BRITISH COUNCIL

UNIVERSITIES FOR THE WORLD

IN SEARCH OF QUALITY IN INTERNATIONALISATION

Local perspectives and global challenges define actions to internationalise

THE CONTEXT OF EACH UNIVERSITY
Objectives and motivation serve as a guide to define strategies

FOR THE EVALUATION OF PROCESSES
Well-defined indicators help to attract partnerships, talent and even resources

LANGUAGE POLICIES
Institutional initiatives include EMI and virtual mobility

SOCIOECONOMIC IMPACT
The value of collaborative research between university and industry

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UNIVERSITIES
FOR THE **WORLD**

IN SEARCH OF QUALITY IN INTERNATIONALISATION

2020

CONTENTS

THE WEALTH
OF KNOWLEDGE
EXCHANGE

Armando Rapchan

Martin Dowle
• Director,
**British Council
in Brazil**

For more than three years, the British Council has been working with Brazilian institutions to promote the internationalisation of the higher education sector through the Universities for the World programme, involving British universities. Its core is to promote quality in research and teaching in institutions.

We concluded the third edition of the publication **Universities for the World** amid a pandemic caused by the new Coronavirus. It is too early to know the impact on Brazilian and British universities, but we know it will be considerable. Reduction of funds, whether from governments or income from international students, will be accompanied by the need for research focused on the impact of Covid-19 on societies in our countries. Certainly, geographical mobility will be reduced, and digital collaboration will have to grow.

In recent years, the Universities for the World programme has encouraged discussions about what internationalisation is and how it goes beyond the mobility of students and researchers. From now on, it will be even more important to invest in other aspects, favouring strategic approaches and maximizing the links between universities. This publication provides examples of decision making and HEI initiatives in search of quality in the process. It addresses partnerships of different types and current issues such as the evaluation of internationalisation actions and the structuring of language policies. In short, many of the issues that foster discussions on the theme in the country.

In this new scenario, indicators to measure the quality of projects and their execution have gained relevance and can guarantee the sustainability of internationalisation. Mobility will focus on training students with multicultural skills to interact online and face problems on a global scale. The skills to learn and adapt are growing in value. Above all, it is necessary to talk about Science to encourage new generations and better communicate the results of research and education to show its benefits to the people and the government. We also need to engage more young women in research and scientific activity.

The British Council will continue to support the agenda of internationalisation and Science communication channels. Studies, seminars, training and information material are part of the Universities for the World programme's commitment to stimulate partnerships between HEIs in the United Kingdom and Brazil. They benefit research networks, agreements and exchanges between academic teams and students. We would like to thank all those who contribute to the success of these initiatives, be they government agencies, representatives of the productive area, the third sector or the HEIs themselves and their associations. Innovation, scientific advancement and social development are born from the exchange of knowledge within this great system formed by institutions and people. If you are reading these lines, it is because you are already part of it.

Divulgação

Vera Oliveira
Senior Manager Higher Education and Science

Essential discussions for the progress of internationalisation

Internationalisation is a tool for change and has the potential to achieve results, such as increased quality in higher education, increased visibility for Brazilian scientific production, collaboration in research and innovation, and the international flow of students. The British Council in Brazil works in partnership with Higher Education Institutions (HEIs) and carries out research to strengthen cooperation ties, encourage training and dissemination of Science, and encourage debate on internationalisation in the country. Through different projects, it initiates and maximises existing connections between Brazil and the United Kingdom to promote in both countries, a favourable environment for education, research and inclusion.

In its three editions, the **Universities for the World** publication followed the evolution of the theme. At first, discussions revolved around the motivation for internationalisation and its benefits. In 2019, the guiding theme was development of interna-tionalisation strategies. The current agenda, on the other hand, analyses what results can be expected from internationalisation and the ways to achieve and measure them.

Internationalisation processes require financial, human and structural resources that are often scarce or in high demand among other HEI priorities. A study carried out by Universities UK International in 2019 showed that 80% of collaboration between British and Brazilian institutions aimed at conducting research. The recruitment of students, an interest that motivated 62% of partnerships, reveals that access to different cultures and learning is still highly valued in higher education. Even under favourable conditions, only a minority of the student body has the opportunity to study abroad in student exchange programmes, making it more urgent to define what the benefits of internationalisation are and what strategies to employ in order to achieve them.

In the midst of a crisis, which exacerbate inequality, it is fundamental to think how the university, in its essence, and through internationalisation, can influence the prosperity of a region and, especially, of young people in vulnerable conditions. It can allow the student to be exposed to a multicultural environment, develop connections and have more opportunities. By creating bonds as a researcher and establishing an international network of collaborators, this student continues a cycle of good practices and development of the education and research environment.

Advancing internationalisation means considering the issue of quality from two perspectives: that of implementing plans, with monitoring and collection of results and indicators; and that of the effect of internationalisation for the educational institution's strategic goals, in its profile of engagement, in research, teaching or contribution to local development. The latter is connected to the concept of social and economic contribution by universities. The impact can be measured differently and the search for data and the narrative around the results are essential today. In 2019, the British Council announced their support for Brazilian universities participating in the CAPES-PrInt programme, in the monitoring and evaluation of internationalisation plans. Seven projects were selected from Brazilian and British universities, starting in October 2019 and continuing until September 2021. These projects will help us to better understand the issue of the quality of internationalisation in the Brazilian context, and will provide us with tools to support this process.

It is interesting to note the example of Research England, which fosters research and partnerships in English HEIs and assesses the impact of research based on the REF (Research Excellency Framework), which considers three elements: the quality of what is produced, the impact beyond academia and the favourable environment for research within HEI. Its research and innovation support fund (Higher Education Innovation Fund) encourages partnerships between English universities, local industry and communities. These projects are evaluated via a reference framework called KEF (Knowledge Exchange Framework), which analyses, in addition to research partnerships, work with companies, the third sector, and engagement with the public and the community. It is a complex evaluation system, recently having proved relevant for presenting the results of the HEIs, while also sometimes being criticised for running the risk of restricting areas and lines of thought within academia.

In the context of the work that we have been developing, the possibility of the relationship between academia and industry is highlighted, along with social impact. In addition to this, three topics relevant to Brazilian universities have been recurrent for the British Council: quality in internationalisation, the development of language policies, and the recognition of qualifications. In January 2020, we organised a week-long programme in England with seminars, workshops and meetings, aiming to work on these issues. Much of the material discussed there unfolds over the next few pages.

Firstly, Internationalisation is all about exchange and cooperation. The reaffirmation of the commitment to strengthening partnerships between Brazilian and British Educational Institutions becomes increasingly important in this period of uncertainty in the Coronavirus pandemic, to maintain the flow of discussion, training and dissemination of relevant content for universities. Within this agenda, we will continue to search for quality, indicators and benchmarks of socio-economic impact, cooperation models between academia and industry, and criteria that facilitate the mutual recognition of qualifications between Brazil and the United Kingdom.

> The issue of quality runs through two perspectives: that of PLAN IMPLEMENTATION, with monitoring and RESULTS COLLECTION and indicators; and the effect of internationalisation for the educational institution's STRATEGIC GOALS.

QUALITY IS THE STARTING POINT

What are the University's reason for being? How do they fulfil their function and interact with the world - be it with the nearest cities, or with researchers from other countries? These are points to be analysed when talking about internationalisation. The identity of a Higher Education Institution (HEI), defined by its motivations and the context in which they are inserted, leads to different possibilities for defining quality and how it, in turn, unfolds into priorities. The best HEIs in the UK have long-term strategic plans and are clear about where they want to go so that they can deploy their actions accordingly. Simon Marginson, Professor at Oxford and Director of the Centre for Global Higher Education, points out that a known challenge of internationalisation is to define policies and make collaboration a successful routine. Brazilian institutions, some of which are still in the process of designing and consolidating their plans, are increasingly aware that seeking quality in actions is the step that will lead them to their goals and greater recognition from the local and international community.

Frank Noon Photography

King's College London

ATTITUDE Towards the global world

Scenario and objectives of institutions indicate how to qualify internationalisation actions

The direction of the internationalisation of higher education in each country depends greatly on external factors, and also on desires rooted in the university community and its surroundings. These are global challenges and local perspectives that need to be managed. One of the decisive steps when reaching maturity in this area is to create and maintain mechanisms that promote innovation.

In this regard, already-established practices in the United Kingdom are only starting in Brazil. "The problem is that Science is not a priority in most states and in education policies. Innovation is not recognised as part of the development strategy. But we have universities, problems to solve, and the market, so we have everything, we just need to plan", reflects Evaldo Ferreira Vilela, president of the National Council of State Research Support Foundations (Confap). In London, during an event promoted by the British Council that discussed internationalisation and language policies in Brazil and the United Kingdom, he defended organisation and strategy as fundamental pillars of the internationalisation process, be they funding for joint research or investment in language or mobility programmes.

Simon Marginson, Professor at the University of Oxford and Director of the Centre for Global Higher Education, notes that internationalisation can take any form: that of personal interests, competition and economic exploitation, but also that of builder of durable bridges between researchers and institutions. The challenge is to define policies and make collaboration a successful routine. "Before thinking about the quality of implementation, we must be concerned with how to overcome the resistance to internationalisation currently taking place, with countries raising barriers to immigration, for example," observes Marginson.

Despite this scenario, **the internationalisation of higher education has grown in importance worldwide.** In 2013, the European University Association (EUA) found that most European universities were thinking strategically about the topic, had a proposal in place or wanted to improve it. In Brazil, the situation was the opposite. In 2017, a survey carried out by the Brazilian Federal Agency for Support and Evaluation of Graduate Education (CAPES) with 320 Brazilian Higher Education Institutions found that 70% of them considered themselves little or not at all internationalised. But in a short time, there was a change of attitude in relation to the theme, leveraged by CAPES-PrInt, which stimulated the definition of action plans in the HEIs. In a survey* supported by the Brazilian Association of International Education (Faubai), from 59 responding institutions, about 80% declared that they had an internationalisation strategy within their institutional plan. However, the stages in which they are in the process are quite heterogeneous. The same research identified that a large part of Brazilian HEIs has not yet made internationalisation an institutional policy.

* Contributions of Internationalization of Higher Education to the development of Intercultural Competences in the students. Perspective of Brazilian Higher Education Institutions

> It is necessary to understand that WE ARE PART OF LOCAL AND GLOBAL COMMUNITIES, and decide how Higher Education Institutions can contribute.

Simon Marginson, professor at Oxford University and Director of the Centre for Global Higher Education

Strategy at the centre

The main elements of internationalisation, according to researchers Söderqvist and Parsons, are anchored by the strategy and inserted in contexts.
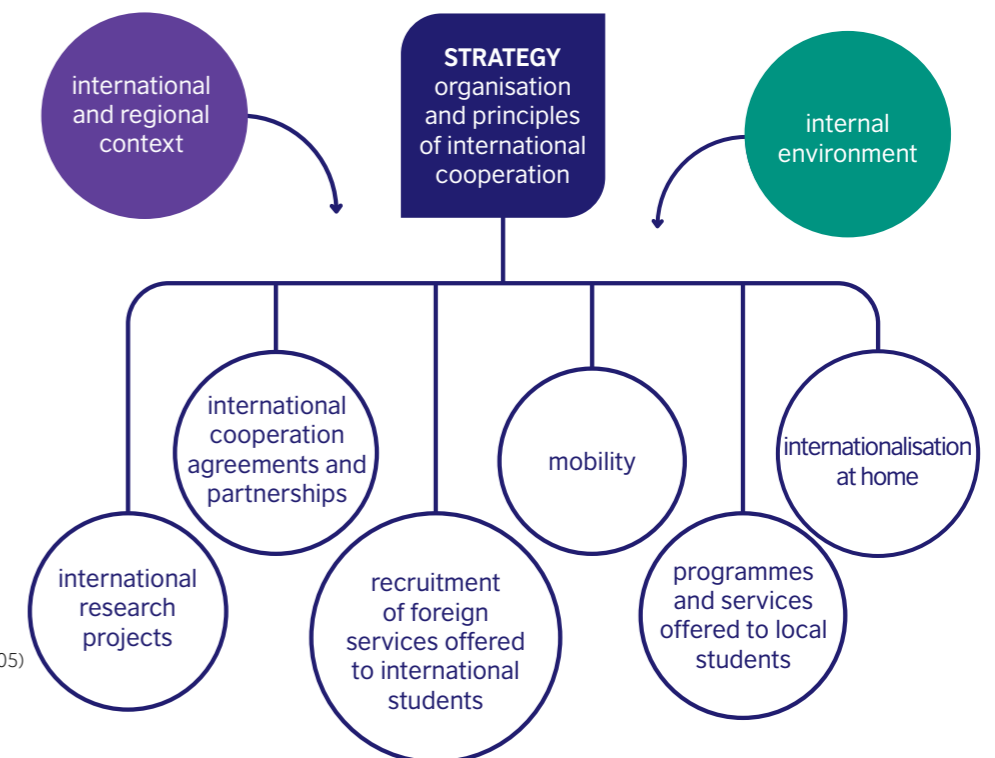
Source: Söderqvist and Parsons (2005)

international and regional context

STRATEGY organisation and principles of international cooperation

internal environment

international cooperation agreements and partnerships

mobility

internationalisation at home

international research projects

recruitment of foreign services offered to international students

programmes and services offered to local students

Quality of education

Office for Students

Quality in education is a broad concept
There are a number of ways we look at this and ongoing challenge and pressure on institution
At the heart of quality assessment are conditions set by the Office for Students and the role of the QAA (England)

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QAA

Chris Hale of Universities UK International, in a presentation at the British Council event in London.

Frank Noon Photography

Attentive look at **each university's plan**

What does it mean to conduct quality internationalisation? Whoever is involved with the subject has already reached a conclusion: what is seen as quality for one institution may not be for another. "I understand that it is directly linked to the proposals of the internationalisation plan and strategic planning. The maximum quality will be defined by actions that lead to the expected objectives", explains José Celso Freire Junior, Associate Provost for International Affairs at Unesp. **The guide will always be linked to goals: it may mean looking for a partner whose reputation allows for increasing the research impact** or investing in hosting to bring in more students from abroad. Professor Marginson recommends keeping an eye on the activities where improvement is wanted. Increasing the number of articles published in scientific journals or by foreign professors is measurable; whereas other variables, such as the degree of achievement in courses offered in English as a Medium of Instruction (EMI), bring more challenges to the assessment.
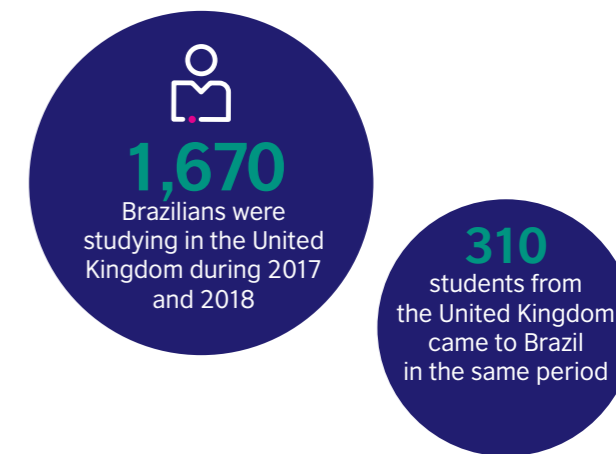
The basis of everything is to know what the priorities of the institution are. In the article

A Qualidade da Educação Superior e o Complexo Exercício de Propor Indicadores (Quality of Higher Education and the Complex Exercise of Proposing Indicators), Marilia Costa Morosini, from PUC-RS, together with other authors, states that each context will have its particularities. **"Quality is self-referenced; it assumes a subject or a community that accepts certain standards as desirable."** In the case of Unesp, one of the long-term objectives is to increase the impact of research. There are actions that translate into data, such as when the University of Queensland in Australia formalised a partnership for joint supervision of doctoral students and strengthening of a tripartite relationship focused on research projects in the area of Bioeconomy (the third institution is the Technical University of Munich (TUM), Germany). "After this agreement, the number of articles published together has almost tripled. These results help me to make the next decisions, such as which programmes to develop, where to allocate more resources, based on mistakes and successes along the way", reports Freire Junior, indicating that this
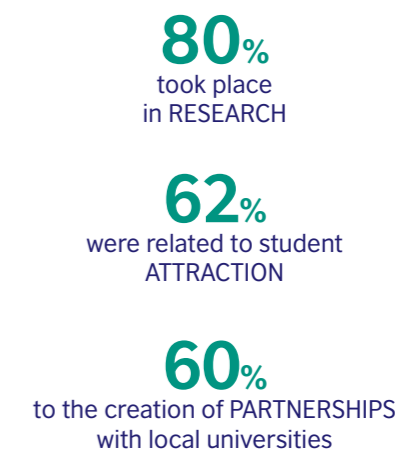
type of analysis contributes to the sustainability of internationalisation at the university.

Each HEI invests in actions and initiatives that it considers valid, which is why internationalisation strategies do not follow a single model. On the contrary, they can be seen as a dynamic process that takes several variables into account and inevitably includes profound self-knowledge. Researcher Tristan McCowan, from University College London (UCL), suggests three components to identify the most salient characteristics of an HEI: value, function and interaction. "First of all, there are differences in the fundamental justification of a university – the reason for Higher Education. It determines the value dimension", explains the article *Universities and the Post-2015 Development Agenda: An Analytical Framework*. There are also differences in what a university does, that is, the list of activities and roles it fulfils (function) and in the way it relates to society, in the circulation of people and ideas inside and outside the HEI (interaction). According to McCowan, the objective of analysing these components is to understand the "anatomy" of the institution - its purposes, the practices organised to reach them and the links with society. When examining interaction, he recommends assessing the porosity of the flow of actors and ideas from the community to the university, and vice versa. "In some cases, universities are porous in relation to knowledge coming from other sectors, for example, technological advances in the industry, or, otherwise, they are active in translating and communicating academic knowledge produced for external partners, such as how to explain research on water sterilisation to city officials," notes McCowan. These attitudes also influence internationalisation processes, based on cooperation, exchange of experiences and research collaboration.

Between the United Kingdom and Brazil

1,670 Brazilians were studying in the United Kingdom during 2017 and 2018

310 students from the United Kingdom came to Brazil in the same period

Of the collaborations between HEIs in the UK and Brazil

80% took place in RESEARCH

62% were related to student ATTRACTION

60% to the creation of PARTNERSHIPS with local universities

Source: The State of the Relationship - Mapping UK Higher Education Engagement with Brazil / Universities UK International (research conducted between October 2018 and January 2019)

Stimulating INTERCULTURAL competencies

Well-prepared students are the main motivation for Higher Education Institutions to internationalise

The mobility of students, an activity with high visibility within institutions and driving the theme in Brazil, is not necessarily the leading topic in current internationalisation strategy. It is true that the Science without Borders (CSF) programme, which awarded almost 104 thousand scholarships, taking students abroad for international experiences between 2011 and 2017, collaborated to insert Brazil in the collaboration map between HEIs. But in order to guarantee the sustainability of programmes and expand the reach of actions, part of the effort in mobility is being replaced by the internationalisation of curricula at home. The idea is supported by experts, among them Elspeth Jones, Emerita Professor at Leeds Beckett University, in the United Kingdom. "We need to challenge the idea that studying abroad is the best solution. The current demand for global professional contexts requires that we offer an internationalised curriculum for all students, not just for the few who enjoy mobility", says Jones*. According to her, in contemporary society, all graduates should be able to interpret local problems within a global context

*In the article Graduate Employability and Internationalization of the Curriculum at Home (2014)

and judge the impact of global issues in their personal and professional lives. For Jones, this attribute, among other benefits, would increase employability. On the side of the universities, there is pressure for new internationalisation arrangements due to the global situation. "An example is climate change and the search for environmental sustainability, which indicates that it will be necessary to slow down physical mobility and invest in technological resources, such as videoconferences", comments Marginson.

Behind all institutional planning are the motivating factors for internationalisation, and they were the subject of study by the International Association of Universities (IAU), which regularly researches the subject in more than 100 countries. **In three surveys (2005, 2009 and 2013), the IAU found that the main reason cited by universities for investing in internationalisation processes was to prepare students to be more competent in cross-cultural and international issues.** This fact gave rise to the subject of the doctoral thesis of Lourdes Zilberberg, director of internationalisation at FAAP, which investigated in Brazilian HEIs the *Contributions of Internationalization of Higher Education to the development of Intercultural Competences in the students. Perspective of Brazilian Higher Education Institutions* (title of the project). Intercultural competence in the definition of Duke University researcher Darla Deardoff is "the ability to communicate efficiently and appropriately in intercultural situations, based on the knowledge, skills and intercultural attitudes developed by the individual".

The research conducted by Lourdes asked the managers of international relations offices and students the following question: Does the internationalisation process contribute to the development of intercultural competences? The answer was unanimous - 100% responded YES. The study listed responses to *According to managers and students, what are the international dimensions that most contribute to the development of IC? And Why?,* which gave rise to a ranking of internationalisation measures according to their contributions to the development of intercultural competencies in students. Mobility, internships abroad and the presence of foreigners on campus were the most cited items. "Insight is gained through the action, the exchange, and being immersed in another culture. The curriculum is left more aside. In Brazil, attitudes and skills are more valued than knowledge," observes Lourdes. So much so, that understanding the value of diversity, respecting other cultures, and learning through interaction were attitudes cited by respondents as components of intercultural competence. The research, which reveals the Brazilian perspective on this topic, will be presented this year.

REASONS TO INTERNATIONALISE

- ■ **Mobility and exchange of students and professors**
- ■ **Collaboration in teaching and research**
- ■ **Academic and quality standards**
- ■ **Research projects**
- ■ **Cooperation and assistance development**
- ■ **Curriculum development**
- ■ **International and intercultural understanding**
- ■ **Promotion of the institution's profile**
- ■ **Diversification of the origin of the faculty and students**
- ■ **Regional and integration issues**
- ■ **Recruitment of international students**
- ■ **Diversification of sources of income generation**

Source: International Association of Universities (IAU, 2003)

GOOD STRATEGIES
respect the local context

Projects that put subjects and the community at the centre of research initiatives

**"SUBJECTS are the beginning of internationalisation processes and not individuals without identity.
THE PLACE is the space that holds contradictions and possibilities, and that brings subjects together who have the support and possibilities to build bridges of dialogue within the frontier zones through the necessarily and interdisciplinary RESEARCH conducted to solve the complex problems of humanity."**

Excerpt from the study *Internacionalização da Educação Superior: Lugar, Sujeito e Pesquisa como Categorias Substantivas de Análise (Internationalisation of Higher Education: Place, Subject and Research as Substantive Categories of Analysis (2018)*

The importance of individuals remains the determining factor in the gear that drives internationalisation, even at the prestigious American universities Harvard, Columbia and MIT (Massachusetts Institute of Technology). These three are World Class Universities (WCU), meaning that their vocation is to be international, and they were the object of study in the Internationalization of Higher Education: Subject, Place and Research as substantive categories of analysis. "Most problems are global, but they need to go through theories, laboratories, and thought and executed by subjects. There is neither neutrality nor naivety in this context", observes Marlize Rubin Oliveira, co-author of the article and professor at the Federal Technological University of Paraná. The authors' objective was to extract, after analysing documents and carrying out technical visits, the dimensions and categories that contribute to rethinking the practice in the Brazilian context. "The perception that the subjects have about their role in achieving the institutional mission grabbed our attention, something that seems directly related to the stability of these universities in order to be able to act objectively in the world", says Professor Hamilton de Godoy Wielewicki, from the Federal University of Santa Catarina, in post-doctorate at the University of Washington, Seattle.

In the research, it is clear that leading institutions make a difference based on their perception of themselves and their relationship with the outside world. This is true both in relation to their local insertion and in the relevance attributed to them in the context of the universities of the world. "They tend to have a long-term vision, which contributes to the construction of an agenda that seeks questions, subjects and knowledge related to where they are. Perhaps this is a factor that Brazilian institutions need to rethink", reflects Wielewicki.

The look at American WCUs led the authors to analyse the Brazilian posture. **"We occupy a privileged place, both in terms of geographical space and our distinctive characteristics of culture and organisation of higher education. However, most of the time "our backs remain turned" to Latin America and to our problems**. We have a potential to be explored with the knowledge of the original peoples, who could position us at another level in scientific research", emphasises Marlize.

In the United Kingdom, the prospects for the internationalisation of HEIs undergo differentiated strategies, depending on their local and global context. Observation, listening and analysis of the needs of the community lead to academic and administrative actions. Read the examples on the opposite page.

UNIVERSITY OF BIRMINGHAM
Relations with Brazil began in 2011 and have gained strength in recent years thanks to the strategy, which has dedicated professionals on both sides of the ocean. "We have strengthened ties with the Visiting Fellows programme, the visit of delegations to both countries, and we have created the Birmingham Engagement Grants, an allowance for our academics and researchers to participate in events in Brazil", says Flávia Rodrigues, representative of Research Collaborations. At Birmingham, Richard Brunt, International Partnerships Officer, is responsible for Brazil. "Some collaborations have evolved from small research groups to those that deserve substantial funding. Everything depends on the work area, grants and funds, and support during the process to reach the next level", he explains. To make the country stand out among its community, UoB changed its Brazil Week, which previously only took place in March, to a monthly forum.

UNIVERSITY OF NOTTINGHAM
Among the UK institutions, the University of Nottingham is considered the most internationalised. In addition to having two campuses in Asia (China and Malaysia), it has good connections around the world. "The difference between Nottingham and the others is that they organised the international office and the local one in the same physical space, fully integrated, sharing infrastructure and resources, under the same leadership. Internationalisation actions are connected to everything else and are not restricted to a privileged group", summarises Professor Marginson, Director of the Centre for Global Higher Education. The principles of the University of Nottingham's internationalisation strategy are reciprocity, social and environmental responsibility, commitment and quality.
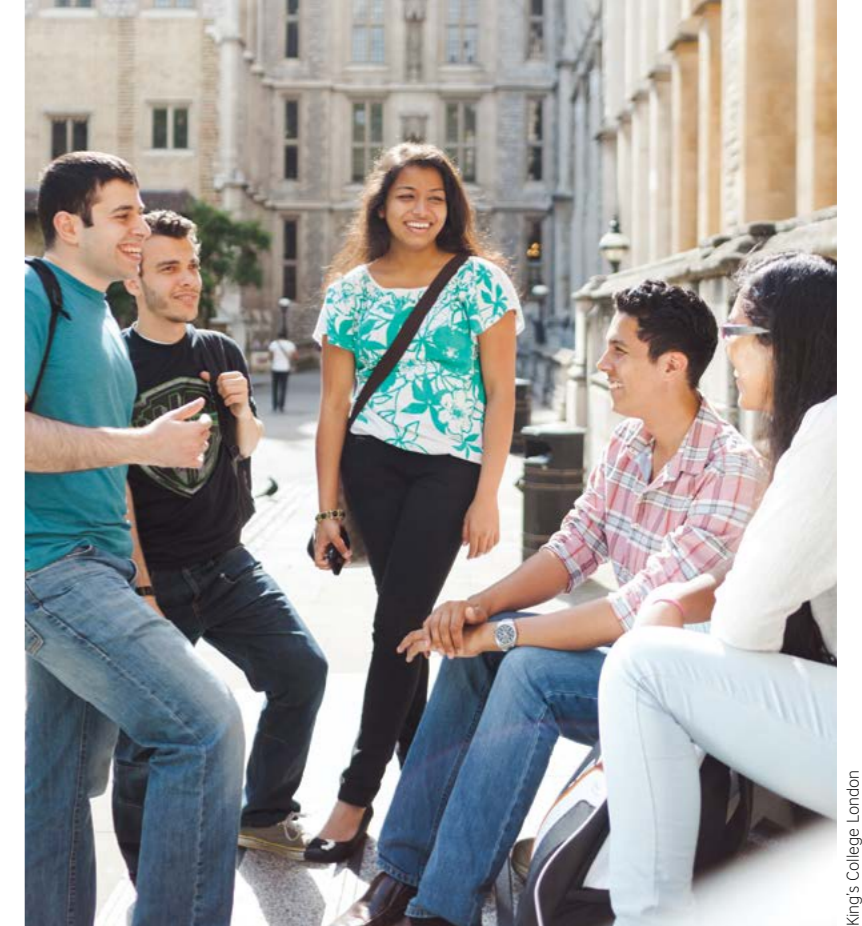
KING'S COLLEGE LONDON
The long-term vision guides the ten-year strategic plan, aiming to train the university community for a global mindset - that is, people with intercultural competence, awareness of world problems and the role of the university therein. It also seeks to change processes, curricula, pedagogy and revise the partnership portfolio for effective contribution in all regions of the globe. "One of the recent initiatives was to invite students and employees, through a booth set up at events on King's many campuses, to give testimonials and opinions about internationalisation activities on social network. It will be a collection of stories to build and keep the journey in the area alive," says Tania Lima, Director of Global Engagement at King's College London. Its campuses count people from more than 150 nationalities, employ approximately 4 thousand academics and 4 thousand administrative employees. ∎

King's College London

Frank Noon Photography

CHALLENGES IN PLANNING ASSESSMENT

In order to define internationalisation goals and strategies, it is essential to know the origin and to monitor progress over time. Assessing oneself and being assessed is, therefore, an important exercise in self-knowledge of Higher Education Institutions (HEIs), making it possible to understand which points need to be worked on, both in aspects related to internationalisation and in the quality of research. This is the movement that has been designed by Brazilian universities such as Fundação Getulio Vargas (FGV), the Federal University of Roraima (UFRR) and by the Brazilian Federal Agency for Support and Evaluation of Graduate Education (CAPES). With indicators in hand and a well-designed plan, doors can be opened for new partnerships, for attracting talent and seeking funding in initiatives such as CAPES-PrInt, which requires self-assessment as a determining factor for the granting of resources as well as the monitoring of the internationalisation plan in accounting records.

The value of
SELF-KNOWLEDGE

The construction and analysis of internationalisation indicators are linked to the objectives and profile of each university

Attracting and retaining talents for teaching and research, seeking funding for academic activities, being recognised for its excellence, producing an impact on the communities with which they work: these are some of the challenges faced by Higher Education Institutions (HEIs). To account for them, it is necessary to develop strategies and, of course, to evaluate their progress. For this reason, external assessment and the creation of indicators for internal use have gained strength. As explained by Marilia Morosini, Professor at the Pontifical Catholic University of Rio Grande do Sul (PUC-RS), following up on cooperation strategies with foreign institutions is a way to also guaran-

tee the evolution in other indicators. "The pressure of the assessment is due to the search for the quality of the initiatives. Internationalisation is a means to increase the quality of teaching and research", argues the researcher.

The work with specific indicators for these actions is therefore not detached from other initiatives that seek to ensure continuous improvement in the work of the HEIs. In external evaluations - such as the one carried out by CAPES on graduate programmes - and international rankings, the number of articles in international journals, research in partnership with foreign institutions and the mobility of students and teachers are considered.

"It is expected that exchanges between Brazilians and the international community will improve the quality and impact of research and bring innovation in education", highlights Sônia Báo, Director of Evaluation at CAPES. Still, the search for specific ways of observing internationalisation is important, Catherine Yuan Gao argues, Professor at Victoria University, in Australia. "Efficient measures can help universities distinguish aspirations from strategic reality and recognise that, for some, there is a distance between the two," she says in the book Measuring University Internationalization. According to the author, there is a tendency for many institutions to vaguely describe their reality, without there being actual data that helps them understand their current status and develop their strategic plan.

In many HEIs in the country, the search for quality in teaching and research is one of the main items of pedagogical projects and institutional development plans. **But in a country the size of Brazil, there are naturally great differences in the conception of quality and the objectives of each institution.** "Universities and their programmes have different vocations", explains Sônia Báo. In some places, there is greater dedication to research activities and in others, teaching is more at the centre; just as there are universities that dedicate themselves to carrying out studies with national and international impact, while others dedicate their activities to creating impact in their regions. "We cannot expect that all 7000 postgraduate programmes in the country will have the same type of internationalisation", highlights Sônia.

A clear example is that of the World Class Universities, institutions that have the proposal to be international in their DNA - the integral model of internationalisation (learn more in the box above) - and precisely those ranked as the

best universities in the world. This list includes universities such as Harvard, Stanford and the Massachusetts Institute of Technology (MIT), in the United States, and in the United Kingdom, Oxford and Cambridge, among others. In Brazil, institutions such as the University of São Paulo (USP), the Federal University of Minas Gerais (UFMG) and Fundação Getulio Vargas (FGV) are some of those that come closest to this model, with the carrying out of cutting-edge research and high level exchange with foreign partners, in relation to the rest of the country. "In every country in the world, there are few universities with the vocation to be a World Class University. But the others also need to think about how they will internationalise", says Marilia Morosini, Professor at the Pontifical Catholic University of Rio Grande do Sul (PUC-RS).

ASSESSMENT IN THE UNITED KINGDOM

REF (Research Excellence Framework): assesses academic research, observes productions (articles, patents, participation in congresses, etc.), the impact (through case studies) and institutional conditions to support research (research environment).

TEF (Teaching Excellence and Students Outcome Framework): focuses on teaching, assessing its quality, university characteristics (learning environment) and student results (such as employability, dropout rates and satisfaction with the university).

Knowledge Exchange Framework (KEF): the most recent, still under implementation, will estimate how the knowledge produced in academia impacts society and the economy, observing items such as the engagement of communities and partnerships with business, third sector and government.

An assessment for each profile

There are other models that can be followed, such as the one based on mobility or internationalisation of the curriculum *(learn more on these pages)*. In all cases, the path followed by each university tends to mix aspects of different types, such as incorporating some elements of the mobility model and internationalisation at home. This strategy is defined in the internationalisation plan, which, ideally, should be discussed by the university community before its approval. In this document, it is explained how relations with researchers, laboratories and international content can boost academic production, teaching and research, even in those institutions that intend to operate at local level. "Internationalisation aims to give students in the classroom in Brazil access to strategies, resources, knowledge and also to the international labour market", explains Morosini.

Depending on the internationalisation model, different evaluation criteria can be used: in addition to academic production and mobility, it is possible to analyse the course syllabus international training and events, for example. "It is also necessary to observe the available resources, the academic staff and their working conditions and the governance structure of the university", exemplifies the Professor at PUC-RS, who highlights the importance of institutional support for the success of the internationalisation initiatives.

Internationalisation models

Chosen by the university community, they help to define assessment indicators

INTEGRAL INTERNATIONALISATION

What it is: Considers international collaboration in teaching and research as one of the main pillars of the institution, including World Class Universities.

Possible indicators:
■ The highlighting of the institution's internationalisation in directional documents
■ Decentralisation and cross-cutting of internationalisation strategies
■ Total number of countries of origin and destination of mobile staff
■ Proportion of mobile or foreign students

Camila Cunha/PUCRS/Divulgação

or staff in relation to the total academic community
■ Total number of events with international guests
■ Proportion of courses offered with EMI in relation to those offered in the local language
■ Possibility of double degree students (Brazilian and foreign diploma)

INTERNATIONALISATION BY MOBILITY

What it is: based mainly on sending and receiving international students and teachers.

Possible indicators:
■ Number of students, researchers and teachers in mobility
■ Infrastructure to support students or staff in mobility - number of scholarships, accommodation vacancies, employees, and institutional support programmes
■ Existence of mobility preparation strategies (students in language courses offered by the university, proficiency tests, etc.)
■ Number of agreements established with foreign universities
■ Number of research studies carried out in partnership
■ Number of professors and staff sent abroad to participate in events, conduct research or do courses in partnership with universities
■ Number of articles published in international journals or in partnership with foreign researchers

INTERNATIONALISATION OF CURRICULUM (IoC)

What it is: incorporation of international, global and intercultural dimensions into the curriculum, teaching and assessment strategies and other academic activities.

Possible indicators:
■ Number of events with international guests
■ Number of teachers sent to events or courses abroad
■ Number of intercultural activities carried out at the university
■ Number of foreign authors in course bibliographies
■ Number of courses offered in foreign languages
■ Availability of publications and materials produced in other languages for students, teachers and staff
■ Number of students, teachers and staff with a good command of foreign languages for academic use

INTERNATIONALISATION AT HOME (IaH)

What it is: incorporating intercultural and global aspects in academic activities.

Possible indicators:
■ Number of foreign authors in course bibliographies
■ Infrastructure for access to international content (internet network, computers in rooms, computer labs, etc.)
■ Use of videos and methodologies - such as design thinking or active teaching methodologies – created by foreign institutions
■ Availability of training and updates for teachers that include international and global perspectives
■ Participation in collaborative education and research networks that promote exchanges between groups of two or more countries

Source: *Guia para a Internacionalização Universitária, Marília Morosini, in Portuguese, available for viewing online* **here**

The complex exercise of defining INDICATORS

Together with goals, they are crucial to ensure that processes move forward

> The different contexts and stages of universities in the internationalisation process enrich discussions, as THE ASSESSMENT SYSTEM IS THOUGHT TO BE FLEXIBLE and adaptable.

Tania Lima,
director of Global Engagement at King's College London

The search for resources remains one of the greatest challenges for internationalisation. Sending students abroad, inviting foreign speakers, and creating research in partnership, all of these initiatives require money, which is not always available - especially in times of contingency of public funds. In this context, programmes like CAPES-PrInt, from the Federal Government, and Universities for the World - Capacity Building and Internationalisation for Higher Education, from the British Council, call the attention of institutions looking for ways to internationalise.

Like other resource granting programmes, CAPES-PrInt also requires the presentation of a diagnosis of internationalisation of the applying universities. According to the 2017 call for proposals, it was necessary to present a document "showing indicators of its strengths and weaknesses, institutional vocations and justifying its priorities, with a description of the existing structure, including the qualification of its technical staff for internationalisation". The call also asked for the development of goals and indicators that described the expected results of the project. Over the four years of the programme (2019 to 2022), in accounting records, universities need to present the advances and impacts achieved through the funding.

As it is a young institution - created in 1989 - and with low internationalisation, the Federal University of Roraima (UFRR) could not be included in the first call for proposals, aimed at institutions in a more advanced stage. But it remains steadfast in developing strategies to increase cooperation with Latin American institutions and other continents: the expectation is that it will be able to approve its internationalisation plan in 2020. "We are close to the border and in the Amazon Forest, we have a strong connection with Caribbean countries, and we are experiencing an especially important migratory flow. Because of this social, political and strategic context, we want to soon become a point of academic excellence in northern South America and we believe that internationalisation can make this possible", explains Rafael Assunção Rocha, from the Coordination of International Relations.
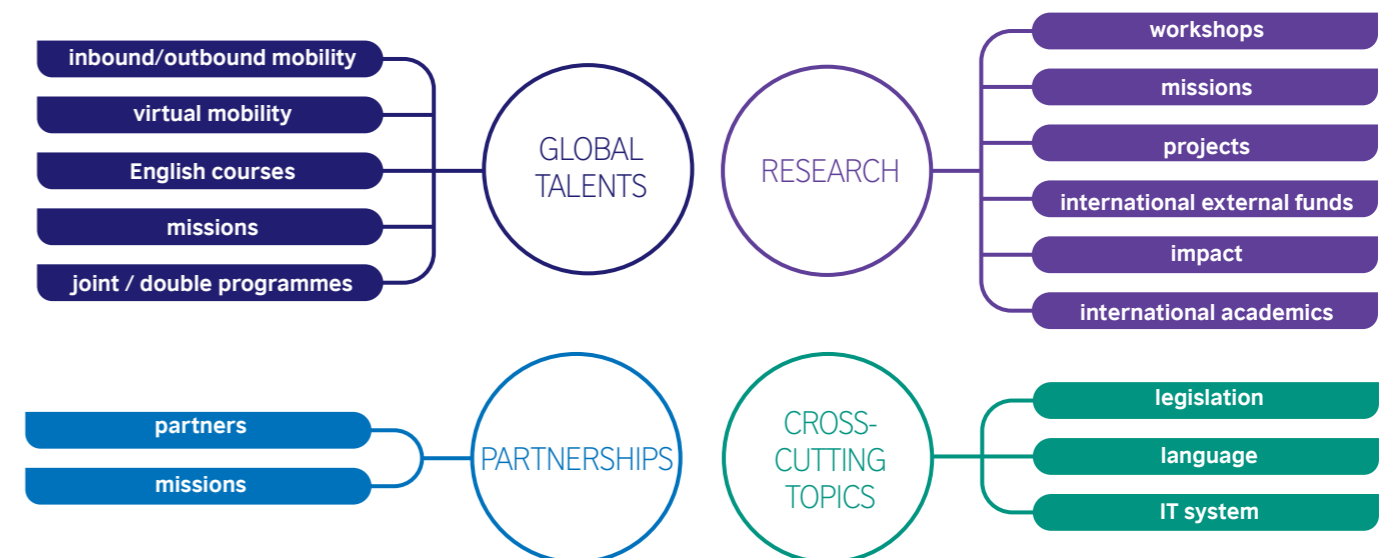
Part of the effort to seek more resources and enhance its initiatives coincided with the project presented by the São Paulo State University (Unesp) for the fourth call of the Universities for the World programme. A national reference in internationalisation, Unesp has established indicators in its own internationalisation plan *(see the table below)* and, now, it will develop, in cooperation with King's College London, in the United Kingdom, and with the

Federal University of Paraíba (UFPB), an evaluation model that can also be used by other universities, with indicators and other metrics within an information system. This system will serve to collect data that can feed decisions and adjust internationalisation processes.

The interesting thing about this collaboration is the heterogeneity of participating institutions: King's College has just launched a ten-year strategic plan; Unesp is implementing its projects with support of CAPES; UFRR and UFPB are in the process of designing internationalisation strategies. "The different contexts and process stages in which universities find themselves, are enriching, as the assessment system is designed to be flexible and adaptable according to local academic reality," says Tania Lima, Director of

Global Engagement at the English institution. For King's, which has prioritised Brazil for partnerships for eight years, the most interesting so far have been exchanges with other universities. "We are aware that each one has a different journey and wants their own change, so choosing a common set of indicators - which can then be adapted by others in the future - is an ambitious project of only 18 months", reports Tania. For UFRR, the expectation is that the construction of these indicators can pave the way for new partnerships. "By identifying what our limitations are, we can focus on this improvement and, after moving forward, show that the investments are yielding results and requesting more resources", says Rocha, from the Coordination of International Relations.

Gather data, analyse processes

In the case of Unesp, the set of macro indicators below has been proposed for each of the dimensions (in the circles) of its Strategic Internationalisation Plan for 2018-2021.

GLOBAL TALENTS
- inbound/outbound mobility
- virtual mobility
- English courses
- missions
- joint / double programmes

RESEARCH
- workshops
- missions
- projects
- international external funds
- impact
- international academics

PARTNERSHIPS
- partners
- missions

CROSS-CUTTING TOPICS
- legislation
- language
- IT system

RESPONSIBILITY
in the use of resources

Accountability guides the monitoring of internationalisation plans

Frank Noon Photography

Patricio Pereira Marinho from the International Relations Directorate of CAPES participates in debates in London.

The notion that universities need to account for the results achieved by their projects is at the heart of external evaluations, especially in institutions that use public funds to finance their activities. "The demand for greater accountability and transparency in university governance corresponds to the urgent demand for valid internationalisation measures", highlights Catherine Yuan Gao, in the book *Measuring University Internationalization.*

Today, in Brazil, the main internationalisation measure is made by CAPES. During evaluations of graduate programmes, grades 6 and 7 in the general assessment are de-pendent on requirements related to aspects such as productivity and graduation in masters and doctoral degrees, and restricted to programmes with a high level of internationalisation. The main factors evaluated are related to mobility - the presence of foreigners in the programme, as well as the departure of researchers for activities abroad -, to the establishment of partnerships - for example, the receipt of funding from agencies or foreign bodies -, and to productivity - publication of articles in international journals or development of products resulting from research in partnership.

"Publications and mobility are the main items we are able to measure", says Sônia Báo, CAPES' Director of Evaluation. However, the entity is already organizing a change in its evaluation system, based on the idea of multi-dimensionality: instead of assigning numerical marks, the evaluation will bring separate results for different criteria, such as graduation in masters and doctoral degrees, internationalisation and the impact of research. "We want to bring these criteria to the forefront," says Báo. **The details of the model are still under discussion with HEIs, but it is expected that some changes will be made with regard to internationalisation:** "We are improving the evaluation indicators, mainly for the two-way idea. Today, going abroad is highly valued and little is incorporated in coming to Brazil", highlights the Director. According to her, CAPES encourages the increase of the country's attractiveness to researchers and foreign students *(see mobility numbers on page 15).*

It is with an eye on these changes that Fundação Getulio Vargas (FGV) is creating a new evaluation matrix for the institution. The initiative was selected by the fourth call of the Universities for the World programme and will be held in partnership with the University of Warwick, in the UK. The idea is to learn more about the British experience with the Research Excellence Framework / REF *(read on page 23)* and build a tool that helps FGV to evaluate its academic productions.

The institution already has a high level of internationalisation and is recognised as an international reference in the areas of Law, Social Sciences, Administration, Economics and Public Management. In 2019, it was elected by the Global Go To Think Tanks Index as the fifth best think tank in the world. With the mission "to stimulate national socioeco-nomic development", FGV - a philanthropic entity - wants to carry out impact assessments on its academic production. This type of analysis is present in the REF and must also be included in the new model proposed by CAPES. "We want to influence CAPES," announces Goret Pereira Paulo, Director of Research and Innovation. According to her, the proposal is that this evaluation be made by the creation of case studies of research recommended by the assessed entities (post-graduation or institutions). "For internationalisation, it is possible to build a report showing the impacts achieved by both the Brazilian institution and the international partner", she explains.

At FGV, the creation of this instrument also has a second function: articulating the initiatives of the different units - such as the Rio de Janeiro School of Law or the São Paulo School of Business Administration - to ensure that they align with the institution's mission. "The biggest expected result is to enhance the internationalisation process institutionally, and not through individual initiatives, and generate contributions that have a positive impact on Brazilian society", emphasises Goret. ∎

75%
of UK researchers consider **accountability** an important driver for change in the research environment

Source: The Changing Research Landscape and Reflections on National Research Assessment in the Future/ Research England (2019)

Source: report produced by the European Project Indicators for Mapping & Profiling Internationalisation (2010)

THREE MAIN USES FOR INDICATORS ON RELATIONS WITH UNIVERSITIES ABROAD

MAPPING
Identify the institution's internationalisation stage.

ASSESSMENT
Examine the value of efforts in this area.

PERFIL
Define the institution's identity, strengths and ambitions in an international context.

LANGUAGE AS AN OPPORTUNITY

Language policies are an essential part of internationalisation plans and Brazilian universities are increasingly more structured to increase the proficiency of their communities, which includes students, academics and administrative staff. The concern with expanding knowledge exchanges with foreign partners and the publication of research in international journals motivates a series of strategies in the area of languages. The internationalisation at home trend reinforces the offer of subjects taught in English at undergraduate and postgraduate courses and gives rise to new arrangements, such as mixed classes in Brazil and abroad, mediated by language and technology.

A figure well reflects the international relevance of English: in addition to being the most widely spoken language in the world, 66% of speakers learned it as their second language *(see absolute numbers in the box opposite)*. In the undergraduate, graduate and extension spheres, English permeates both the acquisition of knowledge and internationalisation processes, impacting from the collaboration of teaching and research between academics and scientists from various countries, to the university administrative teams. Although language courses are a constant on campuses, for decades, the offer has multiplied due to the need for internationalisation - mainly after the Science without Borders programme (2011 to 2017) and, consequently, the creation of Idiomas sem Fronteiras (IsF), which operated from 2012 to 2019. **Specific documents on language policies are recent. The University of São Paulo (USP), for example, which has the largest number of students in Latin America, only made theirs official in August 2018.** Many institutions are still in the process of consolidation and debate of their policies in the area.

"The idea is for the university to be a plurilingual, multicultural environment that values the global citizen," says Eliane Segati Rios Registro, State Coordinator of the *Paraná Fala Idiomas Programme*. Even though the trend is to respect many languages - and Brazil borders on seven Spanish-speaking countries - English is still the central element in the actions of universities, and expanding its acquisition remains a challenge. "Students, teachers and staff have few opportunities to use the language in real situations, which impacts oral proficiency, deal arrangements, the discussion of research topics and even social interaction," she notes.

The language policy is a key part of a larger policy, that of internationalisation, in the view of Eliane, who is also Coordinator of International Relations at the State University of Northern Paraná (Uenp). According to her, it is necessary to consider the nature of the university and its context and see which languages and actions support internationalisation and its priorities. And also, to check what the linguistic needs are for the publication in high impact magazines, to carry out international co-operation or dual degree programmes, for example.

ENGLISH: The second language for more than 750 million people

Total speakers
1,132,366,680

Total native speakers
379,007,140

Around **15%** of the world population speaks English, but for **66%** of them, it was the second language learnt

The most spoken languages in the world
(quantity of speakers in millions)

1 English	1,132	
2 Mandarin	1,117	
3 Hindu	615	
4 Spanish	534	
5 French	280	
9 Portuguese	234	

Mandarim e Spanish have the most native speakers, being:

918 million Chinese; and

460 million people in Spanish speaking countries.

Fonte: **Infográfico do Wordtips,** baseado em *Ethnologue: Languages of the World, 22nd edition* (2019)

ACTIONS at Universities

Greater offer of English courses seeks to fill gaps in basic education

Maria Lucia Castanheira *(left)*, **from UFMG, and Marilyn Martin-Jones, University of Birmingham, collaborated in research on language policies.**

The drive towards internationalisation does not take off without investments to increase levels of language proficiency in higher education. According to a survey by the *Idiomas sem Fronteiras* programme, 77% of the Brazilian academic community reaches only up to level B1, in the definition of the Common European Framework of Reference for Languages (CEFR), or intermediate, which does not allow studying or working exclusively in English. "It is difficult to understand the scenario of English language development in Brazil among academics, students and university management, and administration teams, as we

have little data", comments Cíntia Gonçalves, Senior Manager English at the British Council. In a population of more than 200 million, no more than 5% of people attest to their knowledge of the language (data based on self-declaration). Among young people aged 18 to 24, 10.3% say they speak English, according to a survey commissioned by the British Council in 2013. Therefore, the organisation's role is to support initiatives that help to understand the academic context, such as the English as a Medium of Instruction (EMI) guide 2018-2019, jointly carried out with Faubai, which listed 1000 courses in 70 Brazilian universities, and the

UK-BR English Collaboration Call, which promoted, among others, six research projects on language policies in internationalisation processes, which will have their results presented in the first half of 2020.

The low quality of English classes in Brazilian primary and secondary public schools has a direct impact on internationalisation actions and on language policies. The student reaches at university unprepared and often needs to study the language at a beginner level. For this reason, another line of research in the open call carried out by the British Council addresses the improvement of teaching and learning in public schools. **The obligation of English was determined by the National Common Curricular Base (BNCC), but the devaluation of the teaching career does not attract recent graduates.** "Regrettably, many of the best students don't even start teaching. They use their undergraduate degree to learn the language, and even in their degree, some have no intention of becoming teachers. Among those who try, many drop out, as they pass public examinations and are allocated in the worst places and without guidance. It's sad", recognises Inés Kayon de Miller, Professor of undergraduate courses in the Department of Literature at the Pontifical Catholic University of Rio de Janeiro (PUC-Rio). She works in the field of Applied Linguistics, with an emphasis on initial and continuing teacher education, and participated in a study in partnership with the State University of Rio de Janeiro (Uerj) and Regent's University in London, on Exploratory Practice history, the approach used in the training of English teachers.

Present in a discussion about language policies at the event UK-BR Internationalisation and Language Policies in Higher Education, in London, Laura Izzara, from the International Cooperation Office at USP (Aucani-USP),

maintains that it is necessary to promote projects in conjunction with public schools to improve the quality of the language from basic education. "One idea would be to involve associations of educators and public universities to offer training and teacher training, with the support of education departments", said Laura. Every year USP receives students who do not have a good knowledge of foreign languages in public or private schools. Following the principles of academic inclusion and democratisation of access to higher education the challenge is to have a regular and growing offer. "We attend hundreds of students, but it is not comparable to the USP universe, which, in addition to Butantã, has nine other campuses, including those in the capital, São Paulo and in the state", points out Luciana Carvalho Fonseca, pedagogical coordinator at USP and Aucani's Language Centre.

As of the second term of 2014, the offer of courses and proficiency exams at the

Frank Noon Photography

The proficiency of Brazilian students (CEFR)

% population
- A1 - A2
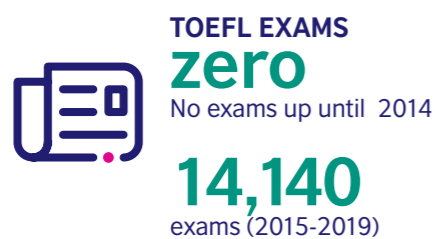- B1
- B2
- C1+

43%

34%

20%

3%
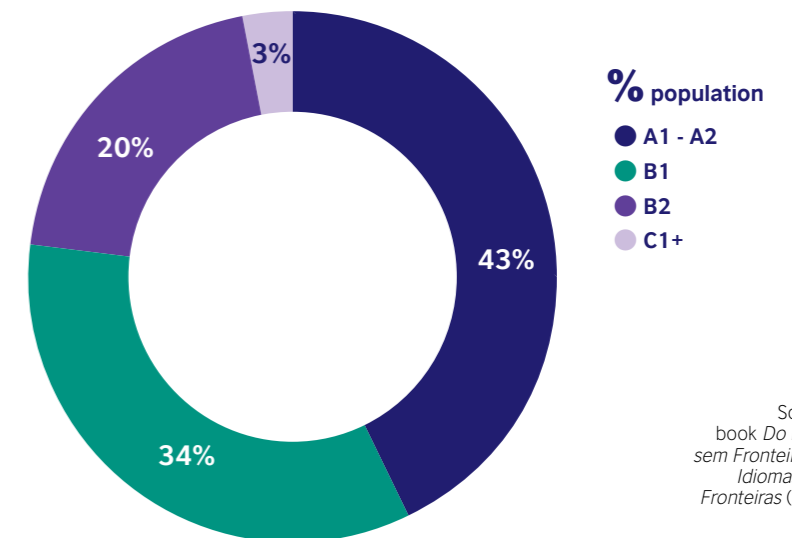
university took a leap *(see box on the next page)* due to "English at USP", which integrated old actions, such as in-person and online courses, with new initiatives, such as entering the IsF programme and the Language Education at USP Programme (LEUSP). The latter fulfils an important part of the university's language policy: the need to foster the training of graduate and undergraduate students to teach languages for the academic context and the importance of teaching initiation. In other words, they are undergraduates from the Language course, graduate students from USP and graduate students in Applied Lin-

guistics from foreign partner universities that teach classes to students, teachers and employees in campuses. "For this, the students involved receive pedagogical training in foreign language teaching through coordination at Aucani", explains Luciana. As the campuses in the capital, São Paulo, and in the countryside have their specificities, the courses take into account the vocation of each one. Distances also require hybrid course planning (partly in-person and partly online). But the priorities of English at USP, as support for the internationalisation area, are the same for everyone:

- Proficiency exams
- Academic communication in English for publications in international journals
- Submission of projects to funding agencies
- Mastering of oral communication for congresses, lectures and English courses

The abundant offer of English classes at USP also had resources from *Idiomas sem Fronteiras*, an MEC programme that was discontinued in May 2019 and ended in December. "Those who joined IsF had to formalise their language policy and that was productive. As a result, universities began to articulate, share international speakers, put researchers in contact. I know that the federal universities felt the end of the programme very much", comments Luciana. The coordinator also notes that one of the researchers' difficulties is publishing in English, as they often do not master the language and cannot afford a quality translation out of their own funds. "I believe that if CAPES invested in a budget aimed at translations, it could have a short-term impact on the expansion of knowledge about Brazilian academic and scientific work."

Inclusive action of academic communication in English at USP

IN-PERSON COURSES
800
students in 2013

10,496
students (2014-2019)

ONLINE COURSES
38,860
students (2014-2019)

TOEFL EXAMS
zero
No exams up until 2014

14,140
exams (2015-2019)

Source: Aucani-USP Presentation (2020)

A LOOK at Latin America

Leader of English Language Teaching Programmes at the University of East London, **Mario R. Moya** studies how the language is used in higher education in several countries, in STEM subjects (Science, Technology, Engineering and Mathematics).

At the seminar in London, you mentioned that Latin American countries have different approaches to internationalisation. Can you elaborate?

There are so many countries, all with different views. There are two models that usually occur in Latin America, one is driven by policies imposed by a ministry that takes care of education (policy driven), and the other by key university people who identify needs and respond to them (model driven). In general, there was a tendency to look at models from Europe or the United States as a mark of quality, but it took up time that could instead have been used to see good practices happening in the region.

The term decolonisation of higher education is present in articles and debates. What is your view on this?

This agenda is particularly important and includes respecting the context for the construction of the best (higher education) model, looking more inward than outward. In some countries, English is still seen as the language of oppression, and there are also people who react negatively to the term internationalisation.

What do you think about language teaching in the region?

In Chile, Argentina, Brazil, Mexico and Colombia, I was very impressed about how they deal with teaching and learning English in the institutions I visited, although I risk having a biased outlook as I visited renowned universities, such as USP. I think that in the case of Brazil, it would be especially important to speak of languages in the plural, and not just English. Both across borders and through cultural exchange, Spanish is relevant. If English is still a barrier for many, I believe that knowledge exchanges in the region would be strengthened if academic publications had versions in both languages: Portuguese and Spanish.

Vera Oliveira, Senior Manager, Higher Education and Science at the British Council, at the event in London.

Frank Noon Photography

Key issues in LANGUAGE POLICIES

Publications, international events, welcoming students and teachers, and the use of technology increase demands for academic and administrative teams

There is no standard model or structure for designing language policy, but those who take up the challenge tend to align two variables: the practices already underway within the university and the objectives they want to achieve. If the university receives many students from abroad, it needs to guarantee Portuguese language courses for foreigners, for example. If you are close to international borders, you can also offer Spanish. The University of Brasília (UnB) receives many students from Latin America and encourages multi-culturalism on campus. It has the largest university language centre in the country, which receives 12,000 students per year (in all there are 50,000 students and 3,000 teachers) and offers more than 12 languages for study. "We have a greater demand than we can attend for courses in Portuguese as a foreign language, difficulty in physical space to host

activities and apartments for foreign students who need renovation and furniture," reports Virgílio Pereira de Almeida, Director of the UnB's Advisory on International Affairs (INT). Everything requires resources, which depend on government, partnerships and external financing. Among other measures to meet the goals of the current UnB Internationalisation Plan (2018-2022), the 19,000 university disciplines have already been translated into a system, to make life easier for those who need their academic history in English *(see other measures to strengthen multilingualism in the box opposite)*. "It is challenging to structure an academic environment that is international and discusses global issues without neglecting local communities. It even involves taking care of the campus signage and the ability of servers to provide information in several languages", explains Almeida. At the same time that it wants to expand opportunities for students from abroad, UnB needs to prepare its students to follow classes given at international institutions with which it has partnership agreements (currently more than 230). In recent years, two calls have been opened to bring in foreign professors. The first hired 22 and the second expects to fill 50 vacancies this year to work in undergraduate, graduate and research.

Internationalisation brings many demands for the improvement of the English language, as it is used in the writing of scientific articles, in the presentation of conferences, in partnership agreements, in projects for development agencies and in specific training for teachers (like those who want to teach subjects in English - EMI). An ethnographic study on English in the development of language policy and practice*, done in collaboration between researchers from the Federal

University of Minas Gerais (UFMG), from the University of Brasília (UnB) and from the University of Birmingham, UK, analysed policies related to internationalisation, looking closely at initiatives and challenges in the use of the English language. "Investigating the daily lives of universities, the implications for people were evident, due to new demands. If there is no one qualified to make contacts for an international event, for example, you end up overloading a teacher", says Maria Lucia Castanheira, professor at UFMG and member of the group of researchers. In order to carry out training programmes, in addition to considering financial contributions, infrastructure and human resources, it is necessary to save time. "In one of the institutions, employees are released from work a few hours a week to take language courses."

The study generated important considerations for those who will think and plan the implementation of language policies, among other aspects investigated:

1 - Design policies in line with existing practices. A single language policy may not cover the diversity of disciplines and areas of knowledge at the university.

2 - Prioritise younger members of the academic team and doctoral students in encouraging mobility and supporting publication in English.

3 - Highlight people with good levels of proficiency and skills such as translation and interpretation to support internationalisation actions.

4 - Provide administrative support due to the increase in volume of work and use of technology by academics to develop and consolidate research networks.

5 - Provide support and language training for administrative employees and those who receive international visitors.

MEASURES FOR A BILINGUAL UnB

■ Adoption of a **second working language** to promote the opening of UnB to the world and encourage academics to go international.
■ Encouraging **the use of foreign languages** in the classroom or in other academic contexts - EMI.
■ **Translation** of UnB **web pages** into English.
■ Creation of a list of subjects offered in foreign languages.
■ **Organisation of scientific events** with presentations in foreign languages.
■ Reception of **theses and dissertations** in other languages.
■ Creation of open-access **multilingual magazines** to disseminate research carried out based on international cooperation.

Source:
UnB's
Internationalisation
Plan (2018-2022)

* To learn more about the research studyPaisagens de Língua e Letramentoem Mudança: o Inglês no Desenvolvimento da Política e da Prática Linguística (The changing language and literacy landscapes of Brazilian universities: Englishin policy development and in practice) and other seven studies funded by the UK-BR English Collaboration Call, **click here**

DISCIPLINES in English and virtual EXCHANGE

Alternatives or complements to mobility, they drive internationalisation at home

Expanding the offer of exchange experiences for undergraduate or graduate students is a desire of many institutions, but it comes up against obstacles such as limited resources. Making the university environment more international and closer to the language is an increasingly adopted solution. In addition to bringing in professors and researchers from abroad, which also requires investment, one of the alternatives is to train Professors to teach disciplines in the EMI model *(see explanation on the left)*. As the practice is quite recent and the institutions have different views on what they consider EMI (how much English students are exposed to, it may vary, for example), the topic is susceptible to discussions and still needs specific research.

Investigate whether there is a minimum level of proficiency to teach English subjects in higher education, and study the extent to which the linguistic knowledge of those involved in EMI impact the learning process, were the subjects of two studies funded by UK-BR English Collaboration Call, published in Framing English Language Applied Research report (learn more **here**). The practice takes place at seven universities in Paraná. "Proficiency does not need to be linked to levels B2 or C1, but it does have to ensure that both the teacher and the student have the minimum skills to follow", highlights the researcher Eliane

Segati Rios Registro, from the State University of Northern Paraná (UENP), who participated in one of the studies alongside with Cambridge Assessment English. According to her, it is necessary to think about institutional regulation for EMI. This includes, for example, enforcing credits for students and recognising the increased workload of the teacher, who for now does not receive any additional wages for extra dedication when teaching in English. Another study, a partnership between the University of Londrina (UEL), the University of Maringá (UEM) and Goldsmiths, University of London, found out that communicating is the most important element in EMI. "The participants are more interested in registering their ideas intelligibly than getting every language aspect right. Teachers, on the other hand, want their students to get used to using the English language so as to not have difficulties listening to a lecture or writing papers. The English language is perceived as a tool of academic communication", notices Telma Gimenez, researcher at UEL.

For Samantha Curle, Professor at the University of Bath, EMI combines the motivation for using the language with the acquisition of knowledge and content. But it is necessary to demystify a series of myths, one of which being that students will be more employable by taking courses in English. This has not been proven true in China, because students do not use the

EMI
English as a Medium of Instruction
The use of the English language to teach academic subjects outside the area of Languages in countries or territories where the language spoken by the majority of the population is not English.

COIL
Collaborative Online International Learning
Virtual exchange between classes of students of Educational Institutions in different countries, involved in same-discipline or multidisciplinary projects.

language in their careers. In Japan, EMI became a trend, but declined, because they saw that it is not worth studying law in English, for example, if the lawyer or judge will express themselves in Japanese. "It is necessary, first of all, to consider the context and what you want to achieve through English," says Samantha. One of the greatest scholars on the subject, Professor Ernesto Macaro, from the University of Oxford, makes recommendations for those who want to insert EMI into the university's language policy: "It is necessary to decide the model to be followed, to obtain support from the English department and make educational investments so that everything works". According to him, in the places where EMI was most successful, there were English and content specialists working together on the same course.

Separated by the ocean

Brave - Brazilian Virtual Exchange. This is the acronym that is being adopted in Brazil for COIL programmes *(see the box)*, which deal with "virtual academic mobility". In the case of the Federal University of Pernambuco (UFPE), undergraduate students take courses with an international interface, taught online in partnership with foreign universities. The model differs from distance learning in that they are in-person classrooms, with students interacting synchronously or asynchronously, using a virtual learning environment and applications. In general, they are courses that last from eight to ten weeks, developed by two Professors, one in Brazil and the other abroad. "Investments are not high; they involve more time for teacher training. As the offer of exchange scholarships has decreased significantly, we have managed to reach more students. There are 50 to 60 per semester in real mobility and 13 classes with up to 20 students each, in Brave", says Maria Leonor Maia, Director of International Relations at UFPE.

Eliane Registro, from the Paraná Fala Idiomas Programme, and Maria Leonor Maia *(right)*, from UFPE: at the forefront of language policy initiatives.

Frank Noon Photography

"Joining three classes to discuss Sustainability in Dentistry and working in virtual collaboration was possible through the COIL SUNY network, in the first semester of 2019. My undergraduate students at UFPE had contact with technical-level dental laboratory students from South Africa and with students from a group of office assistants in the United States. Our biggest challenge was managing the time zone. We planned three web conferences during the semester, and the rest were asynchronous activities. Currently, the project takes place only between two classes. The discussions and studies generated images, videos, explanations and captions for a profile I created on Instagram, the Green Dentistry Tips. Seeing the students' enthusiasm and exchanging knowledge with the teachers were the biggest gains. I learned other teaching methodologies, I visited the Durban University of Technology, I presented the work at two congresses, and I am writing an article together with the South African Professor."
Fábio de Souza is a Professor at the Faculty of Dentistry at UFPE and participates in the Brave programme

"The discipline attracted me as it was international and as I was looking for more sustainable ways of working in the office. I found it interesting because we had contact with people from different areas and ages. The only criticism is that some students do not interact as much in networks and in AVA (Virtual Learning Environment). We worked together to create a conference banner on the topic of sustainable protection barriers and produced material for an international Instagram profile. You could see how dentistry is different in places, each one with their own technologies, materials and ways of working."
Ingrid Melo Schüler Arreguy is an undergraduate student in Dentistry at UFPE and took the optional discipline Sustainability in Dentistry in 2019

Fernando Vivas

John Knagg
Researcher and English Language Consultant

20 ideas for LANGUAGE POLICY

When designing, it is necessary to think about goals, the creation and implementation process, and possible content

Many universities around the world have instituted language policies in response to increased internationalisation and the resulting increase in the use of different languages in the university, and as part of their marketing and recruitment strategies. Some policies aim to solve problems that have arisen in response to perceived tensions between different languages in the local community, or between the local language and international languages (especially English). For most universities in Brazil a language policy is likely to be part of wider internationalisation ambitions and institutional strategy, with the likely aim of:

✔ Attracting and benefiting local students (and perhaps staff) with the international mobility and employment opportunities that language proficiency brings;
✔ Attracting international students (and perhaps staff);
✔ Increasing international collaboration in research, student exchange, etc.;
✔ Generally Increasing the reputation, pres-

tige and ranking of the university.
The process of **creating a language policy** will be more successful if it is an inclusive and participatory process. In particular, it should not be left solely to the language centre or language experts. Faculties and departments should be involved, as should central strategic planning and communication departments. It also needs top management backing.

The content of a written language policy will differ according to the context and mission of each university. You may include:

1 – The **local, national and international** mission of the university (or faculty, etc.);
2 – The **aim of language policy** within that mission;
3 – The **coverage of the policy:** university, faculty, department, course;
4 – The **target audiences** of the policy: current and future local or international students, teachers, researchers, managers, administrators;

5 – The **official language**. In Brazil, universities exist in a legal and regulatory environment that uses Portuguese;
6 – The **benefits to local students of proficiency in English** or other international languages;
7 – The **expectations of the university** of the level of proficiency in English or other languages (in terms of CEFR) of students of different types at entry, during the programme or at graduation - whether compulsory or merely encouraged -, and ways of assessing the language knowledge;
8 – The **language learning support the university** offers in attaining those levels, including formal classes (General English, English for Academic Purposes or English for Specific Purposes), online support, examinations, conversation clubs, counselling and self-help groups;
9 – The **language levels expected** of faculty involved in international academic research and collaboration, and in representing the university in conferences and meetings. Any support available in specialised language improvement, translation, proof-reading for activities such as writing research proposals, academic articles or preparing presentations;
10 – The **expectations of foreign** language proficiency and use for academic, non-academic management and support staff, and the support available;
11 – The **language of education** at the university, faculty, department or course. If there is English as a Medium of Instruction (EMI), clarify who initiates the decision to use EMI and how it is approved and communicated;
12 – For **EMI, the required language level** of students at entry, the method of assessment and the support available during the course;
13 – For EMI, which **teachers are allowed** to teach, the language level and experience of EMI required of those teachers. Support or

training required or available for teachers;
14 – The **model and rules for EMI -** whether it is English-only, or whether Portuguese or other languages can be used in the different elements of education such as lectures, group discussions, reading lists, written work, examinations and assessment;
15 – For different international students and staff, the level of proficiency of Portuguese required or desired, and the resources and support available;
16 – External communications that should be in English or other languages, including the required languages of different parts of websites and social media;
17 – Consideration throughout **disadvantaged groups or special needs** in line with the university's values;
18 – A statement of how language policy and its implementation is to be **quality assured and monitored;**
19 – It should be clear whether the policy is on the one hand general recommendations, goals and ambitions, or on the other hand **rules and regulations** to be followed, or a combination of the two;
20 – It should be clear **how centralised** or decentralised the policy is in each area.

The creation of a language policy is only the first step. It then needs to be implemented. A successful implementation requires planned comprehensive and continuous internal and external communication planning, which should be based on informing, discussing and getting feedback, rather than imposing.
A well-designed and communicated language policy can lead to higher levels of satisfaction from local and international students and staff, whose expectations have been structured and met. This can contribute to the profile and prestige of the institution as an internationalised university. ∎

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RESEARCH IMPACT

Promote changes that respond to contemporary challenges. Universities are increasingly being asked to demonstrate the relevance of research, particularly those results that are visible and applied to people and generate social impact. This is the case with biological and clinical studies that include diseases and epidemic risks - such as the Zika virus - and propose solutions to contain situations that could gain worldwide scale. Also included in this account are studies that have great impact in their area of knowledge and serve as a reference for other scholars to produce new investigations.

Institutional assessments, the search for financial support, and communication with the public: in all these situations, the spotlight has been directed to the search for impact. As intuitive as it may seem, the meaning of this word and how to evaluate it can be complex tasks for many institutions. The University of York in the United Kingdom defines research impact as "the effect research has beyond academia", that is, when the knowledge generated by research contributes to or influences scientific, cultural, economic, and environmental debates, among others.

In Brazil, the most common view of impact is related to publication in journals and citation by other researchers. A second view is the economic impact, associated with the registration of patents or the adoption of a patent by some industry. There is also social impact, the definition of which varies according to what has been studied. CAPES should soon increase the importance of economic and social impact in the assessment of graduate programmes at Brazilian universities. In the United Kingdom, which already has consolidated tradition in this type of analysis, UK Research and Innovation (UKRI) differentiates between academic, social and economic impact. According to the institution, the first fits the evidence of the contribution of research to advances, whether in theoretical, practical or methodological aspects. **Social and economic impact, on the other hand, are related to the different ways that knowledge resulting from research can benefit individuals, organisations and societies.** As examples, they include boosting world economic performance, increasing the efficiency of public services and public policies, or improving the quality of life and health of people.

As a result of Research Excellence Framework (REF), British universities need to build a portfolio that shows the main impact caused by their research. This includes, for example, descriptions of the development by researchers at the University of Oxford of an intelligent system for locating broken water pumps in African countries, which reduced the average repair time of these instruments from 30 to three days in Kenya *(learn more* **here***).* There is also a study by King's College London, which, by identifying the role of language in health communication, influenced companies and state organisations to rethink the way they addressed the public *(read more about this study* **here***).*

Interact and communicate Scientific findings

British institutions differentiate between impact and the ways to achieve it. The impact is related to actions that are not under the direct control of scientists or research bodies. Whereas the paths are linked to activities that can increase the likelihood of a study having an impact. "Presenting evidence to a select committee, working with a company, or contributing to an exhibition in a museum is not impact. They would become impacts if the people or organisations involved in any way did, experimented or understood something differently as a result of interacting with research," explains the University of York in its guides for researchers.

Communicating the results of scientific research widely is one of the most efficient ways to raise awareness of research in communities, companies and public services, and for them to take the appropriate ownership, according to the UKRI.

The publication of scientific articles, participation in congresses, the receipt of

Research impact is defined as "THE EFFECT RESEARCH HAS BEYOND ACADEMIA"

by the University of York, in the United Kingdom

Well-presented **results** for the **community**

invitations to lectures, all count as strategies to reach more people. "Impact is what happens as a result of these activities", defines the University of York. And in these cases, it is important to break through language barriers to overcome the academic walls. "We have to train the scientist to use a less airtight language," says Evaldo Ferreira Vilela, president of the National Council of State Research Support Foundations (Confap).

When concluding research with potential to influence public policies, for example, it is important to consider how the results can get into the hands of decision makers. One way is to develop material aimed at this audience. That is what D3E - Data for a Democratic Debate on Education -does, a group that organises publications and holds meetings with members of the Executive and Legislative branches to present scientific evidence on topics such as the use of technology in the classrooms or international experiences in Education financing.

Another path is taken by the Bori Agen-

cy. The initiative seeks to create a bridge between communication vehicles and scientific research: a team analyses scientific journals in search of studies that can yield good reports. Those selected are transformed into releases: texts in journalistic language that highlight the most notable aspects of research, which makes it easier for reporters, who are not always accustomed to academic language. **Investment in dissemination strategies brings more visibility to Science, and a greater understanding of the benefits of investing in research and innovation.** The EasyTelling consultancy, which assists researchers and institutions in preparing reports, suggests that, in order to promote the generation of impact, scientific results (disseminated among academics) should be transformed into translatable results (data that, if communicated, can bring benefits to society). These results can generate direct impact (changes in legislation, for example) and, subsequently, long-term impact (linked to changes in the socioeconomic indicators
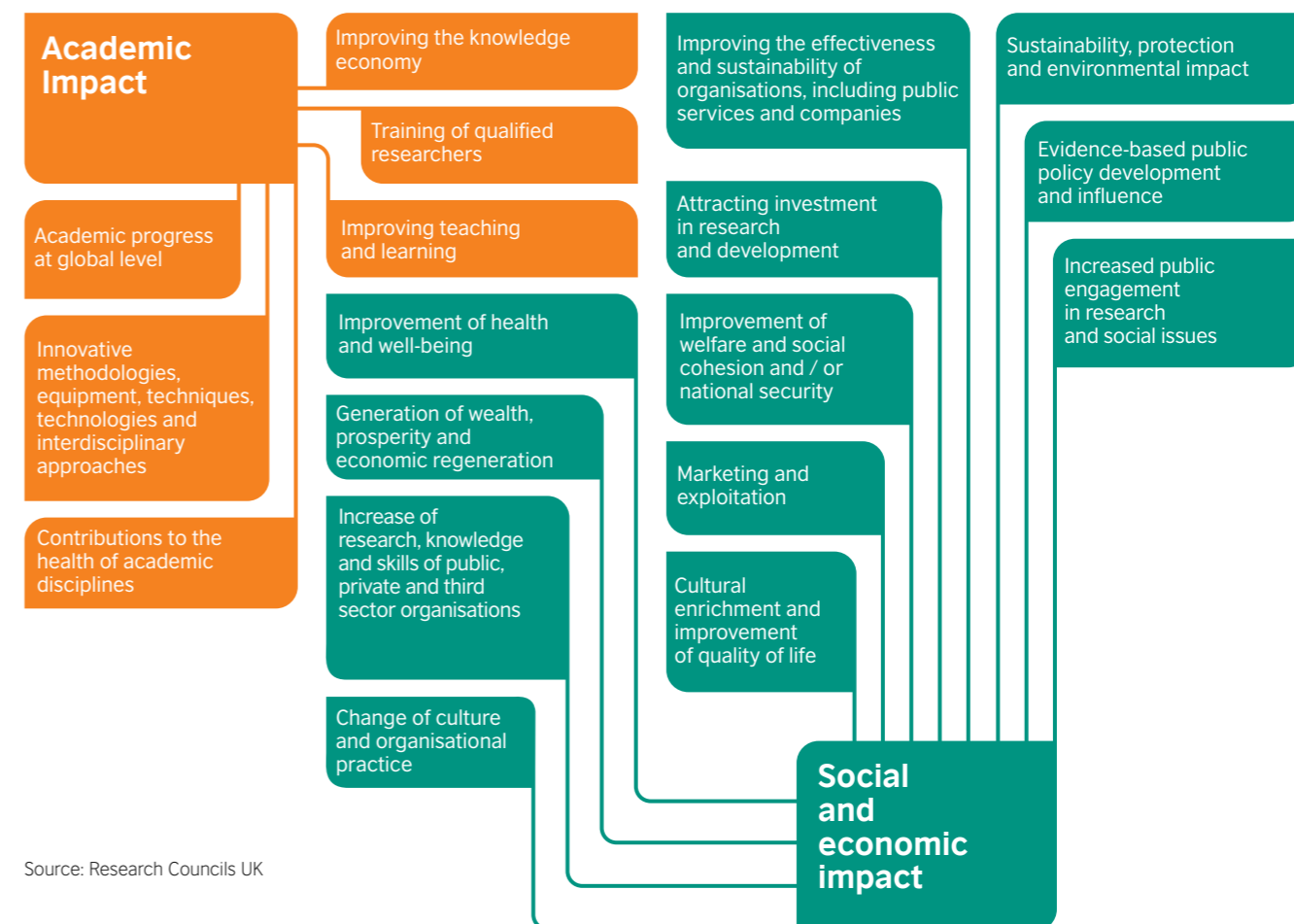
of the affected population group).

In order for this whole path to be taken, it is essential that researchers keep in mind what the specific situation is that the research intends to change and how this goal will be achieved. It is therefore possible to define indicators to observe and think about strategies - communication with politicians or companies, for example - to present the translatable results to decision makers. They are the ones who have the power to use research to promote actions that generate the impact initially desired - in the form of laws, in the

creation of government programs and initiatives of private institutions, and so on *(see some impacts in the table below)*.

In the example of the water pumps in Kenya mentioned previously, the research gave rise to the social company FundiFix, which operates in the monitoring and maintenance of pumps, influenced public policies related to water supply in the country and will have the same model tested by Unicef in Bangladesh. One of the social impacts already verified is the fact that more than 70 thousand people are attended by the pumps with which FundiFix is involved.

Thais Travassos from Unitau *(left)*, and Goret Pereira Paulo from FGV *(front)*, talk to Flávia Rodrigues *(right)*, from UoB.

Frank Noon Photography

Paths to impact
Aspects in and outside academia that demonstrate the relevance of research to society

Academic Impact

- Academic progress at global level
- Innovative methodologies, equipment, techniques, technologies and interdisciplinary approaches
- Contributions to the health of academic disciplines

- Improving the knowledge economy
- Training of qualified researchers
- Improving teaching and learning
- Improvement of health and well-being
- Generation of wealth, prosperity and economic regeneration
- Increase of research, knowledge and skills of public, private and third sector organisations
- Change of culture and organisational practice

- Improving the effectiveness and sustainability of organisations, including public services and companies
- Attracting investment in research and development
- Improvement of welfare and social cohesion and / or national security
- Marketing and exploitation
- Cultural enrichment and improvement of quality of life

- Sustainability, protection and environlental impact
- Evidence-based public policy development and influence
- Increased public engagement in research and social issues

Social and economic impact

Source: Research Councils UK

PARTNERSHIPS to expand research quality

Collaborating with foreign institutions can be an important factor in improving results

Establishing partnerships increases the impact of academic research. Collaboration between different universities - and in different contexts - presents new research problems, different points of view, methods and knowledge that research carried out by a single institution would not have. Traditionally, collaborations are made between research groups that are formal organisations possibly involving more than one institution. But support logic in network format is becoming increasingly common. These are groups - with or without formal ties - that share academic interests and establish opportunities for exchanges with each other. These exchanges can take place in different ways: by writing articles in partnership, by visits to laboratories and universities, or by the creation of "sprint" or accelerated research, which receive joint funding. When it comes to international cooperation, the exchange of information, materials and technologies can accelerate the understanding of global problems. "In general, conducting research in international networks cannot be seen as an alternative to collaborating in groups within universities, but as a complementary research strategy," say Norwegian experts Svein Kyvik and Ingvild Reymert in the article Research Collaboration in Groups and Networks: Differences across Academic Fields.

The fields of medical and natural sciences are some of the most conducive to these collaborations, since many of the objects of study are of interest to different countries and not necessarily linked to local aspects, as in Social Science research. It is in the area of Health that Brazil and the United Kingdom do most of their cooperation (see data below). This is what happened with the research carried out by Professor Patrícia Garcez, from the Federal University of Rio de Janeiro (UFRJ), in partnership with the University of Oxford. The researcher, who had been studying microcephaly since her postdoctoral studies in the United Kingdom, had recently visited the institution to visit a laboratory, thanks to a grant from the Newton Fund. From this contact, the proposal arose to carry out joint research between the laboratory headed by Professor Zoltan Molar and UFRJ. "In Brazil, we had access to the virus and great experience in dealing with flaviviruses. I took the fixed virus to the United Kingdom and there I learned how to do analyses to assess its influence on the brain model", says Patrícia. As a result, the research was one of the first to explain why the Zika virus causes microcephaly. "Without Patrícia, we would not have been able to establish a model of Zika in mice so quickly", highlights Molnar. Collaboration continued - involving other researchers from the United Kingdom - and, more recently, they identified that factors related to maternal nutrition also influence the possibility of malformation in consequence of Zika infection.

The establishment of partnerships is not always simple, and it almost never happens overnight. "Everything in research depends on a relationship which needs to be built over time", ponders Patrícia. Among other possible paths is the collaboration for writing articles. "An article written in partnership and published in a magazine considered to be of impact can open doors for more lasting collaborations", says Goret Pereira Paulo, Director of Research and Innovation at Fundação Getulio Vargas (FGV).

BIOLOGICAL SCIENCES AND BIOTECHNOLOGY **are the main areas of collaboration between British and Brazilian Institutions.**

Has your institution participated in any locally funded research project in Brazil? In which areas of research?
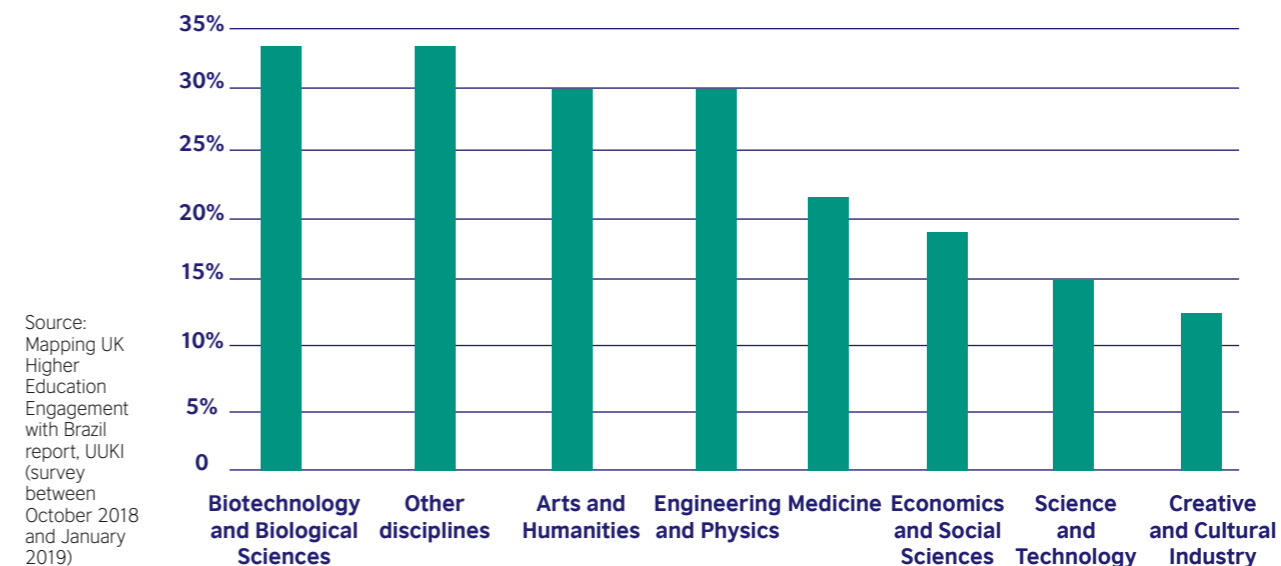
Source: Mapping UK Higher Education Engagement with Brazil report, UUKI (survey between October 2018 and January 2019)

Area	Percentage
Biotechnology and Biological Sciences	33%
Other disciplines	33%
Arts and Humanities	30%
Engineering and Physics	30%
Medicine	21%
Economics and Social Sciences	19%
Science and Technology	15%
Creative and Cultural Industry	12%

Beyond FUNDING

Potential to generate impact guides collaboration between HEIs and international systems

The search for resources for academic research is an important factor for the realisation of partnerships. As research carried out in collaboration tends to produce more impact, it is common to have specific funds for cooperative work: 76% of British HEIs point to funding as the main enabler of their collaboration with Brazil. And, in the investment field, research with the greatest potential to generate social and economic impact usually finds funds more easily. "Applied research establishes partnerships more easily, even with private organisations, to guarantee funding," says Luiz Nunes de Oliveira, Fapesp's Collaboration and Special Programmes coordinator. In the United Kingdom, the results in the REF - where 25% of the final grade is related to impact case studies - are also an important factor in defining the distribution of resources.

But there are other gains, especially in the exchange of knowledge, that are also fundamental. To be successful in looking for partnerships, it is important that the benefits of everyone involved be clear. "If Brazil has something to gain from foreign collaboration, they also have to gain by partnering with our universities," says Oliveira. This claim by the specialist helps to deconstruct a myth of discussions about collaboration with foreign institutions that countries abroad have much more to contribute than institutions here.

76% of **British HEIs** identify research funding as the main enabler of collaborations with Brazil.

In the case of research on the Zika virus carried out in partnership between Oxford and UFRJ, for example, Brazilian researchers had access to the virus and also to a vast amount of knowledge built in the country for dealing with similar agents - because of dengue and other endemic tropical diseases.

Collaboration between systems

Another interesting path is the collaboration between systems, as explains John Bramwell, Senior Advisor at the British Council. The idea is that central organizations be able to conduct and establish international partnerships in themes considered a priority for the country. That is the how Research England approached it, making more funds available to research related to the areas of economic development in the United Kingdom, and CNPq has operated similarly by creating the National Institutes of Science and Technology (INCTs).

The INCTs were developed from an open call. They are made of a head-HEI — which hosts the institute – in articulation with laboratories and groups of other academic and corporate institutions, national and international ones. The themes approached by each institution are mandatorily related to the issues defined by the government as priority for the country's social and economic development.

Focus on the search for IMPACT

John Bramwell
is a British Council
Senior Advisor
and expert
in international education

What is the relationship between impact and the sustainability of institutions?

Most institutions expect an announcement or a public call, produce a good proposal, receive the money, carry out the research and publish the results. This turns into a perpetual cycle. The problem is that there is no recognition of whether the impact of what has been done is the one that Brazil needs, just as there is no indication on the continuity of funding. If you depend on there always being another call, all you can do is complain when the money runs out. But if your work is part of a national effort - dealing with a problem like diabetes, for example - the money will come.

How can the system as a whole articulate around priority research topics?

When national priorities are well established, long-term financiers can be sought (both in government and the private sector). Development agencies can play this role, promoting coordination with companies, other governmental agencies, professional organisations, etc. A system that focuses on priority objectives is more effective when assessing the impact and can seek collaboration with other nations to solve common problems.

How can coordination between systems encourage impact research?

A cross-systems approach creates connections between business, professionals and academics to propose more robust collaboration. Traditionally, it was allowed that only the universities themselves identified partners and chose subjects for study. But collaboration at national level satisfies both institutional research interests and development needs, leading Higher Education Institutions to the nation's focuses and objectives. ∎

At Coventry University, students learn technology in practice at the Institute for Advanced Manufacturing and Engineering.

Coventry University

DIALOGUE BETWEEN SECTORS

Knowledge that comes from years of dedication and studies and can solve problems is coveted by the industry, which needs to invest in research and development to evolve. The scientific rigor of the researcher at the university and the company's market strategy are combined in the search for innovation and sustainable growth, which is also of interest to governments and development agencies. Examples from the UK and Brazil show that collaborations are highly dependent on dialogue between the academic and business worlds and that there are challenges, as well as results measured by quality indicators in these partnerships.

Finding a common denominator is not difficult in partnership relations between university and industry, but narrowing the dialogue and adjusting the pointers so that the actions meet the objectives outlined is laborious and requires persistence. "Any relationship depends on trust and develops over time. For this reason, organisations start by working together on smaller projects, such as business research, internships and courses, or by pleading for funds in calls. After this initial stage, the conversations take on a more strategic character, in which each one can clearly see the benefit of the relationship", describes Ian Chambers, executive who takes care of the development of partnerships at the Institute for Future Transport and Cities, from Coventry University. According to him, **the benefits for companies normally involve the increase of innovation and competitiveness and the creation of a talent funnel. For the university, on the other hand, it may mean advancing its research agenda while providing enriching experiences for students** *(see the table of advantages and challenges on page 52)*. In some cases, the relationship develops to the point of leading to a joint investment in infrastructure, technology and teams to achieve medium and long-term results. At Coventry, for example, a collaboration with the company Unipart generated the Institute for Advanced Manufacturing and Engineering (AME) *(learn more on the next page)*.

With 5,000 international students from 140 countries, Coventry University collects prominent places in rankings (including university of the year for student experience in *The Times Good University Guide 2019*), but one of the indices that they are most proud of is employability. According to their statistics, six months after graduation, 97% of their graduates are hired or continue their academic studies.

The university's vocation is directly influenced by the city of Coventry, which has intensely experienced all phases of the Industrial Revolution (from fabrics to watches, bicycles, and the automotive and aerospace sectors). The Midlands region has seven automobile industries, seven commercial vehicle manufactures and 16 of the 20 largest auto parts suppliers in the world. The industry-academia relationship is not only attractive for the exchange of knowledge and the split of costs of specialised laboratories. "The English government is very active in innovation research, has an interest, and invests in the development of technology", points out Marcos Kauffman, Director of AME. As one of today's critical issues is the transformation of the internal combustion engine to the electric one, Coventry University entered a consortium with Aston Martin and Williams in this area. Academic research and technological development of automotive batteries received £17 million from the government (companies covered the cost of the other half). "In this type of project, joint investment reduces the risk of the industrial partner", he explains. Research UK, a body that supports and encourages research in the United Kingdom, indicates that the highest amounts go to research in priority areas for economic and social development. To encourage collaboration between universities and companies, there are specific funds, such as the Connecting Capability Fund (CCF) and the UK Research Partnership Investment Fund (UKRPIF).

IN THE UNITED KINGDOM, UNIVERSITIES ARE COMPARED TO AN INDUSTRIAL WEIGHT SECTOR THAT:

- **Contributes £95 billion a year to the economy.**
- **Influences local and regional contexts and acts decisively on the national and worldwide scenes.**
- **Builds and maintains environments that allow research and innovation to flourish for providing:**
✓**Facilities and infrastructure**
✓**Human Resources (researchers, teachers, administrative and support teams)**
✓**Cooperation with companies, foundations, local government, other institutions and international partners**
✓**Significant equity investments to fulfil its strategies autonomously.**

Source: Research England

From **Coventry** to **Camaçari**

The UK's first faculty on the factory floor. This is what the Institute of Advanced Manufacturing and Engineering (AME) is called, the result of a partnership between Coventry University and the Unipart Manufacturing Group (auto parts industry). "Setting up part of the faculty inside the factory aims to promote practical experience for the student, who leaves prepared to work in the industry. And the 100% employability rate in the engineering area proves the success of the idea", celebrates Marcos Kauffman, Director of AME, whose building has been operating since November 2014 on campus. There, students develop projects aimed at solving problems of the industrial partner.

Inspired by the same model and with consultancy from Coventry University, Senai Cimatec implemented the E2I Programme (Engineering for Industrial Innovation) in Camaçari, Bahia, in partnership with the Ford Motor Company. It is the first faculty on any Brazilian factory floor, with an industrial environment dedicated to education and applied research. "Coventry University created a specific course for this concept, but here we adapted the model to be implemented in the nine Engineering courses we already had", explains Tatiana Ferraz, administrative Pro-Vice-Chancellor of Senai Cimatec University Centre. The student can have their training with E2I for one or two years of their course. In 2020, those selected for 39 places will receive a company grant to participate in the project. Guided by tutors (Senai Cimatec professors for academic tutoring and Ford engineers for industrial tutoring), students seek a solution to a real industrial problem. They take specific disciplines to support the knowledge needed to develop the project. Just as Coventry has its own industrial structure to operate this model, Senai has an operational arm, Cimatec Park.

"The students brought and applied academic methodologies within Ford. This added a lot of value in problem analysis and decision making," says Nilton Otsuzi, the company's chief product and partnership development engineer. In 2019, E2I carried out two pilot projects in collaboration with the automotive industry. One, led by the manufacturing team, involved the design and production of a part to support the assembly of a car dashboard, ensuring greater agility and productivi-

ty. The project monitored by the Ford product development team was to create a vehicle touch screen test device. "In the case of the manufacturing device, the students were able to optimise the multimedia screen subassembly bench and used our 3D printer for the final solution. We reduced the cost of inventory by 32% and the material used by 40%, and had a 72% improvement in the use of the area," says Otsuzi. One of the biggest challenges, according to him, was to complete the project within the established deadline, which required speed and objectivity. Students interacted with operators on the assembly line, process engineers and ergonomists to find the best solution. For Tatiana, **one of the difficulties is to articulate the company's demand with academic content. In other words, what is proposed must be adequate to what the student needs to learn.** "If it is not challenging, it does not add value to the course and training. On the other hand, if the student is unable to progress, they end up feeling discouraged," she adds. The right dose depends on good articulation between company and university.

This need for dialogue is one of the critical elements of academia-industry collaboration, and is something that Coventry University understood a few years ago. "We hire leaders who can act as translators between both parties, in other words, people in the industry with academic experience or vice versa. It was important to choose individuals who could translate research and its benefits into industrial capacity", explains Kauffman, himself a good example: having studied Agribusiness in Brazil, worked in the English auto industry, studied Law at the University of Buckingham and defended a doctoral thesis on the challenges of the 4th Industrial Revolution. According to him, the current strategy of Coventry University includes aligning business and academic expectations well and trying to achieve a balance, since the industry thinks for tomorrow and the university aims five years ahead. "We mapped out technologies that the industry will have to use and identified which are at a lower level of development, that is, susceptible to research", he says. The university organises multidisciplinary groups of researchers to deal with six main themes in 14 research centres. The current project portfolio moves £57 million and 720 graduate researchers.

Ascom Seplan

Opened in November 2019, Senai Cimatec Park is a 4-million-square-metre complex in Camaçari, Bahia.

The logic behind the strategy of the Institute of Advanced Manufacturing and Engineering, the UK's first faculty on the factory floor, also fits in other academia + industry collaboration contexts:

LEARNING
Create an innovative teaching environment to train students ready to work in the industry

RESEARCH
Establish the infrastructure to house collaborative work on research and development

BUSINESS
Improve return on investment in innovation

Source: Institute of Advanced Manufacturing and Engineering, Coventry University

University-business Partnerships

BENEFITS
For companies
■ Often more worthwhile than investing in laboratories to use them only at specific times
■ Operating laboratories requires highly specialised personnel (such as teachers and researchers)
■ It is a way of prospecting talent at universities

For universities
■ Better conditions and infrastructure for developing research and the possibility of increasing the chances of publication of studies in national and international journals
■ Student training more in line with market demands
■ There may be funding for students, teachers and researchers

CHALLENGES
■ Cultural differences - e.g., universities favour a deep understanding of problems, while companies have a greater focus on product development
■ Difficulties of companies for medium and long-term funding
■ Legal uncertainty of tax incentive models for research
■ Turnover in companies may imply the departure of professionals responsible for partnerships, hindering the progress of projects

Source: Boas Práticas de Parceria Universidade-Empresa em Cursos de Graduação de Engenharia, Confederação Nacional da Indústria – CNI (2019)

Quality and sustainability in PARTNERSHIPS

Expansion of a multidisciplinary network of specialists and increased funding boost research

For a long time in Brazil, Science only happened within universities. "The multinational and foreign industry brought its scientific and innovation models from abroad. This collaboration needs to be induced and fostered", comments Tiago Muzilli, Coordinator of International Relations at FEI University Centre, founded in the industrial pole of ABC Paulista, Sao Paulo, to train engineers for companies in the automotive area. Just as many Brazilian universities have mechanisms for developing partnerships, FEI has an innovation agency. When the result of scientific research is promising, interested parties can encourage it to continue or even give rise to new research *(see examples on the side)*.

There are also indicators to assess the quality of partnerships between academia and industry. Muzilli cites three of them: how much Science materialises within the industry and is applied, benefiting society; the impact of the discovery or study to advance or deepen other research; and the number of patents registered. According to Carlos Henrique de Brito Cruz, Fapesp's Scientific Director, the money the company is willing to invest is also an indicator, as the volume of resources is related to the quality of what the company obtains from that interaction. In the state of Sao Paulo, there are research centres that have up to R$150 million available,

half of which is funded by the private sector. "The production of co-authored scientific articles also indicates that there was intense collaboration," says Cruz, referring to an article published in Energies magazine in February this year, which discloses the findings of the cooperation between Professor Ronaldo Gonçalves dos Santos, from the Chemical Engineering Department of FEI, and Professor Sina Rezaei-Gomari, from the School of Science and Engineering at Teesside University in Middlesbrough, UK. They created mathematical equations for the development of software, based on measures involving chemical and petroleum engineering, to obtain precise data to define the strategy for extracting oil from unconsolidated (porous) rocks. The collaboration was supported by the Newton Fund and is of interest to the industry, having already been validated, and now needing to be extended to various types of reservoirs (with analysis of scenarios such as rock type, salinity and acidity) to gain commercial appeal. "There is nothing better than cooperating, especially when doing research. We worked in similar areas, but with different backgrounds, so the exchange was sensational", says Gonçalves dos Santos. "Today there is a lot of talk about multidisciplinary groups and diversity. The result tends to be more effective if there are different contributions."

EXPENDITURE ON R&D AS PERCENTAGE OF GDP:

Sao Paulo:
1.24%

United Kingdom:
1.40%

Collaboration that strengthens results and evolves

UNIVERSITY COURSE ON BIOMIMETICS, an area of science that is inspired by nature to develop sustainable solutions.

FEI + Coventry University:
Between February and April 2016, undergraduate and post graduate students from both HEIs had classes with Professor Rodrigo Filev, from the Department of Computer Science at FEI, and with Professor Anh Tran, from the area of Humanitarian Engineering at Coventry University.

The students developed several projects, including one related to the **better use of water resources for food production, and another aimed at the conservation of fruit** during transport to minimise waste.

A low-cost monitoring system of agricultural areas gave rise to the following project:

SENSING CHANGE, THE INTERNET OF THINGS (IOT) IN AGRICULTURE, a device that captures and monitors data such as humidity and soil temperature to help small farm producers to improve agricultural processes and increase productivity.

FEI + Coventry University + Harper Adams + University of KwaZulu-Natal + entrepreneurs:
In 2018, researchers and professors in the areas of Humanitarian and Agricultural Engineering of the United Kingdom, Bioresource Engineering from South Africa, and Computer Science from Brazil, a social entrepreneur from Zambia and a new business professional from the United States came together to carry out the IoT project in agriculture.

Sensing Change obtained **£20,000 in funding from the UK's Royal Academy of Engineering** and resulted in technology so that the smallholder is able to use hardware construction instructions, assemble the electronic components and download the software to have a device for precision agriculture of value and accessible use.

The IoT in agriculture gave rise to the following project:

SWAMP (SMART WATER MANAGEMENT PLATFORM), high precision intelligent irrigation system for agriculture.

FEI + UFABC + UFPE + University of Bologna (Italy) + VVT Technical Research Centre (Finland) + Embrapa + companies:
In progress until the end of 2020, it combines multidisciplinary knowledge to develop a platform with sensors, software and artificial intelligence to improve irrigation efficiency, optimizing the use of water resources. Among those involved are the Brazilian IoT solutions company Levertech, of IoT solutions, and the Spanish drone manufacturer Quaternium, in addition to commercial entities of farmers, who test the solutions in Brazil and Europe.

The project received €3 million, half from the National Education and Research Network (RNP) and half from the European Commission, and has already resulted in the publication of some papers and presentations at conferences in the area, documented on the swamp-project.org website.

UFABC - Federal University of ABC
UFPE - Federal University of Pernambuco
Embrapa - Brazilian Agricultural Research Corporation

The INTERACTION scenario

Piu Dip/Fapesp

Carlos Henrique de Brito Cruz, Scientific Director of the Sao Paulo Research Foundation(Fapesp), says that supporting teachers in project management is essential for the development of research, and that co-authorship between universities and companies is only but growing in Brazil.

You refute the idea that the interaction between universities and companies in scientific and technological research in Brazil is incipient. Why?

In the Brazilian debate, there is a kind of common sense that considers this relationship weak or even non-existent. But it is a discussion based on subjective feelings. That is why I set out to present four objective indicators that make it possible to know the intensity of this relationship and to verify whether it is improving or not. What I got was a quantitative picture that had never been drawn in Brazil about the interaction between universities and companies.

What are these indicators?

The money that universities receive from companies to carry out research; the number of scientific articles in which there are authors from Brazilian universities and national or foreign companies; the number of patents registered by universities that have co-ownership with companies; and the number of start-ups created, mainly by students.

What did the values invested by companies reveal?

When analysing the figures of the State University of Campinas (Unicamp) and the University of São Paulo (USP), I found that both would rank among the 20 universities in the United States that most receive money from companies in relation to the total of external funding for research that enters the institution. Compared to the American scene, Unicamp would be in seventh place and USP, in 11th. This helps to understand that there is little interaction or effort in this direction. As there are few universities in Brazil that keep their accounting up to date, the lack of information did not allow us to analyse other institutions, but I suppose that UFRJ, UFMG, UFSC and ITA, among others, would show good results if they published their data.

And in relation to the quantity of scientific papers published in co-authorship?

Using the international Web of Science base, I was able to look at almost all Brazilian institutions, including private ones. I found that from 1980 to 2018 the number of scientific publications with university and company authors grew 14% per year. All this evolution demonstrates that the collaboration sees results and is sophisticated, as it implies that two authors had the idea, worked, wrote and published together.

What else did the analysis of the co-authorships show?

That this interaction is not widespread in the set of Brazilian HEIs, as only TEN PUBLIC UNIVERSITIES account for 72% of co-authorships. This data indicates that it occurs where there is a high intensity of research activities. Less intensity is a hindrance, as the company is looking for a place with many ideas. If the other 100 universities want to improve interaction, they should try to be more similar to these ten.

But why is there such a difference?

I see two reasons. The first is access to research resources, which are limited. The second is how the university works with academic values. For example, an environment is created and maintained where the most qualified teacher progresses in the career and receives authorisation to participate in international conferences and students have access to scholarships to advance their training. This includes an institutional effort to support researchers, such as maintaining infrastructure and equipment, scientific repositories with international visibility and administrative support. I think the biggest problem for Brazilian universities is the inability to help teachers manage a research project.

What can industry and university relations in the UK teach Brazil and vice versa?

In the United Kingdom, there has been a tradition of corporate R&D for many decades, with the conviction of the benefits of collaborating with universities on advanced topics, which facilitates interaction. In Sao Paulo, instruments that favour advanced and long-term collaborative research, like the Engineering Research Centres (Fapesp), can inspire policies. Programmes to stimulate technological innovation, such as Pipe Fapesp and Catapult, from the United Kingdom, can dialogue to create collaborations between small companies.

How should the government act to improve quality research and encourage partnerships with the productive sector?

The government may have more rigorous and internationalised criteria to analyse the quality of research, taking advantage, for example, of the opinion of outside scientists when considering requests for funding. Another initiative is to encourage research leaders to spend time abroad. The limitation of international experience is one of the major barriers to advancing the quality of research in Brazil. In relation to partnerships, funding helps. But Finep's National Fund for Scientific and Technological Development (FNDCT), which from 2010 to 2011 invested R$700 million each year in collaborative research between university and company, today only has R$40 million per year.

Are there new areas of research that have opened up in recent years due to industry interest and funding?

Yes, one example is the research centre on artificial intelligence, in partnership with IBM, to be based at USP. Another is a study on gene editing and climate change together with Embrapa, at Unicamp. Since 2014, Fapesp has helped to create 14 engineering research centres, with contracts of up to ten years, involving expenditures between R$40 and R$260 million each, at a time of economic crisis in the country.

Universities with the largest number of articles published in co-authorship with the industry between 2009 and 2018:

1. University of São Paulo (USP)
2. Federal University of Rio de Janeiro (UFRJ)
3. State University of Campinas (Unicamp)
4. Federal University of São Paulo (Unifesp)
5. Federal University of Rio Grande do Sul (UFRGS)
6. Sao Paulo State University (Unesp)
7. Federal University of Minas Gerais (UFMG)
8. Federal University of Paraná (UFPR)
9. Federal University of Viçosa (UFV)
10. Federal University of Santa Catarina (UFSC)

Internationalisation and language policies

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In November 2017, the British Council took knowledge of internationalisation in Higher Education to university centres in four regions of the country, fostering debates aimed at strengthening Brazilian institutions so that they can establish more strategic partnerships. The Universities for the World seminars were attended by Vice-Chancellors, Deputy vice-chancellors of postgraduate studies, research, international relations and English language departments, mostly of public universities. The results of the seminars were compiled in the publication, and launched in April 2018 at the Faubai Conference, available for free download in Portuguese in English **here.**

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In London, December 2018, the British Council held the UK-BR seminar on internationalisation in higher education in which Brazilian and British universities were able to discuss the main challenges and opportunities related to the CAPES-PrInt programme, partnerships, English as a Medium of Instruction, quality, rankings, and transnational education. Themes dear to the internationalisation agenda and its advance in Brazil and the United Kingdom were discussed among the departments of international relations, research and English. The result of this seminar and workshop was translated into the 2019 publication, available for free for download in Portuguese and in English **here.**

Framing English language applied research

In June 2018, the British Council launched the UK Brazil English Collaboration Call - a call for funding joint projects between Brazilian and British HEIs with the aim of promoting applied research in English. The support funded two research lines:

■ English language policies at the institutional level as a main component of the international process of Brazilian HEIs, aligned with the internationalisation agenda at home.

■ Improving English language teaching and learning in the public school system at lower and upper secondary levels. This line included topics such as initial and continuing teacher training, use of technologies and assessment.

Access the publication that provides an overview of the research conducted **here.**

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Lieselotte Hoeschl Ornellas

Lieselotte Hoeschl Ornellas once read a bookthat told the story of Florence Nightingale, a British nurse recognised for treating wounded soldiers during the Crimean War. It was enough to encourage her to pursue a career in Nursing, graduating in 1939 from the Federal University of Rio de Janeiro.

Soon after, Lieselotte was awarded a scholarship to study at the Professor Escudero National Institute of Nutrition in Argentina, during the period when the area of Nutrition and the profession of the nutritionist began to emerge and gain recognition in Brazil.

In 1947, Lieselotte received a second scholarship, this time from the British Council. She was invited to study at the Florence Nightingale School of Nursing and Midwifery at King's College London, where she researched the effects of food rationing in the organism in post-war Britain.

Lieselotte would still study in the United States and write a series of books in her field, and become one of the great references of the area and an inspiration, when her knowledge was used to help victims of a flood in Bolivia.

Amid the celebration of the British Council's 75 years of activities in Brazil, we recognise the trajectory of Lieselotte Hoeschl Ornellas as a symbol of the importance of exchange of ideas made possible by the internationalisation of education.

We hope that Lieselotte's experience can serve as an inspiration for the achievements that are possible when fostering partnerships between universities and educational institutions around the world.