Terms of Reference - Midterm Evaluation

The Mastercard Foundation Scholars program
at the African Institute for Mathematical Sciences

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1. Background

1.1. African Institute for Mathematical Sciences (AIMS)

Established in 2003 in Cape Town, South Africa, AIMS is a pan-African network of centres of excellence offering postgraduate education, research, and public engagement for the development of Science, Technology, Engineering and Mathematics (STEM) in Africa. AIMS recruits Africa's most talented university graduates to pursue a one-year fully funded Master's in Mathematical Sciences in a highly interactive and culturally diverse learning environment. AIMS attracts world-class lecturers and research fellows on a volunteer basis to further improve the learning experience for students.

Building on the success of its first centre in South Africa, AIMS launched the Next Einstein Initiative (NEI) in 2008 to scale up and roll out the AIMS model across the continent. Five additional centres were established in Senegal (2011), Ghana (2012), Cameroon (2013), Tanzania (2014), and Rwanda (2016).

1.2. The Mastercard Foundation Scholars Program at the African Institute of Mathematical Sciences

Launched in 2015, the Mastercard Foundation Scholars program at AIMS is a five-year, $25 million initiative that provides postgraduate training in mathematical sciences to economically disadvantaged but academically talented young people in Africa who demonstrate a commitment to give back to their communities. The program is multi-country program being implemented by a network organization. Within the programme are two pilots: the cooperative education programme and the Cameroon teacher-training programme. Overall, the programme focuses on the following three inter-related areas:

Program Area 1: Advanced training for employment

The Mastercard Foundation Scholars Program at AIMS provides fully funded bursaries for eligible African youth to pursue a one-year Master's in Mathematical Sciences at any of the six AIMS centres or the 18-month Co-op Master's in Mathematical Sciences at AIMS Senegal, Cameroon or Rwanda. Mastercard Foundation Scholars at AIMS represent a cross section of African youth including women (at least 30%) and men from rural and urban areas and various socio-economic, cultural and religious backgrounds. This program area seeks to:

a) Provide a bridge to support the transition of graduates to careers in STEM through the cooperative education pilot programme;

b) Increase the human capital in STEM in Africa; and

c) Build a network of trained and motivated graduates with technical expertise in mathematical sciences and leadership skills, ready to join the workforce and tackle the development challenges of Africa.

Program Area 2: Improved quality of mathematics education

The program is piloting a teacher training initiative in Cameroon in partnership with three Higher Teacher Training Colleges and the Government of Cameroon. Using a "train-the-trainer" model, the teacher training initiative seeks to improve the teaching and learning of mathematics in secondary schools across Cameroon. Through this model, 89 master trainers will be provided with the relevant skills and knowledge to train 3,120 mathematics teachers (1,920 in-service and 1,200 pre-service) responsible for 1.7 million students[1]. As a result, the teacher training initiative aims to increase the transition rates of students choosing to pursue post-secondary education in STEM, with a particular focus on girls, thereby building a pipeline of potential scholars' for programme area 1.

Program Area 3: Global coordination and advancement of STEM for development

The Mastercard Foundation Scholars Program at AIMS also provides institutional support to the AIMS network more broadly, namely in the development of communications, public engagement, partnership building, gender mainstreaming, and monitoring & evaluation strategies to facilitate policy dialogue for increased investment in STEM education.

2. Purpose of the Evaluation

This midterm evaluation seeks to take stock of the Mastercard Foundation Scholars program at AIMS from its inception to date, with the aim to:

1) Evaluate the progress made towards achieving planned outcomes in each program area and identify any early impacts;
2) Assess the relevance of the program design, including the theory of change; and
3) Provide recommendations for program implementation going forward to ensure greater impact and the achievement of planned results.

3. Scope of the Evaluation and Key Evaluation Questions

3.1. Scope

The midterm evaluation will focus exclusively on the Mastercard Foundation Scholars Program at AIMS and its three program areas from inception in 2015 to present within the context of the broader AIMS network. The evaluation will be formative in nature and apply the OECD DAC criteria for evaluating development assistance (i.e. relevance, effectiveness, efficiency, impact and sustainability) to assess the Mastercard Foundation Scholars Program at AIMS. The following evaluation questions have been

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[1] AIMS strives to target 30% women for both master trainers and participating teachers in the training program.

proposed to help guide the selected evaluators. However, AIMS recognises that these might spur additional questions that the evaluators may wish to explore further.

3.2. Key evaluation questions

The table below presents the key evaluation questions.

OECD DAC Evaluation Criteria	Key Questions
Relevance	- To what extent is the Mastercard Foundation Scholars Program at AIMS relevant to the development priorities of Africa, specifically in terms of higher education and STEM and the advancement of women and girls in STEM? - To what extent are the objectives of the program still valid? - Are the activities to date and the outputs achieved thus far for each program area consistent with and how are they contributing to the program's overall goal, intended impacts, and attainment of its objectives? What signs indicate this? - In hindsight, how would program personnel have altered the design or implementation of the Scholars Program at their institution and as a whole? - If AIMS was to have an opportunity to extend the partnership with the Foundation, what would that ideally look like?
Effectiveness	- Have program activities been implemented as planned? Have the targets been met? Describe variances. - What is the status of target outputs – is their implementation on track? Have they/are they being rolled out successfully and as intended? How are the key program components being operationalized, implemented, and monitored? - To what extent are the stated objectives in each program area likely to be achieved? - How appropriate are the implementation modalities? - How effectively is the program managed? What are the challenges, opportunities, benefits, costs or successes? How have these been managed or leveraged? What challenges remain? - How adequate are the Monitoring & Evaluation mechanisms? Are they sufficient for monitoring the gender equality and inclusion elements of the program? - How is the program nurturing scholars and their desire to give back? Are there any noted differences between girls and boys? - What types of partnerships should AIMS be considering to enter with other institutions in the future that would strengthen the Scholars Program as a whole?
Efficiency	- Were activities undertaken to date conducted in the most cost-effective and timely manner? Looking forward to a hypothetical new phase of the Program, are there recommendations to improve cost-effectiveness? - How well has the program used its resources to deliver the target outputs? Has the program identified any savings or efficiencies, whether realized or potential? Describe these. - How adequate are the program resources available (human, financial etc.) relative to the target outputs?

OECD DAC Evaluation Criteria	Key Questions
	- Is the current budget adequate for addressing the gender equality and inclusion needs of the program?

Impact	- What are the early signs of impact, if any? How do the results achieved for women and girls compare to those achieved for men and boys? Are there any observed differences based on the socio-economic background of scholars?
	- What is the overall impact of the program on:
	    o AIMS Alumni;
	    o Higher education in Science Technology Engineering and Mathematics (STEM) in Africa, including the advancement of women and girls; and
	    o AIMS as an organization

Sustainability	- To what extent has AIMS received commitment from African Governments to support its programs? - Have any policy changes been observed in the STEM education sector of AIMS host countries as a result of this grant? - To what extent are any early results observed in gender equality and inclusion likely to endure following this grant?

4. Audience of the Evaluation Findings

The primary audience for the midterm evaluation findings is AIMS. The findings will assist AIMS in improving the implementation of the program going forward to ensure greater impact and sustainable results. The findings will also contribute to Mastercard Foundation's learning in its Scholar Program and Teacher Training Initiative. Secondary audience will include other local and international Mastercard Foundation Scholars program partners and stakeholders who will benefit from lessons learnt and good practices emerging from the midterm evaluation.

Findings from the midterm evaluation will be shared with partners and stakeholders through a learning workshop and a final report.

5. Evaluation Approach and Methodology

The midterm evaluation will require a variety of data collection and analysis methods for both qualitative and quantitative data to ensure a comprehensive evaluation exercise. The evaluators will be expected to triangulate the information collected to ensure accuracy. A gender equality and inclusion lens should be applied to all analysis. The evaluation envisages a combination of desk research, site visits to selected AIMS centres, key informant interviews and focus group discussions:

a) **Desk research** to help the evaluators understand and contextualize the Mastercard Foundation program at AIMS. Sources of information will include the program proposal, theory of change, baseline studies, scholars' databases, partnership agreements, performance measurement framework, program reports, and annual work plans etc.

b) **Site Visits** to AIMS Senegal, Cameroon and Rwanda and to the Global Secretariat in Kigali, Rwanda.

c) **Key informants interviews** with selected individuals (partners, host country governments, AIMS staff, Mastercard foundation staff, etc.) who have firsthand information about the program.

d) **Focus groups discussions** with AIMS lecturers, tutors, students, and alumni, as well as teachers and students participating in the Teacher Training Program in Cameroon[2].

AIMS invites interested evaluators to define a more detailed methodology in line with the stated objectives and drawing on their own expertise and experience.

6. Deliverables

The selected evaluators will be expected to produce the following:

a) **Inception report** – Detailing the evaluator's proposed approach to the midterm evaluation. The inception report will demonstrate the evaluator's interpretation of the midterm evaluation objectives and scope and will include a detailed work plan, proposed methodology, and draft outline for the final report, for review by AIMS.

b) **Site visit reports** – Brief reports detailing initial findings from site visits to AIMS centres and the Secretariat. This provides AIMS an opportunity to quickly fact check prior to drafting the final report.

c) **Draft evaluation report** – This will include all analysis, findings, conclusions, recommendations, and lessons learned as defined by the outline presented in the inception report.

d) **Learning workshop** - the evaluators will present their findings and recommendations to AIMS and Mastercard Foundation staff to provide an opportunity to discuss and provide feedback.

e) **Final report** – This will incorporate feedback from the learning workshop. This report will include practical and feasible recommendations for improving program delivery and its impact as well as an executive summary of no more than three pages.

All findings, conclusions, and recommendations should reflect a gender equality and inclusion analysis. Data collection and face-to-face interactions at some centres will require fluency in French. All deliverables must be submitted in English.

7. Midterm evaluation phases and timelines

The midterm evaluation will take place over a period of 9 weeks beginning in February 2018. Data collection will start in March 2018 and the final report submitted by 30 June 2018.

Phase	Activities	Timeframe
Inception	- Review background documents: program proposal, theory of change, baseline studies, scholars' databases, partnership	2 weeks

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[2] All focus groups must provide for the equitable participation of men and women.

Phase	Activities	Timeframe
	agreements, performance measurement framework, program reports, and annual plans etc. - Prepare draft inception report, including the proposed approach, methodology, work plan, evaluation matrix, and outline for final report - Hold an inception meeting with AIMS staff to discuss the draft inception report and gather feedback - Prepare final inception report	
Data collection	- Site visits to AIMS Senegal, Cameroon, and Rwanda as well as the AIMS Secretariat in Kigali, Rwanda. - Interviews and focus group sessions with staff, partners (Government, industry, civil society), students, lecturers, tutors, and alumni - Debrief with each center and the Secretariat - Submission of site visit reports (4)	3 weeks
Analysis and Reporting	- Synthesis and analysis of findings - Follow-up interviews where necessary - Preparation of draft report	3 weeks
Learning workshop	- Presentation of findings, recommendations and lessons learned to AIMS, Mastercard Foundation and partners - Support AIMS in developing action plans to implement recommendations going forward in the Mastercard Foundation Scholars program at AIMS - Incorporation of feedback from AIMS, Mastercard Foundation and other stakeholders on the draft report - Submit final report	1 week

8. Evaluator's profile and selection criteria

Applications are invited from teams of at least three consultants with an appropriate balance of expertise, experience, and gender. The team must demonstrate strong analytical, team management, and communication skills. Team members must be fluent in both English and French. The team must demonstrate experience in conducting evaluations for complex pan-African programs, as well as specific experience in conducting evaluations for academic, teacher training, and work integrated learning programs. Applicants must also demonstrate their expertise in gender equality and inclusion and their experience in designing evaluations in ways that reflect an attention to gender-related issues (i.e. gender-sensitive indicators, gender analysis, and use of participatory methods etc.)

Applications will be evaluated based on the following criteria:

a) Demonstrated experience conducting evaluations of complex multifaceted programs as evidenced by curricula vitae of the team leader and key team members and three recent professional references - 25 %

b) Strength of the proposed methodology and understanding of the evaluation scope and objectives as presented in the technical proposal – 35%

c) Financial proposal including a detailed breakdown of costs - 15 %

d) Two samples of relevant evaluation reports recently completed - 15 %

e) Demonstrated expertise and experience in gender equality and inclusion and proven ability to integrate gender-related concerns into the evaluation's approach and methodology, findings, conclusions, and recommendations – 10%

9. Submission of Expression of Interest

a) Potential evaluators meeting the above criteria are invited to submit an Expression of Interest (EOI) to: mel@nexteinstein.org with the subject "Mastercard Foundation Scholars Program at AIMS - Midterm Evaluation"

b) The EOI should include:

    i. Technical proposal

    ii. Financial proposal

    iii. CVs for all proposed team members

    iv. Sample reports of recently completed evaluations done by the proposed members of the evaluation team or at least by the team leader

    v. List of three referees who can attest to the firm/evaluator's experience and expertise as related to this assignment.

c) Applications are due by **23 February 2018**

10. Annexes

Annex 1: Mastercard Foundation Research and Evaluation policy

Annex 2: Mastercard Foundation Scholar Program at AIMS Logical Framework

THE MASTERCARD FOUNDATION

RESEARCH AND
EVALUATION POLICY

MAY 2015

RESEARCH AND EVALUATION POLICY

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RESEARCH AND EVALUATION POLICY

PURPOSE

The MasterCard Foundation was established with a clear vision: to provide economically disadvantaged people with the opportunity to learn and prosper. Together with visionary partners, our programs advance financial inclusion, economic opportunities for the poor and secondary and tertiary education in Sub-Saharan Africa. Many of these programs impact young people.

The purpose of research, evaluation and learning at The MasterCard Foundation is to strengthen programs and policies that improve the lives of people living in poverty. We believe in the catalytic, lasting impact that smart research and evaluation can have in identifying and enabling pathways out of poverty.

The Research and Evaluation Policy articulates the Foundation's approach, provides guidance and sets expectations for Foundation staff, researchers, evaluators and partners. They are responsible for implementing this Policy in any research and evaluation activities we commission or implement.

This Policy was developed in consultation with senior leaders, staff, partners and global experts. It adheres to the Canada Revenue Agency's Policy Statement on Research as a Charitable Activity.[1] This Policy will be reviewed yearly and revised as needed based on ongoing feedback and any regulatory changes.

APPROACH

Research and evaluation are central to the Foundation's work. Together they underpin an integrated learning approach that allows for evidence-informed decisions and amplified impact.

The Foundation funds research and evaluation to further our charitable purpose and programming goals. Our learning is strategic, intentional and advances our core mission and areas of work. The Foundation is committed to engaged, joint learning with partners and stakeholders so that we continuously improve our work and find innovative solutions that advance our mission and vision.

At the Foundation, research, evaluation and learning activities follow two objectives:

- To generate high quality, trustworthy knowledge for program learning, accountability and decision-making.

- To strengthen the evidence base needed to improve programs and policies in our areas of work.

RESEARCH AND EVALUATION WORK TOGETHER TO CATALYZE LEARNING AND FILL PRIORITIZED KNOWLEDGE GAPS

While there are varying definitions of research, evaluation and learning, at The MasterCard Foundation they are generally used in the following ways: Research at the Foundation is a systematic investigation focused on producing new knowledge that is applicable to programs and broadly advances our areas of work. Evaluation is a systematic process to learn from programs, promote accountability, understand and improve effectiveness, further decision-making and contribute knowledge to the wider fields of practice. Learning is a continuous process of reflection, incorporating evidence from research and evaluation as well as experience and tacit knowledge. A learning culture's true value is revealed when new knowledge results in programmatic or policy action and impact.

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1. CPS-029, April 30, 2009: http://www.cra-arc.gc.ca/chrts-gvng/chrts/plcy/cps/rsrch-eng.html

RESEARCH AND EVALUATION POLICY

CORE PRINCIPLES

Three core principles and related themes must be carefully considered and explicitly addressed when designing, approving and implementing any research and evaluation activities commissioned by the Foundation and its implementing partners. This helps ensure that research and evaluation activities align with the Foundation's core values, intentions and quality expectations.

1. RESEARCH AND EVALUATION IS STRATEGIC AND APPLIED FOR IMPACT.

Strategic: Research and evaluation responds to specific knowledge needs that are directly linked to programming goals and learning agendas. Directly aligning research and evaluation with programming helps ensure relevance. The purpose and audience must be clearly articulated. Any research and evaluation effort must be cost-effective and result in new knowledge, ensuring no redundancy with past or present knowledge-generation efforts.

Applied: Research and evaluation is designed and communicated for uptake and impact. Findings should add value to our areas of work by supporting evidence-informed decision-making. This requires ongoing communication and engagement with stakeholders. Research findings should be made available and shared widely to advance learning and public knowledge. These efforts must be built into the design phase and reflect the diversity of intended audiences and uses.

2. METHODS ARE ETHICAL, RIGOROUS AND ADAPTED TO LEARNING QUESTIONS AND CONTEXT.

Ethical: Research and evaluation reflect high ethical standards, rooted in the Foundation's fundamental respect for human dignity. All individuals engaged in efforts funded by the Foundation must embrace the key ethical principles of cultural sensitivity and respect for the dignity, privacy and agency of individuals. Every effort must be made to optimize the involvement of, and benefits to, participants and communities. Considerations must also include child protection, gender equity and sensitivity, informed consent and the avoidance of any real or perceived conflict of interest.

Rigorous: Methodological rigour generates high quality, trustworthy knowledge and new insights through innovative approaches. Rigour in this context means data collection, analysis and reporting that is systematic and verifiable.

Combining quantitative and qualitative methods, in an integrated manner and at multiple levels, fosters richness of understanding. Sound methodological approaches are critical to building a reliable evidence base. The Foundation encourages methodological innovation and creativity, particularly those which empower participants and harness the power of technology, to generate compelling insights and new ways of thinking.

Adapted: Selection of methods is driven by the ability to respond to specific learning questions and context. Methods and approaches must aim to generate reliable, useful evidence in response to learning questions and should be informed by purpose and audience. They must also be appropriately tailored to specific programming goals, contexts and participants.

3. THE FOUNDATION AND ITS PARTNERS COLLABORATE TO LISTEN DEEPLY, ELEVATE VOICES AND LEVERAGE LOCAL KNOWLEDGE.

Collaborate: Engagement of relevant partners, participants and stakeholders builds ownership, shared learning and collective action. Expanded networks and alliances with partner organizations' clients and program participants, young people, universities, governments, donors, civil society and other stakeholders can enable more systematic use of knowledge in addressing national, regional and global priorities. Working together at multiple levels strengthens the shared value and collective impact of research and evaluation activities.

Listen deeply, elevate voices: Participatory approaches elevate the views of economically disadvantaged people to enhance the programs and policies that affect them. One of the far-reaching effects of poverty can be the exclusion of poor people from articulating their abilities, interests and perspectives to decision-makers at all levels. Research and evaluation efforts should be inclusive and give voice to a multiplicity of perspectives, including those of less powerful or excluded populations. These efforts should also find dynamic ways to ensure the voices of people living in poverty are heard and acted upon.

Leverage local knowledge: African-based institutions are engaged in research, evaluation and learning, in partnership with global centres, and knowledge is returned to communities and institutions. Activities supporting evidence-informed decisions should be shaped by local contexts and capacities, while drawing upon global knowledge and expertise. This includes leveraging existing expertise, building capacity to generate and use data locally and having clear plans for returning knowledge back into local communities, institutions and systems.

RESEARCH AND EVALUATION POLICY

IMPLEMENTATION

> The successful implementation of this Policy requires that the core principles are well understood and communicated internally and with partners. Foundation staff and partners have a shared responsibility to carefully consider and explicitly address the principles in any research or evaluation activity. All Foundation staff, researchers, evaluators and partners are responsible for ensuring that the principles and practices articulated in this Policy are met.

The Research, Evaluation and Learning team at the Foundation is responsible for assessing, approving and providing technical assistance and quality assurance for all research and evaluation commissioned, funded or undertaken by the Foundation. The Research, Evaluation and Learning team will work closely with program staff and partners to ensure that any research or evaluation that is funded by the Foundation is relevant and applied for the purposes of advancing evidence-informed decision-making and addressing knowledge gaps.

The Foundation's Program staff contributes to the design and management of research and evaluation related to their specific programming partnerships and learning priorities. We are collectively responsible for ensuring that evidence is communicated and disseminated internally to support decision-making at all levels.

The Foundation's Senior Management is responsible for ensuring that evidence generated by research and evaluation is used in strategic decision-making. Senior Management also ensures that research and evaluation activities comply with the Canada Revenue Agency's requirements and the Foundation's charitable objects.

All strategies and major programs related to research and evaluation, particularly for larger initiatives, are subject to approval from the Foundation's senior leadership and Board of Directors.

A Research and Evaluation Advisory Group consisting of external experts is engaged, when required, to provide overall strategic guidance, independent validation and quality assurance on select research and evaluation activities. External bodies, including institutional review boards, are also engaged as needed to ensure high ethical and technical standards are adhered to for major research and evaluation initiatives.

Researchers, evaluators and implementing partners are responsible for carrying out their work in adherence with this Policy and maintaining frequent and regular communication with the Foundation throughout the course of their work.

Detailed tools and guidelines are available upon request to assist in the implementation of this Policy.

More information on research and evaluation at the Foundation, ethical considerations and the strategic role of communications are provided in the Appendices of this Policy. For further information regarding The MasterCard Foundation's Policy and approaches to research, evaluation and learning, please contact knowledge@mastercardfdn.org.

RESEARCH AND EVALUATION POLICY

APPENDIX I: RESEARCH AND EVALUATION AT THE MASTERCARD FOUNDATION

RESEARCH

When designed well and guided by strong principles and practices, research is a powerful tool to guide programming decisions and contribute to global knowledge for action and impact.

The Foundation prioritizes research that is clearly aligned with our charitable purpose and has the potential to catalyze meaningful change in the lives of economically disadvantaged clients and young people.

All research undertaken, commissioned or funded by the Foundation must align with the core principles and practices outlined in this Policy, as well as comply with the Canada Revenue Agency's Policy Statement on Research as a Charitable Activity.[2]

Foundation-funded research also leverages the knowledge of our partner research institutions and implementing agencies, particularly in Sub-Saharan Africa, and reinforces their capacity to generate and deploy the results of research in conjunction with local knowledge users.

Research aims to accomplish knowledge objectives related to program strategies, theories of change and learning agendas. This includes:

- Advancing learning within a particular project partnership or initiative to generate greater understanding of key issues, improve strategies and maximize impact.

- Building evidence around a wider programming area or theme to inform the design and implementation of new program strategies and investments, as well as replication or scaling of existing initiatives.

- Responding to knowledge gaps in key sectors and areas of work, to improve the Foundation's programming and contribute to the wider field.

EVALUATION

Evaluation at the Foundation is undertaken for the dual goals of learning and accountability. As such, evaluation strengthens the Foundation and our programming partners as learning organizations, and promotes more effective interventions.

Given the diversity of our programs, evaluation does not take a one-size-fits-all approach. Instead, we seek to meet the specific needs of the Foundation, our program partners and stakeholders through evaluation approaches that are relevant and timely. All evaluations respond to learning questions that are tailored to each program and project, guided by Theories of Change and learning agendas as well as global evaluation standards and criteria.[3]

Evaluations are designed with input and consultation from program stakeholders, including Foundation staff, partner organizations and other relevant audiences. Decisions as to what is being evaluated, and how, will be guided by the core principles set out in this Policy.

Monitoring complements the evaluation function, specifically by tracking project progress on an active and ongoing basis, allowing for timely adjustments and corrections. Baseline assessments are also critical for initial measurement of indicators and to facilitate the tracking of outcomes and impacts over time, setting the stage for robust evaluation later in the project.

Types of Evaluation Frequently Conducted at The MasterCard Foundation	
Mid-term Evaluation	Conducts a systematic assessment of progress towards anticipated and unanticipated outcomes, and generates learning for course corrections.
Final Evaluation	Provides a summative assessment of project results and lessons learned.
Impact Evaluation	A type of evaluation design that assesses the changes that can be attributed to a particular intervention.
Learning Partnership	Embeds robust, third-party evaluation and research into the full lifecycle of a project or program, allowing for ongoing learning and knowledge sharing.

2. CPS-029, April 30, 2009: http://www.cra-arc.gc.ca/chrts-gvng/chrts/plcy/cps/rsrch-eng.html

3. Please see links to evaluation standards and OECD DAC Evaluation Criteria in Annex

RESEARCH AND EVALUATION POLICY

APPENDIX II: ETHICAL CONSIDERATIONS

Ethical considerations are crucial to shaping the design of all research and evaluation endeavours. The Foundation's fundamental respect for human dignity and equity underpins our ethical approach, which all staff, partners, researchers and evaluators are expected to follow. Our ethical approach includes the following core elements:

- All research and evaluation designs, approaches and practices should demonstrate cultural sensitivity, including the recognition of differences of beliefs, manners and customs, and ensuring that integrity and honesty are exhibited in relationships with stakeholders.

- Participants in research and evaluation activities must be treated with respect and dignity. This entails robust procedures to ensure protection of privacy and sensitive information, including offering anonymity and confidentiality of individual information. Research and evaluation must not be unduly extractive, invasive or burdensome on any individual, organization or community, and instead should seek to optimize their involvement and benefit. This includes consulting with local stakeholders and proactively sharing results. Gender-sensitive approaches, with particular attention paid to vulnerable populations, must also be considered and pursued.

- Research and evaluation must practice free and informed consent, specifically ensuring that individuals are free to choose to participate or not and that no penalty or hardship shall arise from their decision.

- Any real, potential or perceived conflict of interest must be proactively disclosed and managed.

All employees of the Foundation must uphold the Employee Code of Conduct, which further details employee requirements regarding conflict of interest, confidentiality and child protection.

All researchers and evaluators working on projects funded by the Foundation and engaging with children or youth must also comply with the Foundation's Child Protection Guidelines.

The Foundation endorses Canada Revenue Agency's ethical standards for research, as set out in the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans.

Potential ethical issues, including those that particularly relate to working with children, youth and other vulnerable populations, must be included and addressed in relevant plans, tools and guidelines for research and

evaluation. All proposed research and evaluation at the Foundation must consider potential ethical implications of the proposed activities along with plans to mitigate these concerns. Management of research and evaluation activities must remain sensitive to ethical considerations throughout the duration of the activities, with frequent check-ins and early attention to any emergent issues.

Serious ethical concerns or violations will be reviewed by the Director of Research, Strategy and Learning, and where warranted, by appropriate internal and external bodies, including institutional review boards. Appropriate actions will be taken to address any confirmed violations of these ethical principles and codes of conduct, including changes to research design and implementation and, where warranted, removal of individuals implicated and cessation of research and evaluation activities and related funding agreements.

APPENDIX III: THE STRATEGIC ROLE OF COMMUNICATIONS

The role of communications and meaningful engagement with potential users of knowledge is central to the Foundation's applied research and evaluation approach. In line with the core principles outlined in this Policy, research and evaluation communications involves the following activities by the Foundation and its partners:

- The clear articulation of a communications and user engagement strategy, based on purpose and audience, at the outset of any research or evaluation activity to inform dissemination and use of knowledge.

- The production and dissemination of knowledge and insights from research and evaluation activities in multiple forms, including publications, presentations, policy briefs and other open knowledge products.

- Deep engagement and dialogue with key users of this knowledge, through public events, stakeholder consultations and other actions.

The wide dissemination of knowledge and meaningful engagement with potential users of knowledge is critical to achieving the Foundation's goals of strengthened programs, improved lives and amplified impact.

The Foundation's approach to intellectual property and copyright of products is guided by its commitment to knowledge sharing and wide distribution, as well as access and use of funded research. Further guidance on the Foundation's intellectual property and copyright policies and considerations is available upon request.

ANNEXES

Canada Revenue Agency's Policy Statement on Research as a Charitable Activity: CPS-029, April 30, 2009:
http://www.cra-arc.gc.ca/chrts-gvng/chrts/plcy/cps/rsrch-eng.html

Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans:
http://www.pre.ethics.gc.ca/pdf/eng/tcps2/TCPS_2_FINAL_Web.pdf

OECD Development Assistance Committee (DAC) Criteria for Evaluating Development Assistance, 2010:
http://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm

African Evaluation Association (AfrEA) African Evaluation Guidelines – Standards and Norms, 2007:
http://www.afrea.org/?page=EvaluationGuildline

American Evaluation Association (AEA) Guiding Principles For Evaluators, 2004:
http://www.eval.org/p/cm/ld/fid=51

Lean Research Declaration, D-Lab at the Massachusetts Institute of Technology, the Fletcher School of Law and Diplomacy, and the Feinstein International Center at Tufts University, August 2014:
http://d-lab.mit.edu/lean-research

AIMS-MCF PARTNERSHIP PROGRAM LOGIC MODEL

	Project Objective 1	Project Objective 2	Project Objective 3
IMPACT	Increased number of African male and female STEM scholars leading technological innovations that can address development challenges and drive wealth creation in Africa		
INTERMEDIATE OUTCOME 5 years	• Improved transition of female and male AIMS scholars to progressive careers in relevant fields of science and technology in Africa	• Enhanced quality of secondary school math education in Cameroon	• Increased investment in mathematical sciences in AIMS operating countries
IMMEDIATE OUTCOMES 2-3 years	• Increased number of high calibre STEM scholars graduating from AIMS centres • Increased number of STEM scholars placed in skilled jobs in industry, academia and government	• Enhanced capacity of secondary school math teaching in Cameroon	• Increased understanding and appreciation of mathematical sciences by policy makers and general public
OUTPUTS	• AIMS Master's Program upgraded and implemented • AIMS Co-op Program implemented	• Teacher Training program implemented in Cameroon • Mathematics curricula and teaching resources improved • AIMS Secretariat efforts to influence education policy in Cameroon specific to teacher training and qualification executed	• AIMS advocacy strategy implemented to improve coordination of STEM activities and win support and promotion of mathematical sciences • AIMS Communication strategy to promote mathematical sciences for development implemented • AIMS operational procedures are enhanced to drive, promote and support the advancement of STEM education in Africa.
ACTIVITIES	• Revise and enhance key elements of the AIMS Master's Degree • Provide bursaries to promising maths and sciences students • Implement Give Back program • Develop and validate AIMS Co-op pilot strategy • Identify key industry and government partners and establish sustainable partnerships	• Launch (kick off) Teacher Training pilot • Establish Steering Committee • Curriculum Development • Implement training & continued professional development (HTCC, Pre-service & in-service teachers) • Advocate policy, mobilise stakeholders & revise Mathematics policy within Education sector in Cameroon • Develop Community of Practice and ICT platform for teachers • Develop & implement National Awards Program	• Develop AIMS Advocacy strategy to influence policy related to the promotion of mathematical sciences for development • Develop Communications strategy to promote the value and benefits of mathematical sciences for development • Strengthen AIMS operations policies including RBM, partnership and gender equity strategies • Hire relevant resources to lead on strategic areas • Develop & implement Monitoring & Evaluation and Knowledge Management frameworks
INPUTS	Talent (Lecturers, tutors, specialists, partners, industry partners) Information (curriculum, financial, course requirements, MOU's) Infrastructure (ICT platforms, buildings) Financial (bursaries, industry partnerships)	Talent (teachers, lecturers, curriculum specialists, partners, government) Information (curriculum, course structure, policy inputs, award prog, CoP) Infrastructure (ICT platforms) Financial (running costs, ICT costs, Awards prog costs)	Talent (Key staff, experts) Information (Policy inputs, monitoring data, strategy documents) Infrastructure (ICT platforms, Training venues) Financial (running costs, ICT costs, consultancy costs)
KEY STAKE HOLDERS	AIMS / MCF / Academics Industry partners / Government / Other Funders (IDRC & DFID)	AIMS / MCF / Academics Teachers / Government / Other Funders (IDRC & DFID)	AIMS / MCF / Specialists & Staff Government / Other Funders (IDRC & DFID)
Obj.	**Project Objective 1: Advanced Training for Employment**	**Project Objective 2: Improved Quality of Mathematics Education**	**Project Objective 3: Coordination and Advancement of STEM for Development**