

Lego Communications

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Type: Design, Communication, Ice breaker
Student Time: 15 - 20 min
Location: In Class

Summary

This project is intended to be used in a first year engineering course. Possibly as an ice breaker early in the semester. It can however be used at any level within any course to explain the need for detailed communication. The main purpose is to show the importance of effective communication, both verbally and graphically, "a picture is worth a thousand words".

ABET Descriptors

Engr Sci Content: First Year Engineering, or any level
Type: Process
Elements: Establish objectives
Features: Design, open-ended, creativity
Constraints: Time, communication skills both verbal and audio
Effort: Team

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Note: There is no student handout sheet. This is an inclass exercise and discussion.

Engineering Notes:

The class is to be divided into groups of two. If an odd number of students are in the class the instructor can be a partner.

Prior to class the instructor must prepare group materials (legos). Group materials should consist of two identical sets of lego pieces. Approximately 20 - 30 pieces work for a short 5 - 10 minute exercise. **Note:** the pieces must match identically!!! (Size, shape, and color).

Have the students turn back to back. One student is to be the leader. Have the leader of each group design and construct an object . As the leader is building the object s/he is to explain to their partner how to assemble the same object. The second partner is not to speak or gesture in any way if there is mis-understanding. (Example: if the second partner missed the color description s/he is not allowed to say "what color?", or gesture with an elbow to repeat the comment.) The second partner can not talk or ask questions by any means.

Once the objects are completed the partners are to face one another and discuss the differences of appearance (if any).

Class discussion may follow as to both the vocal and listening aspects of communication. Sometimes a different experience level exists between individuals giving the instructions and those receiving the instructions. A variety of language barriers now pose constraints on our shrinking world, as well as specific jargon developed in areas of particular interest. These are a few issues which can be discussed to explain the need for effective communication.

Remember these same issues can be carried over into graphical representations of product design.

Discussion:

- How did the students decide who would be the leader?
- Did they feel confident, comfortable during the exercise?
- Did they get better as they went along?
- How might they use what they've learned from this exercise in the future?
- What might they do differently next time?