



IRB INFORMED CONSENT or AGREEMENT TO PARTICIPATE FORM

IRB No.:10-046-MAR-XPB

Rev. No./Date:2/4-21-10

Consent Form Title: Parent Informed Consent Form

Project Title: Exploration of Natural Design Strategies of Novice Engineers

Principal Investigator: Dr. Fred Martin Associate Professor

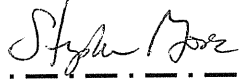
Contact Information: UMass Lowell Computer Science, 1 University Avenue, Lowell MA 01854,
fredm@cs.uml.edu, 978/934-1964

Co-PI(s):

Student Investigator(s): Mark Sherman

Date Submitted: April 21, 2010

*This form has been approved for use by the UML IRB and is valid for up to one year from the approval date.
(PIs -Give a copy of this form to the study participant after they sign it. Originals are to be retained by the PI.)*

Authorized IRB Approval Signature:  **Approval Date:** April 21, 2010

The following are essential elements of Informed Consent (these section titles may be edited to suite your needs but the information for each element must be included):

1. Study Purpose: Mark Sherman is a student at the University of Massachusetts Lowell who is exploring how students solve engineering and design problems. This research study will document the design strategies of subjects with little formal design training. This data will help us create better engineering courses and teaching tools.

2. Procedure and Duration: Your child will be asked to participate in a research program called "Engineering & Modeling Activities." This program will involve meeting with your child for 90 minutes on six Thursday afternoons where he/she will be presented with simple engineering activities. Your child will be asked to solve the activity as well as develop a procedure for solving problems like it. All activities will be based on critical thinking and problem solving with technology. Your child will not require any special training to be eligible to participate.

Your child will also be asked to complete a questionnaire to describe their educational interests, including questions about their heritage and your educational background. This questionnaire will not have any identifying information on it and will only be used by the researchers to evaluate the program.

Your child will be selected to participate on a first-come, first-serve basis through the Youth Development Organization. Your child must be in grades 6-8. The YDO will also provide transportation to and from the program.

We ask for your permission to use parts of your child's work (such as writing, diagrams, and explanation) in articles and electronic publications. We also ask your permission to use video recording in the project classroom. The recordings will be used to construct an understanding of student thinking as they carry out and discuss work. No identifying information will be associated with this material. Videos and images of your child will only be used for research analysis and will not be released in any publication without additional written permission from you and your child.

This class will meet in Olsen 302 on UMass Lowell's North Campus.

3. Potential Risks and Discomfort: There is no risk involved in your child's participation in this study.

4. Incentives/Compensation (if any): There is no payment or financial reward that is provided as compensation for participation in this study.


5. Anticipated Benefits to the Subject or to Non-subjects: We wish to work with your child because we believe this study will lead to improved engineering curriculum for the educational community. Your child may personally gain skills in abstract problem solving, and/or increased understanding of and interest in design principles.

6. Right to Refusal or Withdrawal of Participation: Participation in this study is completely voluntary. This program is only for parents and students who agree to participate in this research study. You may decide not to participate at any time without any penalty. This decision will not affect other services provided to you by the Youth Development Organization or the University of Massachusetts Lowell.

7. Assurances of Privacy and Confidentiality: Only the researchers will have access to recorded materials. All research data will be strictly confidential. Your child's name and all other identification will be removed from everything that is collected, including images, audio recordings, and video recordings. Every precaution will be taken to protect your child's privacy and confidentiality in the data collected. Recorded videos will be destroyed no later than three years after the completion of this research project. Publications based on this research will not include any participant identifiable information.

8. Additional Information (Include contact information for researchers): This form is also available in Spanish. Please contact the researchers to obtain this version. If you do not understand any portion of this form we will be happy to provide a complete explanation. Questions relating to this research project are welcome at any time. Please contact Dr. Fred Martin, Associate Professor, UMass Lowell Computer Science, 1 University Avenue, Lowell MA 01854, fredm@cs.uml.edu 978 -934-1964 Thank you.

PRINCIPAL INVESTIGATOR SIGNATURE(S) -See definition of PI for who is authorized to sign here.

1. Printed Name: **FRED MARTIN** Signature:  Date: **APRIL 21, 2010**

PERSON OBTAINING CONSENT

Printed Name: **HOWARD STICKLOR** Date:

Signature:

PARENT/GUARDIAN SIGNATURE

I understand the risks, requirements, and protocols that have been described in this document. I have read this entire document, have had the opportunity to fully discuss my concerns and questions, and fully understand the nature and character of my child's involvement in this research program as a participant and the possible risks and consequences.

Parent, Guardian, or Legal Representative (if applicable):

Printed Name: Date:

Signature:

Child's Name: