Rutgers
Mechanical and
Aerospace
Engineering

2020-2021
Senior Design Questionnaire

Junior Class

Survey contacted by the MAE Undergraduate Office

March 28-April 4, 2020

Preface

Dear ME and AE students,

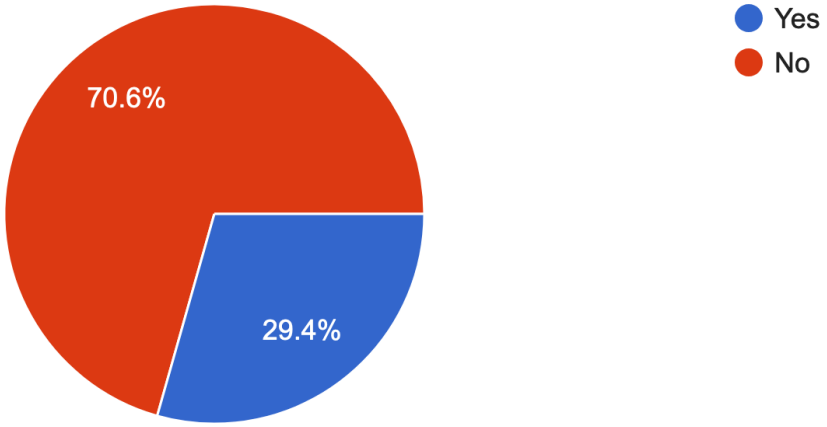
This survey is created to help us to structure the senior design process and organize it in a way that it will be helpful and more effective for student teams, and for the MAE department. It will help us to better identify your strengths and areas where collaborations would be most fruitful. Also, it will aid in identifying project design complexity, material and manufacturing requirements, required man and machining hours for each project, and eventually for all projects together. Your answers will only be shared with the MAE faculty and staff involved on your next-year Senior Design experience.

Thank you for your response.

Forming Teams

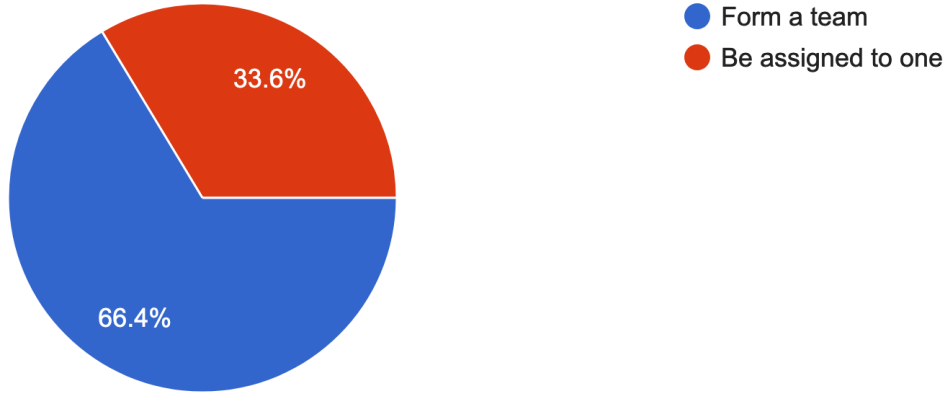
Have a formed team at this moment?

211 responses

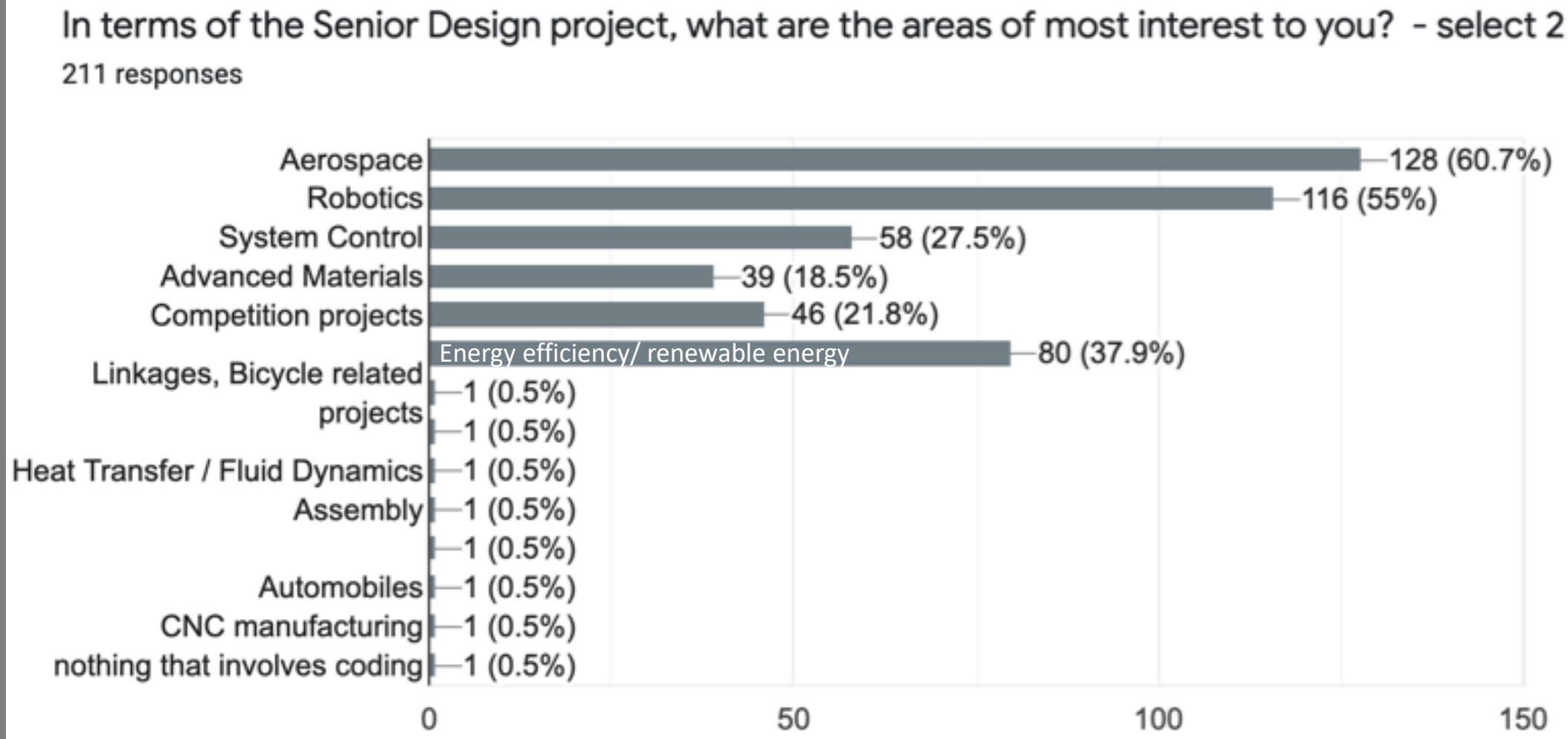


Would you prefer to form your own team or be assigned to one?

211 responses

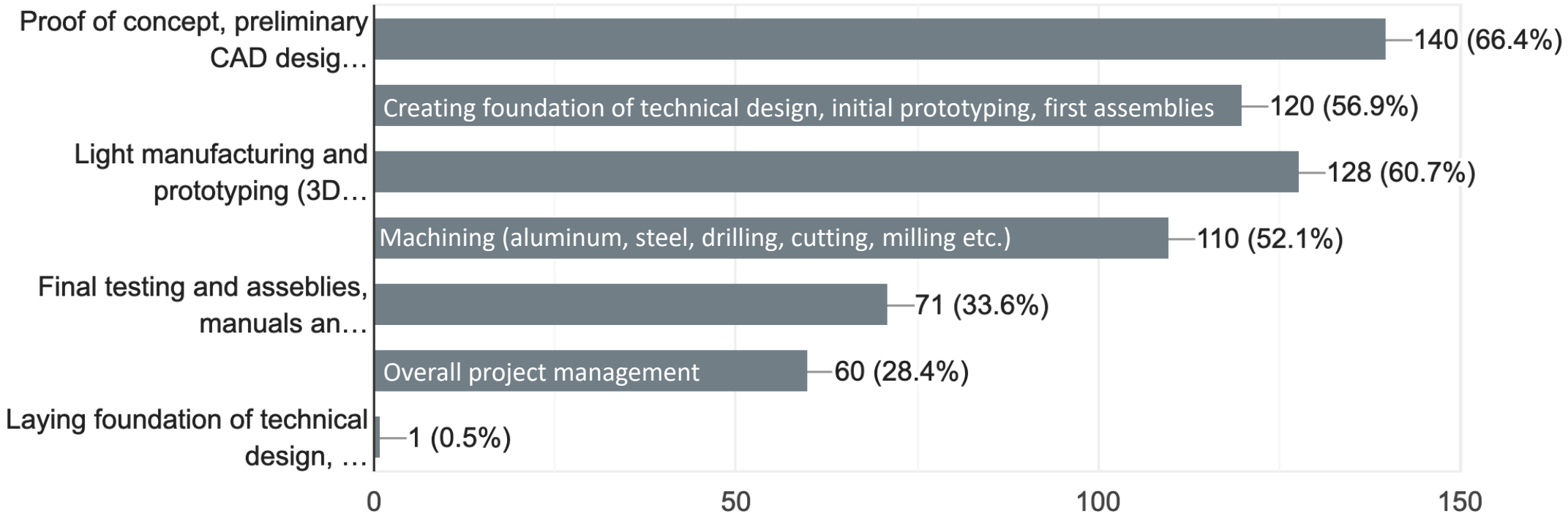


Out of 211 students 148 have not formed teams as of 4/9/2020 and 71 of total students would like to be assigned to a team.


In terms of the Senior Design project, what are the areas of most interest to you? - select 2 -
211 responses
Aerospace
Robotics
System Control
Advanced Materials
Competition projects
Energy efficiency/ renewable energy
Linkages, Bicycle related projects
Heat Transfer / Fluid Dynamics
Assembly
Automobiles
CNC manufacturing
nothing that involves coding
128 (60.7%)
116 (55%)
58 (27.5%)
39 (18.5%)
46 (21.8%)
80 (37.9%)
1 (0.5%)
1 (0.5%)
1 (0.5%)
1 (0.5%)
1 (0.5%)
1 (0.5%)
1 (0.5%)
1 (0.5%)
0
50
100
150

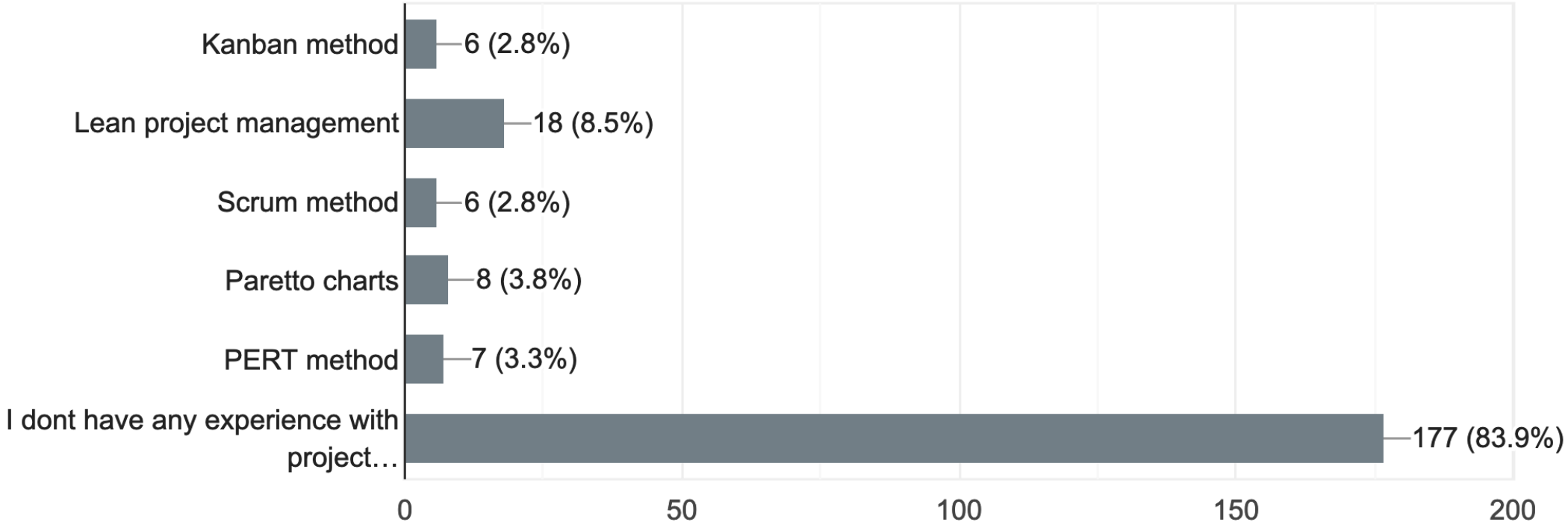
In what area or stage of the project would you like to be involved the most - select 3

211 responses



What project management tools and methods are you familiar with? (Do not worry if you don't, this will be part of the class)

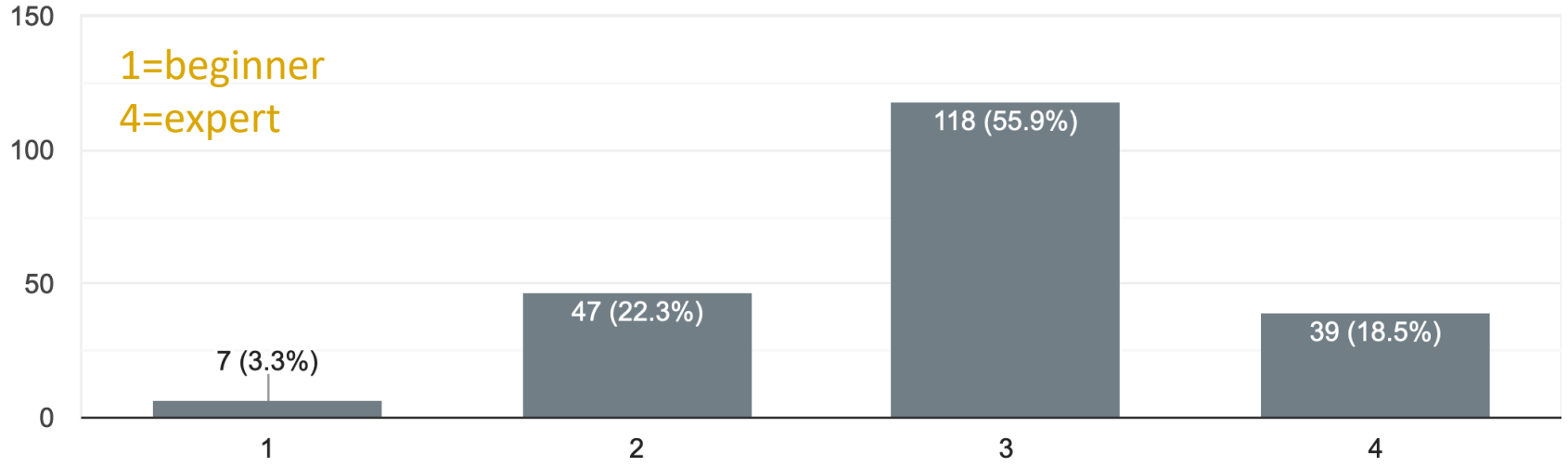
211 responses



Describe your expertise in the fields:

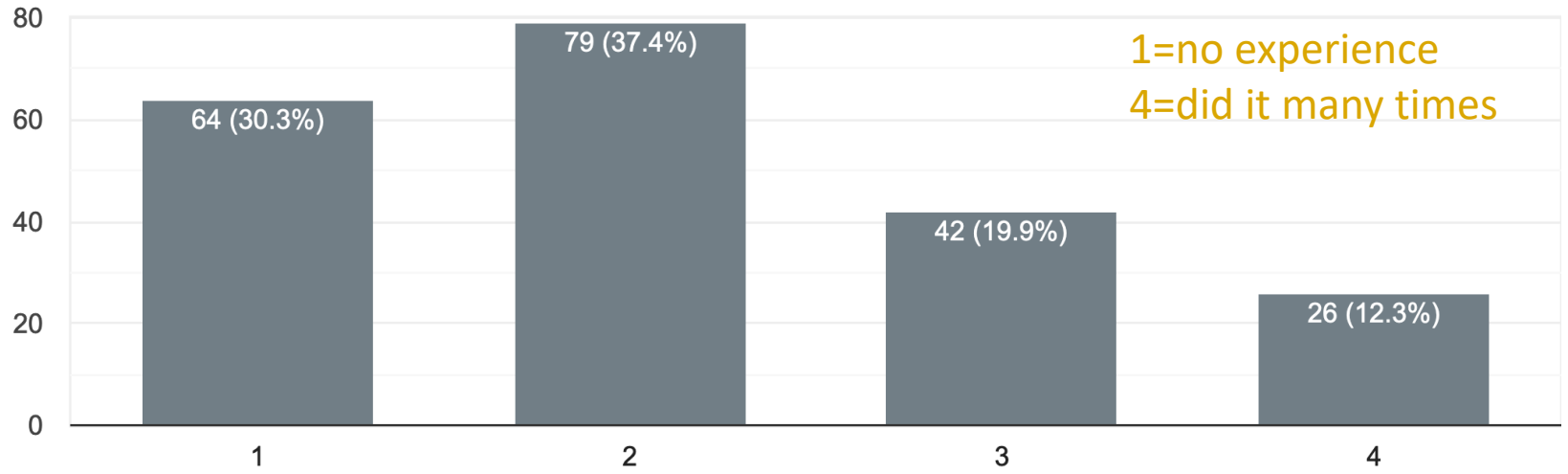
1. Creating preliminary CAD designs, final parts and functional assembly models

211 responses



2. Transforming CAD design into real manufacturable parts and assemblies

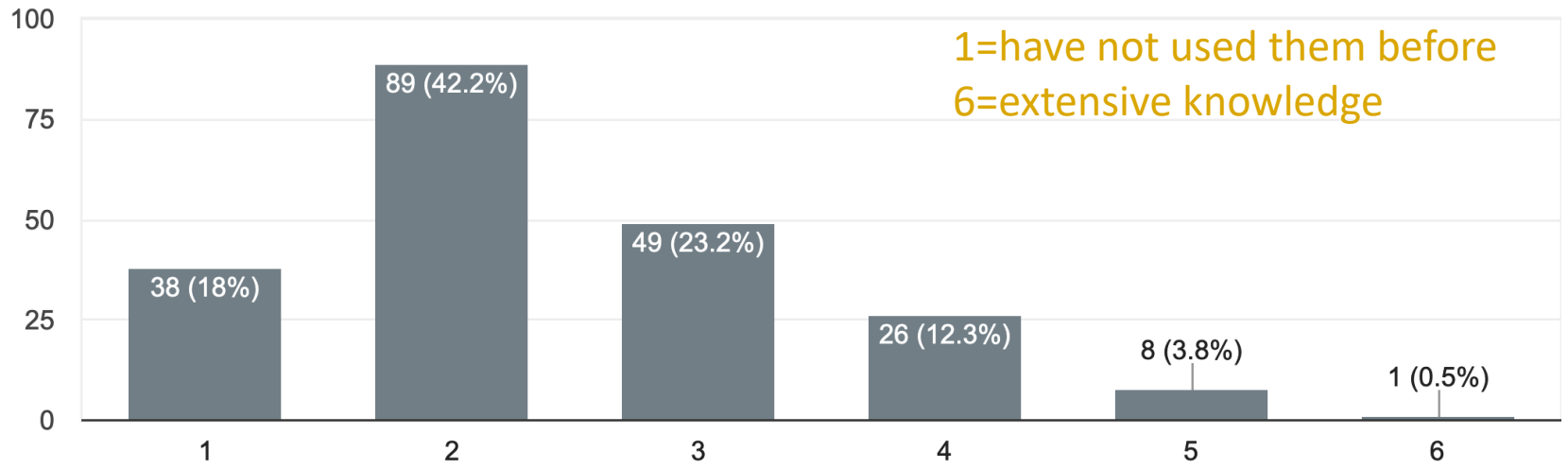
211 responses



Describe your expertise in the fields:

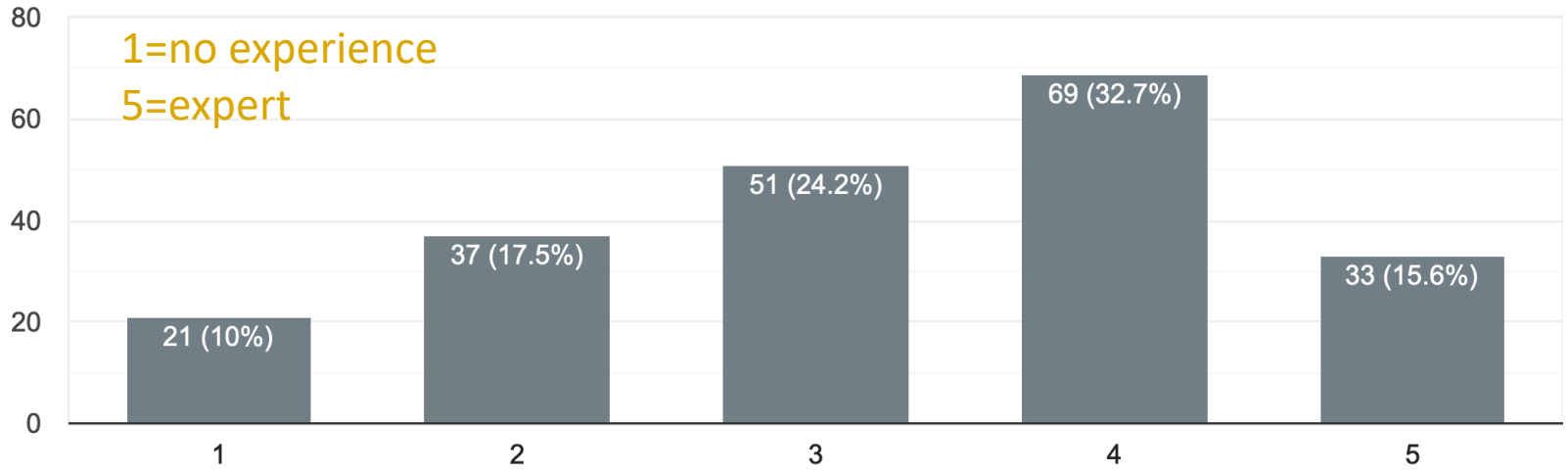
3. Very important! Electronic controller boards, sensors, electric motors, power supply (AC/DC)

211 responses



4. Light manufacturing (plastic, wood etc.) and basic-hands on experience (basic tools)

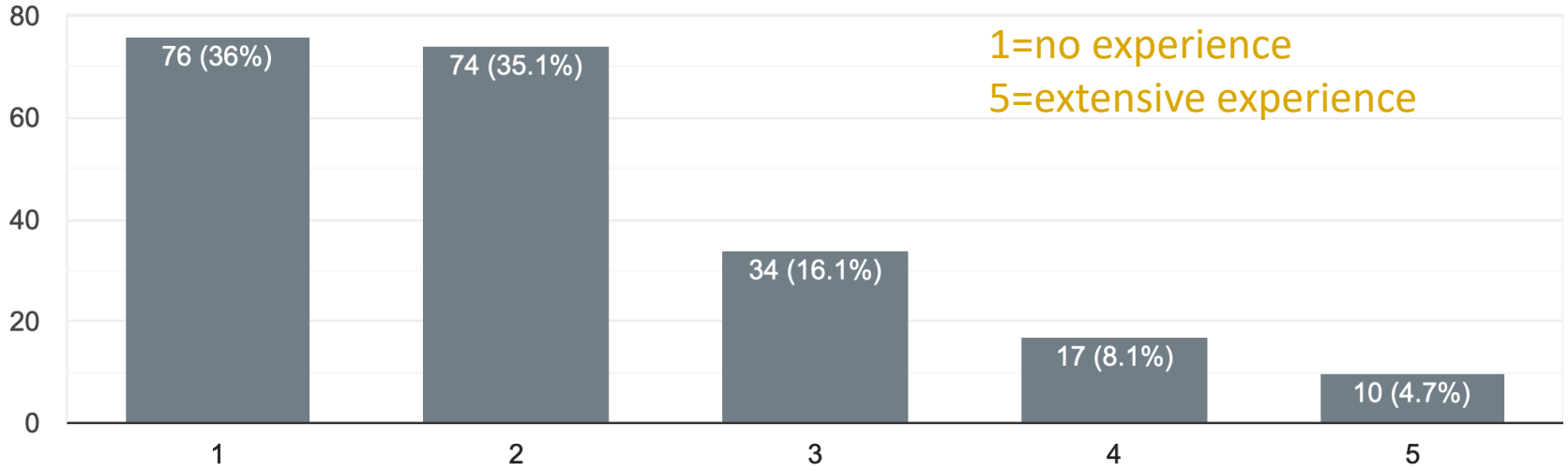
211 responses



Describe your expertise in the fields:

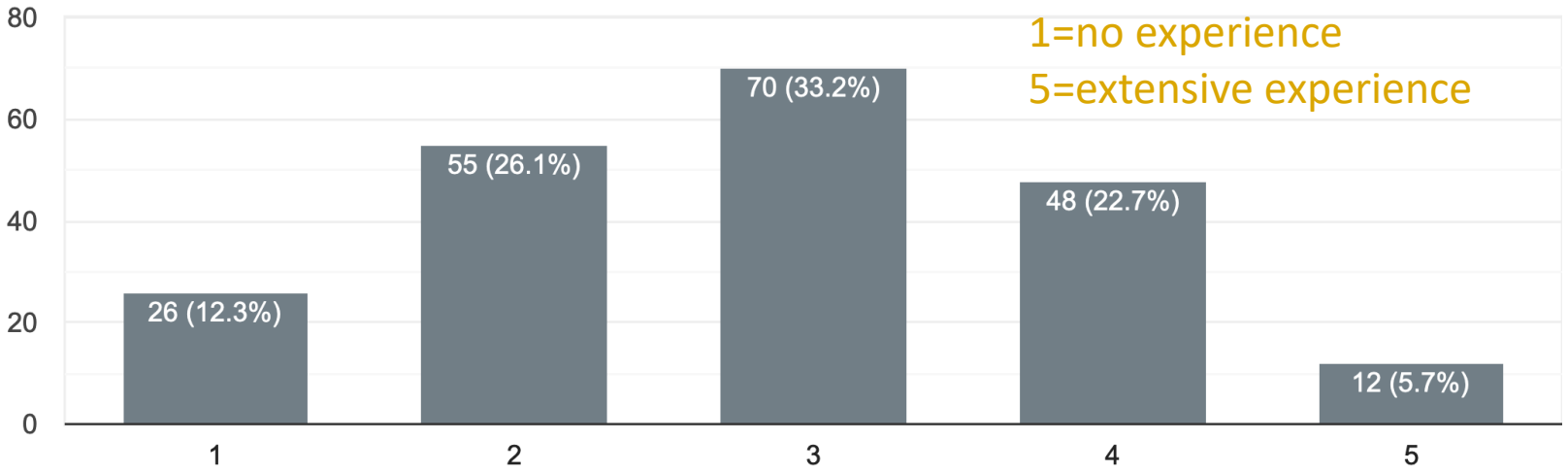
5. Metal manufacturing , heavy machinery, CNC, special tools

211 responses



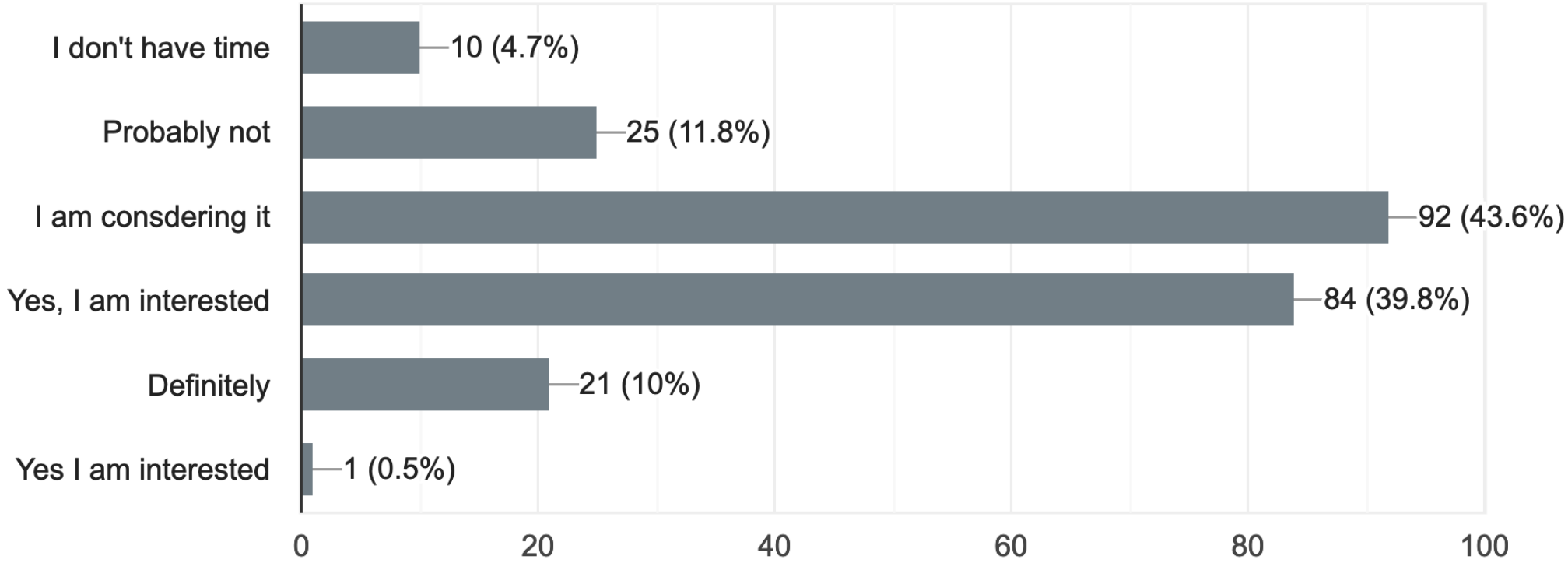
6. Design of experiments, testing, manuals, documentation, presentations

211 responses



Will you be interested (and have enough free time) to get more involved in MAE manufacturing and prototyping activities?

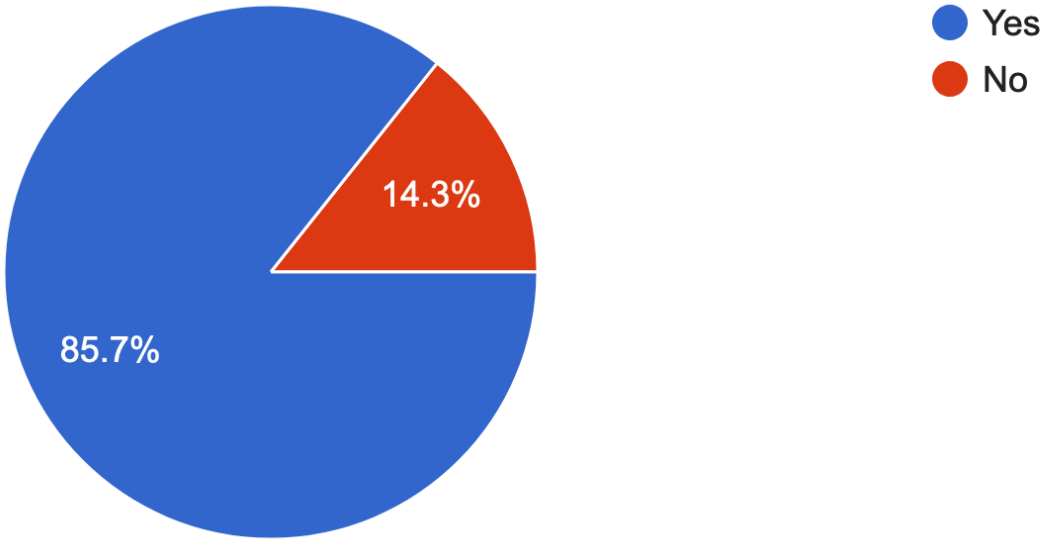
211 responses



Summer training

Will you be willing to participate in accelerated machine shop training, if available, in August?

210 responses



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