

## **iREACT**

### Internet Resources Equipping Africans for College and Technology

#### **Program Abstract**

iREACT (Internet Resources Equipping Africans for College and Technology) is a three week program for fifteen top performing junior year students in Limbe, Cameroon to equip them with necessary resources for successfully applying to college. The program will run from January 10 – 28, 2006 in Limbe, Cameroon on a budget of \$5955.

#### **A. Program Introduction**

Many of the best students in public high schools in Limbe, Cameroon do not attend college, and of those who do, only a few obtain a degree in a scientific field. Poverty and a lack of knowledge about educational opportunities, particularly for studying abroad, prevent them from living up to their academic potential.

Of the few who enter college intending to study science-related fields, many end up switching to a degree in liberal arts because the curriculum for science-related fields at colleges in Cameroon is not strongly developed.

Many Cameroonian students are unaware of how to best utilize the wealth of information available to them on the internet. We have developed a three week program for fifteen of the top performing junior year students in Cameroon, iREACT (Internet Resources Equipping Africans for College and Technology). Using internet technology and MIT OpenCourseWare (OCW), with an emphasis on the concept of openly sharing knowledge, we will equip them with the necessary tools for effectively applying to college, motivate them to study a science-related field, and enable them to take advantage of the internet for educational purposes.

We expect our students to walk away with greater confidence, enhanced knowledge, and a newfound empowerment that will allow them to use the open sharing model to impact their peers by passing their knowledge on to them.



*High school boys complete a Chemistry lab in Cameroon.*



*High school girls gather outside after their classes end.*

## **B. Program and Timeline**

The program will run for 17 hours per week from January 10-28, 2006. We will implement the program in three phases: Getting Started and Information About College, Developing Yourself As an Exceptional Applicant, and Focus on the Individual.

Upon completion of the January program component, we will match the students with a student mentor at MIT who will address any further questions about their college applications via email. We will need the following materials to carry out the program and will run on a budget of \$5955.

### Materials:

- Generic brochures and college applications
- MIT student-donated used SAT I and II books
- MIT student-donated used college information books
- 5 laptops on loan in addition to our own (to return to Institute)
- Binders and printed handouts
- Internet facilities at computer center (LUKMEF)
- Classroom at Government High School, Limbe at no cost

### Budget:

#### In Kind Donations

*Used SAT Books-* We are contacting the class of 2009 to donate their used SAT books for the new version of the SAT.

*Computer Facilities-* LUKMEF (Luther King Memorial Foundation) is an NGO in Cameroon and owns a computer center in Limbe. We have been collaborating with Mr. Mezi Raymond, the Director of Academic Affairs at the computer center. He has offered us the use of a classroom and an 80% discount on internet services. A huge component of our program involves receiving feedback from and follow up information on the students. Mr. Mezi Raymond has also agreed to assist us in gathering this information.

*Laptop Computers-* IS&T has a computer loan program and we are working to secure five computers for use during the program.

*Brochures-* We are contacting the MIT admissions office and other colleges for informational brochures and viewbooks.

*OCW Webpage-* Manish Gaudi, of the OCW office, has agreed to set up our webpage on the OCW server.

*Classrooms-* We will be using classrooms, free of charge, at the schools whose students are participants in the program.

*Binders*- We are contacting Office Depot, Wal Mart, Target, and other office supply stores for the donation of binders.

Estimated Budget

(For 2 Instructors and 15 students)

Expense	Sub cost	Total Cost
International Travel	USD 1700 / person X 2	USD 3400
Accommodation	USD 30/ night X 20	USD 600
Food	USD 15/ day X 21	USD 315
Computer facilities	USD 34/ student X 15	USD 510
SAT cost	USD 62/ student X 15	USD 930
Miscellaneous	USD 200	USD 200
<i>Total Expense</i>		USD 5955

*Pre-Cameroon (Nov-Dec, 2005)*

To secure the materials needed and prepare before departure, we will:

- Make arrangements with the Luther King Memorial Foundation (LUKMEF) computer center in Limbe, Cameroon for the usage of their computer facilities
- Gather information on our prospective students in Cameroon through informal surveys carried out by our contact, Akohleng Meyahnu.
- Contact high school administrators who will follow our criteria to choose the student participants in the program.
- Make arrangements for classroom usage with the school administration of the Government High School (GHS) of Limbe.
- Contact the class of 2009 for used SAT preparation and college profile books
- Engage in research on college admissions
- Prepare slides which will later be posted on MIT OCW for our instruction while in Cameroon
- Develop an online discussion forum for our students on our MIT OCW webpage
- Obtain counsel from the dean of the International Students Office at MIT
- Obtain counsel from the admissions officer for international students
- Obtain counsel from the financial aid officer for international students
- Gather a prospective mentor pool
- Contact IS&T (Laptop loaner program) for laptops

In Cameroon (Jan 2006)

- Upon arrival, we will meet with local contacts and the computer center director, set up the classroom, test computers, and prepare for students.
- The program will run from Jan 10 - Jan 28. The students are on break for the first week of January, but have classes until about 2:30 each day for the rest of the month.
- The class will run for 2 ½ hours per weekday after their normal classes and 4 hours on Saturdays. The students are used to this system because they normally voluntarily choose to attend extra courses outside of their normal school day.

During each phase of the program, we will cover the following topics:

Phase I (Jan 10-14): Getting Started and Information about College

- Introduction to the Program
- Utilizing OCW
- Online Resources for College
- Studying Science, Technology and Engineering
- Being an International Student in America
- Financing an Education Abroad
- Begin Developing College Prep Bible

Phase II (Jan 16-21): Developing Yourself as an Exceptional Applicant

- Introduction to the SAT I and SAT II
- Introduction to the TOEFL
- How to Present Yourself as An Applicant
- Effective Essays
- Resume Writing

Phase III (Jan 23-28): Focus on the Individual

- Practice filling out Applications
- Write and Develop Essays and Resumes
- Post Profile on Webpage
- Wrap Up

Post-Cameroon (Spring 2006 - Spring 2007)

- Perform an evaluation of how the students were affected by the program and track their tendency to use the internet for more educational purposes, particularly regarding their use of OCW.
- Write a report on the IAP component of the program, challenges faced, ideas that were successful, and recommendations for the feasibility of implementing the program each IAP and in other countries as well.

- Establish and monitor mentorship component to connect MIT student advisors with African student participants
- Fund the top program participant's SAT tests
- Survey students to determine statistics for number of students who apply to university, acceptance and attendance rates as well as their chosen fields of study
- Survey students to determine whether (and how) they are spreading their knowledge and skills to help the current junior year students.

### **C. Program Curriculum:**

Before the start of the January component of iREACT, our entire curriculum, including handouts and presentations, will be posted on our MIT-OCW website. Current students, their interested friends, and other students will have full and open access to the information in the future. By accessing the curriculum and other educational websites on a daily basis, the students will realize the benefits of MIT-OCW, other open coursewares, and educational webpages that they can continue to take advantage of in the future. The curriculum on the website will be presented in three phases.

#### *Phase I: Getting Started and Information about College*

*To introduce the students to the program and provide general information about preparing for and attending college to study science related fields*

- Online resources for College Preparation:
  - Although internet access is available to students in Limbe, it is not typically being used for educational purposes. According to the computer center we are working with, 75% of their customers are between the ages of 15 and 35. Of those using the internet, 80% are exchanging e-mails and 20% are chatting or browsing. On average, each customer spends 2-4 hours online.
  - Unlike students in America who are aware of sites such as review.com and collegeboard.com, and how to effectively use them, the students in Cameroon are not making good use of these resources. Our goal is to make the students equally knowledgeable about utilizing the internet for educational purposes besides email and chatting.
  - Using review.com, we will help each of the students develop a profile to decide on colleges that best fit their needs.
- How to Use OCW as Preparation for College Material
  - Students considering study in another country are unaware of how material is presented and the format of the educational system. The students will learn how to use OCW course material to prepare for study in America and determine where their interests lie.
  - The students will learn about typical general course requirements for their freshman year of university and how they can go through some course material before even attending college using OCW.

- After using our OCW webpage for the program, the students will be familiar with navigating the website and the benefits OCW and other university's open courseware sites.
- We will encourage the students to continue to use OCW for course material once enrolled in university.
- Being an International Student in America
  - We will discuss the advantages, cultural differences, and implications that come along with studying at a university in America.
- Studying Science, Technology, and Engineering
  - We will introduce the students to our guidelines for succeeding at a university and the advantages of studying fields in Science, Technology, and Engineering.
  - We will discuss our personal experiences at MIT and the opportunities specifically available at the institute.
- How to Finance An Education Abroad
  - Many students do not realize that they can qualify for generous need-based financial aid, particularly at prestigious universities in America.
  - We will provide sample financial aid packages that international students studying in America have received.
- College Prep Bible
  - The students will be provided with binders that they will fill with their handouts, notes, and tips on college applications and success.
  - Information printed off the internet will go into their college prep "bibles", or binders filled with a collection of any information related to the program.
  - The students will also collect the brochures and other information donated from organizations and schools that we provide them with.
  - The college prep bible they create will be used throughout their senior year while applying to university.
  - We will charge the students with the responsibility of openly sharing the information with their peers and passing down their college prep bibles to younger students upon graduation from high school.

*Phase II: Developing Yourself as an Exceptional Applicant*

*To equip the students with necessary information for creating a stand-out application*

- SAT I and II and TOEFL Information:
  - The students will be provided with used SAT preparatory books donated by MIT students.
  - The students will be taken through the online registration process for both exams and informed of online resources for SAT and TOEFL preparation

- The students will receive direction on how to take practice SAT and TOEFL exams online
- At the culmination of the program, the students will stay in touch with their mentors and the program coordinators and will have their SAT test funded by the iREACT program during their senior year.
- Developing an Application:
  - To best prepare for submitting a quality application, the students will complete the following 2 ½ hour workshops developed by the program directors, based on research and advice from MIT admissions officers:
    - How to Present Yourself as An Applicant
    - Effective Essays: Developing a Personal Statement
    - Resume Writing

*Phase III: Focus on the Individual*

*To provide the students with practical application of material covered, personal feedback, and ongoing mentorship*

- Completing an Application:
  - The students will practice filling out paper and online applications.
- Writing the Essay and Resume
  - We will give each student personal feedback on the essay, resume, and application that they will be required to complete.
- Webpage Mentorship
  - Upon completion of the program, each student will have posted their own profile on the program's OCW webpage. It will include their photo and a brief profile. We will match them with an MIT student whose profile will also be made available and who will be accessible by email to address their further concerns and advise them.
  - Using the discussion forum on the program's OCW webpage the students will be able to keep in touch with each other and other students on issues regarding college admission and preparation.
  - The mentorship program will increase cultural exchange, serving to further the open sharing of knowledge and ideas and fostering the collaboration between MIT students and those in Cameroon.

**F. Qualifications of Team**

Fawah Akwo: I am a second year international student from Limbe, Cameroon currently pursuing an SB in Electrical Engineering and Computer Science at MIT. Having lived and attended school in Limbe all of my life, I have good knowledge of the town and the educational system. I also have a passion for helping the students of my home country and first-hand knowledge of their needs. Additionally, I have good teaching skills and have informally taught A Level science courses in the past. This past summer, I was a

teaching assistant and mentor for middle school students participating in the STEM (Science Technology Engineering and Math) program at MIT.

Jamira Cotton: I am a second year American student studying Chemical-Biological Engineering at MIT. I participated in college preparation workshops and served as a tutor on the subject throughout high school. This past summer, I gained significant experience as part of a student team that taught, directed, and administered an intensive 6 week course on Java computer programming and entrepreneurship for university students in Africa. In addition, I am currently a teaching assistant in Chemical Engineering for high school students participating in the SEED (Saturday Engineering Enrichment and Discovery) Academy at MIT. I am very interested in youth, preparing them for college, and helping them to recognize and follow through on their potential.

### **G. Conclusion**

iREACT is a feasible and cost effective approach to bridging the divide between students in Cameroon and their counterparts in more developed countries. By using the concept of openly sharing knowledge, we will guide the students through appreciating how to best use the educational resources available to them, particularly on the internet.

It is our goal to see the students react to the program at a level higher than merely completing a successful college application. More importantly, the students must be inspired. Inspired by the idea of openly sharing knowledge. Inspired by learning from students who have achieved the goals of the program and come back to share it with others. Inspired enough to realize the potential that they themselves possess. Inspired enough to take this knowledge and RE-ACT. This inspiration is our true drive. Based on our experiences and capabilities, we, the program directors, are up to the task of following through on these goals.