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Role of University International Partnerships for Research & Education: Leaders' Critical Insights & Recommendations

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ABSTRACT

International partnerships have become increasingly important for the mission and goals of universities and colleges globally. Understanding the nature of these partnerships and the perspectives of their senior leaders is critical. Senior international officers (SIOs) at 59 US public and private universities and colleges and 4 non-US universities completed surveys regarding: goals and criteria for developing the partnerships; number and country of their partners; types of existing partnerships; ways the university/college promotes/rewards international partnerships; challenges faced and important considerations for developing partnerships; and recommendations to enhance successful international partnerships. The SIOs' insights and recommendations were reviewed and analyzed. The most frequently identified major goals were *'enhancing the quality of research and scholarship'* and '*strengthening students' education and preparation for life in a multicultural world and global economy'.* Conclusions included the recognition that successful strategic international partnerships and effective policy will likely: need to expand in scale, scope, diversity, and complexity; require strong, committed leadership; draw on the research and pedagogical knowledge worldwide; and carefully consider the wide, unique opportunities and challenges of these partnerships for practice and policy.

Keywords: university international partnerships, internationalization of research and education, university leaders' perspectives, university-industry relations, international research policy

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Around the world and increasingly through international partnerships, institutions of higher education have played key roles in generating, disseminating, and applying the latest research and technological knowledge to address global grand challenges and to transform rural and urban communities. As reported in many recent publications, international scientific and undergraduate and graduate educational partnerships have been an important part of research, education and development for decades (AAA&S, 2020; Deardorff and Charles, 2018; IIE, 2016; Perkmann et al., 2021; Wagner and Leydesdorff, 2005). These partnerships take many forms including agreements of cooperation; interdisciplinary joint research initiatives and centers; faculty and student exchanges and study abroad; dual degree programs; community and regional development activities; and networks, consortia, and associations.

Regardless of the specific nature of these international partnerships, they generally require formal institutional commitments, strong visionary leadership, adequate resources, clear and sound policies, and mutual respect (NSF, 2020; Ma and Montgomery, 2021; Sutton and Obst, 2011; USAID, 2017, 2020; Woldegiyorgis et al., 2018).

The importance of international partnerships is reflected in The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015. This report provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries—developed and developing—in a global partnership. Goal 17 is focused on strengthening the means of implementation and revitalization of the global partnerships for development with an emphasis on '*strong, inclusive global coalitions and collaborations*.' With just under ten years left to achieve the SDGs, world leaders at the September 2019 SDG Summit called for a 'Decade of Action' and pledged to mobilize financing, enhance national implementation, and strengthen institutions to achieve the goals by the target date of 2030 (United Nations, 2020; Loconto and Fouilleux, 2019).

LITERATURE REVIEW & FRAMEWORK

Many US science, research, and educational institutions have stressed the critical importance of international research collaborations and educational partnerships (NSF, 2018, 2020; APLU, 2017; USAID, 2017, 2020; AAA&S, 2020; Chen et al., 2019; IIE, 2016; Hird and Pfotenhauer, 2017; Wagner and Leydesdorff, 2005). Rebecca Keiser, Chief of Research Security, Strategy and Policy and former leader of the US National Science Foundation's Office of International Science and Engineering, noted that international collaboration ensures the US science and engineering (S&E) community access to expertise, facilities, data, and research sites across the globe and that keeping the US engaged with global research is critical to the health of our S&E enterprise. Kaiser indicated that the National Science Foundation is committed to international cooperation in science, engineering, and education research. She also observed that "we value our international partnerships around the globe and recognize that the most challenging science requires international cooperation" (NSF, 2018; 2020).

Keiser further observed that large-scale research networks that connect US researchers with partners in other nations will be key to tackling scientific grand challenges and pushing the frontiers of science in ways that are impossible for typical lab-to-lab collaborations. To meet this need, in fall 2020 she announced an NSF program (Accelerating Research through International Network-to-Network Collaborations, or AccelNet) which aims to accelerate the process of scientific discovery and prepare the next generation of US researchers for multi-team international collaborations. Among the projects to be funded are community-identified grand challenges to improve understanding of the organisms, systems,

and sustainability of our planet, as well as solutions to pressing problems related to the air we breathe and the food we produce (NSF, 2020).

In late 2020, the American Academy of Arts & Sciences (AAA&S) published a key report, entitled America and the International Future of Science, as part of the Challenges for International Scientific Partnerships (CISP) project (AAA&S, 2020). This report notes that international scientific collaborations have led to many groundbreaking scientific discoveries, such as the first image of a black hole, lifesaving vaccines and therapies, and new crops that help prevent famine. The CISP project's principal conclusion was that the benefits of international scientific collaborations for the US and the world are substantial and growing and far outweigh the risks they can present.

According to recent articles in *Nature Index* (Crew, 2019; Chawla, 2018), since 2004, the number of international scientific collaborations globally has tripled, as has the number of co-authored publications. Moreover, according to a Web of Science analysis, from 2000 to 2015, the percent of scientific publications produced by authors from two or more countries tripled (Chawla, 2018). Moreover, the impact of these co-authored publications was considerably higher based on field-weighted citation analyses (Ribeiro et al., 2018).

Similarly, in a case study of the MIT Portugal Program, the co-authors found that the researchers involved in this international collaboration produced between 15% to 30% more articles than the control cohort, while still increasing the quality and visibility of their publications as measured by their impact factors and citations. In addition, they noted that complex international capacity-building partnerships can have a significant impact on the 'hosting' country in terms of cluster formation and research re-orientation (Hird and Pfotenhauer, 2017).

Several authors (Crew,2019; Chawla, 2018; Ribeiro et al., 2018) note, looking at publication records dating back to 1991, that while internationally co-authored papers have increased tenfold in the most advanced countries, among the BRIC group of countries (Brazil, Russia, India and China) they have increased twentyfold. However, these same authors report that researchers in developing countries face large hurdles and often risk playing a marginal and subordinate role in international collaborations with limited influence on the research agendas. For example, while US researchers lead the world with nearly 300,000 international co-authorships in 202 countries, some countries in Africa, Southeast Asia and South America have far more limited international connections (e.g., Bolivia with 78 countries, Liberia with 42 and Angola with 32). Finally, they observe that collaborating on a paper doesn't necessarily mean that researchers interact, thereby minimizing knowledge exchange.

The US Agency for International Development (USAID) has also focused on a number of the critical grand challenges related to food, environment, energy, and community development and has a long and extensive history of international research, educational, and development partnerships in these important development related areas. A recent publication, entitled USAID'S *Legacy in Agricultural Development 50 Years of Progress* (USAID, 2017), documents the impressive efforts and programs to innovatively develop, test, and advance best practices in development.

USAID has continually pioneered new approaches in science, education, economics, and social organization to improve the earnings potential and standard of living of rural and urban households. In particular, USAID has partnered with US university scientists and host-country researchers to conduct research to boost agricultural productivity, enhance nutrition, support science-based biotechnology, and strengthen higher education institutions in developing and emerging countries.

Over the last several decades, Feed the Future Innovation Labs for Collaborative Research and Collaborative Research Support Programs (CRSPs), unique partnerships between US universities, developing country institutions, and USAID's other partners, have addressed issues of hunger and poverty through science, technology, and education. Created in 1977, these long-term collaborative research programs have focused the expertise of US universities on improving agricultural productivity and marketing systems and enhancing food security in both the US and in developing countries. Currently 23 interdisciplinary multi-state international programs are actively engaged in Asia, Central America, and East, Southern and West Africa, all led by US universities (USAID, 2020; Rudnick et al., 2019).

Complementing the importance of international partnerships for research and development is the equally important role of these partnerships for the development of the citizens and leaders of tomorrow (Mace and Pearl, 2019; Marginson and Smolentseva, 2014; Marginson, 2017). The US Department of Education report Succeeding Globally Through International Education and Engagement notes that "today more than ever, an effective domestic education agenda must aim to develop a globally and culturally competent citizenry…. Today's world also requires critical thinking and creativity to solve complex problems, well-honed communication skills, the ability to speak world languages, and advanced mathematics, science and technical skills" (2018).

As E. Gordon Gee, President of West Virginia University, recently observed, "globalization has helped create new demands for graduates who understand our world and can compete in an international workplace. It is our job, as leaders in higher education, to connect our students to the world and the world to them. At this fragile time in our world, it is more important than ever to give our students the skills, experience, and knowledge that will help them pursue global opportunity, understanding, and, ultimately, peace" (Deardorff and Charles, 2018: xi-xii).

All these reports, initiatives, and broad global agendas emphasize the critical role of collaborative partnerships. International research, education, and outreach partnerships and collaborations have become particularly relevant for the mission, goals, and future direction of universities in the US and globally. As noted above, US universities have been leaders with a long history of successful research, educational and extension collaborations and will need to enhance and continue to build on that foundation (USAID, 2020; USDA, 2020; APLU, 2017; IIE, 2016; Chen, 2019; Payumo et al., 2019). In addition, in the last two decades, many universities have created a senior leadership position for this key function in recognition of the increasing importance of international collaborations and partnerships (e.g., vice president, vice chancellor, vice provost, dean).

While this review has emphasized the research, educational, and outreach benefits of international partnerships, it is equally important to acknowledge that imbalances often exist in these relationships. Most international partnerships bring together institutions with different resources and capacities. The asymmetrical power relations that may impact the partnerships is at the center of the North-South theoretical divide. In the global South, due to lack of resources, financial support, and human capital, in part as a consequence of colonialism and global capitalism, many universities are unable to function as a true partner (Robinson, 2016).

Zingerli, in an article on the sociology of international research partnerships for sustainable development, reviewed institutional conditions and individual choices of North-South research collaborations. He analyzed discourses and practices shaping the relations between unequal partners and concluded with the necessity to negotiate power and social relations in these partnerships (Zingerli, 2010). This inequality

may influence the outcomes and the course of decision making, goals and programs of these partnerships (Ynalvez and Shrum, 2011).

Nonetheless, within this context, describing and understanding the leaders' perspectives and opinions of the nature and goals of these partnerships, their issues and challenges, as well as successful models, are essential to future success. Equally important is the role of university leaders in the negotiated partnerships (Deardorff and Charles, 2018; Merkx and Nolan, 2015; Heyl and Hunter, 2019). How do university leaders see their role in these international and transnational partnerships? In many instances, deans, directors, and university vice presidents play a critical role in developing and maintaining strategic research and educational collaborations. Yet, we know little about how they see their role, specifically their perceptions that tend to shape the policies and outcomes of their universities' partnerships. This study focused on university leaders' perspectives of their international partnerships in order to better understand and enhance the research and educational relationships and to strengthen the policies that shape those partnerships.

STUDY DESIGN

To gain insights into how university/college leadership teams view the goals, mission, and challenges of international collaborations and their role in these strategic partnerships, a survey was sent to members of the Association of International Education Administrators (AIEA), a large, predominately US organization formed in 1982, and specifically focused on senior international research and education leadership. In the last two decades many universities and colleges have added senior leadership for their international agendas to include Vice Presidents, Vice Provosts, Vice Chancellors, Deans and Directors. This paper utilizes senior international officers (SIOs) to refer to the survey respondents. Sixty-three surveys were completed by the institutions' SIOs representing nearly 20% of the 2020-2021 AIEA membership. The institutions included a broad cross section of large, mid-size, and small US public and private universities and colleges and four highly ranked non-US universities from Europe and North and South America (Appendix A).

Fifteen of the universities in this study are among the most research-active North American institutions as measured by membership in the Association of American Universities. In addition, one third of the participants' universities rank among the top 100 U.S. institutions in the QS World University Rankings: USA. The specific measures utilized by QS include a combination of global and regional reputation, publications, normalized citation impact, other bibliometric indicators, international institutions considered excellent for the recruitment of graduates, and international collaborations (Craig, 2021). The universities and colleges vary considerably in size from 1200-1400 to over 45,000 and include both public and private comprehensive universities and liberal arts colleges.

However, despite the very different sizes of the programs, all the institutions provide a diverse set of majors across the natural and social sciences and humanities, acknowledge the importance of globalization in their plans, and have some international partnership agreements. One of the key changes over the last decade has been the increased ranking of institutions outside the US. However, as several scholars note (Chirikov, 2021; Dicker et al. 2019) these changes may be a consequence of their shift of mission, ambitions and investments toward the QS ranking criteria as much as their enhanced quality and productivity. Regardless of the criteria or ranking of institutional quality, the perceived opportunity and value of international partnerships and collaborations with universities outside the US continues to grow.

A cover letter on university letterhead was sent to the AIEA members explaining the nature of the study and asking them, or an appropriate designated SIO, to complete a 14 question Qualtrics survey. The survey was developed from an extensive review of the literature on international partnerships and multiple interviews with university leaders. Understandably, the Qualtrics survey has its limitations. Specifically, it does not capture the fact that respondents may not feel comfortable providing answers that present themselves or their institutions in an unflattering manner. Nonetheless, the Qualtrics survey was chosen for its ease of administration and quality of data analysis.

The focus of the survey was on the nature and goals of each institution's international partnerships, addressing the following seven key aspects**:** 1. goals and criteria for developing the partnerships; 2. number and country of their partners; 3. types of existing partnerships; 4. ways their institution promotes/encourages/rewards international partnerships; 5. challenges or issues faced in building and maintaining the partnerships; 6. important considerations for developing successful partnerships; and 7. suggestions to increase and enhance successful international partnerships. For each of the key aspects of their partnerships, the SIO was provided with 9 to 16 possible answers.

The international leaders utilized a 5-point Likert scale to rate each possible answer within the eight key aspects, from 1=not important/never, 2=slightly important/rarely, 3=moderately important/occasionally, 4=very important/frequently, to 5=extremely important/always. After each question, they were also asked to identify other possible answers.

After responding to the seven questions on the key aspects of the partnerships, the SIOs were given three opened ended requests: identify a particularly successful collaboration and describe why it was a success; identify a particularly challenging collaboration and describe why it did not meet expectations; and share suggestions to better engage in these partnerships in the future. Finally, these university/college leaders were asked if they would like a copy of the report (all indicated affirmative).

RESULTS

Number and country of partners

While every university and college had some partnership agreements, they differed significantly in the number of agreements and their primary partner countries. The institutions reported a total of over 7000 Memorandums of Understanding (MOU)/Agreements of Cooperation (AoC). Less than a fifth of the institutions (17%) reported 1-25 international agreements, while nearly half (48%) indicated they had over 100 MOUs/AoCs. Approximately a fifth (21%) of the colleges and universities reported over 200 agreements.

The campus international leaders were also asked to identify up to five of their most important partners. Partner institutions were located on all six continents and in 48 countries. Asian countries were the most frequently mentioned as important partners. Four of the top five partner countries were China (48), Japan (18), India (16), and South Korea (15). Other countries most frequently identified as important partners were United Kingdom (24), Germany (11), Australia (10), Brazil (10), Mexico (10), France (9) and Vietnam (7). All other countries were identified fewer than five times. In total, 14 European countries, 10 Asian countries, 9 Latin American countries, 6 African countries, and 6 Middle Eastern nations were identified among the most important five countries with institutional partnerships in the US.

Types of International Partnerships

Most universities/colleges in this study maintained a spectrum of diverse international partnerships (Table 1). Two thirds of the universities reported seven or more different types of relationships. Nearly every institution (61) was engaged in student exchanges. Over ninety percent of the universities/colleges had both faculty engaged in collaborative research with international colleagues (58) and faculty/scholar exchanges (57). Other frequently occurring types of partnerships included faculty-led short and on-line courses and visiting lectures (53) and joint or dual degrees (46). In addition, over half of the institutions reported university/government/private/NGO partnerships (35); local and national development and outreach activities (34); and organized programs, centers, or institutes of collaborative research (31).

Not surprisingly, only 8 institutions reported establishing branch campuses or joint overseas campuses, in large part because of the significant and complicated challenges in opening and maintaining these programs. Despite these challenges, this 21st century emergence of international branch campuses is expanding. According to the Cross–Border Education Research Team at SUNY Albany (2021), universities from 37 countries had a total of 306 international branch campuses in 2021.

Criteria for Developing International Partnerships

A fundamental question is what are the stated and/or unstated criteria, goals, and reasons for investing personnel and resources in developing international partnerships. The SIOs were provided nine possible goals and asked to rate each from 1=not a goal, 3=moderate goal and 5=major goal. They were also invited to specify any additional goals. Despite the diversity of the universities and colleges in this study, all leaders considered '*strengthening student's education and preparation for life in a multicultural world and global economy'* a major goal (Table 2).

Similarly, 83% of the SIOs rated as major goals *'enhancing the quality of research and scholarship'* and *'encouraging mutual understanding and respect among students, faculty and staff of partner institutions'.* Approximately two thirds of the SIOs also highly rated three additional goals: *'generate new revenues (e.g. tuition, research funding, USAID and other agency development projects)'; 'advance institution's international ranking and global presence';* and *'enable extension and application of knowledge to address global needs'.*

The growing importance of generating new revenues reflects the increasing neoliberal agenda and transformation of higher education (Busch, 2017; Slaughter and Rhodes, 2004). The emerging academic capitalism and neoliberal agenda in higher education is also represented by two other goals identified by the SIOs: *'generate new intellectual property and commercial products'* (35% of SIOs identified this as a major goal) and *'achieve university/college development goals (fund raising, gifts)*' (a quarter of the SIOs identified this as a major goal).

The proliferation of campus patent offices and licensing of intellectual property at US universities reflects a growing attention on generating new intellectual property. Partnerships between US universities and industries have existed for several decades. In recent years, however, those relationships have become: generally more varied; wider in scope; more aggressive, commercial, and experimental; and higher in public visibility as universities pursued what has been referred to as academic entrepreneurship and academic capitalism (Slaughter and Rhoades, 2004; Welsh et al., 2008; Lacy et al., 2020; Glenna et al., 2007, 2011; Croucher and Lacy, 2021; De Wit-de Vries et al., 2019; Este et al., 2019; Cohen et al., 2002; Veletanlic and Creso, 2019). In the last few decades, several policies and court decisions led to the widespread establishment of new university technology transfer offices which promoted patenting of the

outcomes of federally funded research and drove increases in the number of universities actively engaged in patenting and licensing technologies and discoveries.

The Association of University Technology Managers (AUTM), a global nonprofit that represents 3,000 technology managers at 800 research institutions, about 80 percent of which are universities, reported in their 2017 yearly survey a record 1,080 start-ups were formed and 6,050 start-ups reported in previous surveys were still operational. The survey also revealed that 7,459 patents were issued, 7,849 licenses and options (the agreements that give companies the right to manufacture a product) were signed and 755 new products were created (AUTM 2020).

The growth, expansion, and enhancement of the development and advancement offices has paralleled that of the intellectual property and patent offices. For the last 10 years, university and college development offices have raised increased donations to institutions of higher education. The latest report on voluntary giving to higher education, from the Council for Advancement and Support of Education, or CASE, found that donations in the 2019 fiscal year reached $49.6 billion, an all-time high since the numbers have been reported and just slightly less in 2020 at $49.5 billion (CASE, 2021). The report included information from 914 institutions. These criteria and institutional priorities for raising funds through tuition, patenting and licensing of intellectual property, and philanthropy will likely continue to be important in the future. How these goals and criteria will shape or influence international partnerships and interface with academic goals will need to be monitored and assessed.

Support for Success

For international partnerships to be successful, a number of key factors need to be considered, including institutional support, leadership**,** and access to resources. SIOs were asked to report on the extent to which their university promoted, encouraged or rewarded international collaborations. They evaluated ten possible ways in which their university/college supported the partnerships from 1=not done, 2=planning to do, 3=occasionally done, 4=usually done, and 5=always done. Nearly half the SIOs reported their institution usually or always provided six of the ten listed means of support (Table 3).

Ninety-five per cent of the SIOs indicated that their institution provided support for services for students and scholars, including orientation, housing, and counseling, as well as legal and visa support. Two thirds of the SIOs noted that their institution usually or always provided high quality access to international communication facilities and enabled regular communications, as well as increased visibility of the partnerships and publicizing the relationships. However, only about half the SIOs reported solid support for providing dedicated or earmarked resources for the collaborations; organizing international activities with the partners such as forums, conferences, and joint workshops; and establishing collaborative institutions and centers. Finally, a third or less of the SIOs indicated that their institution encouraged publishing in international journals with the partner, provided awards to contributors to international collaboration, or included international collaboration in promotion criteria. If universities/colleges wish to strengthen their international partnerships, they may need to critically examine their current support and reevaluate the support needed.

Potential Issues and Challenges

Domestic partnerships with other higher education institutions; federal, state, and local governmental agencies; and private corporations and industries involve a number of complex organizational and logistical issues. International partnerships expand the scope and number of potential issues and challenges. The SIOs were provided fifteen possible issues their institutions may have faced in building and maintaining international partnerships and then asked to rate the importance of each issue.

Approximately half the SIOs indicated that seven of the issues were very or extremely important to the collaborations (Table 4). The three most important issues were: *'attitudes of institutional leadership'*; *'unequal resource commitments'*; and *'different levels of institutional commitment'*. Nearly as important for the partnerships were: '*perceptions of mutual benefit'; 'incongruent expectations'; 'legal issues such as liability and intellectual property';* and *'health and safety issues*.' For these leaders, attitudes, perceptions, commitments, and expectations are important considerations for successful partnerships. In addition, many of these issues are often of administrative concern for all senior leadership of the institution.

Interestingly, slightly less than two-fifths of the SIOs identified 'change in government policies' as an extremely or very important issue. Yet, several scholars have reported a significant rise of neo-nationalism and fascism and their strong negative impacts on the missions, activities, productivity, and international engagement of universities globally (Douglass, 2021; Subbaraman, 2021; Fischer, 2022; Stanley, 2018). These authors cite numerous examples from every part of the world including China, Russia, Hungary, Venezuela, Turkey, Iran, Brazil, the United Kingdom, and the US. In a recent book on neo-nationalism and universities, John Douglass (2021: viii) states that the "national political environment and governments are the most powerful influence on the mission, role, organization and effectiveness of universities and the higher education system to which they belong." The negative policy effects of neo-nationalism are being felt in many realms of the university and particularly in the area of international activities. These policies include restrictions and prohibitions for international partnerships, student and faculty mobility, and international research collaboration. While the several issues that the SIOs identified will likely continue to be important for successful partnerships, the broader political context and government policies may be far more significant.

These findings suggest that successful international partnerships require more than providing adequate financial and personnel support. Important additional issues involve attitudes, perceptions, levels of commitment, and expectations. Finally, the broader social and political context and the policies that follow will likely be among the most significant factors in shaping successful partnerships. SIOs and all campus leadership will need to understand these challenges and issues and be prepared to address them in developing an effective strategic plan.

Important Considerations for Future Success

As discussed earlier in this paper, findings on support and potential issues strongly suggest the need to carefully consider a number of factors or components essential for establishing, maintaining, and enhancing international partnerships. Some of these factors surfaced in the discussion of ways universities/colleges support their partnerships or the issues that threaten successful implementation of international partnerships. The SIOs were provided sixteen possible considerations for successful international partnerships and asked to indicate the importance of each for making these partnerships work well.

Strong agreement existed among the SIOs that many of these components or factors are very or extremely important (Table 6). Of the sixteen provided, more than half the SIOs identified ten components as very or extremely important. Moreover, most of the SIOs (80-97%) indicated that seven of the considerations were very or extremely important. Leadership at all levels in the institution was seen as very or extremely important by all SIOs except two. Not surprising, all but four SIOs viewed *'adequate resources, including funding, eligible faculty and students, facilities, and space'* as very or extremely important. The *'potential for collaboration including appropriate programs'* and *a 'common willingness on collaboration'* were also seen as key considerations (89%). At the same time the SIOs recognized that the institutions are likely

embedded in different cultures, politics, and economies and that both an understanding and respect for those differences are important (83% of the SIOs saw this factor very or extremely important). Nearly as important were '*clear and sound policies'* (80%). Other important considerations included: '*complementary strengths'* (63%) and *'concordant mission and goals' (*66%). Finally about half the SIOs viewed as important considerations*: 'comparable academic quality' (47%)* and *'existing partnerships' (48%).* Factors that were not seen as important were *'similar organization and structure of higher education'* and '*geographical distance'.*

CONCLUSIONS, RECOMMENDATIONS & FUTURE RESEARCH NEEDS

The insights of the SIOs on international partnerships and collaborations highlight the continuing critical role of these relationships for universities and colleges in the US and globally. To conclude the survey, the SIOs were given three opened ended requests: (1) identify a particularly successful collaboration and describe why it was a success; (2) identify a particularly challenging collaboration and describe why it did not meet expectations; and (3) share recommendations to better engage in these partnerships in the future. Several important observations and potentially useful suggestions from this study of the leaderships' responses are summarized below.

Seventy-five per cent of the SIOs identified a particularly successful collaboration and noted several reasons for its success. The SIOs generally agreed on the need to specify the rationale and choices for international partnerships to include goals, strategies, priorities, types of collaborations, and specific topics for the partnerships. They emphasized the value of creating clear policies and procedures for the partnerships, identifying appropriate leadership, and determining the degree of institutional commitment. Important administrative considerations included standardized general agreements (MOU, AoC), active working agreements (delineated goals, activities, responsibilities, resources), performance standards and assessment criteria, and established procedures for renewal/sunset. Several SIOs volunteered additional observations for reasons of their success. These included *'institutional commitment, support and funding,'* '*involvement of both students and faculty,' 'agreements that bridged academic colleges and units,' 'long-term multi-projects with significant funding and graduate student and faculty exchanges,' 'deep multilayered and sustained relationships,' 'shared common goals and benefits,' 'mutual respect, mutual benefit,'* and *'mutual trust.'*

More than 60% of the SIOs identified a particularly challenging collaboration and described in some detail why it did not meet expectations. Many of the issues have been described above. Among the most frequently mentioned were *'not a good match', 'lack of follow-up', 'not connected to university or college/department goals', 'single faculty partnering with government sponsors',* and *'unequal participation partially caused by change of leadership'.*

Finally, several of the SIOs offered insightful suggestions for enhancing and sustaining international partnerships. One SIO wrote "establish a strategic plan for international initiatives and global engagement and ensure international initiatives are linked to the goals of the university and academic colleges and departments." One SIO observed the need to expand our view of these relationships: "up to now most of our collaborations are bilateral. I think in the future we need to encourage networks and work to make these networks as efficient and effective as possible." A thoughtful comment about the time frame for these partnerships is reflected in the following note: "Successful international collaborations are here to stay; the question is the extent to which institutional leaders are able to have a long view of the potential reward from such collaborations and provide support to ensure their success".

The SIOs' assessments of the goals, issues and challenges, and important considerations in this study clearly provide some valuable insights and guidelines for developing successful partnerships. In particular, some findings stand out. The most frequently identified major goals of the partnerships are: '*strengthening student's education and preparation for life in a multicultural world and global economy'; 'enhancing the quality of research and scholarship',* and *'encouraging mutual understanding and respect among students, faculty and staff of partner institutions'.*

If institutions wish to strengthen their international partnerships they may need to engage in a critical examination of the support available at both the college and university level. Ninety-five per cent of the SIOs indicated that their institution provided support for services for students and scholars and two thirds noted that their institution provided high quality access to international communication facilities as well, as increased visibility of the partnerships. However, only about half the SIOs reported solid support for providing dedicated or earmarked resources for the collaborations, organizing international activities with the partners such as forums, conferences, and joint workshops, and establishing collaborative institutions and centers. Even fewer SIOs indicated that their institution provided other types of support. This apparent gap between the identified goals and activities to achieve those goals, and the resources provided, needs to be further analyzed to include potential strategies to address the gap.

International partnerships involve a number of complex organizational and logistical issues. Appropriately half of the SIOs indicated that seven issues were very important: *'attitudes of institutional leadership'*; *'unequal resource commitments'*; *'different levels of institutional commitment';* '*perceptions of mutual benefit'; 'incongruent expectations'; 'legal issues such as liability and intellectual property';* and *'health and safely issues'*. For these leaders, attitudes, perceptions, commitments, and expectations are important considerations for successful partnerships. While many of these issues are of administrative concern for all senior leadership*, s*uccessful international partnerships require attention to a number of issues unique to them. Some of the issues identified by the SIOs are often likely to be more critical but not exclusive to international partnerships than to domestic collaborations. These include 'legal issues such as liability and intellectual property', 'health and safety issues', 'attitudes of Institutional leadership', unequal resource commitments', and 'perceptions of mutual benefit". Related to these issues may be significant cultural, historical and language differences particularly relevant to international collaborations.

This study strongly suggests the need to consider a number of factors important for establishing, maintaining and enhancing international partnerships. Of the 16 factors surveyed, most of the SIOs (80-97%) indicated that seven of the considerations were very important: *'committed leaders at the program, college, and senior university level'; 'adequate resources including funding, eligible faculty and students, facilities and space'*; *'potential for collaboration including appropriate programs*'; *'common willingness on collaboration'*; '*understanding and respect of culture, history, politics and economy of partners*'; and '*clear and sound policies'*.

While the SIO's perspectives are critical, additional research needs to be conducted among presidents and chancellors who are often the individuals determining the creation or continuation of the senior international officer position. Other key senior campus leadership positions are the vice presidents and provosts for research, graduate and undergraduate education, student affairs and finance. The successful implementation of these international partnerships are also highly dependent on college deans and the campus professors, researchers, and extension professionals. Without strong support from the faculty the international research, education, and outreach efforts will not occur. This diverse community of administrators and scholars have different educational and disciplinary backgrounds, cultural histories,

and are at different stages in their careers. More research on the perceptions, actions, and implications of these different participants in international collaborations will be important for successful future partnerships.

Most international partnerships bring together institutions with different resources, capacities, agendas, and priorities resulting in unequal collaborations. As noted in the earlier review of the work by scholars such as Robinson (2016), Zingerli (2010) and Ynalvez and Shrum (2011), this is particularly the case in North-South research and educational partnerships. One recent example is the increasingly influential Food and Land Sovereignty movements and related social movements, composed of hundreds of millions of peasants, family farmers, pastoralists, farm workers, and indigenous peoples, mobilized to challenge the destabilizing effect of trade liberalization on small producer cultures and ecosystems across the world.

These movements often influence the priorities and agendas of universities with colleges of agriculture in the South. These universities and the related social movements seek to champion the rights of a multiplicity of diverse farming systems and food cultures to produce local food, and to protect farmers in the global South from northern government-subsidized large scale industrialized, energy intensive, capital-intensive produced foods often sold at less than the market price in their markets. Additional research needs to be conducted on the unequal levels of power, resources and human capital in these partnerships, and the impact these trends and inequality may have on the success of the partnerships. Future research should include the perceptions and insights of the leaders among the international partners (Holt-Giménez, 2019; McMichael, 2013; Ynalvez and Shrum, 2011; Kruss and Visser, 2017; Lawson et al., 2019).

Several scholars have been analyzing academic capitalism and the neoliberal transformation of higher education (Bok, 2003; Busch 2017; Croucher and Lacy, 2021; Giroux, 2010; Welsh et al., 2008; Slaughter and Rhodes, 2004; Este et al., 2019; Glenna and Bruce, 2021). Through this transformation, many universities are becoming more market-oriented and seen as a key driver in the knowledge economy. As a consequence, higher education institutions have been encouraged to develop links with industry and business in a series of new venture partnerships and to establish university technology transfer offices which promote patenting and licensing technologies and discoveries (Lacy et al., 2020, Olssen and Peters, 2005; Garcia, 2020; Walsh et al., 2007). More research is needed to assess how these trends and transformations may affect the types, goals, and priorities of university international strategic partnerships.

In conclusion, international partnerships are viewed as essential by the senior international officers for the goals and missions of institutions of higher education. In the past, these institutions worldwide have played key roles in generating, disseminating, and applying the latest scientific knowledge and technology to address critical and grand challenges and global goals. These priorities have only increased in importance. Insights learned from the observations and perspectives of these university/college international leaders have important implications for all future university strategic international research and education partnerships. The critical partnerships to address these global challenges and advance science will require informed and creative university leadership and likely need to expand in scale, scope, diversity, and complexity; draw successfully on the scientific knowledge and wisdom worldwide; and carefully consider the wide and unique opportunities and challenges of these partnerships.

Table 1. Types of University/College International Partnerships

Types of Partnerships	Number of Institutions
Student exchanges	61
Collaborative research between professors/researchers	58
Faculty/scholar exchanges	57
Faculty activities (e.g. short and on-line courses, visiting lectures)	53
Joint or dual degrees	46
University/government/private/ NGOs partnerships	35
Local and national development(outreach and engagement)	34
Organized program, center, or institute for collaborative research	31
International multi-institutional networks	31
Faculty affiliate status (non-funded)	27
Administrative exchange	22
Branch campuses (joint overseas campuses)	8

Table 2. Criteria for Developing International Partnerships*

Criteria	Mean	% Major goal**
Strengthen students' education and life preparation in multicultural world	4.8	100
Enhance research and scholarship	4.4	83
Encourage understanding/respect among partners	4.2	83
Generate new revenues (e.g., tuition, research funding, development projects)	3.8	68
Advance international ranking	3.9	65
Enable extension and application of knowledge to address global needs	3.8	62
Promote peaceful solutions for international issues and conflicts	3.4	48
Generate Intellectual property and commercial products	2.8	35
Fund raising/gifts/development	2.7	25

**N=63, 1=not a goal, 3=moderate goal, 5=major goal*

*** % of SIOs who consider a criterion very or extremely important*

Table 3. Ways Universities/Colleges Encourage International Partnerships*

Support	**Mean**	**%Usually/Always ****
Support student and scholar services	4.8	95
Provide quality communication facilities	3.8	67
Publicize the partnerships	3.8	65
Provide dedicated resources	3.6	56
Organize activities with the partner	3.5	4///*/
Establish collaborative institutions	3.2	44
Publish with partners	3.0	35
Provide awards for collaboration	2.6	32
Include collaboration in promotion criteria	2.6	28
Join organizations on global collaboration	2.5	26

** N=63, 1=not done, 2=planning to do, 3=occasionally done, 4=usually done, 5=always done*
*** % of SIOs indicating the university/college usually/always provides this support or encouragement to their faculty for their international activities and partnerships*

Table 4. Challenges or Issues

Issues	**Mean***	**% Extremely/Very Important****
Attitudes of institutional leadership	3.5	59
Unequal resource commitments	3.5	56
Different levels of institutional commitment	3.5	54
Perceptions of mutual benefit	3.4	51
Incongruent expectations	3.4	50
Legal issues (liability, intellectual prop.)	3.3	52
Health and safety issues	3.3	48
Shifting institutional priorities	3.3	44
Different educational quality	3.4	39
Change in government policies	3.3	39
Differences in organizational structure	3.2	36
Export compliance issues	3.0	40
Academic freedom	3.0	37
Language and cultural differences	2.9	29
Geographical distances	2.7	19

** N=63, 1=not important, 3=moderately important, 5=extremely important*
*** % of SIOs identifying very/extremely important issues facing their international partnerships*

Table 5. Considerations for Future Successful International Partnerships

Important consideration	**Mean***	**% Very/Extremely Important****
Committed leaders	4.7	97
Support from senior leadership	4.6	97
Adequate resources	4.5	92
Common willingness	4.4	89
Potential for collaboration	4.3	89
Respect for culture of partners	4.2	83
Clear and sound policies	4.1	80
Concordant mission and goals	3.4	66
Complementary strengths	3.7	63
Adequate communication skills	3.6	52
Supportive govt. policies	3.5	50
Existing partnerships	3.4	48
Comparable academic quality	3.6	47
Good political relations	3.1	33
Similar higher education structure	2.7	11
Geographical distance	2.5	11

** N=63, 1=not important, 2=slightly important, 3=moderately important,4=very important, 5=extremely important*

*** % of SIOs who consider a consideration as very or extremely important*

Appendix A

AIEA University/College Survey Participants, 2018^^

2018

Baylor University
Beloit College
CA State University Long Beach
California State University San Bernardino
Cleveland State University
Colorado State University
DePaul University
Drake University
Georgetown University
Georgia Gwinnett College
Indiana University-Purdue University Indianapolis
Knox College
Large Public State University
Michigan State University ^
New Mexico State University
New York University ^
Ohio State University ^
Oregon State University
Providence University
Rutgers University ^
St. Norbert College
St. Mary's College of California
Smith College
Teachers College of Columbia University
Texas State University
Utrecht University, Netherlands
University of Alberta, Canada
University of Alabama
University of Albany, SUNY
University of California, Davis ^
University of California, Riverside
University of Colorado, Boulder ^
University of Connecticut
University of Florida
University of Hawaii, Manoa
University of Illinois, Urbana-Champaign ^
University of Iowa ^
University of Geneva, Switzerland
University of Massachusetts, Boston
University of Missouri
University of North Carolina, Greensboro
University of North Carolina, Wilmington
University of North Texas
University of Oregon ^
University of Rochester ^
University del Salvador, Argentina
University of South Carolina
University of South Florida
University of Tennessee
University of Texas, San Antonio
University of Tulsa
University of Utah ^
University of Washington ^
Wayne State University
West Virginia University
William & Mary University

^ Universities that are members of the Association of American Universities
^^ Seven university/college respondents declined to indicate an institutional affiliation

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