published around the same theme. This gap decreased in the year 2015 when the percentage of UK papers decreased to 46% and the Chinese papers shows a surge from 13% to 17%. In 1995, only 10% of the Chinese papers focused on the theme of performance.

Differences in teaching and learning

The figure illustrates that scholarship having a *Teaching and Research* focus has witnessed a contrasting trend between UK and China. Research focusing on *Teaching and Research* in UK has experienced a modest increase from 63% in 1995 and 72% in 2005 and then a steady decrease to 70% in 2015. While higher education articles that have the *Teaching and Research* focus in China have seen a significant decrease from 65% in 1995 to 50% in 2005 then moved upwards with 59% in 2015.

Discussion and conclusions

The data presented above demonstrates that there are both similar and distinctive trends in the data collected and analysed in the Chinese and UK databases. Considering the similarities and differences in the data some tentative issues can be drawn out from the data and it appears that there is both convergence and divergence in research focus in the two countries.

Convergence and divergence
It is unsurprising to note that there are convergences in many of the themes that are prominent in the research literature of the two countries, given the fact that globalisation and internationalisation are driving similar trends across the globe, particularly in emphasis on research (Marginson, 2016). In particular, the increasing emphasis on global rankings forms a backdrop to convergence in research themes (Hazellkorn, 2014; Locke, 2014) and the findings of this study in terms of the similar emphasis on research in China and England comes as no surprise. The strongest similarity in focus in the two sets of research literature was on policy and given the changes to higher education since 1995 this also comes as no surprise. Both countries have undertaken extensive reform of their higher education systems with development and massification being major policy issues. In the Chinese literature this was characterised through higher education reform but in the English literature it appeared more in the research as development and research on the system of higher education.

In terms of divergence, the project generated interesting findings with regards to the overall priorities represented by the analysis of the literature. The Chinese literature was very clearly more likely to engage with Technology and Innovation than the English literature and this is a clear reflection of the vast investments in Science and Technology in China and the emphasis on STEM subjects in funding of universities. Technology and innovation is dominant in China's strategies for higher education and this is particularly clear in their most recent policy document 'Double World Class' as this has a strong emphasis on excellence in the disciplines with Science at the forefront of this. The English literature's strong occurrences in terms of performance was also of particular interest and also reflected a very strong trend towards effective performance management in UK higher education institutions.

There are similarities in the literature in the two countries that indicate that there is divergence in issues that are of global significance and similarity. These issues most notably include *globalisation* which was surprisingly low in its occurrence but was similarly low in both countries and *quality* and the *market* were also prominent themes and all showed a notable increase in the literature in the two countries over the twenty year period. As mentioned above, this can be seen in the context of the global higher education sector where league tables and rankings are driving convergence in the focus of research and the intensification of the market in higher education may have encouraged common trends in these global issues being reflected in both literatures in China and the UK.

It was noticeable that the issues which are more contextualised in cultural, social and economic characteristics showed divergence in the two literatures. Divergent trends were noted in particular in the intensity of focus on *management* and on *technology and innovation* with the intensity in these two themes showing a particularly marked increase in China in the last decade. Detailed interpretation of themes such as management require further qualitative investigation which is beyond the scope of this small scale project but it is possible that this change can be explained through changes in centralisation of policy and its implementation in China. Increasing autonomy and gradual loosening of central control over universities in China may have resulted in an increasing focus on the issues of

management in higher education. With regard to technology and innovation, the huge investment in China into Science and Technology may be behind the increasing focus on this in the higher education research literature. The reduction in funding and lack of clarity in policy directives in higher education in the UK in terms of Science and Technology may be a contributing factor in the lower occurrence on this in the UK literature than in the Chinese literature.

Limitations and future research

This was a small scale project which aimed to scope out some of the characteristics, issues and challenges of engaging in cross cultural research on higher education literature in the UK and China. It therefore has limitations which would need to be considered by others undertaking a similar project, particularly if this were to be on a larger scale. These limitations include:

- **Analysis of abstracts only**: this scoping study undertook thematic and methodological analysis only using the abstracts of the papers in the two libraries. The reasons for this were to do with the scale of the project and the Chinese literature library being so vast and also the limitations of the search engines for the Chinese literature. This posed some problems for the methodology search as it became evident that authors do not tend to give extended detail of methodology in abstracts. A future and larger study would do better to engage with a full analysis of full texts of articles.

- **Frameworks used**: it was decided to use an existing framework for analysis and the Tiplic and Ramirez (2014) framework was selected from a range of others. The conflation of research and teaching in this framework was a limitation, however, and despite subthemes being divided into research and teaching, a future study might do better to delve more deeply into the issue of research, given that this is such a crucial theme. The methodological search was based on work carried out by Tight (2012) and a small number of research terms were added to this. However, as mentioned above, the methodological search was one of the disappointing areas of the study as analysis of the abstracts generated very limited results. A future study might engage in more depth with comparative analysis of methodological frameworks and philosophies as it would be interesting to see how these might be similar or different in the two countries and could shed more light on the paradigms of the research in HE in England and China.

- **Qualitative analysis**: Future projects could also engage in qualitative analysis of article abstracts to draw out details that were not apparent in the quantitative analysis of the two libraries. A qualitative analysis would enable a more confident interpretation of the similarities and differences in the literatures. For example: (i) a meta-ethnographic approach (Noblit & Hare 1988) could be used to categorise further the main findings under key concepts. The conceptual framework – particularly what is meant by West and East within the context of Occident/Orient– can be further developed by a qualitative analysis of the data contributing to the development of an analytical language for the debate on global higher education; (ii) an analysis of institutional power could also be approached through an examination of the institutional location of the authors of the papers. It could potentially contribute to the debate on global elites and the extent to which this is the case within the context of higher education studies

- **Technological challenges in data gathering and analysis**: on starting the study we did not expect to meet so many technological challenges in gathering and analysing the data across the two contexts. The research started with the English data, beginning by filtering out papers that did not focus on higher education in the UK and searching using 'The Web of Science' for two of the UK journals. The aim was to model the gathering of the Chinese literature on the same approach. However, when we began importing the Chinese data it became apparent that the search engines to be used on the Chinese side were complex and we began using China/Asia on Demand but changed this early in the project to the CNKI or Chinese National Knowledge Infrastructure. Even using this engine, we were not able to filter in exactly the same way as the English search engines. The CNKI did not allow for the import of the journal as a whole package either by year or by whole journal issue. This meant a great deal of manual input. Due to this mismatch in the search engines we had to begin the whole data gathering process from scratch in order to ensure as much similarity as possible between the two samples. The UK data was also not without its challenges as one of the journals we selected, Higher Education Quarterly, had to be inputted manually from the website. Both this part of the data and the Chinese data set had to be checked manually for 'rubbish' that came along with the search. These challenges slowed the study considerably and meant we were learning these technological issues as we progressed and there was less time available for qualitative analysis of the full data set and much of the time was spent in building the databases. However, these challenges represent an important part of the findings

of this study. A future study could learn from the experience of this challenge and perhaps begin by carefully considering compatibility of electronic search engines.

- **Language and academic cultures:** it would not have been possible to carry out this study with a monolingual or monocultural research team. There were many issues of translation not only in terms of language but with regards to academic cultures. Differences in publishing traditions and formats were foremost in the challenges experienced here. One of the major benefits of the project, however, was bringing together a cross cultural team and the learning experiences for all involved were another crucial outcome of the study. For cross-national and cross-cultural research a pilot study and translation equivalence and calibration exercise within the context of the etic and emic approaches are strongly recommended and can be further explored.

- **Sampling:** The issue of 'sampling' in cross-national projects can also be further explored – for example, the complexity of journal impact factors can be a study for each own sake or the intensity and volume of the research and having much more material from China (90%) than the UK (10%) raise issues of comparability and generalisability of the research findings. A representative range of case study countries in Europe and East Asia, for example, could shed light on the complexities and the dynamics between west and east as well centre and periphery within the contexts of these two continents.

The project has generated a range of methodological and thematic issues of interest as described above. Further research in this area would be able to build on the lessons of this project, particularly with regards to the challenges of compiling Chinese data in a UK context. As mentioned, these included translation and technology compatibility issues which required a rethinking of approaches to collecting and analysing data. Future projects could also engage in qualitative analysis of article abstracts to draw out details that were not apparent in the quantitative analysis of the two libraries. A qualitative analysis would enable a more confident interpretation of the similarities and differences in the literatures. The limitations of the size of this study meant that a detailed analysis of the policy documents was beyond the scope of the work. However the data contained in the two libraries remains accessible and further funding (which would need to include support for Chinese native speakers with research skills) could carry out further analysis of the data.

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APPENDICES

I. **Translation of search terms for Themes/Methodology**

1 Quality 质量 素质：
Standards 标准 规范, Rankings 排名 排行榜, Assessment 评价 评估 评定, Evaluation 评价评估 评定

2 Market 市场 市场化 市场的：
Competition 竞争

3 Management 管理 经营:
Organisation 组织 机构 组织机构, Governance 治理,
Leadership 领导 领导权 领导力, Transformation 转化 变换 转型,
Transition 过渡 转变 转型 ,Restructuring 重组 重构 结构调整,
Administration 管理 行政 行政管理

4 Globalisation 全球化:
Internationalisation 国际化, Europeanisation 欧化

5 Technology & Innovation 技术和创新 技术创新 技术与创新
Technology 技术 工艺, Innovation 创新 改革, Knowledge 知识 学识

6 Performance 绩效 成绩:
Effectiveness 有效性 效果 效能, Efficiency 效率, Excellence 卓越 一流,
Responsibility 责任 职责 , Accountability 责任 问责

7 Students 学生
Brain drain 人才流失 人才外流, Access 入学 准入,
Equality 平等 公平, Inequality 不平等 不公平

8 Teaching and Research 教学科研 教学与研究 教育与科研
Teaching 教学, Learning 学习, Curriculum 课程, Research 科研 研究

9 Policy 政策 方针
Funding 经费 筹资 拨款, Massification 大众化
Gender 性别, Privatisation 私有化 民营化 私营化,
Reform 改革 变革, Participation 扩招 招生, Development 发展,
System 系统 体制 体系 制度

10 Methodology 方法 方法论

Documentary 文献法

Interviews 访谈法

Multivariate 多元 多因素 多变量分析

21

Conceptual 理论思辨 理论建构

Phenomenography 现象分析法

Biography 传记法

Quantitative 定量 量化 量的研究方法

Qualitative 定性 质性 质的研究方法

Mixed methodology 定性和定量 量化和质性 混合法

II.　List of Chinese Journals considered for the database

Title	FI	Description Scope	Link
1. Journal of Higher Education (高等教育研究)	2.069	\<Journal of Higher Education> is the source journal of CSSCI (Chinese Social Sciences Citation Index). It is recognised as one the most authoritative academic journal in higher education research area. The journal is jointly hosted by Huazhong University of Science and Technology and national higher education research association. The journal is founded in year 1980 and circulated domestically and at abroad. The press of the journal is based in Huazhong University of Science and Technology. \<Journal of Higher Education> is a comprehensively academic and theoretical journal. The journal now opens the column of 'HE reform and development', 'basic theory in education', 'HE system and structure', 'research on institution', 'teaching theory and teaching reform', 'moral education and aesthetic education', 'higher vocational and technical education', 'degree education and postgraduate education', 'the history of HE', 'international and comparative HE', 'Exploration and debate' and 'discipline development in HE'.	http://www.jyqk.org/qikan/about1007.html
2. China Higher education Research (中国高教研究)	1.59	The journal introduces the frontiers of knowledge in the field of higher education and publishes academic articles and reports with quality. The targeted readers are ranging from teachers and managers in the university to researchers or administrative members in the research institutes and societies. The major topics include: Theories of Higher Education; Forum of University Chancellors; Higher Education Reform and Development; Academic Degrees and Graduate Education; Evaluation and Discipline Construction Research; Exploration and Debate; Professional and Vocational Higher Education Research; Moral Education and the Ideological and Political Work Research.	http://zggjyj.qikann.com/

III.　List of policy documents

China:

- 1985-Decision on Educational System Reform

- 1993-Outline for Reform and Development of Education in China

- 1998-Action Plan for Revitalization of Education in the Twenty-First Century

- 1999-Decision on Deepening Educational Reform and Advancing Essential-Qualities-Oriented Education

- 2003-Regulations of the People's Republic of China on Chinese-Foreign Cooperation in Running Schools (Which has an English version)

- 2004-Implementation Measures for the Regulation of the People's Republic of China on Chinese-Foreign Cooperation in Running Schools

- 2004-Action Plan for Revitalization of Education 2003-2007

- 2010-National Outline for Mid- and Long-term Education Planning and Development 2010-2020

- 2011-Suggestions of Undergraduate Teaching Evaluation for Regular HEIs

- 2011-Implementation Measures and indicators of Undergraduate Teaching Evaluation for Regular HEIs

- 2012-Suggestions of Enhancing Quality in Higher Education

- 2015-Notice of the State Council on Issuing the Overall Coordination Plan Advancing the Construction of World First-class Universities and First-class Disciplines

- 2015-Abstract for the Interim Evaluation Report of National Outline for Mid- and Long-term Education Planning and Development 2010-2020 (which is the Higher Education Part)

UK

- The Dearing Report 1997

- Kennedy Report (1997) – Learning Works – Further Education

- Fryer Report (1997) – Continuing Education and Lifelong Learning

- Bett Report (1999) – Staff Pay and Conditions in Higher Education

- Moser Report (1999) – Improving Literacy and Numeracy

- NAO (2002) – Individual Learning Accounts

- Roberts Report (2002) – Research Careers

- Lambert Report (2003) – Review of Business University Collaboration

- Roberts Report (2003) – Review of Research Assessment

- Schwartz Report (2004) – Fair Admissions to higher education

- CUC (2004) – Guide for Members of Higher Education Governing Bodies

- Leitch Report (2006) – World Class Skills

- NIACE (2009) – Inquiry into the Future for Lifelong Learning

- The Browne Review (2010)

- Finch Report (2011) – Review of external examining

- Milburn Report (2012) – How higher education can advance social mobility

- Finch Report (2012) – Expanding access to research findings

- Pearce Report (2012) – Review of Philanthropy in Higher Education

- Wilson Report (2012) – Review of University Business Collaboration

- IPPR (2013) – Securing the future of Higher Education in England

- The Green Paper (2015)

- The White Paper (2016)