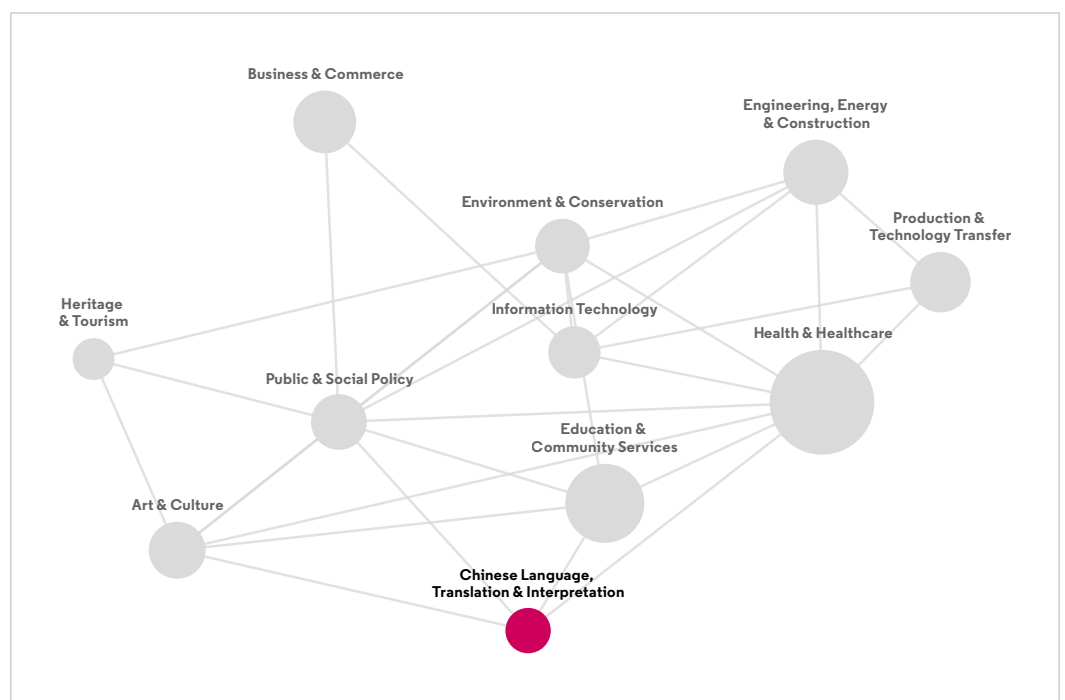




The societal impact of research undertaken by Hong Kong universities:

# Chinese Language, Translation & Interpretation

A synthesis of the RAE 2020 impact case studies



Partnered with:



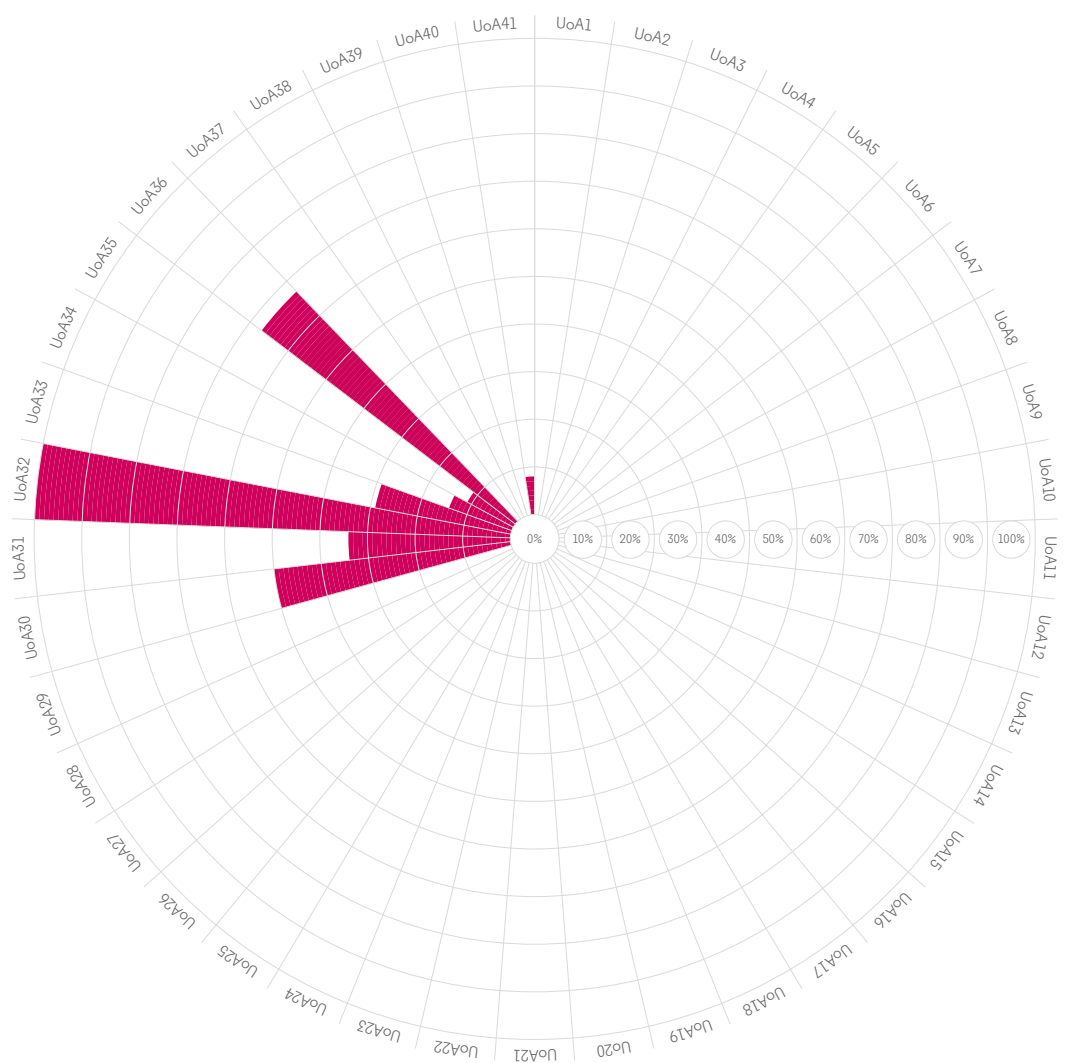
This report is part of a series of outputs that examines the impact of research arising from eight universities based in Hong Kong and funded by the University Grants Committee (UGC). The report focuses on the Impact Case Studies (ICS) produced by the UGC-funded universities as part of their response to a Research Assessment Exercise (RAE) in 2020. The overarching report - *The impact of research undertaken by universities in Hong Kong: A synthesis of the RAE 2020 impact case studies* – is accompanied by 11 thematic reports that examine the nature of research impact in different areas, ranging from Arts & Culture to Health & Healthcare. The 342 impact case studies that are analysed through this body of work are also available on a searchable database that is posted on the UGC’s website.

**The Chinese Language, Translation & Interpretation cluster contains 17 impact case studies (ICS) from two primary topics identified in the topic modelling. The Chinese Language, Translation and Interpretation cluster is one of the smallest of the clusters analysed, representing 5% (i.e. 17/342) of ICS submitted to RAE 2020.**

The impact wheel in Figure 1 illustrates how the Chinese Language, Translation and Interpretation cluster is distributed across the 41 Units of Assessment (UoAs) used for RAE 2020.

For example, not surprisingly, all three ICS (i.e. 100%) for UoA 32 (translation) were included in the Chinese Language, Translation & Interpretation cluster. Two of three (67%) ICS in UoA 36 (philosophy) were also included along with five out of 10 (50%) for UoA 30 (Chinese language & literature). The remaining ICS came from English language & literature (UoA 31, n=2), linguistics & language studies (UoA 33, n=2), history (UoA 34, n=1), area studies, cultural studies and other arts/humanities (UoA 35, n=1) and education (UoA 41, n=1).

**Figure 1:** Impact wheel for the Chinese Language, Translation & Interpretation theme (n=17)



<sup>1</sup> See methodological annex for details.

# The impact of Hong Kong universities' research: **Chinese Language, Translation & Interpretation**

**Table A shows the most salient features of the case studies in terms of beneficiaries, location, type of impact and time lag. It gives the percentage of case studies in this cluster that were tagged with sub-codes under these code headings, as well as the percentage of case studies tagged with those sub-codes in the entire sample of 342.**

The 17 case studies in this cluster impacted beneficiaries in three key sectors under the classification of the Hong Kong Standard Industrial Classification: 71% Education, 41% Arts, entertainment and recreation, and 29% the Human health and social work activities sector. The key socioeconomic group was children, with 47% relating to this group, followed by university students (24%) and citizens/communities (24%). The primary decision taker group involved in the impact was NGOs/third sector at 6%. Beyond Hong Kong (88%) and the Greater Bay Area (12%), these case studies primarily had an impact in the United States (29%) and Singapore (24%).

The most salient type of impact was informing procedures, practices or protocols (59% of case studies in this cluster). This was followed by changing public attitudes, behaviours or knowledge (35%) and changing practitioners' attitudes, behaviours or knowledge (18%). Interestingly, compared to all ICS a higher percentage of case studies from this cluster informed procedure, practice, or protocol (59%). Moreover, the underpinning research in this cluster was started in 2010 on average, compared to 2006 for the whole sample. The median publication date for this cluster was 2015, which mirrored the publication date for the whole sample.

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On reading the ICS in the Chinese Language, Translation & Interpretation cluster it was evident that the majority of ICS could be grouped into three main subthemes: curriculum and pedagogical development; public engagement; and information technology.

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**Table A:** Some salient features of research impact identified in the Chinese Language, Translation & Interpretation cluster (n = 17)

<b>Beneficiaries of impact (top mentions)</b>	<b>% of <u>cluster</u> impact case studies</b>	<b>% of <u>all</u> impact case studies</b>
<b>Hong Kong Standard Industrial Classification</b>		
Education	71%	18%
Arts, entertainment and recreation	41%	14%
Human health and social work activities	29%	34%
<b>Sociodemographic group</b>		
Children (under 18)	47%	20%
University students	24%	6%
Citizens/communities	24%	17%
<b>Decision taker group</b>		
NGOs/third sector	6%	17%
<b>Location of impact</b>		
Hong Kong	88%	75%
Greater Bay Area (excluding Hong Kong)	12%	3%
Mainland China (excluding Hong Kong and GBA)	0%	12%
United States	29%	32%
Singapore	24%	13%
<b>Type of impact (top mentions)</b>		
Inform procedure, practice or protocol	59%	52%
Change public attitudes, behaviours or knowledge	35%	30%
Change practitioners' attitudes, behaviours or knowledge	18%	31%
<b>Elapsed time</b>		
	<b><u>Cluster</u></b>	<b><u>All</u></b>
Median year of research commencement	2010	2006
Median year of publication date	2015	2015

## Curriculum and pedagogical development

One of the most interesting examples of how university research has impacted on Hong Kong society is a group of ICS that describe academic engagement and support following the reintroduction of classical Chinese texts into the secondary school curriculum in 2015. One case study describes the work of a professor at Hong Kong Baptist University who was instrumental in developing the policy for the reintroduction of classical Chinese set texts, following their removal from the curriculum in 2005. The researcher had been a committee member of the Curriculum Development Council since 2013 and by virtue of this position made the case that understanding such text was critical in gaining proficiency in the Chinese language. Following the change of policy, the researcher created and delivered training courses to secondary school teachers on the selected classic set texts and developed a school-based curriculum for one secondary school. An ICS from The Education University of Hong Kong similarly contributed to the establishment of a progressive learning approach for Chinese literacy and moral development in around 56 schools in Hong Kong. A set of school-based curricula, teaching materials, online and multimedia resources were created to assist the teaching of classical Chinese language and culture. The teaching materials and exercises have been uploaded to three project e-platforms, allowing free public access to the material. A third – and somewhat different example – of impacting on school curriculum and pedagogy is described in an ICS from City University of Hong Kong

which promoted uses of psychology through creative and positive education in different Chinese cities. For example, the Linzi Creative and Happy Education Project was created for the Department of Education, Linzi County, Shandong. Sixty local secondary school teachers participate in the project promoting the principles of psychology to education and everyday life in Chinese society. In all three cases, the researchers involved in these example ICS generated significant media interest and thus had broader public engagement impacts.

## Public engagement

In addition to the three examples above, a standout example of a public engagement impact was a public lecture that attracted an estimated 20 million viewers worldwide. The research has focused on East-West comparative studies, especially in literature and culture. The researcher argues that it is not cultures that get into conflict with one another but the interests of nation states. His aim, therefore, is to promote mutual understanding across cultures. With this in mind, he delivered a 2016 televised lecture on East-West cultural encounters for Phoenix Satellite TV as part of their Century Forum series. The lecture discussed East-West cross-cultural understanding and offered a corrective of some misconceptions about China and Chinese culture, making a case for greater cultural tolerance and understanding. This example illustrates the significant reach of research-informed public engagement. However, it is important to acknowledge that some ICS naturally focus on specific groups of people. For example, an ICS from Lingnan University described how different disadvantaged groups can be

empowered through translating and editing film subtitles. This impact is based on the idea that translation can both perpetrate and mitigate existing economic and political inequalities. The ICS describes how the researchers are working with different communities to facilitate a reduction in inequalities and discrimination created through translation. The ICS describes two different approaches. The first is translating and editing subtitles for films that are aiming to raise awareness and supporting for specific marginalised groups that face discrimination based on their ethnicity, disability status, gender or sexual orientation. The second is by supporting the translation of vulnerable languages, which in this instance is Seediq. This included the researchers advising Seediq translators, publishing annotated Seediq translations, producing language learning aids, and by raising the visibility of Seediq translators. Another example comes from the Department of Japanese Studies at The Chinese University of Hong Kong which focuses on raising awareness and knowledge of Japanese popular culture in Hong Kong and thereby improving Japan-Hong Kong cultural relations. The research underpinning the case study has challenged and to a degree redefined the current understanding of Japanese popular culture in Asia. This has included a series of public lectures frequently held in museums, libraries, convention centres, universities, and secondary schools in Hong Kong, including at the 4th I-Care Book Festival in Hong Kong in 2019. In addition, the researchers engaged with media including TV and radio interviews, columns and articles in magazines and newspapers, and YouTube video sharing. For example, in January 2018, one of the researchers was interviewed by BBC News on Japanese culture in Greater China.



## Information technology

An interesting cluster of ICS emerged at the intersection between Information Technology and Chinese language. For example, researchers at The Chinese University of Hong Kong developed the Chinese Ancient Texts Database (CHANT). CHANT consists of seven digital traditional and excavated ancient Chinese texts databases and includes more than 80 million characters. It has become a standard reference and is currently subscribed by users in 15 countries across Asia, Asia Pacific, Europe, North America and Scandinavia, and attracted more than two million accesses in the last six years. The database is used by scholars around the world with one user (Princeton University, US) describing “CHANT [as] one of the few truly indispensable research tools in premodern Chinese studies today.” The creation of associated teaching material has enabled the database to reach beyond academia and to support change in secondary education curricula. Another example of a research database with wider functions, albeit one that is no longer maintained, is the ‘Multi-function Chinese Character Database’ developed by researchers at The Chinese University of Hong Kong. The captioned database facilitates the teaching and learning of the Chinese language by tracing the genealogy of Chinese scripts alongside innovative visual gadgets (such as “componential trees/formulas”). Following its release in 2014 (and upgrade in 2018), the database recorded over 10 million accesses and over 60 million searches, amounting to an average of 32,000+ searches per day. During peak hours, the database is often accessed simultaneously by as many as 500 users. Although the database is aimed at teachers and other educationalists, a user survey discovered that they only counted for about one third of access.

Perhaps a less esoteric example is an ICS submitted by The University of Hong Kong about the development of an app, Newssary, a Chinese-English bilingual glossary aimed at courtroom interpreters. The idea for such a tool arose from over 20 years of research focused on legal translation and judicial interpreting within the context of Hong Kong’s bilingual courts. While 90 percent of the Hong Kong

population is Cantonese-speaking Chinese, English remains the dominant language of the High Court. The research illustrated the powerful role of the interpreter and the relationship between linguistic competencies and social inequalities. Additionally, the research also revealed frequent inaccuracies in interpretation, especially omissions or distortions, when interpreters failed properly to identify the equivalent of a term in the target language. This confirmed the importance of bilingual glossary compilation. Newssary – and its associated website (Resources for Interpreting, <http://www.interpreting.hku.hk/>) - makes a unique contribution through continuous updating and is refreshed with the most cutting-edge content from current world affairs. It includes both Traditional and Simplified Chinese translations of English terms (and vice versa). New terms, including buzzwords, slang, and idioms are added to the database to keep up with the natural evolution of language and with the times. Newssary has been downloaded by over 17,500 users around the world since it was officially released to the public on 24 September 2017 and Resources for Interpreting has received over 170,00 page visits.

Whilst Newssary was developed with courtroom interpreters in mind, it has also been picked up by healthcare workers. This connects to another ICS which does not neatly fit into the three subthemes above. This ICS, from Hong Kong Baptist University, focuses on improving medical interpreting services in Hong Kong. As in many countries, ethnic minorities who do not speak a dominant local language have difficulty in accessing healthcare services without the aid of interpreters. The underpinning research had shown that interpreting services were provided mainly on an ad hoc basis where most interpreters had received no training specific to medical settings. This evidence was used to advocate for policy changes regarding the provision of interpretation services and the Hospital Authority now stipulates the provision of medical interpreting training courses to support this policy change. By 2017, over 100 interpreters with 17 language backgrounds had been trained and subsequently delivered targeted interpreting in over 10,000 cases.

# The characteristics and translation of the underpinning research

**Table B provides the salient features of the underpinning research. It provides bibliometrics as well as information on the impetus for the research and mechanisms/channels of dissemination.**

22 outputs from this cluster are indexed on the Web of Science, which have a mean citation score of 1.45. This is lower than the mean score of 4.45 for the whole sample, most likely due to disciplinary differences. The median citation score is 1.14, which is slightly lower than the median of 1.59 for all ICS. 12% of the research in this cluster

were reported to be motivated by a demand for better protocols, practices, or policies, and 41% were driven by researcher curiosity, while 12% sought to follow on from previous work. The main form of co-production and collaboration was academic and public sector partnership (29%), and the researcher was involved by being referenced as an expert or advisor (29%) and through sector collaborations (12%). The research findings were disseminated primarily through educational and training materials (76%) and media coverage (59%), also garnering prizes and awards (35%).

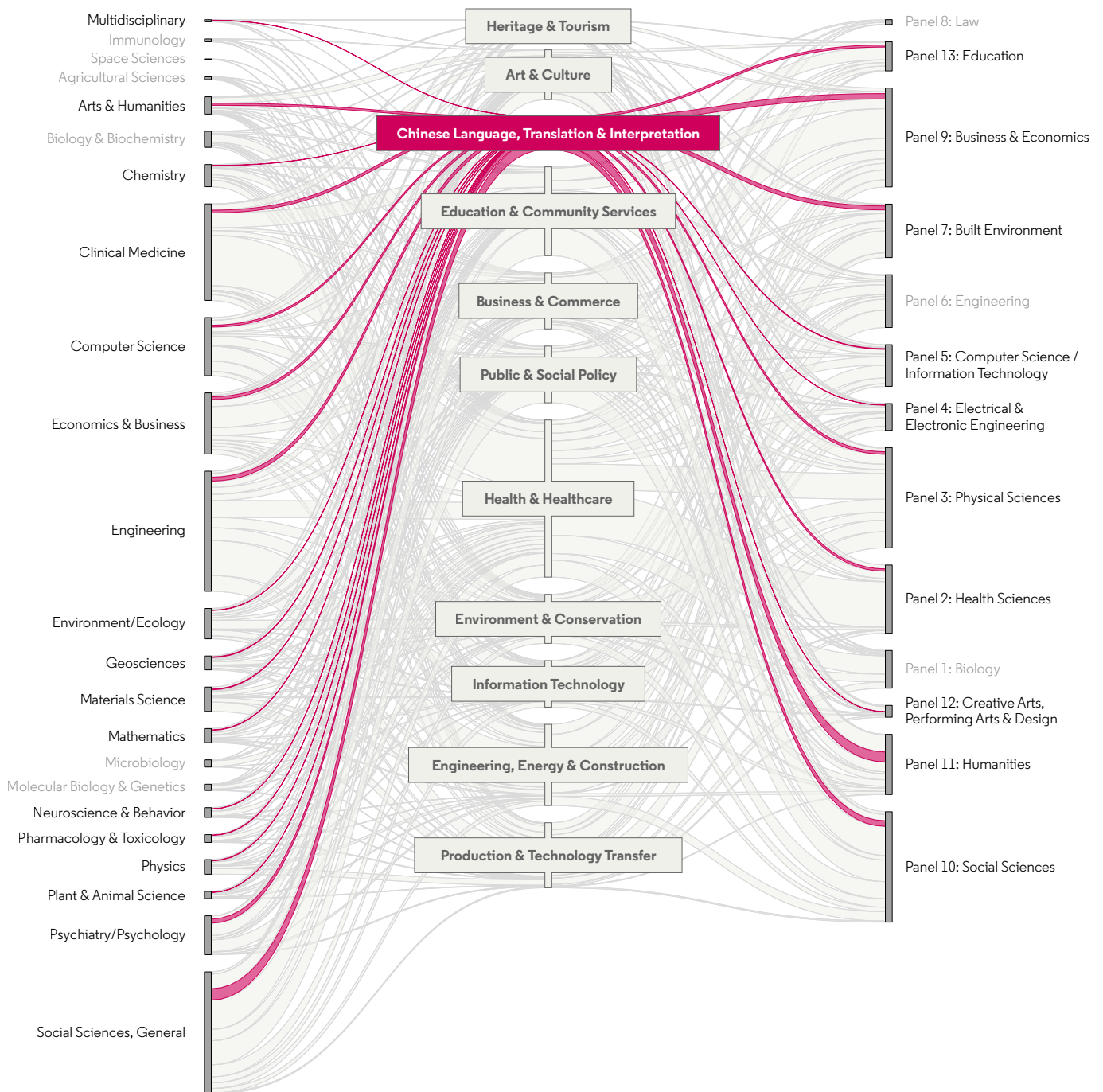


**Table B:** Some salient features of the underpinning research identified in the Chinese Language, Translation and Interpretation cluster (n = 17)

<b>Analysis of underpinning research</b>	<b><u>Cluster</u> impact case studies</b>	<b><u>All</u> impact case studies</b>
<b>Bibliometrics indicators</b>		
Number of outputs indexed on Web of Science	22	1445
Mean citation score	1.45	4.45
Median citation score	1.14	1.59
<b>Impetus for research (top mentions)</b>	<b>% of <u>cluster</u> impact case studies</b>	<b>% of <u>all</u> impact case studies</b>
<b>Pull factors</b>		
Demand for better protocols/practices/policies	12%	8%
<b>Push factors</b>		
Investigator initiated research (curiosity)	41%	12%
Follow on from research team's previous work	12%	12%
<b>Mechanisms/channels of impact (top mentions)</b>	<b>% of <u>cluster</u> impact case studies</b>	<b>% of <u>all</u> impact case studies</b>
<b>Coproduction &amp; collaboration</b>		
Academic - public sector partnership	29%	17%
<b>Researcher involvement</b>		
Referenced as expert, practitioner or adviser	29%	33%
Collaboration with sector	12%	20%
<b>Dissemination of research findings</b>		
Educational and training materials	76%	32%
Media coverage	59%	48%
<b>Codification of impact eg prizes, patents etc.</b>		
Prizes and awards	35%	33%

The alluvial diagram in Figure 2 links the underpinning research (as classified by discipline using the 23 Web of Science, Essential Science Indicators (ESI), journal categories) to the 11 clusters identified through the topic modelling and the 13 Panels used in RAE 2020. The Chinese Language, Translation & Interpretation cluster has been highlighted, with the impact pathways for the other clusters greyed out. Figure 2 illustrates the multidisciplinary nature of research impact; multiple journal categories feed into the cluster and the cluster contributes to ICS submitted to a broad range of RAE panels.

**Figure 2:** Alluvial diagram linking underpinning research with clusters and panels.



# Methodological annex

This synthesised impact report presents a cross-cases analysis of the salient features in 342 impact case studies (ICS) provided by Hong Kong universities as part of the RAE 2020 evaluation. A sequential multi-method approach was employed. The first component involved quantitative topic modelling, followed by directed content analysis. This approach allowed the essence of the impact generated by Hong Kong universities to be captured and synthesised. It is important to note that the analysis and conclusions of these reports are based on the impact as described in the ICS. That is, the authors of this report took the case studies at face value and did not verify or question the narratives provided. A summary of the methodology is given below. For more detailed information on the methodological elements of this study, please see the overarching impact report.

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## Quantitative topic modelling

Quantitative topic modelling was used to identify overarching topics in the ICS. Topic modelling is a language processing technique applied to document sets to understand the different combinations of words or phrases (topics) that are present. It is a data driven approach, meaning results are not dependent on pre-conceived notions of structure, but are instead derived from the data itself.

Python, Scikit Learn, and Gensim packages were used to implement the topic modelling. Text from section 4 (Details of Impact) from the ICS was normalized (i.e. removal of punctuation and special characters), and domain specific stop-words were removed (i.e. words that are used frequently across the case studies). Various implementations of

the topic modelling algorithm were tested, and the Non-negative matrix factorization [NMF] was found to produce the most usable results. After testing multiple models using this algorithm, and manual review by the authors, the number of topics was set to 35 to provide a balance between the breadth of groupings and granularity of topics.

In discussion with UGC, the research team developed an initial taxonomy by grouping similar topics into broader 'clusters'. For example, the topics 'finance', 'accountancy and governance', and 'economics' were grouped into a cluster titled 'business & commerce'. Topic clusters were set at the outset of the analysis to ensure cognitively similar cases were read together, thereby improving the quality of coding, analysis, and impact reports. This classification system then informed the coding and testing of case studies.

## Directed content analysis

Qualitative directed content analysis was then used to elucidate the salient characteristics of the impact narratives. This involved an iterative process of examining case studies and developing a code book to categorise their inherent features. The code book was derived from the existing literature and the domain expertise of the authors. It included four overarching categories: a) research, which captured funding source and impetus for research; b) time lags, which captured the elapsed time between the research and its impact; c) mechanisms/channels of impact, which included forms of collaboration and dissemination; and d) impact, which included beneficiary groups (e.g. young people, women, ethnic minorities), location and reach (e.g. Hong Kong, Mainland China, elsewhere), and the nature of impact (e.g. commercial, policy, practice).

Using the cloud based qualitative analysis software, Dedoose, each case study was read, and relevant excerpts were 'tagged' with the relevant codes. Multiple codes

and subcodes were attributed to individual case studies. This allowed all case studies that had been tagged with a particular code (e.g. a particular beneficiary group) to be considered as a group. Two of the study's authors undertook the reading and coding (JG and KW). Inter coder reliability was ensured by double coding 10% of the cases (i.e. each author codes the same case study) and through regular coding meetings that were used to compare code applications and adjust the code book as required. The code book was thus a 'living document' that was reviewed and revised iteratively. This process allowed for cross case analysis that was the basis of synthesised impact reports. A code co-occurrence matrix was used to identify where the overarching codes intersect (for example, instances where particular topics are associated with particular beneficiary groups). The properties of the ICS were systematically examined, and evidence was gathered by assigning segments of text to unique codes within the broader coding categories. This process allowed for cross case analysis that formed the basis of this synthesised impact report.

# Author information

**Jonathan Grant** is founding Director of Different Angles Ltd, a consultancy that focuses on the social impact of universities and research. His main interests are in biomedical and health R&D policy, research impact assessment, the use of research and evidence in policy and decision-taking, and the social purpose of universities in the 21st century. ORCID: 0000-0002-1646-3486.

**Kate Williams** is Senior Lecturer in Public Policy in the School of Social and Political Sciences at the University of Melbourne and a Visiting Research Fellow at King's College London's Policy Institute. She is currently leading an ESRC Research Grant that compares methods and cultures of research impact evaluation across the U.K., Australia and the U.S. ORCID: 0000-0002-2882-1068.

**Martin Szomszor** is founder of Electric Data Solutions and a former Director of ISI. He has expertise in knowledge engineering, machine learning, and natural language processing and was named a 2015 top-50 UK Information Age data leader for his work in creating the REF2014 impact case studies database for the Higher Education Funding Council for England (HEFCE). ORCID:0000-0003-0347-3527.

**Ryan Beardsley** is a Senior Consultant for the Academic and Government Consulting Practice at Clarivate™, where his role is to lead projects from inception to completion. He is experienced in bibliometric analysis, which he combines with data science techniques to serve clients from across the globe. Prior to working in research analytics, he spent over a decade as a condensed matter physicist. ORCID: 0000-0003-4012-6372.

**Jonathan Adams** is Chief Scientist at the Institute for Scientific Information™ (ISI). He is also a Visiting Professor at King's College London, Policy Institute. In 2017 he was awarded an Honorary D.Sc. by the University of Exeter, for his work in higher education and research policy. ORCID: 0000-0002-0325-4431.

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Different Angles Ltd is a consultancy with a distinctive focus on the social impact of universities and research. Founded by Jonathan Grant in 2020, Different Angles provides consultancy, evaluation and training to individuals and institutions in the UK and across the globe. Different Angles clients are a diverse mix of research funders, universities and private innovators & philanthropists. We aim to help clients co-create and co-design innovative, impactful and influential interventions.

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