

.....**Research Assessment Exercise 2020**

.....**Impact Overview Statement**

University: The Chinese University of Hong Kong

Unit of Assessment (UoA): Linguistics and Language Studies (33)

Total number of eligible staff of the university in the UoA: 9

(1) Context

Linguistics naturally affords opportunities for making discoveries that have the potential to benefit individuals from all walks of life. Considering the university's mission to bridge the East and West and the strength of our faculty in targeted specializations of linguistics, our UoA has strategically selected 3 groups of non-academic beneficiaries for making a unique impact of significance and reach.

(i) *Deaf and Hard-of-Hearing (DHH) individuals.* Our UoA is the epicenter of Sign Linguistics research in the Asia-Pacific region. Our research has resulted in a deeper understanding of the language and culture of the severely marginalized deaf communities in our region. We have been documenting a number of sign languages in the region and creating corpora to further research into these languages. At the university, we have initiated programs for students to learn sign language, sign linguistics, sign language teaching and sign interpretation. For the community, we have developed a model of inclusive education encouraging both deaf and hearing students to learn sign language and spoken language simultaneously. We have also created a website of sex-related concepts in Hong Kong Sign Language to assist with sex education and prevention of sexual abuse disproportionately targeted on deaf individuals, and a website of medical concepts to boost their medical knowledge and improve their physical well-being. Our research has directly resulted in a change in policy towards DHH individuals more broadly. See Impact Case Study for further details.

(ii) *Bilingual learners of Chinese.* Over 1 billion individuals speak some varieties of Chinese, and more than 200 million individuals speak Chinese as a second language. Our research in Bilingualism has provided convincing evidence of the benefits of simultaneous bilingual acquisition in early childhood and dispelled misconceptions of its harm. This research provides the foundation for working with local kindergartens in boosting children's bilingual proficiency by raising awareness of the importance of early exposure to multiple languages. In overseas communities, we partner with universities and NGOs in promoting the learning and maintenance of Cantonese and Mandarin as heritage languages in immigrant families. Our research has also documented the developmental milestones of Chinese-English bilingual development which has enabled the development of language learning apps and technology-enhanced learning aids, as well as language assessment tools for bilingual preschool children worldwide. In Hong Kong, our research has enabled the development of a method of teaching Cantonese to ethnic minority groups. Poor Cantonese proficiency can hinder access to quality public education and subsequent higher-education and career prospects. We hope to improve ethnic minorities' social access by improving their Cantonese proficiency.

(iii) *Individuals at risk of language disorder.* As much as 13% of the population has a language disorder when all etiologies are included. Without (early) intervention, a language disorder can persist throughout development which minimizes children's opportunity to achieve their fullest academic potential. Combining our basic findings in Neurolinguistics with Language Acquisition, we are creating a brain-based technology that can forecast a child's language developmental trajectory to assist clinicians in identifying those at risk of a language disorder before a diagnostic decision can be made. The test results will help parents to make an informed decision regarding whether or not to initiate early intervention to prevent the disorder from appearing in the first place. A US patent has been filed for the first phase of this technology, with a second application being prepared.

Our research has begun to make an impact on the aforementioned beneficiaries, though they are not exhaustive of our target impact groups. Our work also has implications for stakeholders of environmental policies and maintenance of cognitive abilities in older adulthood. We hope impact can be documented for these groups in the next RAE.

(2) Approach to impact

We adopt a four-phase approach in our interaction with non-academic entities to achieve impact from

our research. (i) We hold informal meetings with members of non-academic entities (NGOs, schools, clinicians, technology companies) to discuss relevant social and health problems that linguists can contribute to solving. (ii) When it seems likely that members of our UoA can contribute to finding a solution, we articulate a pathway to impact plan and attempt to seek funding for the project. (iii) We collaborate with these non-academic entities in conducting our research, including recruitment of special populations who are the ultimate beneficiaries of our research. For technology-related projects, we work closely with technology companies to seek their advice about the best pathway to impact. (iv) We rely on non-academic entities to disseminate and deliver the outcome of our research to the ultimate beneficiaries such as DDH individuals, though sometimes a licensing procedure is required. In recent years, for example, the copyrighted materials that a former PhD student created for his thesis have been licensed to a technology company for further language learning product development. Non-academic entities are important stakeholders in our pathways to impact. We have worked with dozens of NGOs, technology companies, hospitals, and preschools inside and outside Hong Kong during this assessment period. It is worth noting that our work with non-academic entities also include entities that our faculty members have founded, as encouraged by the Department. For instance, with funding support from the Innovation and Technology Bureau and the University, one social enterprise, The SLCO Community Resources Ltd. (SLCO-CR), and two technology companies, WIT Enterprises Limited (WIT) and Foresight Language and Learning Solutions Limited (FLLS), have been established by three faculty members (30% of this UoA's staff). These three entities enable us to directly serve the relevant populations of beneficiaries described in the Context section above.

(3) Strategy and plans

As a small research unit, we realize that we must conduct our work within a larger context in order to create impact. Therefore, in the future, we will more intentionally adopt vertical alignment and horizontal collaboration in our strategy. *Vertical alignment* includes an understanding of the current social policies outlined by the Hong Kong government, the university's strategic plan for impact, and social needs identified by non-academic entities. In the current assessment period, our emphasis was on downstream entities (e.g., NGOs). In the next assessment period, we will be cognizant about the Hong Kong government's policy positions, which we hope will further broaden our funding sources. We hope to double our translational and impact-related funding in the next assessment period. In this period, we have obtained 1 grant from the Innovation and Technology Fund, 5 grants from the Labour and Welfare Bureau, and 1 grant from the Standing Committee on Language Education and Research. Internally, we were awarded 8 Knowledge Transfer Fund projects and 4 Impact Postdoctoral Fellow positions. This does not include the millions in donation designated for service delivery. *Horizontal collaboration* involves working with other academic disciplines (e.g., deaf studies, pediatrics, education). While we were successful in conducting upstream interdisciplinary research in this assessment period, we were less intentional about engaging other disciplines in our downstream impact endeavors, which we hope to improve in the next assessment period.

In addition, our UoA will continue to allocate financial resources that we have accumulated through our self-financed programs to support the strategic development of impact enhancement activities. Through education of students and research staff, our research teams will improve the ways we collect evidence to demonstrate our research impact beyond the academia. Keeping pace with the latest social development in areas that seek their expertise is also what our teams will focus on in future. For example, we will highlight the relevant new government policies for internal discussion.

(4) Relationship to case studies

Our Impact Case Study will highlight the best example of our research impact. This case addresses the needs of deaf communities in the Asia-Pacific region (see Context). To create impact, our researchers adopted the four-phase Approach of formulating the problems and working closely with non-academic entities in conducting their research and delivering the impact (see Approach). The body of translational work has attracted funding from government and private sources and has been successful partly because of interdisciplinary collaboration. Lives have been improved in a measurable way and policy changes have been induced at the government level because of our research.