



June 29, 2017

Welcome to the Tuskegee BUILDERS Academy!

Please, find enclosed the following documents:

- A sample schedule of daily Academy activities
- An invitation to participate in the BUILDERS Academy research program
- A parental permission form for students to participate in the research program
- A student assent form to participate in the research

Research forms should be returned to the Academy on the first day (**June 29th**) whether or not parents/guardians and students agree to participate in the research. If you do not consent to research participation, you can return the forms blank.

Description of research activities can be found in the program's website, www.TuskegeeBuildersAcademy.org. For further information, please contact Dr. Martha Escobar, marthaescobar@oakland.edu.

ACADEMY DAILY SCHEDULE

8:45-9:00	Arrival
9:00-9:30	Overview of daily activities Student brainteasers or interactive makerspace games
9:30-9:40	Snack break
9:40-10:10	Review of Makerspace/STEM contents
10:10-12:00	Research background information for Makerspace project
12:00-1:30	Lunch Break
1:30-2:45	Makerspace activity
2:45-3:00	Wrap-up for the day
3:00	Dismissal

This schedule is informative and it may be modified slightly to benefit the development of student projects

Students should bring to the Academy their school-issued laptops

Students who do not yet have their school-issued electronic device checked out for the Academy yet will be issued a device on the first day of the Academy.

*Devices will be available **only** for students who have not yet been issued a device for the Academy*

RESEARCH PARTICIPATION INFORMATION

Dear parents,

Congratulations on having your child accepted to the Tuskegee BUILDERS Academy! A very important part of the Academy's goals is to investigate the factors that foster adolescents' interest, persistence, and ultimately success in careers in the Sciences, Technology, Engineering, and Mathematics (STEM). The only way to investigate those factors is by assessing students who are completing their K-12 education and are pondering their professional future. Your child is at that stage and, thus, could be a valuable contributor to this assessment.

Attached to this letter you will find a "Parental Consent" form, which you can return to us to let us know that you grant permission for us to invite your child to be a participant in this investigation. Even if you provide us with that permission, it will be your child's decision whether or not to participate in the project. If you decide not to allow your child to participate in the research, there will be no consequences regarding their participation in the Academy.

The research will consist of a survey asking questions relating to your child's experience in STEM courses and activities, regardless of whether or not your child is considering a career in a STEM area. This survey will collect no personal information except for some general demographics. The answers your child provide cannot be used as diagnostic or grading tools; indeed, the researchers who will be handling the data are not associated to your child's school or school district. Furthermore, your child's responses will not be tied to your child's name.

If you provide parental consent, please, return the stamped envelope attached to this letter. Your child will complete the surveys as part of the Academy's activities and it will not detract from instruction time. Upon completion of the survey, your child will be asked whether he/she would agree to be contacted at a later time (1 year later) for a brief, follow-up interview. If they agree, their name will be saved as part of a list of students to contact, but separate from the responses they provide to the survey.

This study is being conducted by Drs. Mohamed Qazi and Michael Curry (Tuskegee University; maqazi@mytu.tuskegee.edu and currym@mytu.tuskegee.edu) and Dr. Martha Escobar (Oakland University, MI; marthaescobar@oakland.edu), and it is supported by an ITEST grant from the National Science Foundation. This grant also funds the BUILDERS ITEST Program at Tuskegee University, which is the basis for this research study. To learn more about the BUILDERS program, please visit www.TuskegeeBuildersAcademy.org. The study has been approved by the Human Participant Review Committee for the Protection of Human Participants at Tuskegee University.

Cordially,


Mohamed Qazi

Tuskegee University, AL


Martha Escobar

Oakland University, MI

Parent or Legal Guardian Permission for Child to Participate in a Research Study

Building Unique Inventions to Launch Discoveries, Engagement and Reasoning in STEM (BUILDERS)

You are being asked to give permission for your child to participate in a research study. Before you give permission for your child to participate, it is important that you read the following information and ask as many questions as necessary to be sure you understand what your child is being asked to do.

Investigators

This research project is being conducted by Drs. Mohamed Qazi from Tuskegee University, AL (maqazi@mytu.tuskegee.edu), in collaboration with Dr. Martha Escobar from Oakland University, MI (marthaescobar@oakland.edu). All procedures used in this research have been approved by the Tuskegee University Human Participants Review Committee (Dr. Stephen Sodeke, HPRC Chair, 334-724-8210).

Purpose of the Research

This research study is designed to investigate the reasons why high school students select and remain to pursue activities related to Science, Technology, Engineering, and Mathematics (STEM), as well as how to increase their success in pursuing careers related to STEM. The data from this research will be used to better inform the Alabama school system on the type of interventions and programs that may increase academic and professional success of students in STEM. This research project is associated to the BUILDERS ITEST Academy, to which your child has been accepted.

Procedures

If you allow your child to participate in this study, he/she will be asked to complete a survey that will ask some demographic information, as well as information on how they are doing in STEM related courses, what they feel about STEM, their anticipated career options, and the difficulties they may be experiencing with their STEM courses. His/her participation will take approximately 45 min, and will be conducted as part of the Academy's activities, but without detracting from instruction time. Your child will be also asked whether they consent to be contacted in one year for a brief, follow-up interview which will be conducted by telephone. This survey will ask questions related to their recent experiences with STEM, as well as the things that influenced those experiences.

Your child will be asked to assent (agree) to participate in this research. He/she can refuse to participate without any penalty, and/or can stop participation at any time just by telling the investigator that he/she wants to stop (if taking the surveys at the Academy).

Potential Risks or Discomforts

There are no foreseeable risks associated with the study. At the completion of the survey, your child will be asked whether he/she is willing to be contacted again for the follow-up interview. If he/she would like to be contacted for this follow-up, we will ask that he/she provide us with contact information. However, that contact information will not be stored in connection with the data they provide. Your child is free to decline this subsequent contact.

Potential Benefits of the Research

The present study will serve to assess the BUILDERS ITEST program, which was designed to implement various interventions that can help students succeed in STEM-related activities and careers, with the potential of implementing these interventions into the STEM curriculum in the state of Alabama. Thus, the student population will benefit from identification and assessment of potential interventions to increase academic and professional success of students in STEM. We also invite you to visit the

MAKERS program Facebook page, which will disseminate BUILDERS activities and our findings on how different activities and interventions affect student success in STEM. These postings may provide students with tips and information on how to maximize their success in STEM with their existing resources, or how to pursue activities that can increase their chances of success.

Confidentiality and Data Storage

All of your child’s responses will be recorded as anonymous, and only group means will be shared with the scientific community. Any information connecting your child to this research project will be destroyed upon completion of data collection and only a code name will be associated with the responses they provide.

Participation and Withdrawal

Participation in this research study is voluntary. You may refuse to allow your child to participate. If you decide to allow your child to participate, you are free to withdraw him/her at any time. To withdraw your child from the study, please contact Dr. Martha Escobar at marthaescobar@oakland.edu, (248)370-2303. Because the data is saved as anonymous, it may not be possible to remove your child’s data from the study if he/she withdraws after data have been collected

Questions about the Research

If you have any questions about the research, please contact Dr. Mohammed A. Qazi, (334)728-2773, maqazi@mytu.tuskegee.edu, or Dr. Martha Escobar, (248)370-2303, marthaescobar@oakland.edu.

This project has been reviewed and approved by the Human Participant Review Committee at Tuskegee University. If you believe there is any infringement upon your child’s rights as a research participant, you may contact the HPRC Chair, Dr. Stephen Sodeke at 334-724-8210.

Parent or Legal Guardian Permission:

You have read the information provided above. You have been given the opportunity to ask questions and these have been answered to my satisfaction. My signature below indicates that my child may participate in this research study. My child’s assent to participate in this study will be sought.

Please return one copy of this consent form and keep one copy for your records.

Name of Child (please, print)

Signature of Parent/Legal Guardian

Date

Name of Parent/Legal Guardian (Please Print)

Signature of Person Obtaining Consent

Date

Informed Assent for Students at the BUILDERS Academy

**Building Unique Inventions to Launch Discoveries, Engagement
and Reasoning in STEM (BUILDERS)**

Investigators at Tuskegee University, in collaboration with investigators at Oakland University (MI) are doing a project that investigates the reasons why high school students select and remain to pursue activities related to Science, Technology, Engineering, and Mathematics (STEM). Because we will be collecting and analyzing data, this is considered to be a research study.

The purpose of this research study is to determine how to increase students' success in pursuing careers related to STEM. The data from this research will be used to better inform the Alabama school system on the type of interventions and programs that may increase academic and professional success of students in STEM. This research project is associated to the BUILDERS ITEST Academy, in which you are currently a participant.

You are asked to be in this research study because you are a high school student in the state of Alabama who has been accepted to the BUILDERS ITEST Academy. The investigators in charge of this study are Drs. Mohamed Qazi (Tuskegee University) and Martha Escobar (Oakland University). This study will take place at Tuskegee University. Participating in the study will take about 45 min of your time. During this study, you will answer survey questions about your experiences, impressions, and feelings with regard to your STEM classes. When you complete these surveys, we will ask for your permission to be contacted in one year to follow-up on the responses you provided. All your responses will be maintained separate from your name (you will be assigned a code number for data recording). Only the investigators will know your answers. Your parents and teachers will not. There are no foreseeable risks associated with the study.

Your parents (or Guardians) have agreed to let us invite you to be a part of this research study. However, you do not have to participate in this study if you do not want to. You can also change your mind at any time and decide not complete the survey, decline further contact, or email Dr. Escobar (marthaescobar@oakland.edu) to ask not to be contacted for that interview.

Please select one of the choices below. **YOU WILL BE GIVEN A COPY OF THIS ASSENT FORM FOR YOU TO KEEP.**

NO, I do not want to be in this study.

YES, I want to be in this study.

Name or Signature of Participant

Date

Signature of Person Obtaining Consent

Date