ENHANCING RESEARCH MANAGEMENT THROUGH THE UNIVERSITY ADMINISTRATION SUPPORT PROGRAM:

THE CURRENT STATE AND PROGRAM IMPACT

IREX

INTRODUCTION AND BACKGROUND

IREX is an independent global development and education non-profit organization dedicated to building a more just, prosperous, and inclusive world by empowering youth, cultivating leaders, strengthening institutions, and extending access to quality education and information.

With primary support from the Carnegie Corporation of New York, IREX designed the University Administration Support Program's (UASP) Fellowship in Research Management to enhance research administration in selected universities across Ethiopia, Ghana, Kenya, Nigeria, Rwanda, Senegal, South Africa, Tanzania, and Uganda. Since 2016, the Fellowship aided administrators from member institutions of the African Research Universities Alliance (ARUA) to develop their skills in research management and leadership, apply these skills to their practice, and enhance research management within their institutions.

Selected fellows undergo a Research Management and Leadership course, engage with a U.S. university (either in-person and/or virtually), and develop an implementation plan for enhancing performance improvements at their home university. Alumni are subsequently eligible to apply for a competitive small grant to catalyze their improvement plan. Since 2020, the course has transitioned online, offering abundant digital resources.

In 2023, IREX invited alumni to partner with us in co-designing and implementing two commissioned research studies for UASP, reflecting our commitment to program enhancement through learning and adaptation. Following a competitive review of six submitted proposals, two alumni-led teams were selected for this work.

IREX's Learning Aims:

Understand the current state of research management at UASP fellows' institutions, including the salient strengths, weaknesses, opportunities, and threats facing research management at participants' institutions.

Explore the impact of UASP, including if and how IREX builds the capacities of individuals, if and how they apply capacities to their practice, and if and how institutional performance improvement is achieved, as well as enabling and hindering factors to achieving program aims.

Study 1, led by UASP alumni Dr. Victor Okorie and Dr. Mekasha Gobaw, examined the strengths and challenges of UASP universities using data from participant assignments of the p "2020" and "2022 cohorts" (as per UASP program start date), in Canvas, the online learning platform for UASP's Research Management and Leadership Course.

Study 2, led by alum Dr. Titilayo Olaposi, assessed UASP's effectiveness in enhancing individual and institutional research management capacities through 19 alumni focus groups and interviews with small grant recipients, university principal officers, an external key informant interview.

Upon receipt of both teams' research reports, IREX built upon the themes identified by the researchers, added counts of the number of times each theme was mentioned, and synthesized the findings from both studies to answer our research questions. Where applicable, we have also added relevant statistics from the 2020 and 2022 cohort End of Program surveys. The IREX team sought to use triangulation of these multiple data sources to increase confidence in our findings.

STUDY 1. CURRENT STATE

Research Question

What were the initial strengths, weaknesses, opportunities, and threats identified in research management at the commencement of the IREX program, as reflected upon by the alumni through the Research Management 360 lens utilized by their respective universities?

Methods

IREX facilitated Okorie's team to have access to participant assignment data from the past two cohorts of the UASP Research Management and Leadership Course, including:

- Completed "Research Management 360" assessments, providing a rapid snapshot of institutional capacity related to research management and knowledge transfer.
- Visualizations of participant institutions' research governance structures.
- Reflections on institutional knowledge exchange/transfer capacity.
- Approximately 30 online forums covering research management organization and governance, research ethics and integrity, researcher development and career support, enhancing reputation and visibility, accessing and managing sponsored funding, data for decision making, knowledge transfer, intellectual property, and change management.

Okorie's team created a coding framework from their review of assignments, exercise outputs, discussion forums, and SWOT analysis theory. They used summative content analysis and thematic analysis to quantify and juxtapose relevant keywords and content, aiming to unearth the deeper meanings and contexts aligned with the research questions. In a few places, differences in assignment structures between the two cohorts posed challenges for direct comparisons.

Results

Using data from the Research Management 360 assessment (RM360)[1], alumni assignments, and discussion forums, the study revealed a notable variance across universities on identified strengths and weaknesses related to research management. According to the RM360 assessment, at the onset of the program approximately 40% of those completing the RM360 indicated that their institution was particularly strong (meaning a score above 3.5) in the management of sponsored research and more than 20% felt their institution was strong in research governance (see Figure below). Conversely, over a third of those who completed the tools indicated their institutions needed improvement (meaning a score under 2.5) in the management of sponsored research and knowledge transfer and external relationships. It's worth noting that the figure below does not reflect underlying variance and a poor RM360 score in one area does not necessarily predict a low score in another, indicating that institutions encounter distinct and unique obstacles in strengthening collaboration, capacity, strategic planning, research dissemination, funding processes, and research policies.

[1] The Research Management 360 Matrix provides a framework for quantifying performance across a range of research management functions. Within each category, the matrix identifies a series of 'good practice criterion' and facilitators score their institutions on a scale of 1 (strongly disagree) to 4 (strongly agree) according to the extent they agree or disagree that the criterion has been met. A higher score implies that the criterion has been met.

UASP Fellows' Perception of quality of institutional research management functions
Percentage of RM360 scores given within each range by institutions in 2020 and 2022 Cohorts
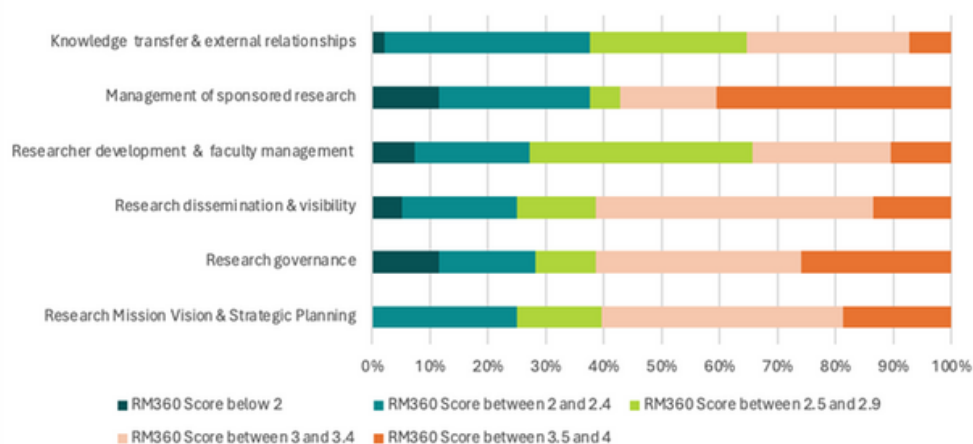
Funding

Research funding consistently emerged as a weakness and challenge across institutions, including having limited internal funding, a lack of dissemination of funding opportunities to potential researchers, and difficulty in securing international funding. For instance, some institutions lacked subscriptions to international platforms for sourcing funding information and others lacked formal mechanisms to locate and engage with international funding sources. In addition, some universities noted that the centralized process for releasing research funds was cumbersome, which could delay access to grant funding and thus project implementation.

Respondents did note positive attempts to overcome funding challenges. For instance, some institutions were said to have planned and coordinated various trainings on grant writing; some gave seed funding to researchers to use for preliminary studies that could further attract grants; and some institutions have demonstrated a willingness to explore crowdfunding as an additional source of funding.

Research Governance, Processes, and Knowledge Transfer

In general, institutions demonstrated strength in establishing standards, policies and governance structures for research management, but were weak in the implementation and monitoring of research processes, suggesting challenges in operationalizing the established policies and structures. Over half of participating institutions had established clear and well-defined research objectives, standards, and policies to guide the research process and provide a clear framework to drive the research agenda. Other established policies included those related to research integrity, ethics, proposal development, and professional development. Yet, challenges were noted with policy implementation and monitoring.

Furthermore, in some cases there is no centralized system for tracking projects, leading to a lack of clear data on success rates and inadequate data for strategic decision making.

"There is no proper monitoring of compliance with established policies and procedures for research ethics. Apart from the time researchers are reviewed yearly and the focus is on quality and quantity of journal publications. There is no collection of research performance data on ethics and integrity for understanding performance over a period of time."

In addition, the strengths of governance and policy structures were found primarily with the traditional roles of universities, such as teaching, researching for publication and promotion, and collaborating with foreign universities, whereas respondents noted weaknesses and gaps in policies for "third-stream" activities. For instance, the commercialization of research was limited in most cases, with little or no clear evidence of collaboration with industry. According to one respondent, *"…The University has not set clear performance expectations regarding the set objective for commercialization of IP. Standards for quality, ethics or volume of commercialized IP are not stated and so not disseminated to researchers."*

Relatedly, external research collaboration was identified as an area of strength from many participating institutions, but this was limited to mainly collaboration with foreign institutions rather than "town-gown linkage" or "university-industry collaborations." Participants identified collaborative research as the most frequent channel by which universities disseminated knowledge, followed by publishing. There were few success stories related to commercialization, licensing, and revenue generation as paths for knowledge transfer. One respondent noted that, *"there are no incentives and staff are not empowered to commercialize their research outputs,"* and alumni noted limited capacity concerning intellectual property protection. This finding is echoed in the results of the RM360, where the "knowledge transfer and external relationship" dimension was scored lowest for the 2020 cohort and low for the 2022 cohort.

Organizational Structure, Capacity Development, and Researcher Support

Similarly, while many institutions had a well-established governance and organizational structure with well-assigned responsibilities, respondents noted weaknesses in actual operations. For the most part, institutions had at least put the basic and essential structures that had the requisite infrastructure to facilitate the conduct of research. Some institutions had offices that catered for pre-and post-award, intellectual property and technology transfer, ethics, research performance, capacity development, and publication dissemination, while some institutions had a research office that provided a supportive one-stop shop office for researchers. Others cascaded research management structures down to colleges, schools, and Centres of Excellence.

However, participants shared that these units do not operate effectively. Respondents noted that some of the units existed only on paper, and in some cases did not have the resources to function. For instance, institutions had limited human resources like senior researchers, supervisors for mentorship programs, and research administrators to support the large number of researchers wishing to submit proposals. Some institutions also lacked IT infrastructure and relied heavily on manual work. As a result, most researchers still tended to operate independently and only involved the central research management offices when needing critical documentation, especially during application/submission. Participants noted potential opportunities to collaborate or coordinate with institutions as such as SARIMA (Southern African Research and Innovation Management Association) and WARIMA (the West African Research and Innovation Management Association) as a means of gaining access to additional resources and expertise to support their research staff.

Overall, Study 1 results suggest that there is significant diversity in research management strengths and challenges across UASP universities.

This diversity presents a unique opportunity to engage in South-South learning, while continuing to leverage UASP and regional hubs to support universities to address areas of shared challenges like knowledge transfer. Overall, the results of this study suggest that UASP content and activities remain responsive and relevant to a majority of universities but that more can be done to ensure that we are supporting universities to carry out policies.

Meanwhile, **the second study**, addressed next, looks at whether UASP is effective at helping alumni to build on the strengths found at their institutions and address identified weaknesses.

STUDY 2. IMPACT

Research Questions

1. *Is the UASP program building the capacity of UASP Fellows? In what ways?*

2. *In what ways are UASP Fellows applying the knowledge acquired from the training to their practice?*

3. *How has the UASP program improved the performance of the institutions of the UASP fellows, if at all?*

4. *What factors influence the achievement of the aims of the UASP program?*

Methods

Olaposi's team collected data primarily through 19 alumni focus groups and 8 interviews with small grant recipients, university principal officers, and an external key informant. A questionnaire was also sent to 5 small grant recipient supervisors, with responses from only two received. All discussions were recorded and transcribed using Android phones and Camtasia Studio 8 software, whether conducted online or in person. The team listened to recordings and edited AI transcriptions as needed, then organized the statements into thematic clusters.

Results

Question 2.1 Is the UASP program building the capacity of UASP Fellows? In what ways?

Overall, the results of Study 2 suggest that UASP built the knowledge, awareness, and confidence of UASP Fellows to take on their role and catalyze change in research management practices at their universities. The end of program surveys support these findings; 95% of the 2020 cohort (n=42) and 98% of the 2022 cohort (n=45) agreed they had learned new knowledge and skills relevant to their profession as a result of the UASP. About 95% of both cohorts agreed they were applying the knowledge acquired in the UASP to personal practice.

Based on Study 2 data, the UASP structure, which includes multiple, sequenced components, appears to have contributed to participant ability to speak authoritatively and take action and engage in reforms by:

1. Building a shared framework of knowledge and awareness around research management practices (online course);
2. Deepening knowledge through concrete examples of research management techniques and organizational structures (virtual exchange); and
3. Increasing participants' understanding of the university research ecosystem and ability to speak authoritatively on and ideate reforms (in-person exchange). enhanced comprehension of the university research ecosystem and advocacy for reforms through in-person exchanges.

Meanwhile, peer-to-peer learning throughout the program facilitated participants' intra- and inter-organizational learning and cooperation and raised their institutional profile as a center for research management excellence.

Online Research Management and Leadership Course

Twenty participants from Study 2 reported that **the online course increased their knowledge of research management,** either by introducing them to new concepts or deepening their knowledge. Some study respondents noted the course raised awareness of standard research management in places where the research ecosystem is more mature.

At least eight respondents noted **increased awareness of gaps, challenges, and strengths at their universities.** They gained insights into their own university programs via course exercises (such as the RM360) and the cross-university knowledge sharing embedded in course discussion forums and group assignments. The peer learning approach was highly valued and is discussed separately below. One participant shared, *"It was very valuable to our gaining more knowledge and especially, if you look at the [RM]360 Matrix, the evaluation was very good because you got to know the status of where you are and… the skills you will require going forward."*

> *"I could relate with researchers even better than before I was selected for the Research Management and Leadership online course. Before then, I didn't really know much because there was no training for the job… but participating in the online course, I was able to… proffer ideas for solutions that could help in researchers' project activities… It has improved my performance*

Other comments suggest the course **prepared fellows to "speak intelligently" and with more confidence about research management** issues in their own work at their universities. The course provided a lexicon around research management and, as one participant noted, *"by the time we began to interact with US mentors we were already grounded in the subject matter of Research Management and leadership."*

Suggested improvements to increase the impact of the online course

Eight discussants recommended expanding modules like Research Communication, Research Commercialization, and Data Management. They also suggested integrating more soft skills training, such as communication and teamwork, alongside leadership-focused content, and adding new content in grant writing and financial management. Two participants requested IREX to organize experts to provide more detailed assignment feedback beyond the current model where peers give input and IREX provides limited input. At the same time, seven alumni noted challenges to juggle the pace of learning on the course with full-time job duties and personal commitments, cautioning IREX against adding significant additional content.

Virtual Exchange with U.S. Universities

Study 2 discussants generally had positive things to say about the virtual exchange activity, though fewer comments were made compared to discussion of other program components. According to nine discussants, the virtual exchange helped to deepen understanding through practical examples for how research management is structured and practiced at a specific U.S. university. Insights were gained through interactive meetings with numerous key staff across their matched university, virtual shadowing, and review of resources, allowing comparison between their home university setup and practice and that of a more mature research ecosystem.
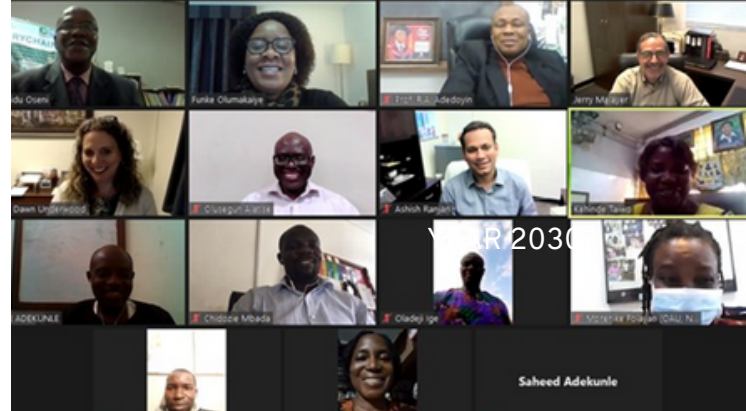
"I learned post approval monitoring. [In my university] when people get ethical approval, they are not monitored. I learned the process. I was given some resources to read."

Virtual exchange participants gained insights for how their partner U.S. university's administrative units:

- Motivate researchers to use research management services.
- Motivate and support researchers to write proposals following certain procedures.
- Raise awareness for ethical clearances and services, including post approval monitoring, which was new to some participants.
- Initiate early career researchers into research activities.
- Manage record keeping processes.
- Leverage websites and written resources to inform and serve the university community.
- Incentivize and manage different approaches to research commercialization.

Value of In-person Exchange with U.S. Universities

Among participants who took part in in-person visits to the United States, results clustered around the following main themes:

The in-person exchange experience allowed participants **to further deepen their knowledge and awareness for how research management could be integrated into the university ecosystem** (surfaced among 16 discussants). The in-person visit helped participants develop a comprehensive understanding of the research ecosystem, with one participant noting "*when we were on the online training, I learned so many aspects of research, but when I went to the U.S. university, I saw the way that team worked together.*"

The on-campus visit also **gave a "feel" for organizational culture and how units and teams work together** which didn't come through in virtual meetings. They came away with concrete ideas for new initiatives they could pilot in their home institutions.

At least 13 alumni shared examples for **new research management administrative strategies and processes** they gleaned from the in-person

> "*[The in-person visit] exposed me to ways to change the orientation of our researchers here. It is actually about going all out to meet them... to let them know what you are doing, trying to convince them to subscribe to the services the office offered that add value to what researchers do... They [the U.S. university staff] went to faculties and departments to campaign.*"

university visit. Insights were gained in grants writing, proposal team assembly, funding opportunities dissemination, social media tools to disseminate research and raise visibility, community and government engagement, university stakeholder engagement, research commercialization, post-award monitoring and compliance, mechanisms to train staff on universities policies, software for research administration, events planning, and strategies for running team meetings and for hiring staff.

> *"[I learned that] commercializable inventions could be identified at the stage of invention disclosure. That made me rewrite our invention disclosure forms in my home institution. That exposure has enabled me to differentiate between commercializable and non-commercializable research outputs. Hence I was able to guide the university in this direction".*

The practical experience of seeing more advanced research management systems **boosted alumni's confidence in their job and in progressing their implementation plan** (cited by at least nine respondents); it helped raise their profile as someone who could make authoritative research management recommendations, both within and beyond their home universities. As one participant stated, *"after I returned from America, I submitted a report through my boss to the Vice-Chancellor of the university. And also, I made a presentation to the management. This could not have been possible if I did not visit the U.S. because seeing is believing."*

Exchange visit to Michigan State University

At least eight alumni referenced that the **U.S. visit supported them to build lasting relationships with other professionals** that share their professional focus area, both in the United States and in Africa. This will be discussed further under "Wider Ripple Effects" below.

Recommendations for U.S. exchanges for maximum impact:

Two discussants emphasized IREX must select U.S. university units that have maximum alignment to the fellows' professional backgrounds and focus areas, highlighted in the following UASP Fellows recommendations: *"mutual background, professional interests are key drivers to sustaining relationships." "[The exchange] should match alumni with US coaches that have expertise in their specific areas."* In addition, two participants recommended using the time of virtual engagement for U.S. universities to get to know fellows' implementation plans and develop a workplan for the in-person campus visit to maximize fellows' time on arrival. Placing multiple fellows with aligned interest areas with the same U.S. university would support additional network building.

Peer-to-Peer Learning

Although IREX has previously explored the ways in which UASP training and exchanges are having an impact on UASP alumni and their institutions, we have had limited data that probes how and why the peer learning approach may be of value to alumni, and we were especially interested in how this was working since much of the UASP training has migrated to an online format. Study 2 findings supported our learning in this area.

One theme that emerged from at least eight individuals' comments is how the required groupwork—embedded in the online course and U.S. fellowship workshops—**strengthened their relationships and fostered intra-university knowledge-sharing with other key members of their university.** Sometimes participants were surprised to learn something new from another member of their own unit or department. Several researchers had not collaborated directly with research administrators before, and vice versa, so interaction on UASP was helpful to cultivate understanding and empathy for each other's complementary roles and perspectives. As one participant stated,

> *"We were in the same university and even in the same unit, but we did not know what the other person was doing. Through the group discussions we shared… we learned from each other, and we got so much information on things we didn't know."*

At least twelve discussants shared ways that **peer learning across universities enriched their understanding of UASP course concepts and helped them build connections within the continent.** Six individuals appreciated exchanging research management practices with other institutions in Africa, and sometimes taking from these exchanges new ideas they could implement at their own university. One participant noted, *"we had groups with people from other institutions and from other countries, so, we had the knowledge of what they had… that we did not have, what we could copy from other countries, what we could bring from another institution."*

Others shared how **reading the discussion posts of others enriched their understanding of topics where they had less experience**, or even enriched their writing style. Still others appreciated how their peers' comments to their own course discussion posts, assignments, and implementation plans provided useful feedback. Five participants felt the peer engagement fostered a sense of teamwork and positive communication among the cohort. Two of these tied the experience to laying a foundation for later collaboration with UASP alumni.

Suggestions to strengthen impact of peer networks:

Ten respondents recommended that IREX invest in alumni programming to strengthen peer networks initiated on the UASP course. Facilitating an alumni association, and follow-on professional development opportunities (virtual and at in-person research management events) were among the proposals. One participant stated, *"let there be a program whereby they share their experiences, thoughts. a kind of alumni association."* Another supports sharing of best practices around the use of core funding, described as follows: *"I have asked about how many people have gotten [UASP small] grants and how have they used it… If we can see any reports on how people have used these grants it would help."* Finally, a third participant suggested, *"There are professional bodies on [research management] on the continent that IREX can help the alumni to participate in, so that their skills are enriched."*

Question 2.2 In what ways are UASP Fellows applying the knowledge acquired from the training to their practice?

Most Study 2 respondents (at least 28) indicated that they applied what they learned during UASP to improve their work, and many of these practical applications stemmed from ideas obtained from the online course and from the U.S. visit. The end of program survey results is aligned with these findings; approximately 95% of the 2020 and 2022 cohorts agreed they were applying the knowledge acquired in the UASP to personal practice. Further, 37% of the 2020 cohort and 36% of the 2022 cohort believed they received a promotion or new professional role at least in part as a result of the UASP, which supports their efforts to reform research management practices.

Some alumni (at least four Study 2 respondents) gave examples for how they were **adopting frameworks, methods, strategies and programs learned** from the online course and from U.S. universities, in their practice (e.g. the RM360, governance framework, empathy map, and others) to identify and address research administration gaps and/or conduct stakeholder engagements. For example, one participant noted: *"The course module on Change Management which taught us about promoters and how to approach them to influence change has been applied in my work. I learned that anyone you want to approach, you must come up with an engagement strategy. The empathy map helped me to understand what motivates the people I want to engage."*

Alumni (18 respondents) were also **spreading knowledge and insights from the program** by participating in university committees where issues relating to research administration were discussed, providing training, and through external engagements such as webinar and conference presentations (both local and international), meetings with minister level officials, and journal and book chapter publications. An example of a conference presentation published by UASP alumni is Research Management and Administration in African Universities: The Way Forward,[2] a conference paper which had about 1050 reads on Research Gate and four citations on Google Scholar at the time of this study.

[2] Akindele, A. & Kerridge, S.R. 2019 July 8-11. Research Management and Administration in African Universities: The Way Forward [paper presentation]. Conference of Rectors, Vice Chancellors and Presidents of African Universities (COREVIP). Cairo, Egypt.

UASP Alumni Activities to Promote Research Ethics and Integrity at Obafemi Awolowo University

There is evidence that **research administrators came to see themselves as professionals and sought to professionalize the research management office.** Some discussants provided examples for how they changed their own practice for how they manage teams, run meetings, and engage stakeholders proactively. Three discussants referenced that UASP alumni have been training other research administrators to better equip them for this role. One UASP alum changed staffing of the research office, with participants noting *"A UASP fellow negotiated for staff for the COR [Central Office of Research]… staff of research office were changed from school certificate holders to university degree holders."* Two of these discussants believed their institutions had successfully established this career structure, whereas others saw lack of such career path as an ongoing challenge and threat to their UASP alumni being able to make impact.

UASP was formative in helping researchers and research administrators to better understand each other's perspective and complementary role in sponsored research processes. Peer engagement embedded in the online course and workshops was particularly impactful as was the exchange component in which research administrators were able to envision themselves in a professional track, working hand-in-hand with researchers. For six quoted administrators, this gave them additional confidence and skill to support faculty effectively.

> *"I learned that **the approach to monitoring sponsored research should be like that of customer service**, so that researchers can cooperate with research administrators. As research administrators we are to provide support to researchers. Not playing down compliance ensuring that proper systems are in place and at the same time ensuring quality customer service."*

Question 2.3 How has UASP program improved the performance of the institutions of the UASP fellows, if at all?

Study 2 suggests that UASP Fellows improved the performance of their institutions in myriad ways including creating new offices, policies, procedures, and systems, to increasing grant writing and publication rates. Results from the end of program survey indicated that 63% (n=42) and 80% (n=45) of the 2020 and 2022 cohorts believed they had changed a behavior of their institution as a result of the UASP. Further, in the end of program survey, participants report introducing 13 new functional units, 15 new administrative positions, 24 new administrative processes or policies, and 20 forms of new technology to support research administration.

IREX attempted to synthesize and cluster Study 2 comments on this topic into four main themes that stood out to us as follows:

Improved Structures

From the Study 2 findings, UASP alumni appear to be actively working to improve existing organizational structures at their institutions. In some cases, this looks like reorganizing units; in others, alumni successfully led creation of new functional units to fill a gap. **Achieving new or restructured functional units were referenced by six study participants.** One participant noted, *"a dedicated office for research and integrity was created at the Research Management Office of the university and they put some officers there."* The provision of small grants as part of UASP also facilitated the restructuring that allowed for more efficient and effective research management, as described by one participant:

> *"Our research office was operating in scattered locations and people would not know where to turn. It was the UASP grant that enabled the activities that made the space and furnishing of the Central Office of Research (COR) possible. The small grant provided laptops, printers and renovation for the building. Now, there is an operational base for COR. UASP grant and TETFund grants were combined to achieve the goal."*

One of the interviewed university leaders shared another example, *"when … [our UASP alum] went for IREX program and came back, she … wrote papers, did so many things to encourage the Vice Chancellor then to really split the office into two. Today we have research management office and we have the innovation office."*

Improved Institutional Grant Writing Capacity

One challenge regularly cited by UASP fellows' is the need —especially for the early career researcher population—to better understand how to write winning proposals for sponsored research funds. Interestingly, this did not come out as frequently in the focus groups or interviews of Study 2, and those that did allude to the topic were less specific in their examples related to grant writing capacity. However, several participants communicated a perception that UASP had contributed to improved skills in grant writing, including this participant:

> *"When we came back from the US, we developed an intervention of doing training on being able to write successful grants… our faculty started submitting grants to different funders, which has actually changed our grant portfolio by about 30%, which for me is quite a good improvement and something that I can always put forward and say this has happened because of UASP."*

Several individuals referenced their own improved ability to understand and respond to grant calls following UASP, which they used in their daily work. Others used knowledge to provide training to others, especially early career researchers, to support their grant writing success.

Early Stages of Improving Knowledge and Technology Transfer and Research for "Real-World" Impact

One UASP concept that seemed to have impressed alumni, emerging repeatedly among the focus group comments, is the idea of how research findings must not be accessible to academic audiences only, but need to contribute to finding solutions for today's problems. Sixteen alumni referenced knowledge or technology transfer as among the insights and skills gained during UASP. In some cases, UASP was pivotal in changing participants' perceptions around the purpose of research as for academia to for society, as described by one participant:

> *"I learned that most of our science is written in a very complex form but that the department in the institution where I was placed had knowledge translators who helped them to simplify their research articles into formats which can be translatable and usable by the participants who participated in their research."*
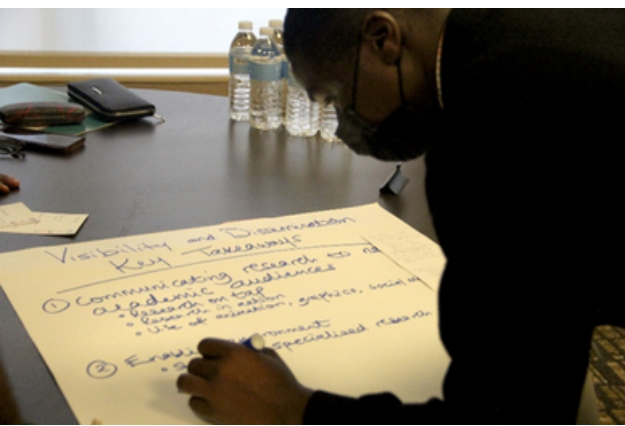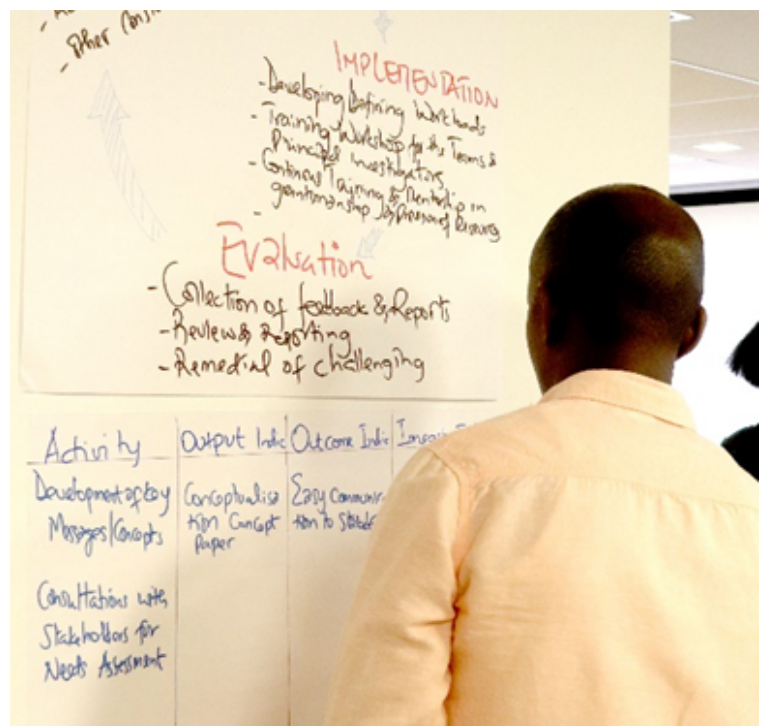
Wider Ripple Effects

Beyond the technical areas above, participants made 15 references to a few wider "ripple effects" alumni attributed to UASP. Namely, these were the spread of research management expertise to other African institutions; access to larger grants; and established collaborations between ARUA institutions through UASP alumni or between an ARUA institution and the UASP-assigned U.S. host institution.

Six individuals perceived that due to UASP, they or their institution held **expertise that was comparatively advanced in research management relative to other institutions on the African continent**. As a result, peer-to-peer learning was occurring outside of the context of UASP. For example, this participant stated, *"some institutions in the country have been visiting our Research Office for assistance to set up their own research offices. We have been able to provide the service because of the training we got in UASP."* Another participant shared:

> *"I've been consulted from the University of Maiduguri, University of Ilorin, Abu Bayero University, to mention a few. They needed my expertise to set up a research team that would be able to secure international funding. I was able to intervene because of UASP gave me the exposure and the connection and the link; and the opportunity to have been trained partially at NIH, you know, I wouldn't have had the competence and the confidence to help all those people that were contacting me for this thing."*

Two discussants gave examples for how UASP activities **laid a foundation for their university to apply for and win larger national or World Bank grants. Three gave examples of ongoing collaboration between their institution and the U.S. UASP host institution** they worked with:

> *"One of the big achievements is that we were actually able to write a… G11 grant with a host institution where I was in the U.S… we submitted it to the National Institutes of Health and it's actually going to be reviewed this month. So, we are very optimistic that we will be able to win it because we worked together and shared ideas. And I know that all this was made to happen because of the opportunity that IREX provided."*

Five individuals referenced how networks built through the UASP program led to a variety of **collaboration opportunities between ARUA institutions.** One participant described collaborating with ARUA universities as follows:

*"**The alumni from this country that visited the US are now working together. Not only with ourselves but with some other fellows from other countries. We've done workshops together. We nominate each other for various things and awards and presentations and training. One of them has invited me to co-supervise students. We are busy writing an emerging researchers [support] policy document. I've invited him to participate in our postdoctoral fellowship guideline document for the country. I've been in conversation with a fellow from Ghana and the group and the university to work on a postdoc policy and set up a postdoc office with them."*

Question 2.4 What factors influence the achievement of the aims of the UASP program?

Overall, Study 2 participants identified three main enabling and four main hindering factors related to the translation of UASP's investment in the individual into institutional change.
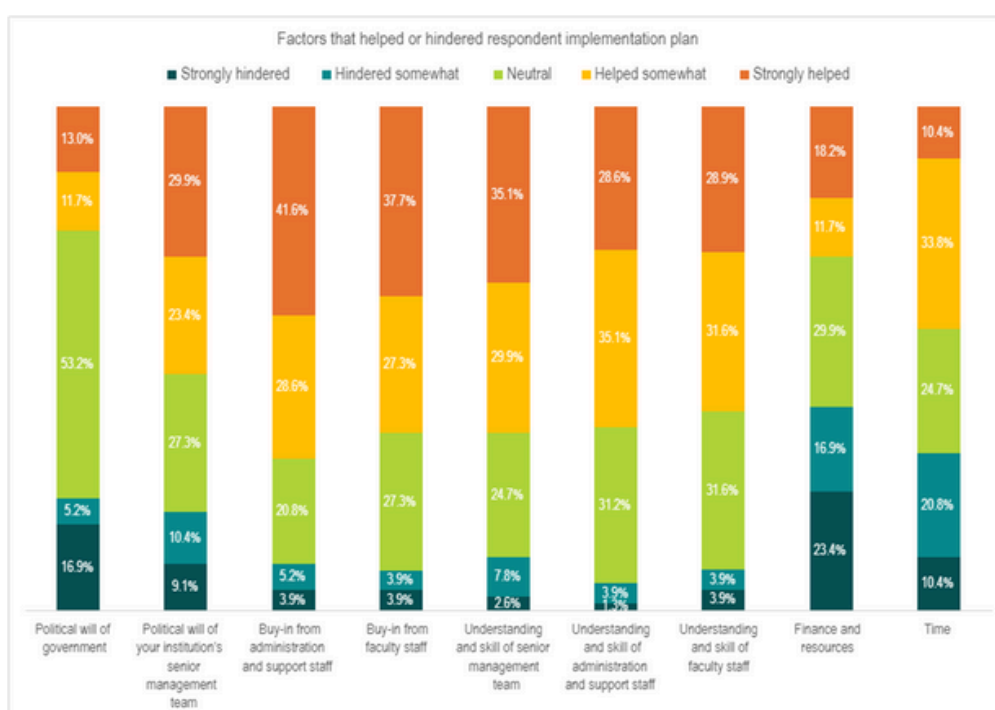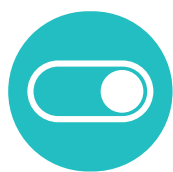
Enabling factors

1. **Leadership support for institutional change**

2. **Availability of funding**

3. **Alumni's leadership and persistence**

Hindering factors

1. **Inadequate staffing**

2. **Restrictive university culture and policies around research management**

3. **Lack of funding**

4. **Government policies**

The end of program survey also inquired about hindering and enabling factors, asking participants to rate certain factors on a 5-point Likert scale ranging from Strongly Hindered to Strongly Helped (see Figure below). Similar to Study 2, participants identified buy-in from administrative support and faculty staff followed by understanding/skill of senior management as enabling factors while political will of government and finance and resources were identified as top hindering factors.

Factors that helped or hindered respondent implementation plan

Enabling Factors

Fellows were more likely to be successful in achieving an institutional improvement when their **institution and its leadership were supportive of institutional changes to promote research management.** Participants described the enabling environment created by leaders as one in which they have the structures and processes to facilitate change (four participants); feel supported by university leaders (four participants); and have access to infrastructure (space and support of ICT; one participant). As one participant noted, *"… because the university gave us space in the ICT department, we were able to manage the activities inherent in the project easily with the support of the ICT department."* Leadership investment in research administrators' training and retention in this specialized career track was also mentioned by one participant.

According to seven respondents, **availability of funding for investing in infrastructure and staff** was key to achieving institutional change. UASP small grants helped some alumni to implement interventions that they could not otherwise carry out due to financial constraints; in another case obtaining the small grant convinced management to buy into their idea. UASP small grants were also seen as a steppingstone to obtaining larger grants for the university to push a bigger agenda forward. One participant described their experience this way, *"The fund we got from IREX was helpful, but it was very limited because it was a small grant. To conduct the training across the 14 different campuses of our institution, it was a little bit challenging. But then we got financial support from SIDA, and other sources and we were able to manage the project successfully."* Three participants indicated that some university and government policies provide helpful funding to incentivize researchers to publish their research.

UASP alumni themselves—their determination, positionality within the university, and leadership skills—were essential to the success of a research management reform, according to 7 respondents. Motivation, persistence, positions as senior staff members, intentional planning, and a collaborative, multi-stakeholder approach were listed success factors. One participant noted, *"collaborative approach is very important because, our university is very large. We have 14 different campuses that spread all over, and 50,000 students. So, working in harmony with the various departments is very important. It made the implementation of our initiative easy."*

Hindering Factors

Hindering factors were raised by 11 study discussants and ranged from issues with staffing, but also practices, policies, and procedures at their universities.

Some alumni struggled with reform because there were **too few staff** members to support them. In some cases, the university transferred UASP-trained research management staff to other roles, as described by this participant, *"Another thing that impedes their activities is that once a member of staff is invested upon by IREX, the way we operate, [they] can be moved to another place, so we are working on that too."* Blocks on hiring at some universities make it challenging to replace staff that exit the university, leaving remaining staff with heavy workloads to do more with less. Relationships with U.S.-based institutions brought these staffing issues to light, as described by this participant, *"at the US university I visited, the Research Management Office had five different units, and each of those units served different interests and different areas of research administration… this is not so in our institution. We have inadequate number of trained professionals and infrastructure."*

In two cases, nonacademic alumni perceived a **restrictive university culture and policies** that prevented administrators from implementing new ideas. *"Nonacademic staff are not given liberty to implement changes that could lead to improvements. They need permission from their directors to [do] almost everything and one cannot just say, oh, I have this vision, this has to change… that policy is limiting."*

Progress was deterred by administrative bottlenecks and certain unfavorable institutional policies found to be discouraging to researchers, such as restrictive procurement policies and a policy that takes a 30% cut of research grant funds for university administration. Bursary structures were noted as particularly problematic by one participant, who stated, *"Structure of our bursary, the bursary system in the university is currently not helpful. We are trying to augment the activities there so as to be easy for researchers to get their grants seamlessly. That is a kind of impediment that we are working on. Automation of the bursary operation is ongoing and hopefully will accommodate the financial monitoring and processing."*

Lack of or limited funding is a challenge to achieving impact that came up for 7 individuals. Some alumni shared they could not achieve their implementation plan because they did not receive a UASP small grant or the small grant was not enough funds to make a substantive change. One respondent's country had achieved status as "middle income" which reduced some training and funding opportunities that universities of that country used to be eligible for. National policies also impact access to essential funds (detailed in next section).

Unfavorable government policies surfaced eight times among respondents. These overlap with and influence institutional enabling environment and access to funding issues. Participants provided the following examples:

- A government policy prevents an institution from establishing a new administrative unit under the institution's own self-determined time-frame.

- A national embargo on employment limits the number of university staff who are available to provide research administration services.

- The "Forex Exchange Crisis" in Nigeria—including challenges with exchange rates, restriction on payment in dollars, and bureaucratic challenges to access research funds—impedes research activities at Nigerian institutions. A participant noted, *"the Treasury Single Account (TSA) is a problem in Nigeria. This, majorly appears in form of bottlenecks/ bureaucracy challenges that hinders researchers from accessing their funds on time. Many of our research groups have difficulty in training our trainees because we don't have to access to needed funds."*

- *"Cumbersome government monitoring processes discourage participation in research"* according to one participant. They add *"if you have research or project, it passes through a monitoring system like the government financial institution."*

- Cuts to university staff salaries have been demoralizing and led to industrial action which delayed or impeded planned UASP alumni activities, among other impacts.

- Several policy recommendations to improve perceived gaps were proposed by discussants, including the need for a national education policy that reduces' researchers' teaching duties when they are actively engaged in sponsored research; policies to provide monetary compensation to those who develop proposals, and policies that enable more professional advancement of university administrative staff.

Suggestions to strengthen the enabling environment for alumni

Seven discussants recommended IREX intentionally engage leaders at their universities to keep them informed on what UASP alumni are doing and lobby for their support of alumni's research administration implementation plans.

"Connection of IREX to university leaders will help in getting their buy-in for reform implementation." According to another participant, "I think we need to develop a way where IREX will also be in touch with the institutions. So that when fellows are starting and ending the program there will be interactions. They should be more intentional in engaging the institutions…when the university is aware you can go far."

CONCLUSIONS & RECOMMENDATIONS

Overall, we see that UASP serves a diverse group of universities across the ARUA network that are each in their own place with regard to the research management journey. Through Study 1, we see the potential for institutions that claim particular areas of strength (e.g., cultivating sponsored research and research governance) to support other institutions through South-South learning that can support local relationships and ownership over research management programs. In areas of shared challenges across universities (e.g., knowledge and technology transfer), regional hubs and programs like UASP can play unique roles in building capacity.

UASP Study 2 findings support IREX's end of program survey data, indicating that the program has made some important impacts in building the capacity of individual university administrators to improve their own professional practice as well as advocate or lead reform initiatives at the institutional level. We observed a variety of improved research management structures, introduction of new data management and technology, and in some cases, improved grant writing rates and solidification of a career path for research managers. Knowledge and technology transfer impacts to the institution were limited, yet there were important foundations laid in this area in terms of knowledge, skills, and exposure to practical experiences.

Whether or not alumni are successful in translating individual capacity to institutional change is primarily enabled by supportive university leadership, funding, and the alumni's own drive, yet their best efforts can be thwarted by financial, institutional, or political constraints outside their control.

As in Study 1, Study 2 also revealed the potential of the peer learning component of UASP, which IREX has not previously studied in-depth. Beyond learning best practices from other institutions, this approach supported breaking down silos within alumni's own institutions, and improving understanding and working relationships between researchers and research administrators. Alumni in the focus groups are keen to continue engaging and IREX intends to build on this in the coming cycle of the UASP.

Based on the conclusions we draw from both studies, we have the following recommendations to inform future program implementation.

RECOMMENDATIONS TO INFORM PROGRAM IMPLEMENTATION

- **Consider how to strengthen the UASP course content**, especially modules flagged by focus group participants or topics that were rated lower in alumni's RM360s, like the researcher development and intellectual property management modules.

- **Consider promoting the program more intentionally to those working in or seeking to improve researcher development or knowledge and technology transfer**, given universities need more support in these areas; at the same time, keep a flexible approach for institutions to nominate participants working on diverse administrative issues across the research ecosystem.

- **Continue the peer learning approach.**

- Continue to prioritize **careful matches of UASP fellows with the right U.S. universities/departments** so they can get the tailored exposure they need.

- **Use the virtual exchange period** to orient the UASP fellow and the U.S. university to each other's respective institutional systems and to plan the activities for the U.S. in-person visit.

- Maximize opportunities for further peer learning and networking by **matching U.S. institutions to mini cohorts of 3-5 fellows that share the same research management focus area**, instead of to just 1-2 fellows.

- Engage ARUA university leadership in promotion and selection processes; consider more regular communication updates on status of UASP participants/alumni to leadership contacts.

- **Initiate an alumni steering committee** in the next cycle of UASP to drive a regular agenda of knowledge exchange activities.

- More proactively **promote alumni to join existing communities of practice for research managers in Africa**, such as the Southern African Research Administration and Innovation Management Association (SARIMA) and the West African Research Administration and Innovation Management Association (WARIMA).

ACKNOWLEDGEMENTS

IREX   1275 K ST. NW, SUITE 600, WASHINGTON, DC 20005