

## Element L: Presentation of designer’s recommendations

This entry would be likely to receive a **score of 1**, based on the EDPPSR. The engineering educators who reviewed this portfolio identified in this entry a few recommendations regarding the conduct of the same or similar project, but noted that these were overly general and sometimes of questionable relevance (e.g., those comments related to the defective mannequin that was used for this project). The often general nature of the recommendations could be easily revised by extending/expanding with some specific examples—for instance, by identifying was that the “small pieces” could be grouped before assembly.

### Engineering Design Process Portfolio Scoring Rubric Component and Element Titles

#### Component I: Presenting and Justifying a Problem and Solution Requirements

- Element A: Presentation and justification of the problem
- Element B: Documentation and analysis of prior solution attempts
- Element C: Presentation and justification of solution design requirements

#### Component II: Generating and Defending an Original Solution

- Element D: Design concept generation, analysis, and selection
- Element E: Application of STEM principles and practices
- Element F: Consideration of design viability

#### Component III: Constructing and Testing a Prototype

- Element G: Construction of a testable prototype
- Element H: Prototype testing and data collection plan
- Element I: Testing, data collection and analysis

#### Component IV: Evaluation, Reflection, and Recommendations

- Element J: Documentation of external evaluation
- **Element K: Reflection on the design project**
- **Element L: Presentation of designer’s recommendations**

#### Component V: Documenting and Presenting the Project

- Element M: Presentation of the project portfolio
- Element N: Writing like an Engineer

**Please Note:** Elements M and N require no submission from the portfolio author(s) and are intended to be scored based on the portfolio work as a whole from what has been submitted from Elements A through L

## **Element L: Presentation of designer's recommendations**

**5** The project designer includes consistently detailed and salient recommendations regarding the conduct of the same or similar project in the future; recommendations include caveats as warranted and specific ways the project could be improved with consistently detailed plans for the implementation of those improvements

**4** The project designer includes generally detailed and salient recommendations regarding the conduct of the same or similar project in the future; recommendations include caveats as warranted and specific ways the project could be improved with generally detailed plans for the implementation of those improvements

**3** The project designer includes a few detailed and salient recommendations regarding the conduct of the same or similar project in the future; recommendations include some specific ways the project could be improved along with what may be only minimally detailed plans for the implementation of those improvements and may also include one or two caveats for others

**2** The project designer includes recommendations regarding the conduct of the same or similar project in the future; recommendations may include some specific ways the project could be improved but plans for the implementation of those improvements may be missing OR the recommendations (with or without plans) may be partial and/or overly general.

**1** The project designer includes one or two overly general and/or questionably relevant recommendations regarding the conduct of the same or similar project in the future; any plans for implementation included are vague/unclear or minimally related to the recommendations provided

**0** The project designer includes one or two recommendations (with or without plans) that bear little/no relation to the conduct of the same or similar project in the future OR fails to offer any recommendations or plans regarding the conduct of the same or similar project in the future.



## The Design and Creation of a Modified Posture Corrective Apparatus for Adolescent Females

PRESENTATION OF DESIGNER'S RECOMMENDATIONS L

There are several recommendations to anyone who decides to pursue this endeavor in building a modified posture corrective brace.

The use of stronger adhesives to attach the many different parts is essentially one of the most important things because if a strong adhesive is not used, then the project will fall apart as did mine on several occasions. I purchased a defective bottle of PVC cement and when I tried to JB Weld to put the parts together, it would not work on the thin edges of the PVC surface because of the lack of surface area. Thus, I had to result to the hot glue gun with only serves their purpose of being a temporary bond.

I am very thankful to have received a mannequin from the JCPenney in Weslaco but unfortunately the mannequin that I received had a slight curvature in the spine. Therefore, whenever I was constructing the parts, I would have to take time and effort to make the minor adjustments needed to not account for that curvature.

The two biggest pieces of my project were the lower torso braces and I used a special type of duct tape to create a hinge like joint in the back in order for the wearer to put on and take off. It would have been better, aesthetically and functionally, to have used real hinges for the two back pieces.

Many problems arose from the fact that I had to deal with many different little parts. This is because when building the brace, it has to be built piece by piece, accounting for every bit of curvature. Thus, in the end, I had several small pieces all over the board so I recommend trying to group those pieces before efficiently and stick them together before trying to apply them to the bigger pieces.

A

B

C

D

E

F

G

H

I

J

K

L

M

N