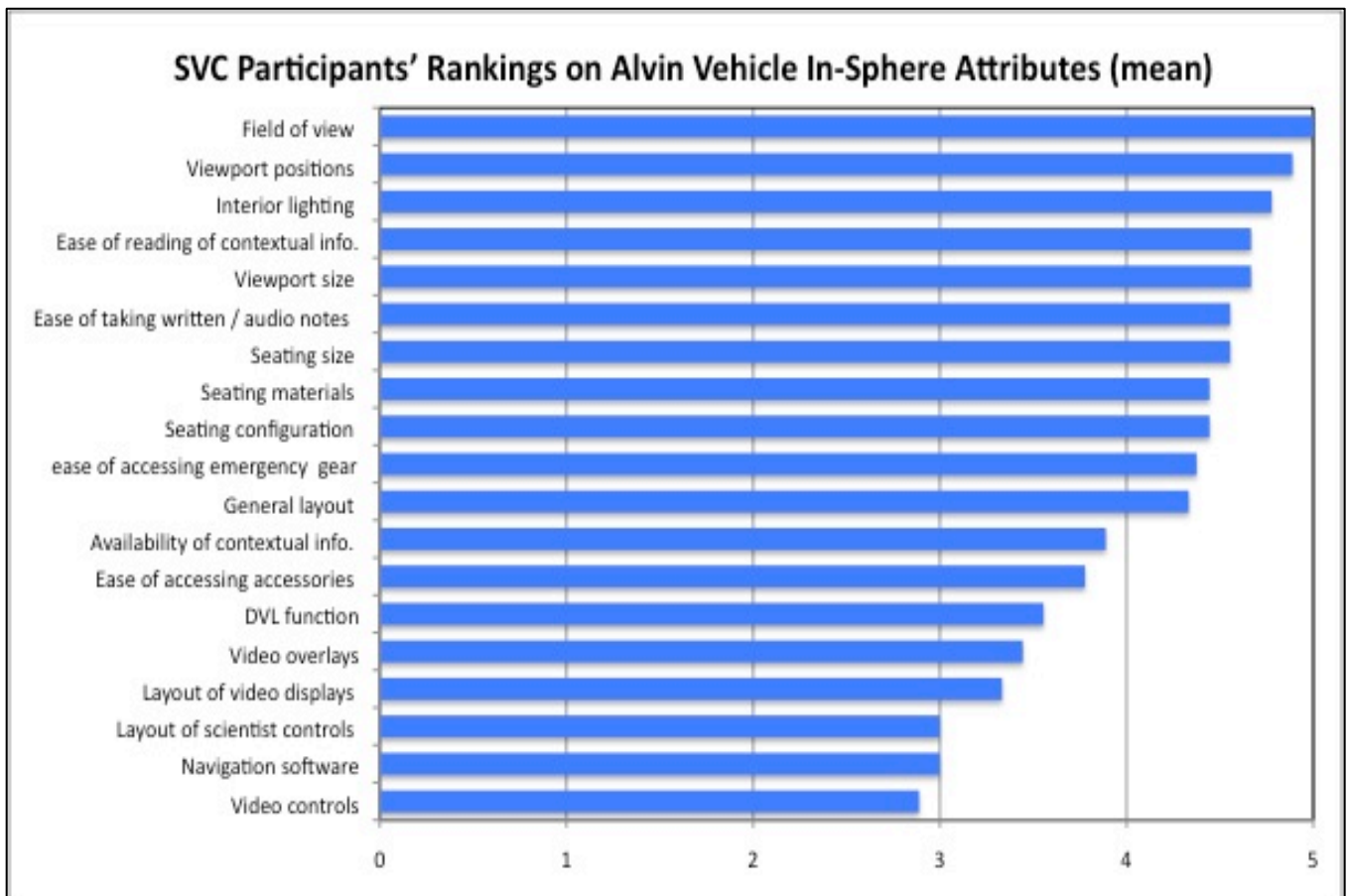


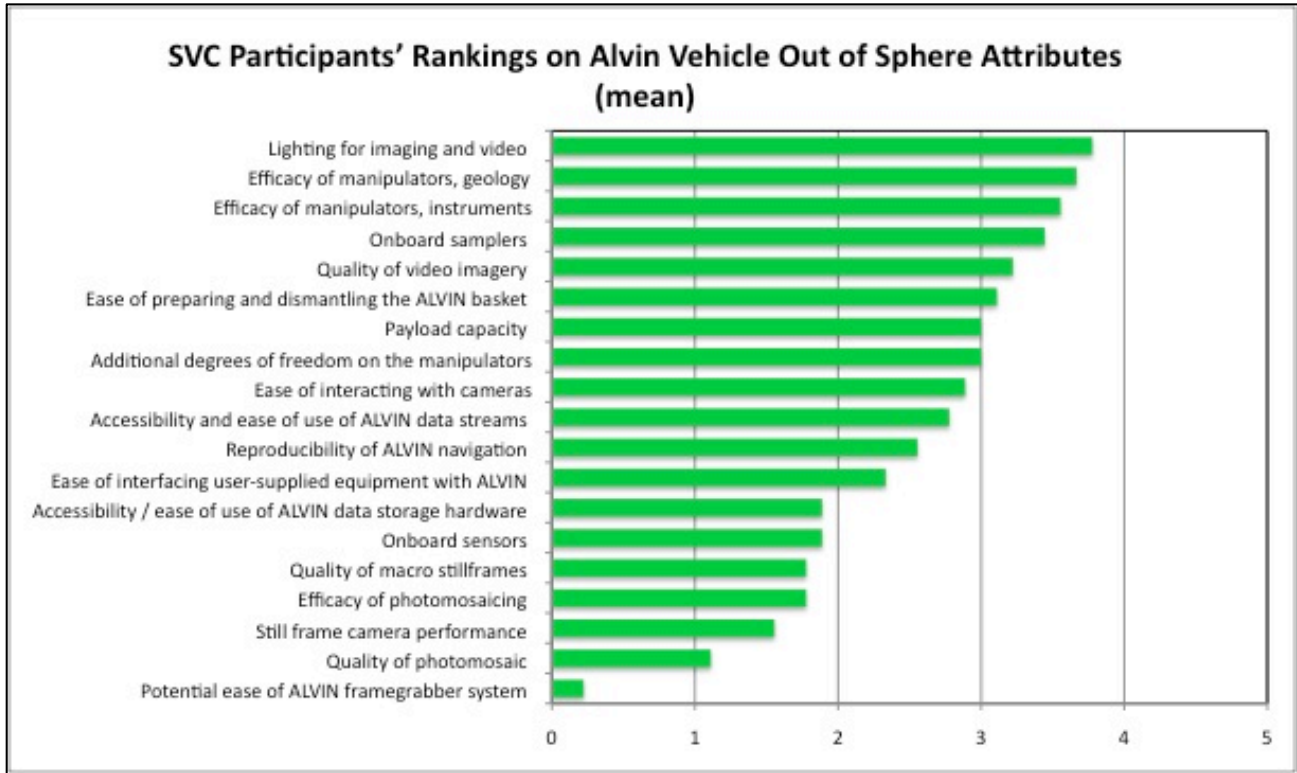
SVC Participants' Rankings on Alvin sphere

Each SVC science participant who experienced an *Alvin* dive was asked to complete a survey ranking the vehicle capabilities for both in-sphere and out-of sphere attributes. The mean of all participant rankings are plotted on the following two charts.

Key to Charts:

1	Unacceptable
2	Very Poor
3	Average (similar to previous sub)
4	Above Average
5	Excellent





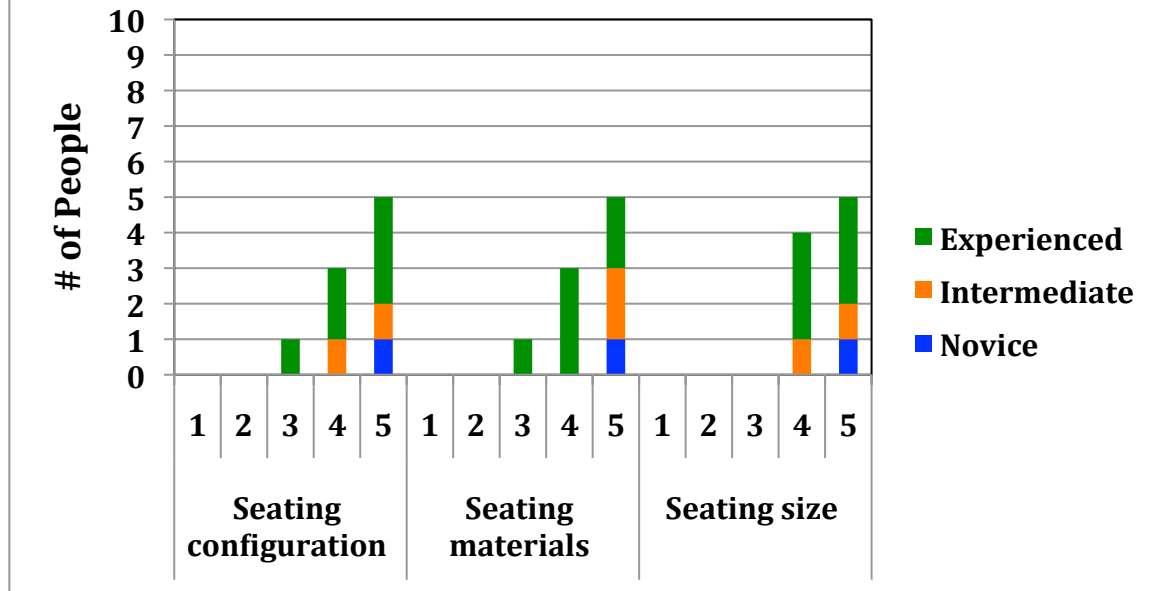
Detailed rankings by participant type (novice, intermediate, and experienced Alvin user) are plotted in the charts contained on the following pages.

Part 1: SVC participants' rankings on Alvin vehicle attributes (in-sphere)

Ergonomics

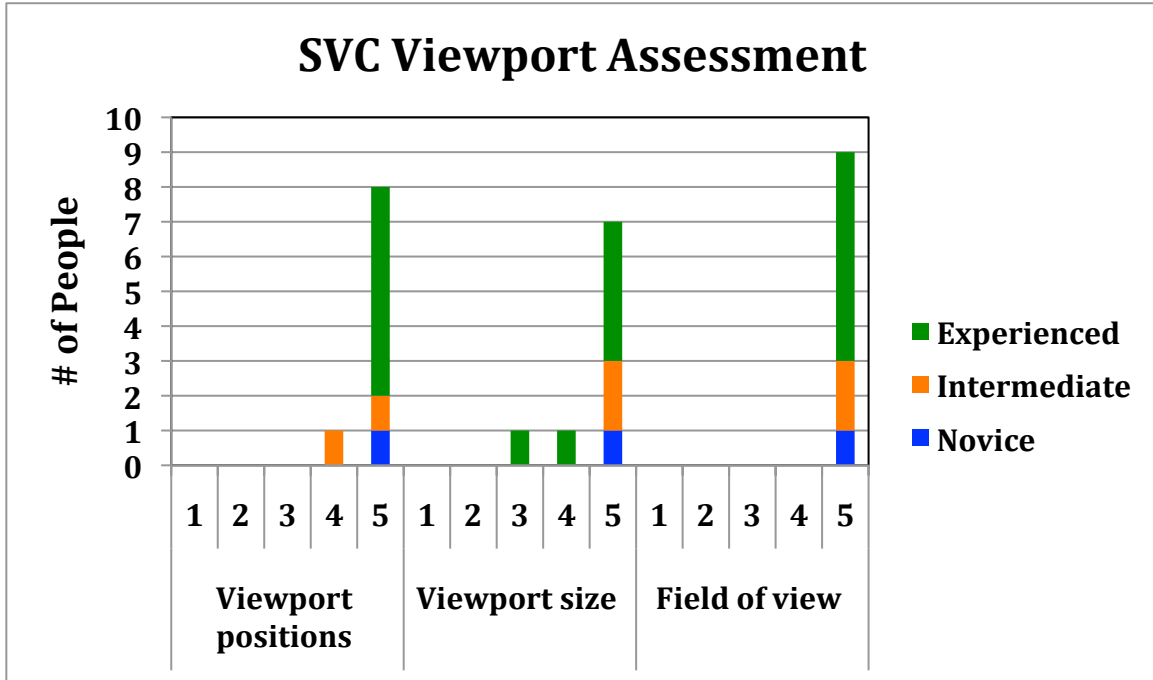
- 1) Seating configuration**
- 2) Seating materials**
- 3) Seating size**

SVC Seating Assessment



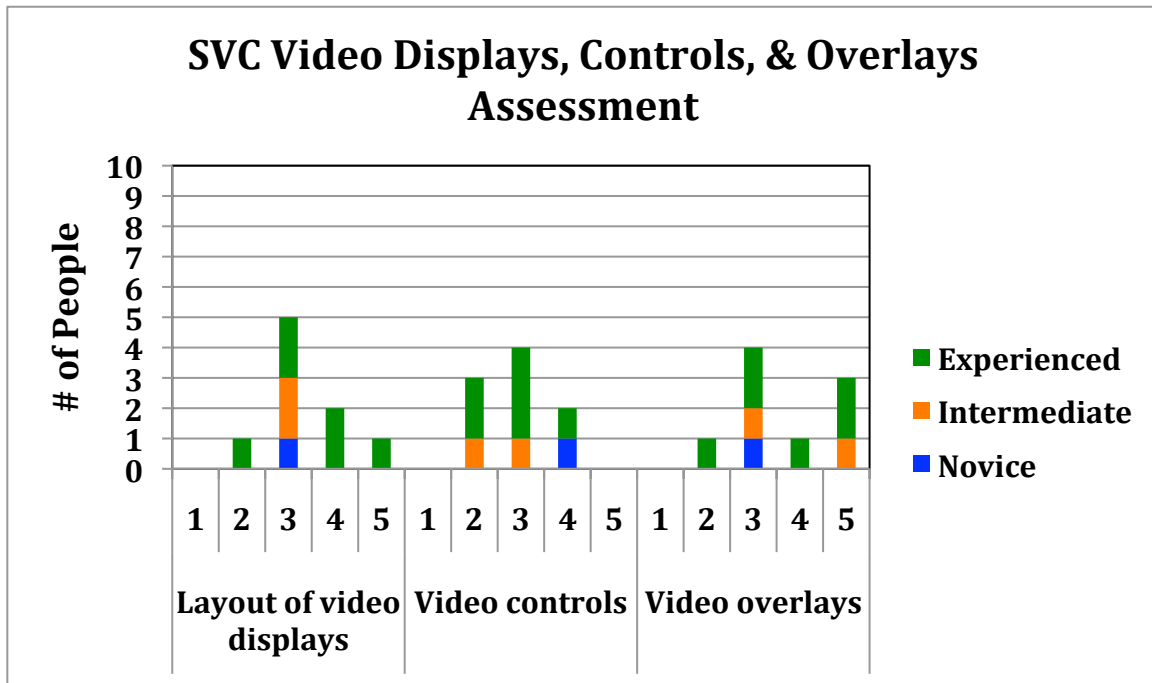
Viewports:

- 4) Viewport positions
- 5) Viewport size
- 6) Field of view



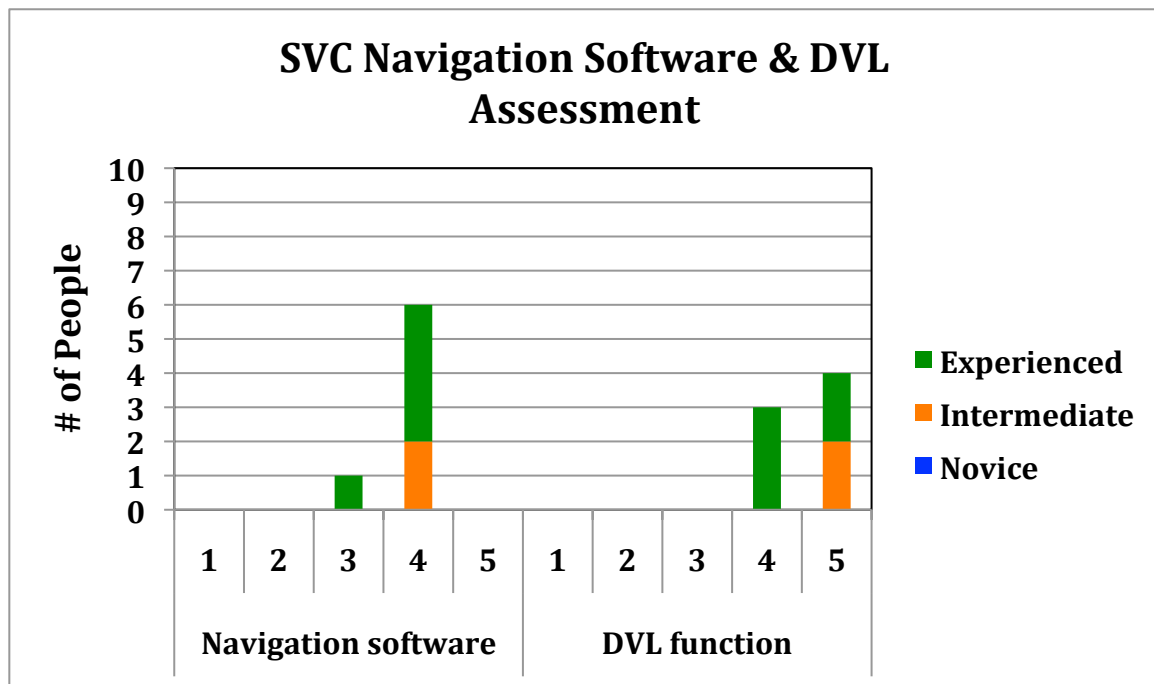
Video Displays, Controls, & Overlays:

- 7) Layout of video displays
- 8) Video controls; e.g. are the pan/tilt, iris and brightness and zoom controls appropriately responsive?
- 9) Video overlays; e.g. are they easily turned on and off? Are they useful information?



Navigation and Doppler Velocity Logger (DVL):

- 10) Navigation software: How easy is it for the observer or pilot to drop targets, adjust underlays (i.e., switch b/w multiple underlays), collect screen grabs?
- 11) Doppler Velocity Logger (DVL). Is it constantly getting bottom lock on both hard and soft substrate?

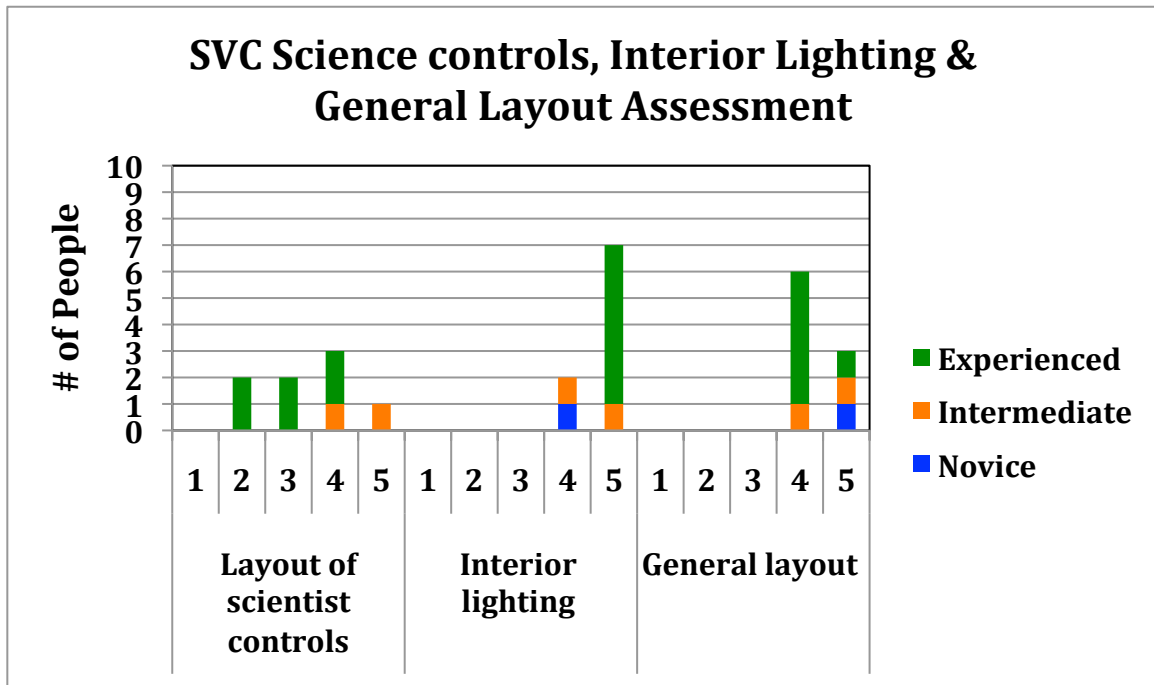


Interior Controls, Lighting, and Layout:

12) Layout of scientist controls

13) Interior lighting

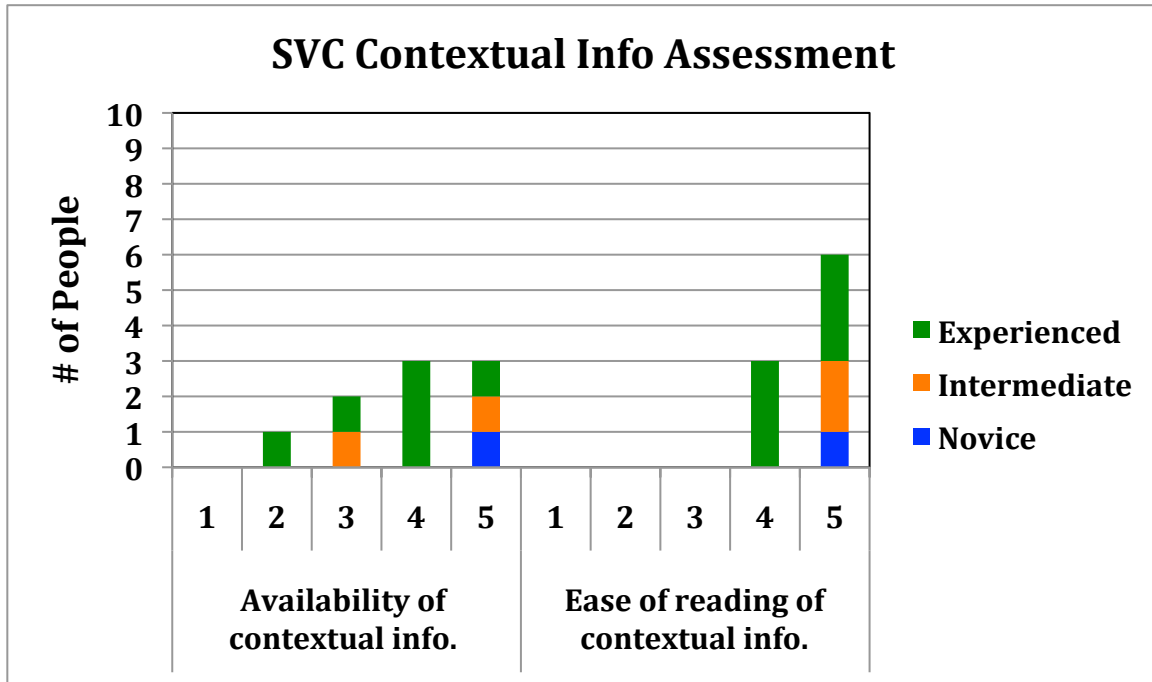
14) General layout and “atmosphere”



Contextual Information:

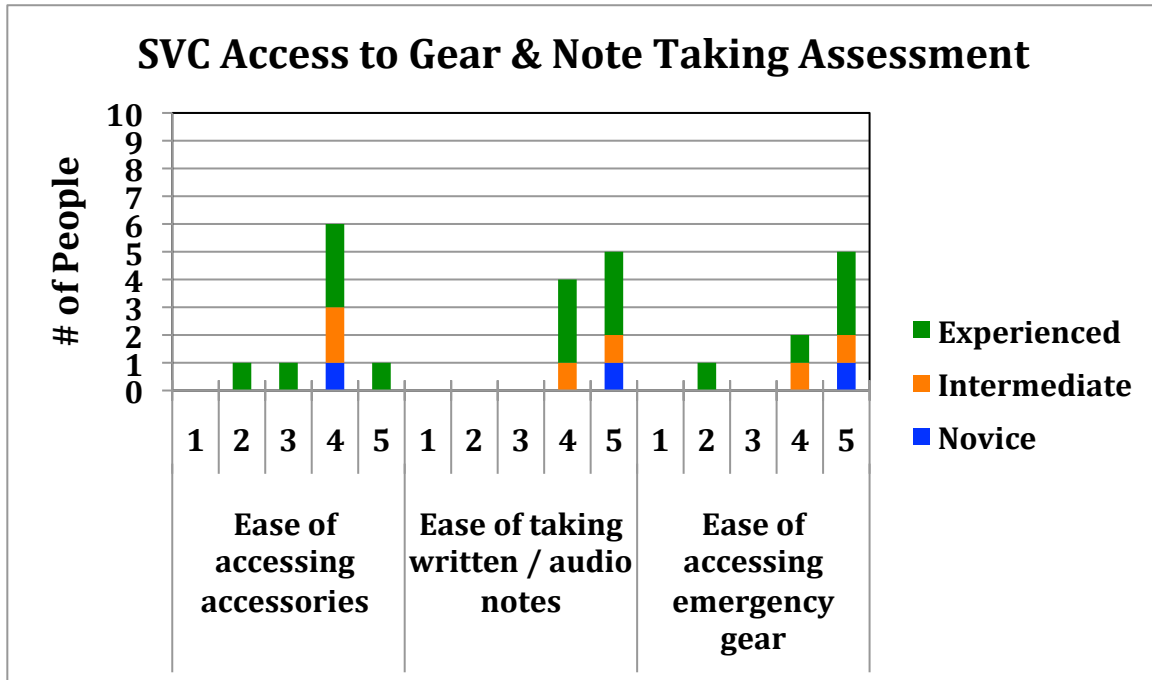
15) Availability of contextual information (time, pressure, etc.)

16) Ease of reading of contextual information



Ease of Note Taking & Access to Gear:

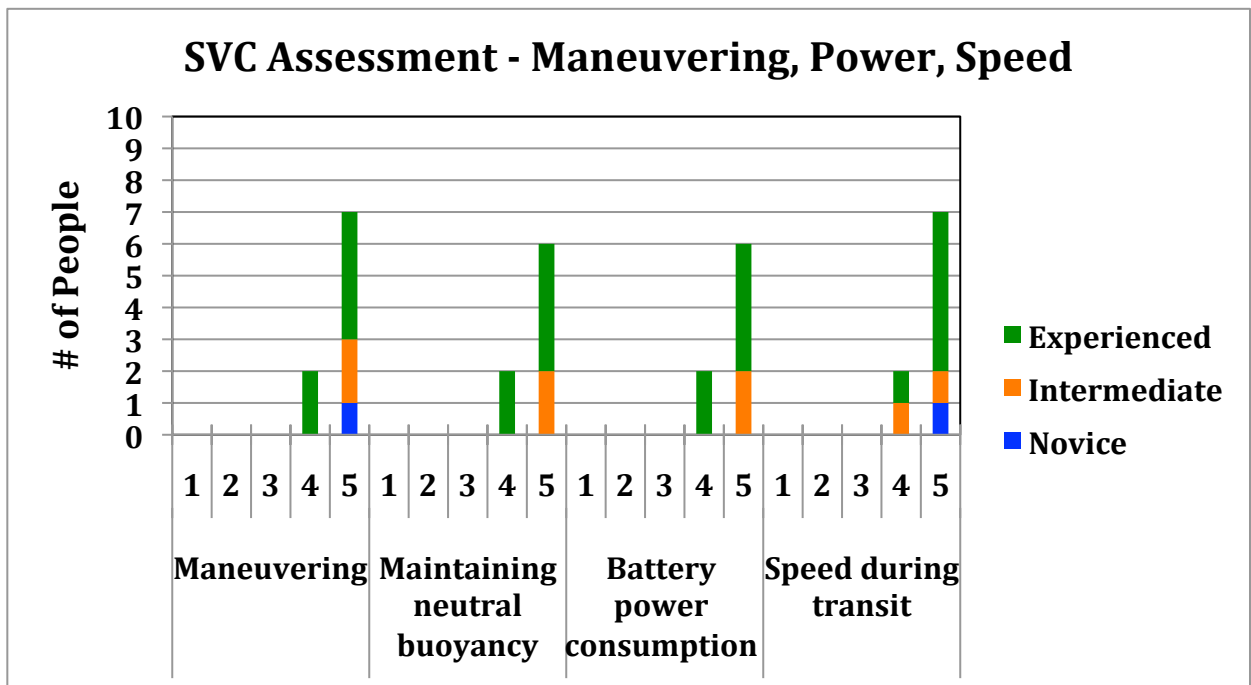
- 17) Ease of accessing existing accessories (e.g. cameras, pens)
- 18) Ease of taking notes, both written and audio
- 19) Ease of accessing and using emergency safety gear?



Part 2: SVC participants' rankings on Alvin vehicle attributes (out of sphere)

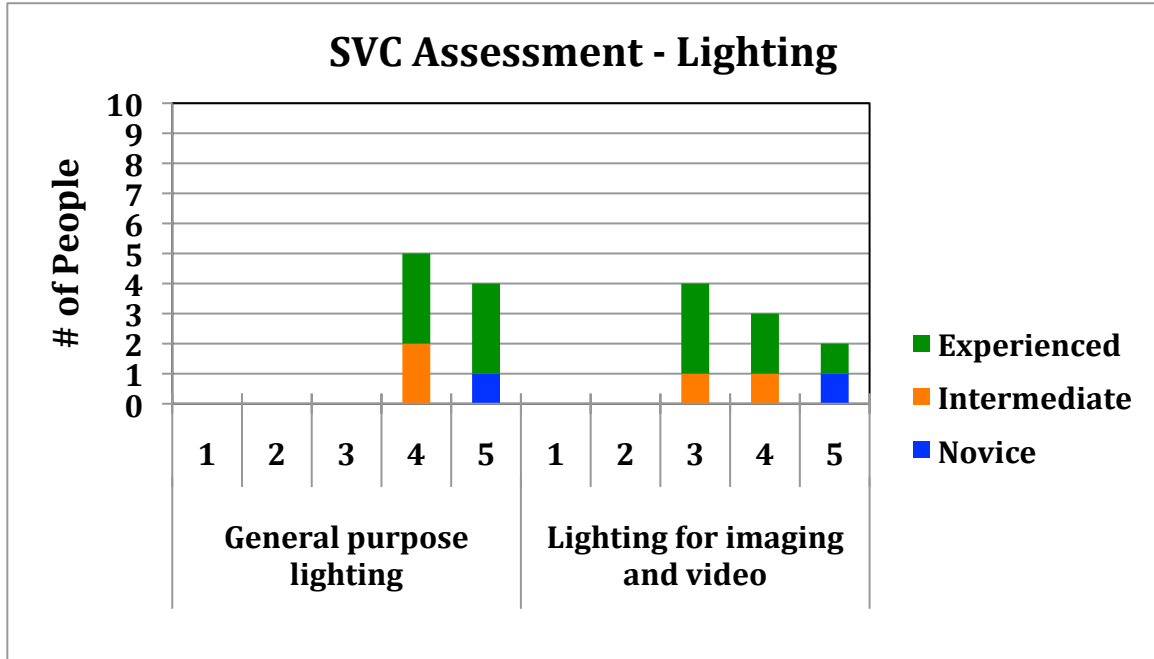
Maneuvering, Power, Speed

- 1) Maneuvering to and around target
- 2) Maintaining neutral buoyancy
- 3) Battery power consumption roughly compared to old *ALVIN*
- 4) Speed during transit



Lighting:

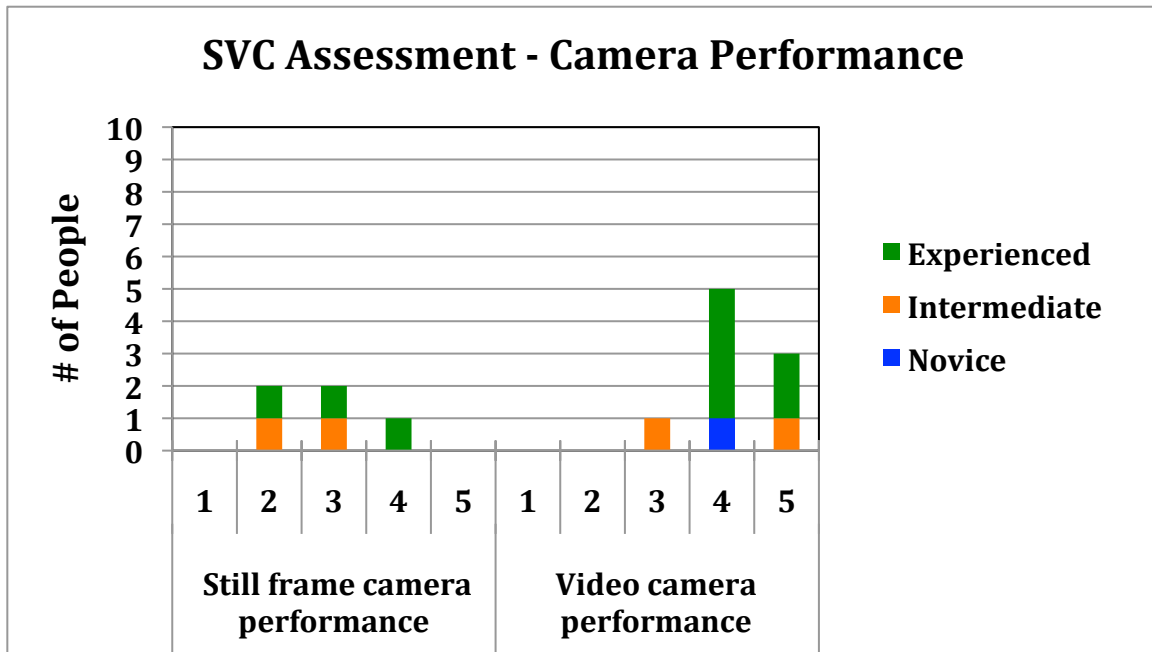
- 5) General purpose lighting
- 6) Lighting for imaging and video



Camera performance:

7) Still frame camera performance

8) Video camera performance



Camera Interaction and Photomosaicing:

- 9) Ease of interacting with still and/or video camera(s)
- 10) Efficacy of photomosaicing seafloor
- 11) Efficacy of framing and photographing a particular target

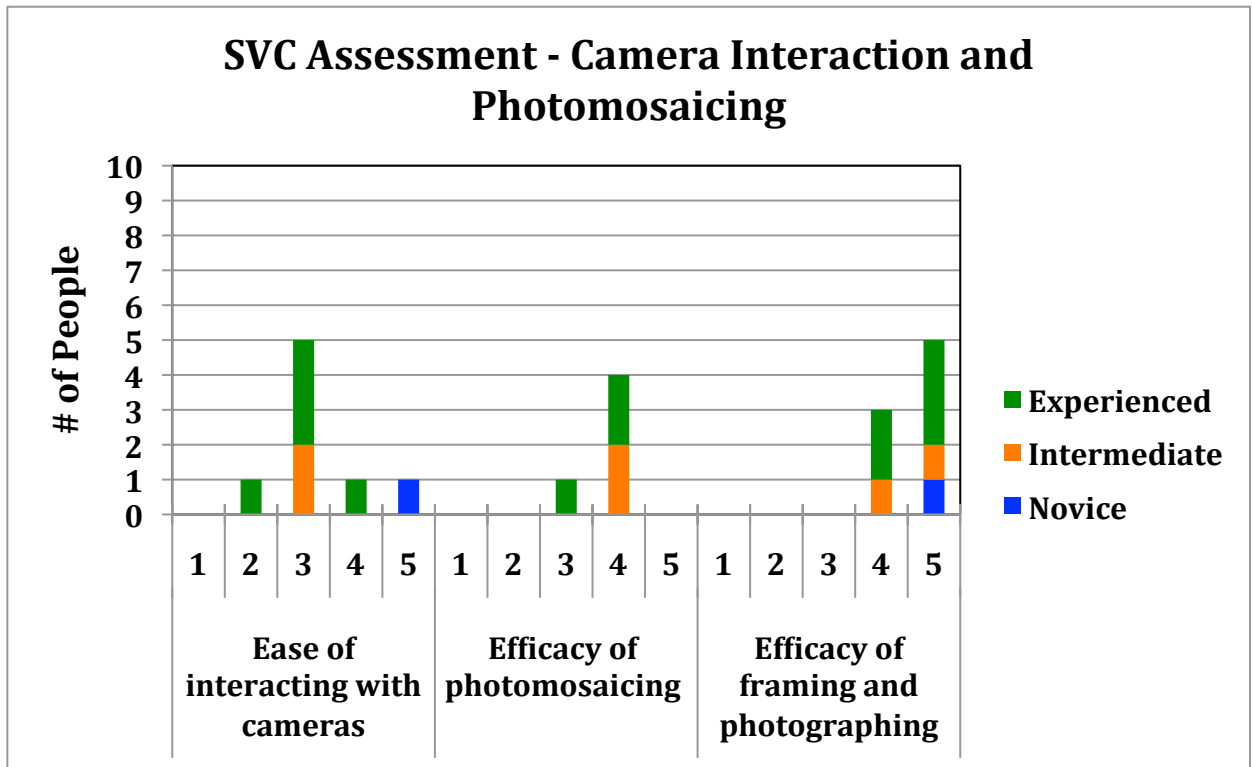
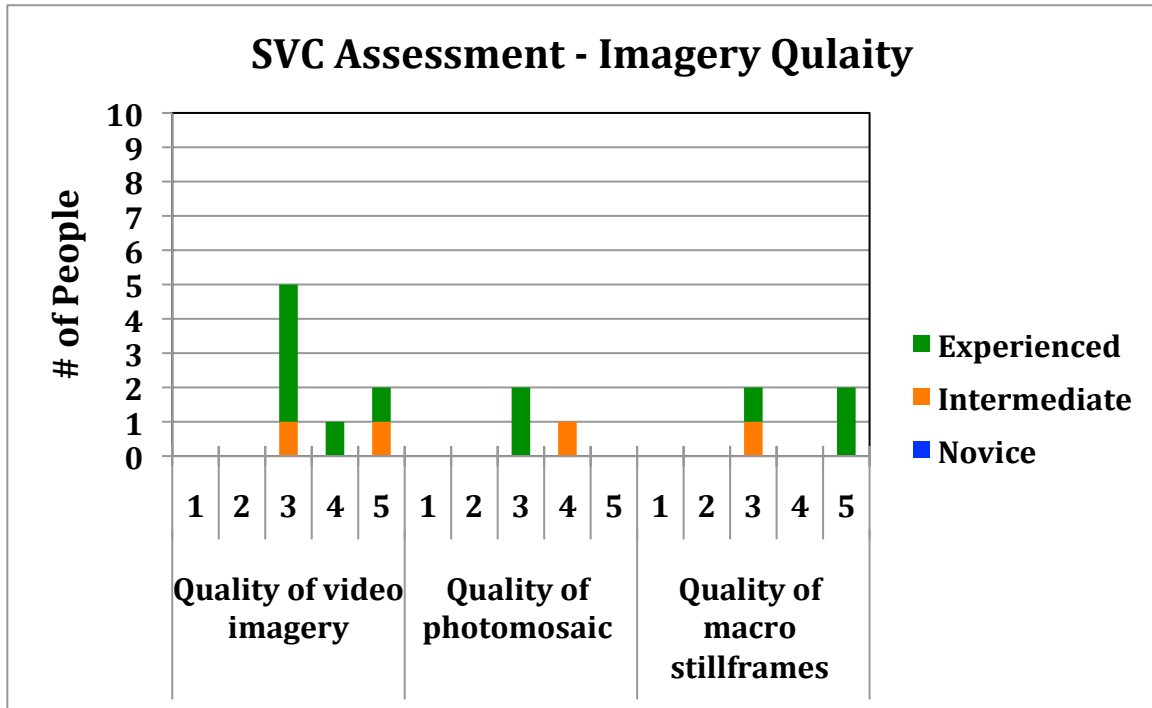


Image Quality:

12) Quality of video imagery

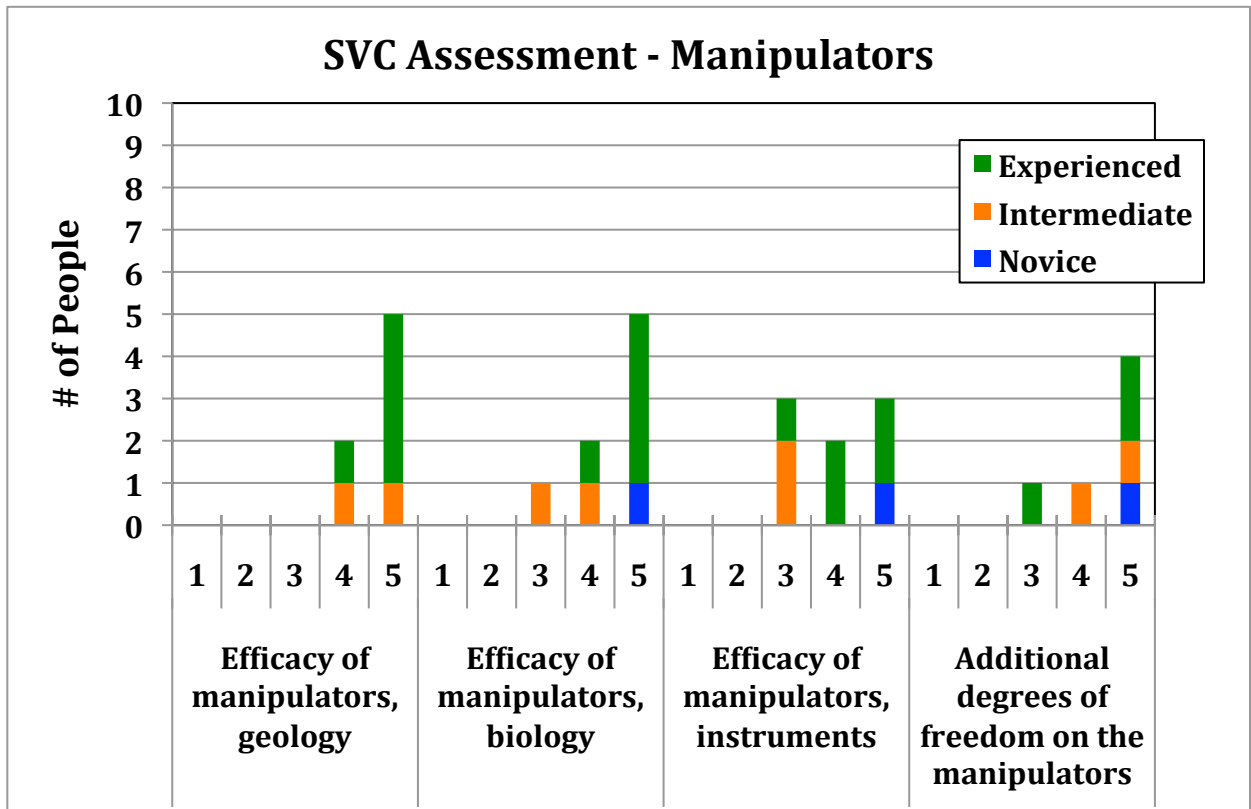
13) Quality of photomosaic

14) Quality of macro stillframes



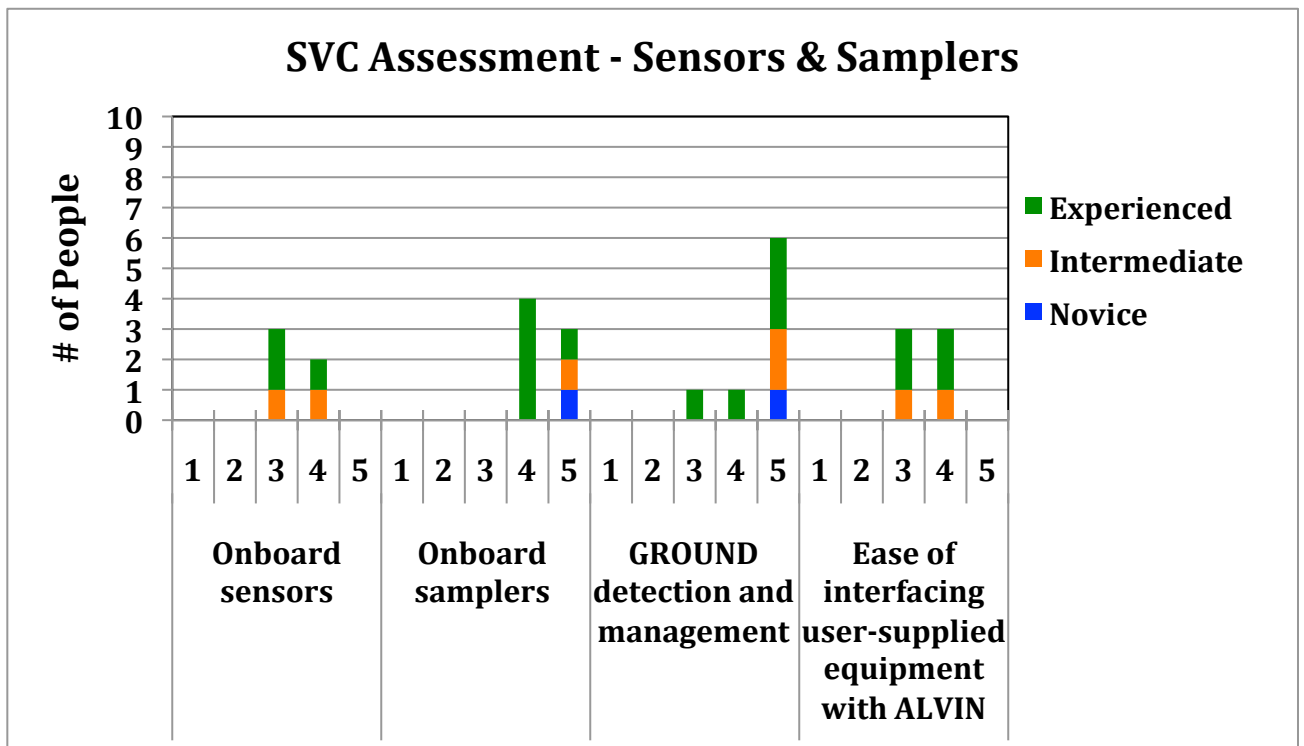
Manipulators:

- 15) Efficacy of manipulators for sampling geology: e.g. is the new configuration well suited for sampling sediments and rocks?
- 16) Efficacy of manipulators for sampling biology: e.g. is the new configuration well suited for sampling fragile organisms?
- 17) Efficacy of manipulators during instrument operations including sampling, deployment, recovery and other operational tasks?
- 18) Efficacy of additional degrees of freedom on the manipulators?



Sensors, Samplers, and User-supplied Equipment:

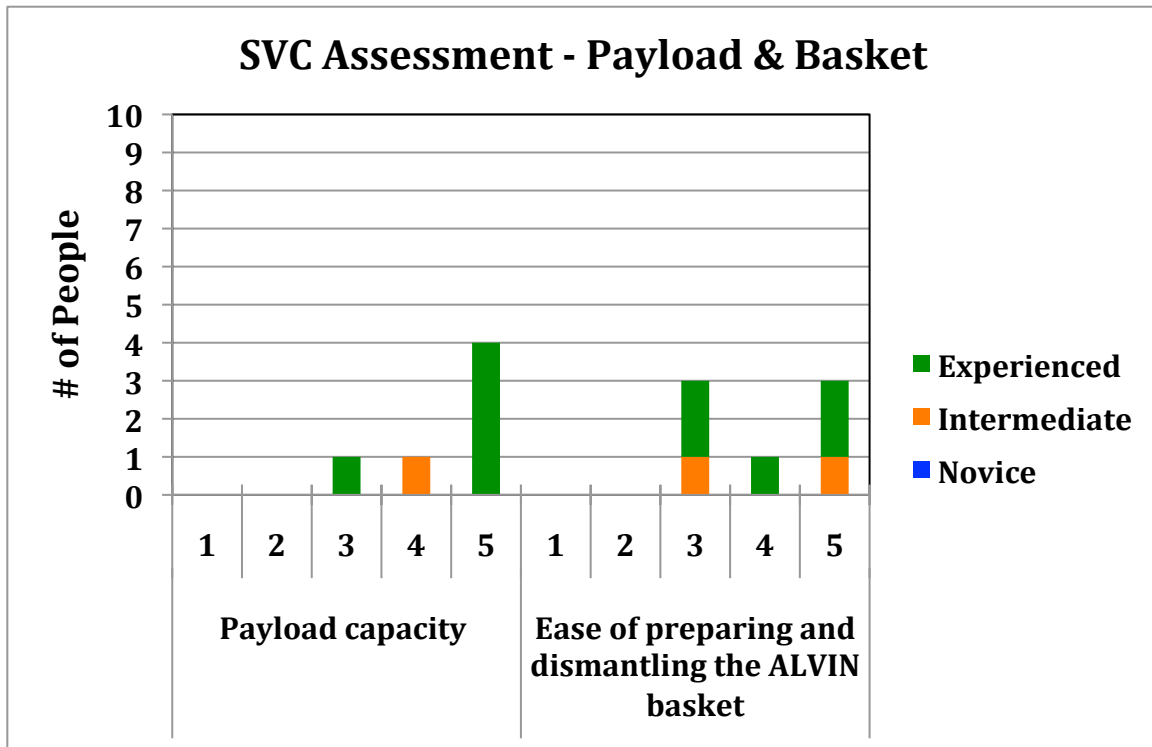
- 19) Efficacy of onboard sensors
- 20) Efficacy of onboard samplers
- 21) Efficacy of GROUND detection and management with user-supplied instruments
- 22) Ease of interfacing user-supplied equipment with *Alvin*



Payload and Basket:

23) Payload capacity

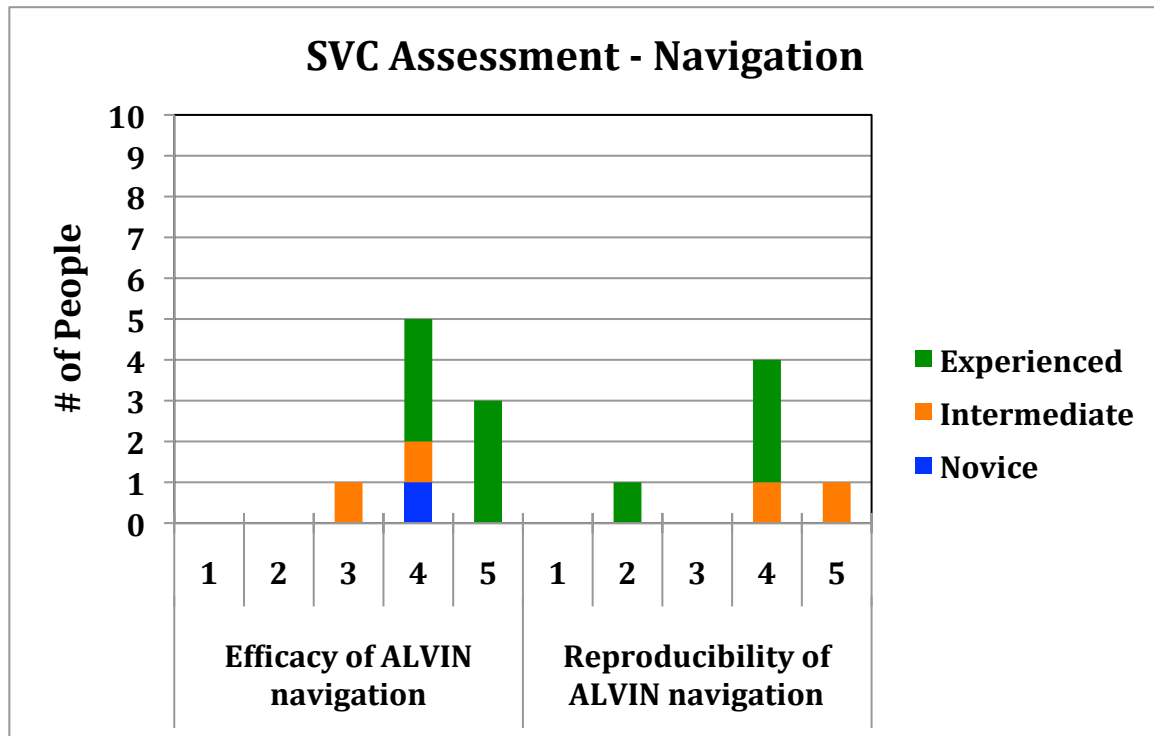
24) Ease of preparing and dismantling the *Alvin* basket



Navigation:

25) Efficacy of *Alvin* navigation

26) Reproducibility of *Alvin* navigation



Data Streams and Storage:

27) Accessibility and ease of use of *Alvin* data streams

28) Accessibility / ease of use of *Alvin* data storage hardware

29) Potential ease of *Alvin* framegrabber system

