

RECRUITING INFORMATION

Makerspaces in an 8 weeks research study.

STUDY TITLE: Client-centered Design in Makerspaces to Positively Affect Social, Emotional and Job-related skills in Adolescents with Autism

BACKGROUND: We are a research team from the Education and Engineering Departments at Tufts University's who are interested in examining how involvement in client-centered projects completed in Makerspaces helps adolescents with autism spectrum disorder create a context where social and job-related skills are required.

Several previous studies conducted by most of the researchers involved with this project have shown hands-on engineering projects are a way to affect change in students with autism.

ELIGIBILITY: The target population is students in late elementary and middle school, ages 11 to 15 years old, with high functioning autism. Eligibility of participants is determined after surveying parents or legal guardians. We will not ask for or administer additional testing as we will base eligibility on testing and documents that already exist and were developed as part of the student's diagnosis process. We will need to have a diagnosis from a qualified source. Only one source of documentation will be needed. Documentaion may be an IEP or a report generated by a medical professional. If parents prefer that we do not see any of the written documentation, we can speak with a helath care provider. We will make sure that the proper releases have been completed before contacting the health care professional.

The research team consider participants with high functionality those who:

1. Posses average to above average intelligence. Evidence of this can be from a standardized intelligence test that they will have already taken this test and that the parents will document the score.
2. Their IEP should not have any documented supports for severe cognitive learning deficits. They would have to mostly function in regular classrooms, with support if needed.
3. Additionally, we wil not include students that have self-injurious or aggressive behaviors.
4. Parents/guardians and participants must agree to be videotaped.

PURPOSE AND DURATION: The project consists of an 8-week study (one two-hour session per week) in a workshop format during which the participants be presented with a series of problems for which they must build a solution. In order to do this they must understand the client and work together in a team.

PROCEDURES: All sessions will take place at Tufts CEEO in Medford, MA. You will have to bring your child to the center where your child is going to participate for each of the 8 sessions of the study. All the sessions will be held after school. Your child is not obligated to attend all of the workshops in order to participate in our research, although attendance is encouraged.

During each session, we will present the students with a new activity and break them up into teams to complete the activity. Each team will work with a variety of tools that include a laser cutter, and LEGO robotics. At some points, they will be using an iPad app to record their design work.

Parents are assisted by the Co-Is to fill out the parent study questionnaire regarding their observations of changes in their child's behavior and their feelings about the effectiveness of the workshop. The teacher that participates in the session will keep field notes on what the students do in the workshop, how they work together, and how they apply vocational skills they are introduced to during the sessions.

Researchers will evaluate the students' behavior with several assessment tools. During each session, we will videotape the team interaction as they work. Videos will be uploaded to a secure server (password-protected) at Tufts University. The information we collect will be confidential. Access to information will be granted only to researchers working on the project. Upon completion of the study, all data will be stored on a computer hard drive located at Tufts CEOO at a minimum of three years. After three years, the data will be deleted and the hard drive will be formatted.

RISK AND DISCOMFORTS: Participation in the study has minimal risk to participants because the probability and magnitude of harm or discomfort anticipated in the research is not greater than what is ordinarily encountered in daily life during performance of routine physical or psychological examinations or tests. Moreover, there is minor emotional risk related to social engagement with peers, instructors, or family. However, the goal of the workshop is to improve skills and in the long term, increase the availability of future employment opportunities for participants so the emotional risk should actually diminish and hopefully be eliminated. The previous experience of the research team should help to minimize potential risk: The PI and co-PI of the project have been involved with projects related with children with ASD for the last 5 years.

COSTS AND BENEFITS: There is no cost to participating in the study. Furthermore, educational tech tools that enhance social and occupational functioning could help students with autism fulfill their academic potential and increase social skills. This could lead youth to future employment and secondary educational opportunities, so that they have a positive impact on society's workforce (by boosting worker's competency).

CONFIDENTIALITY: Student Diagnosis Information will be reviewed and then destroyed. Paper consent forms will be scanned to a password-protected computer and then destroyed. All data from the project will be digital and stored on a secure server located at Tufts University (CEOO, 200 Boston Ave, Medford) protected with an individual login and password. The data related to each participant will be coded with an identifier (it will be a letter) that the PI of the project will assign during the recruitment process.

Although we would like to record videos of your child working with a partner, the research team will be the only people that will see the video. No video data, pictures, or any identifiable information such as your child's name will be shown under any circumstances at meetings, conferences, or other professional activities.

WITHDRAWAL OF PARTICIPATION: **Participation in the workshop is voluntary. You or your child can withdraw from the study at any time with no negative consequences. You have the right to request that any or all of your child's information collected to date be**

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The studies will take place at Tufts Center for Engineering Education and Outreach, Medford.

For further information or to sign up the workshops, please contact:

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