

ITEST Introduction and Orientation Session  
January 26, 2007 (9 a.m. – 1 p.m.)

Present: Paul Kauffman (PI), Cathy Hall (Co-PI), Dana Espinosa (Co-PI), TJ Mohammad (Curriculum Development), Tarek Abdel-Salam (Curriculum Development), Rick Williams (Curriculum Development), Ed Howard (Curriculum Development), Stephanie Sullivan (Curriculum Development), Mark Lesperance (Director, Building Hope Community Center), David Batts (Curriculum Development), Virginia Carraway (Project Coordinator), Christie Weubbles (Mathematics Teacher, Wilson County), Mike Carter (Science Teacher, Wilson County), Ashley Skinner (Counselor, Wilson County), Rachel McNeill (Science Teacher, Wilson County), Dannie Gullett (Math Teacher, Wilson County), Dr. Ralph Smith (Lead Teacher for Science, Wayne County), Gary Hales (Principal, Wayne County), Mary Daly (Lead Teacher for Technology, Wayne County), Matthew Cole (Counselor, Onslow County), Barry Brown (Science Teacher, Onslow County), Angela Brown (Counselor, Onslow County), Jason Tant (Science Teacher, Onslow County), Lila Hackett (Math Teacher, Onslow County), Dalton Berry (Counselor, Onslow County), Dayna Martin (Science Teacher, Onslow County), Eric Kliewer (Math Teacher, Onslow County), Katie Mullin (Math Teacher, Greene County), Kristin Campbell (Science Teacher, Greene County), Celina Low-Scott (Counselor, Greene County), Michael Dixon (Technology Teacher, Greene County), Susan Jones (Assistant Principal, Greene County), Dora Jernigan (Math and Science Coordinator, Duplin County), Elizabeth Straughn (Math Teacher, Duplin County) and Chris Bass (Counselor, Duplin County). Additional unaccounted for teachers and counselors from Onslow and Jones counties were present.

The goal of the ITAT Introduction and Orientation Session was to inform teachers, counselors and additional faculty of participating school systems about administrative details concerning the two week summer session ITAT Academy and student recruitment as well as build a collaborative team and solicit input.

### **Hidden Barrier Issues**

David Batts

Teachers expressed several ideas concerning this issue:

- Explain to students what an engineer is and what they do in the beginning.
- Inform students that college is possible and tell them how to it can be accomplished (bring in current college students with similar background).
- Insure less structure and more interactive activities, students may be afraid of damaging materials.
- Approach issue of leaving home for long-period of time (Spring Symposium, February 23<sup>rd</sup> – gradually ease student into environment).
- Develop mentorship system between high school students and current college students to help with anxiety.
- Incorporate additional activities outside of the classroom during the ITAS Academy.

- Be aware of language barriers.
- Administration expressed concern about using his best teachers for the program and inquiring about flexibility and the opportunity for make-up sessions.
- Level of supervision for students: ten Resident Advisors available to students during the night as well as a building coordinator (10:1 ratio) – teachers may be given the option to stay in the dorms with the students.

### **Leadership Component**

Cathy Hall

The ITEST website is up and running. Website development will be a continuing process and updates are continually added.

The site address is: [www.ecu.edu/ITESTbiomechanics](http://www.ecu.edu/ITESTbiomechanics)

The website includes basic project information, including information on the primary ITEST grant team.

The goal of the leadership component is to inform students of the many different types of careers available in the areas of math and science especially among engineering.

Students will be encouraged to view academic material in terms of mastery and not judgment

### **Solid Modeling and Robotics**

Rick Williams, Ed Howard and TJ Mohammad

Why solid modeling? Solid modeling is related to robotics and aides with visualization skills, plus it is just FUN! Solid modeling is easy for students and teachers to learn. Many schools are already using the program, but not in the areas of math and science. Students will begin to understand that engineering is hands-on, but the profession also involves a large amount of math and science principles. In addition, using robotics can help appeal to various groups of students. The Bobot is a good tool for challenging the more advanced students without leaving behind the slower students. It has a brain just like you and me and can be programmed to perform tasks as determined by the student, such as walking or jumping. The development of the software is simple and user friendly and can be used across many subjects. As the curriculum is developed teachers are encouraged to provide input.

### **Parent-Teacher Symposium and Student Selection**

Mark Lesperance and Paul Kauffman

The purpose of the Parent-Teacher Symposium in the spring is to address issues and concerns that students and/or parents may have concerning their involvement in the ITAS Academy. An additional symposium will be held in the fall for further discussion and follow up. More information will follow as planning progresses.

Each of the ten high schools is responsible for recruiting six students resulting in a total of 60 students for the 2007 ITAS Academy. The ideal situation would be to select students who would benefit the most from participation, and have already shown

leadership potential. The selection process should begin immediately and should be completed by the end of March.

As teacher's choose qualified student they may want to consider requiring an interview as part of the selection process. The interview may be performed by the guidance counselor, faculty member or both. Admittance into the ITAS Academy is a great opportunity for students to learn and grow and will also look great on scholarship and college applications in the future!

Teachers expressed several concerns with the selection process.

- The majority of the teachers wanted to have the option of selecting students that they would have in their classroom the following year.
  - This is based on how the individual schools plan to recruit students.
- Teachers were concerned they would not be able to train another teacher or remember themselves how to use solid modeling and/or robotics in classroom.
  - Teachers will have the website available to them and will have a total of 5 in-services over the year to help refresh what they learned over the summer. In addition, by choosing new teachers to participate every year they can increase the number of teachers who know how to use the programs.
- One teacher stated she was unsure how she would encourage immigrant students to participate in the program when their future employment status was not clear.
  - It was determined that the issue was one of policy and even though we would find more information about what state policy says concerning the topic, the issue should not be a barrier for participation. Additionally, the teachers were encouraged to send students that would be successful in the program. Plans to have a Spanish speaking student available during the ITAS Academy are in the works.
- Student accountability during the ITAS Academy was questioned.
  - At this point, the idea is to possibly have some sort of competition involving robotics and/or solid modeling.

### **Assessment**

Cathy Hall and Dana Espinosa

A packet containing a base assessment questionnaire and other additional materials was distributed. Short-term assessment of students will be completed through various avenues including tracking the number of students who pursue advanced courses in math and science, and gathering academic information on student performance. Long term assessment goals are being considered such as tracking college enrollment and types of careers pursued.

### **Session Conclusion**

Attendees were reminded that currently the main goal at hand is student recruitment. Curriculum ideas among teachers are encouraged as it is further developed. The ITAT Academy schedule is complete and the ITAS Academy schedule will soon follow. The

schedules will overlap in the final week the teachers are here and the first week the students arrive.

The floor was opened for additional questions, concerns and/or ideas:

- In terms of gathering literature for parents, a video, especially of the Bobot and/or campus, describing the academy and what it plans to accomplish may alleviate student and parent concerns.
- Teachers would like to promote the use of program/lesson plans among various setting in many different classes. How can this be accomplished in classrooms with teachers who have not undergone training?
- Consideration of incoming ninth and tenth graders was encouraged for recruitment due to the increased ability to follow the student's academic performance.
- Dr. Espinosa informed teachers that she is currently applying for teacher's approval to get CDUs for each teacher. Currently we do not know how many credits will be given, however each teacher will be putting in about 60 hours of work during the ITAT Academy. The teachers will be notified when additional information is known.

Other topics of discussion during the ITAT Introduction and Orientation Seminar included: biomechanics curriculum content, excel and programming content and lesson plan coordination.