

Presenter Information

- The following presentation took place at the World Aviation Training Symposium (WATS) Orlando, Florida, USA on Thursday, May 2, 2019.
- **General Topic:** Distance and Blended Learning Methods with University Students Nearing Transition into Airline/Aviation Industry
- **Data:** Quantitative and Qualitative Survey, (N=154)
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Distance Learning Technologies & the Next Generation of Aviation Professionals

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May 2, 2019

World Aviation Training Symposium

Presentation Overview

- Goals
- Student Demographics
- The Learning Process
- Quantitative Measures
- Qualitative Feedback
- Recommendations

"It is my **favorite class...**
Ironically it's the
class I'm almost failing."
-Student



Goals: Use of ETHOS Courseware

- Exposure to **Industry** Practices
- Increased **Engagement** compared to "Lecture"
- **Flexibility** on Location
- **Trackable** Student Usage
- Use Classroom Time for **Application**



Actual goal... *"Up Their Game"*



Piper Archer

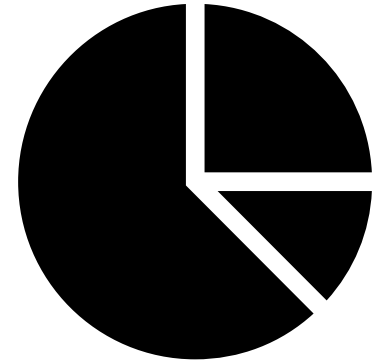
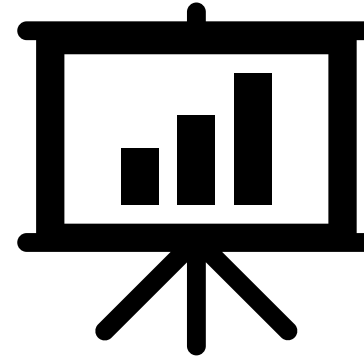
Photo: UND Aerospace



Photo: N. Wilson 2019

Student Demographics

- Mean age **21.8 yrs** (Range 19 – 39)
- Senior 86%, Junior 14%
- Female **10.5%**, Male **89.5%**
- All have at least **FAA Commercial, Single/Multi-Engine, Instrument**
 - Many have CFI or CFI/I
- Career Goals: Part 121 Carrier, Corporate, Part 135, Military, UAS



Learning Process

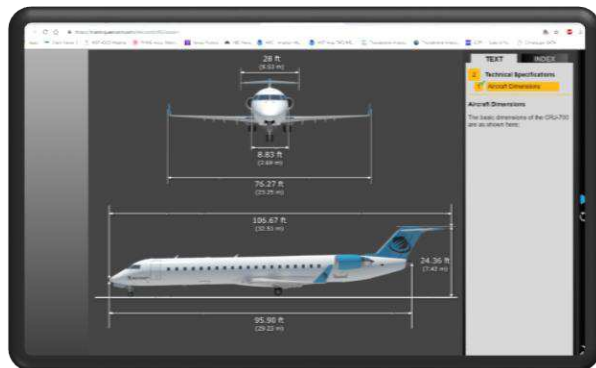
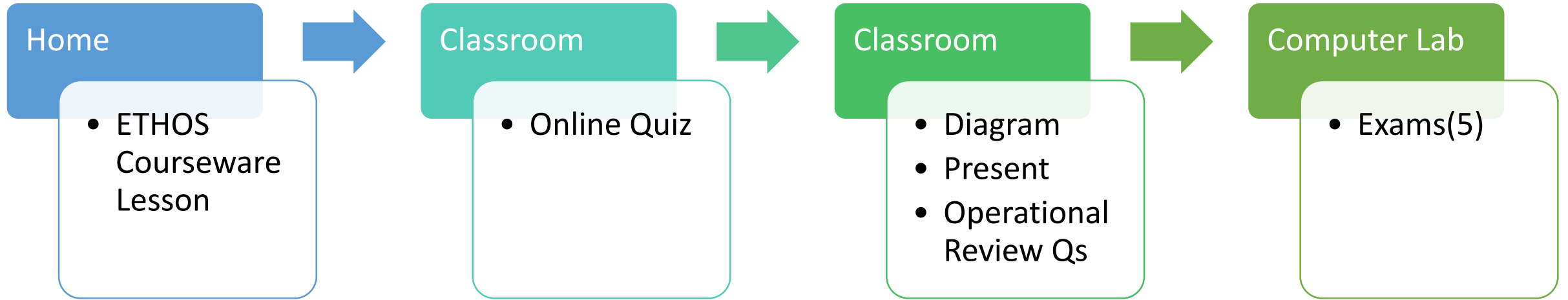


Photo: L3 ETHOS Courseware

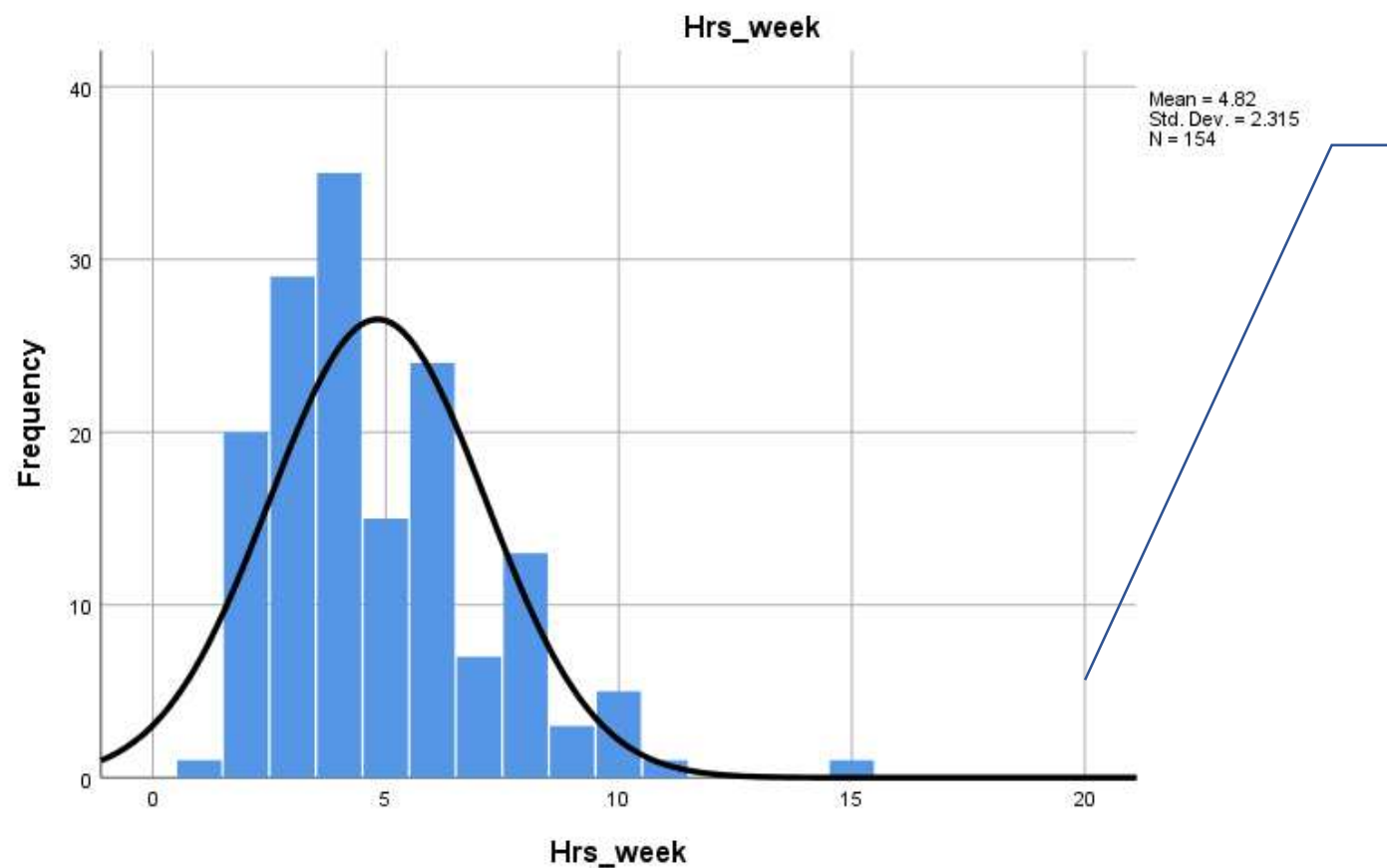


Photo: N. Wilson 2019



Photo: N. Wilson 2019

Courseware Usage (Hours/Week)



Mean 4.82* hours/wk

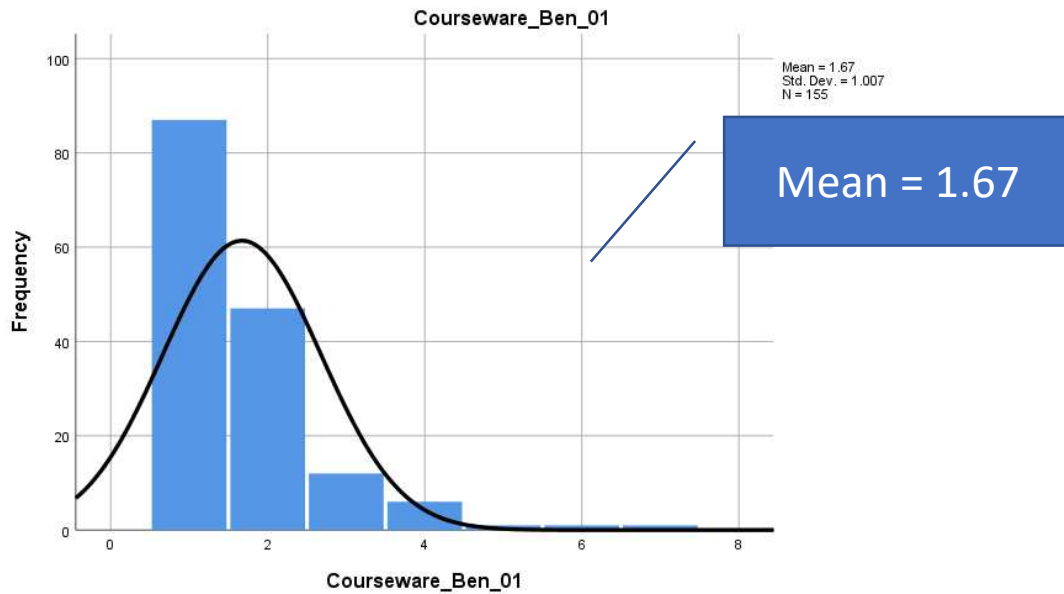
Range 1 to 15 hrs

N = 154

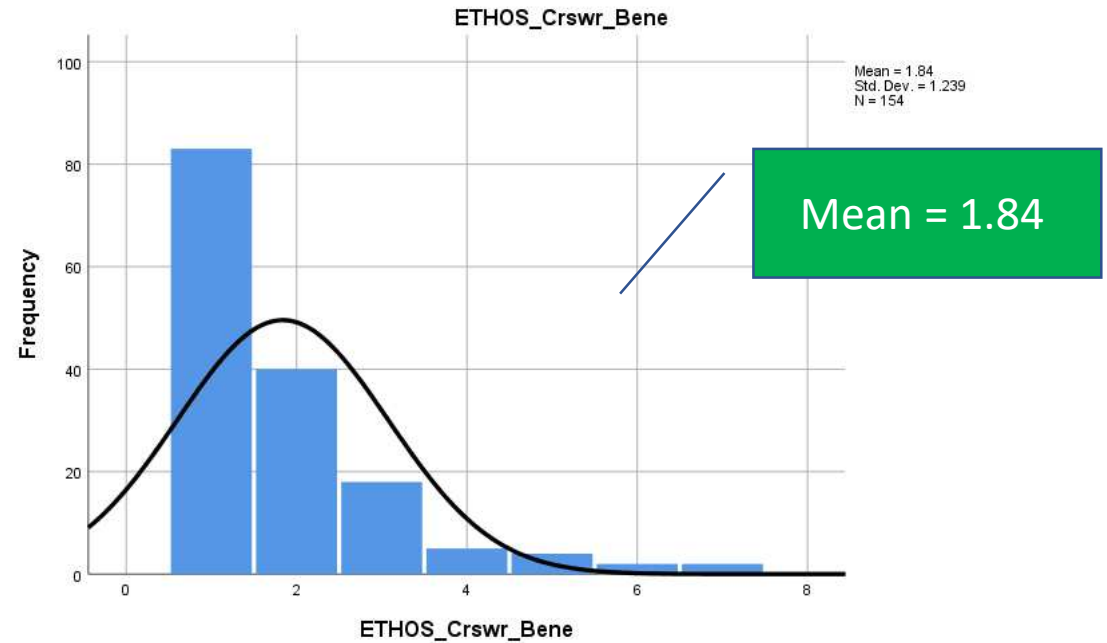
*Self Report 14th Wk

4th Week Observation Mean = 4.69 (N = 153)

I find the courseware beneficial to my learning (1 = Strongly Agree)

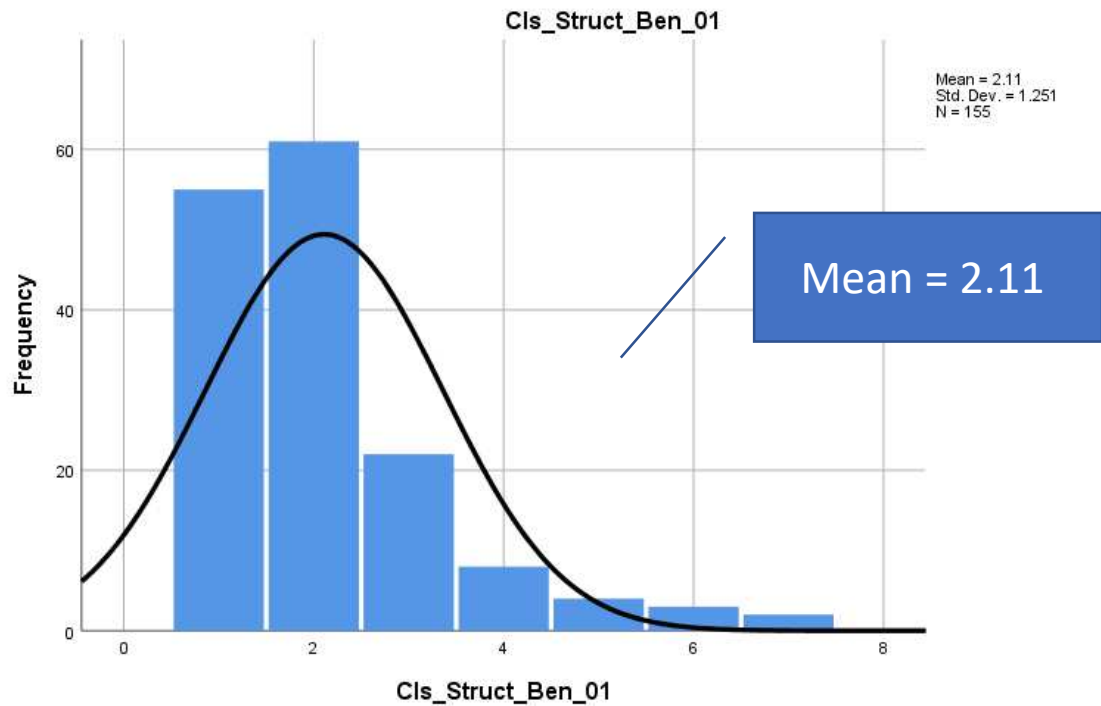


~4th Week of Semester



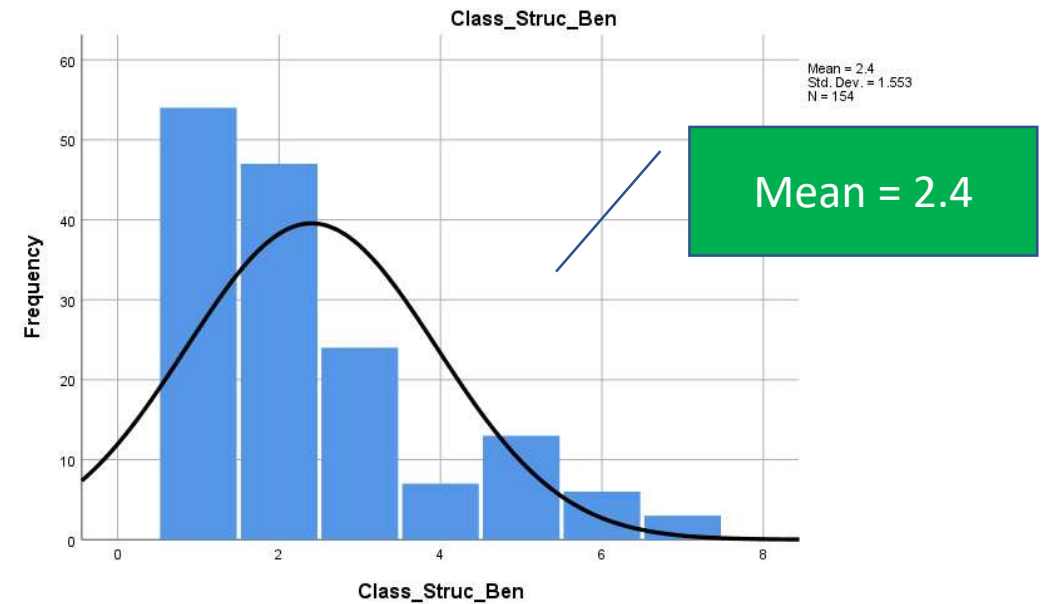
~14th Week of Semester

I find the **class structure beneficial** to my learning (1 = Strongly Agree)



Mean = 2.11

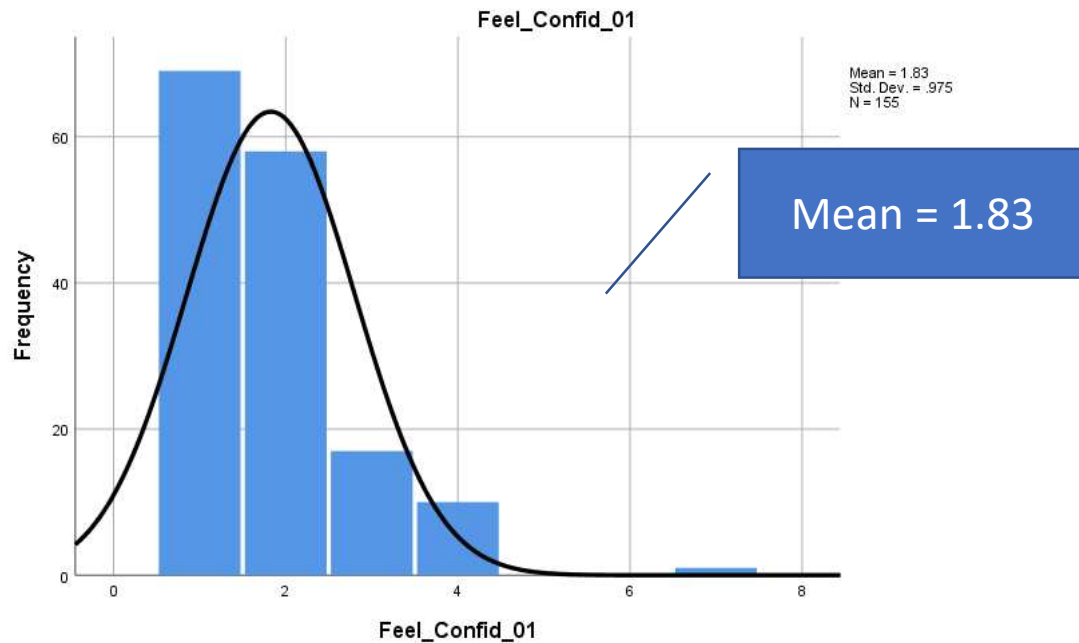
~4th Week of Semester



Mean = 2.4

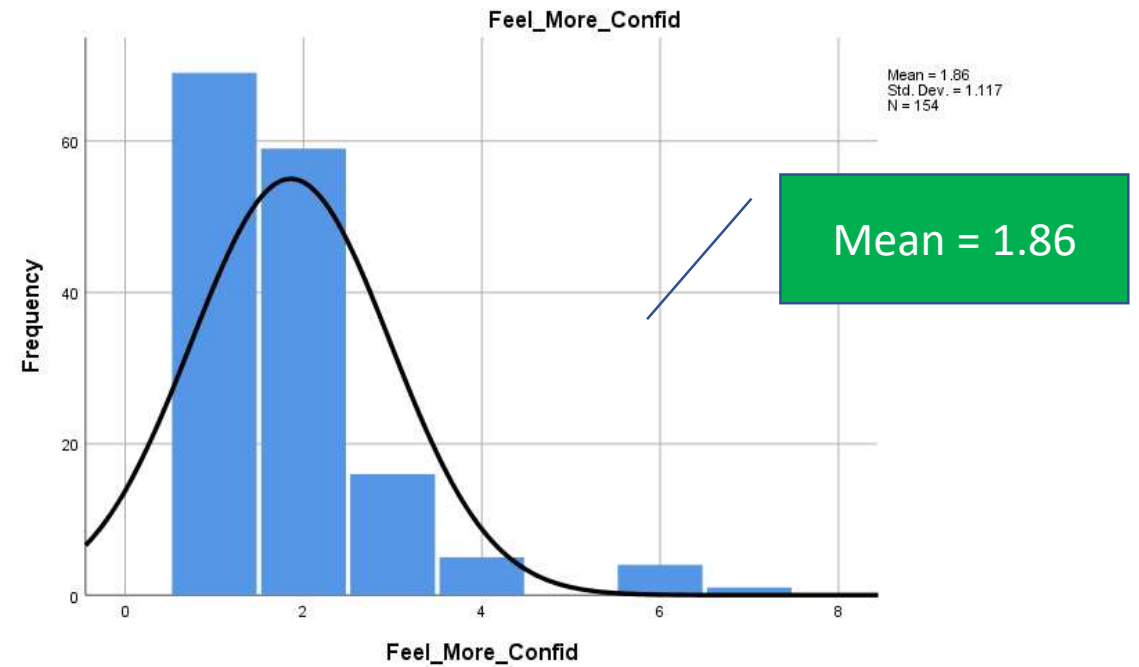
~14th Week of Semester

I feel more confident about transport category aircraft systems (1= strongly agree)



Mean = 1.83

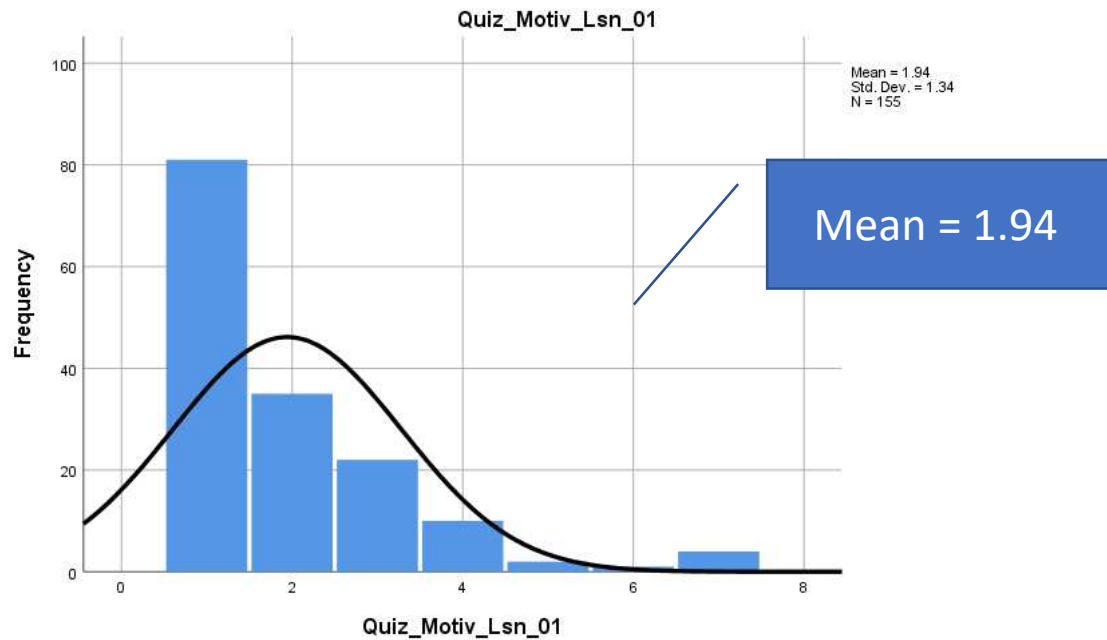
~4th Week of Semester



Mean = 1.86

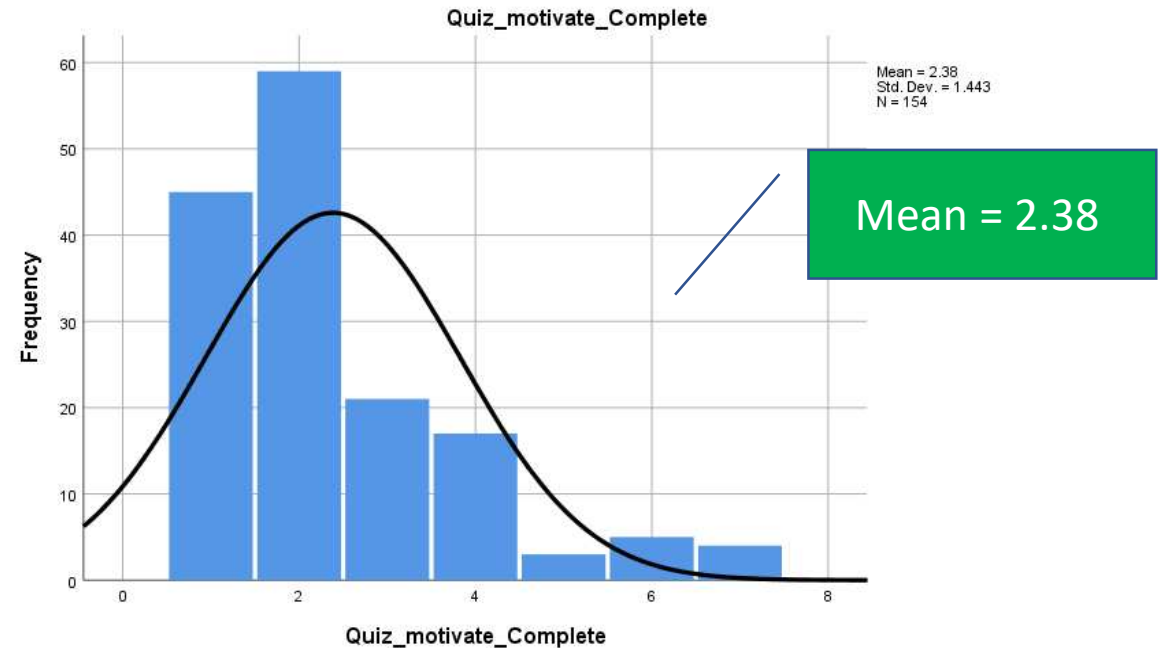
~14th Week of Semester

The classroom **quizzes motivate me** to complete the ETHOS lesson in advance of class.
(1 = Strongly Agree)



Mean = 1.94

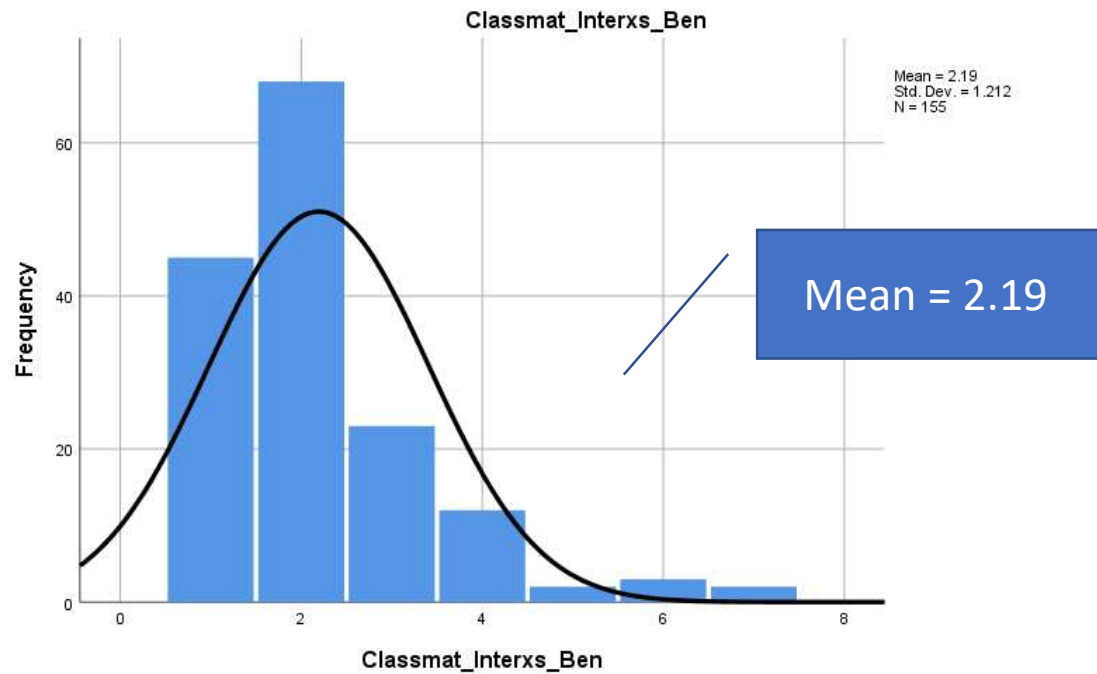
~4th Week of Semester



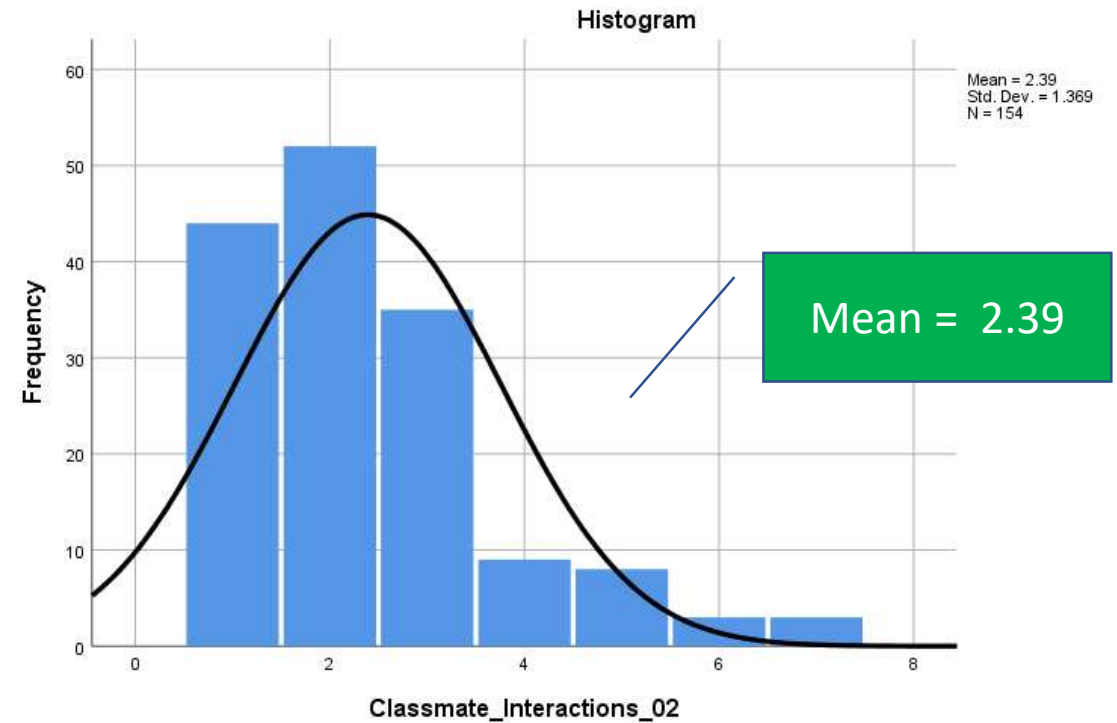
Mean = 2.38

~14th Week of Semester

Interactions with my classmates during individual aircraft review are beneficial (1= Strongly Agree)

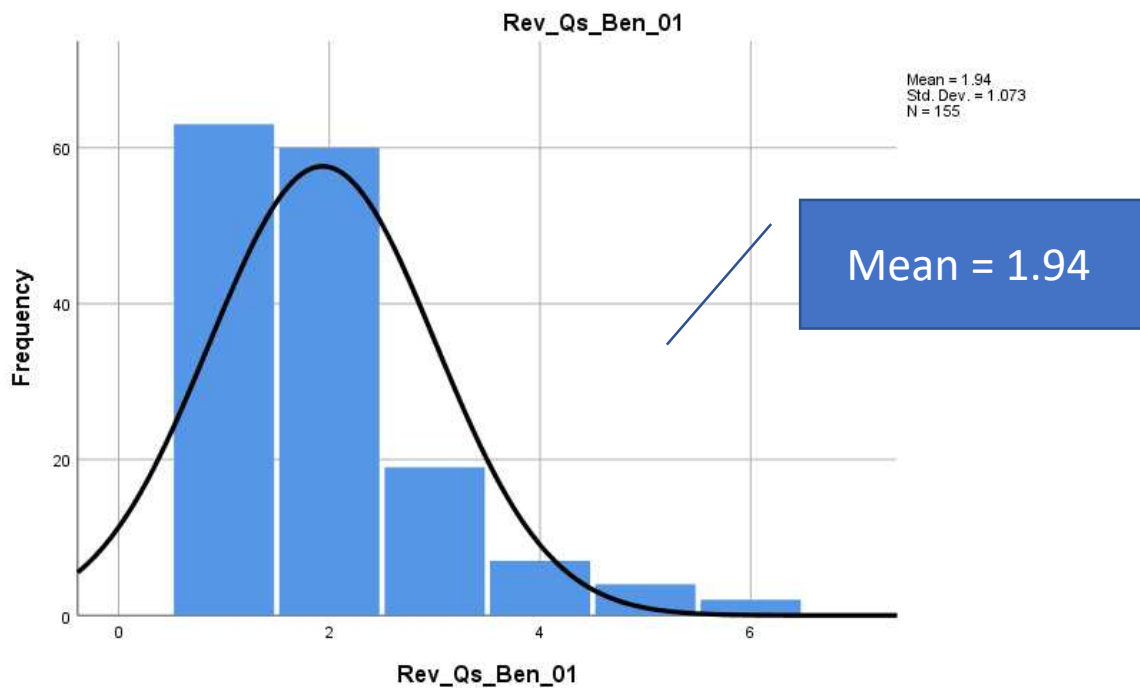


~4th Week of Semester

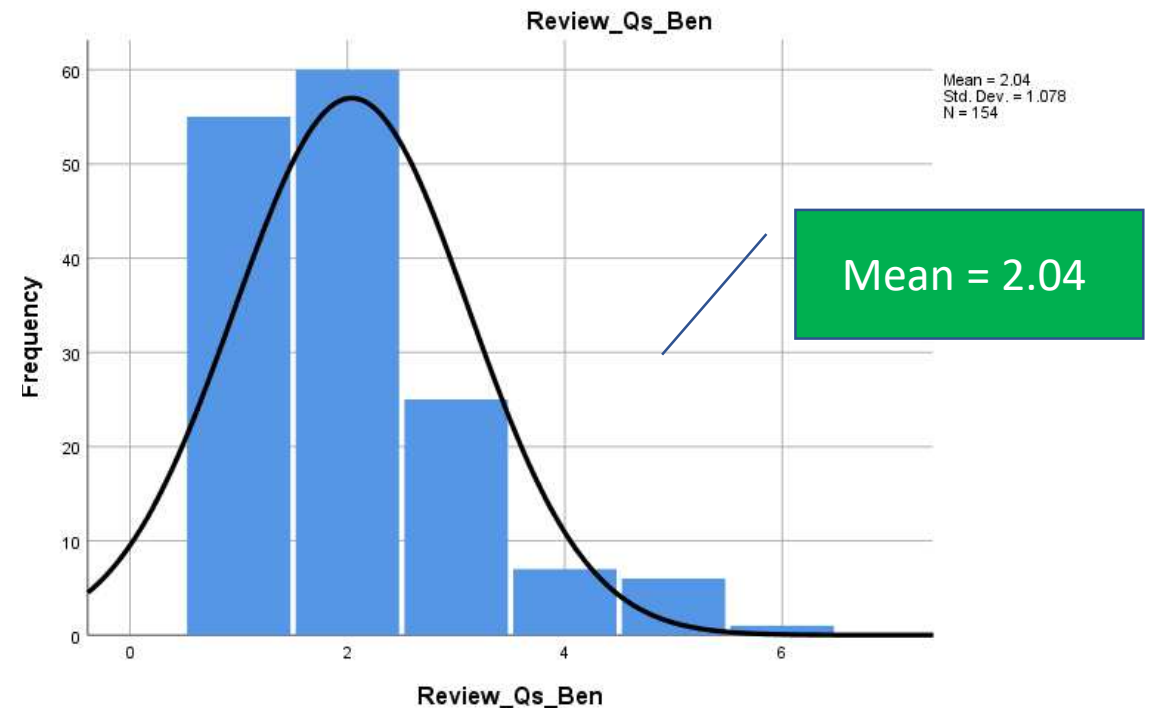


~14th Week of Semester

I find the **system/operational** review questions at the end of class beneficial... (1 = Strongly Agree)



~4th Week of Semester



~14th Week of Semester



Feedback Themes

Utility

Burnout

Preparation

(Identity) Evolution

How has your opinion changed?



"In the beginning of the class, I kind of had **neutral feelings** towards the class, kind of just going through the motions. **At the end of the semester, I really enjoyed going to class and learning about the aircraft systems.** It really sparked my interest in my class."



"Sometimes its a struggle to log on and do the module, knowing it will be hours of dry information, **but I know it is important for my future. Also, some modules are really interesting, and are easy to work with.**"



How has your opinion changed? **Burnout**

"At first I thought that the Ethos were extremely cool. **But towards the end some of them were extremely long**, for example the automation one was way to long with way to[o] many acronyms."



"At first the ETHOS seemed good and paced out. As the course went on, it **became a chore to do these outside of the class**. Having to watch a 2 hour video that basically turns into 3-4 hours with note taking is tough to do within 2 days **due to my other classes**."



How has your opinion changed? **Preparation**

"It became a lot **more manageable** when I started **studying a few days in advance.**"



"I ended up being really happy with the class. **It was hard, but we understood the expectation of what we needed to do. Yes there was a lot of prep work** we had to do before class but that allowed us to learn more and not have to deal with lectures for 2 hours."



How has your opinion changed? Evolution

"I had very little knowledge or interest in transport category aircraft systems, and now that I actually understand a little bit, I somewhat enjoy the material and learning about it. Understanding the material has helped me **enjoy systems more and see a better purpose** for the course."

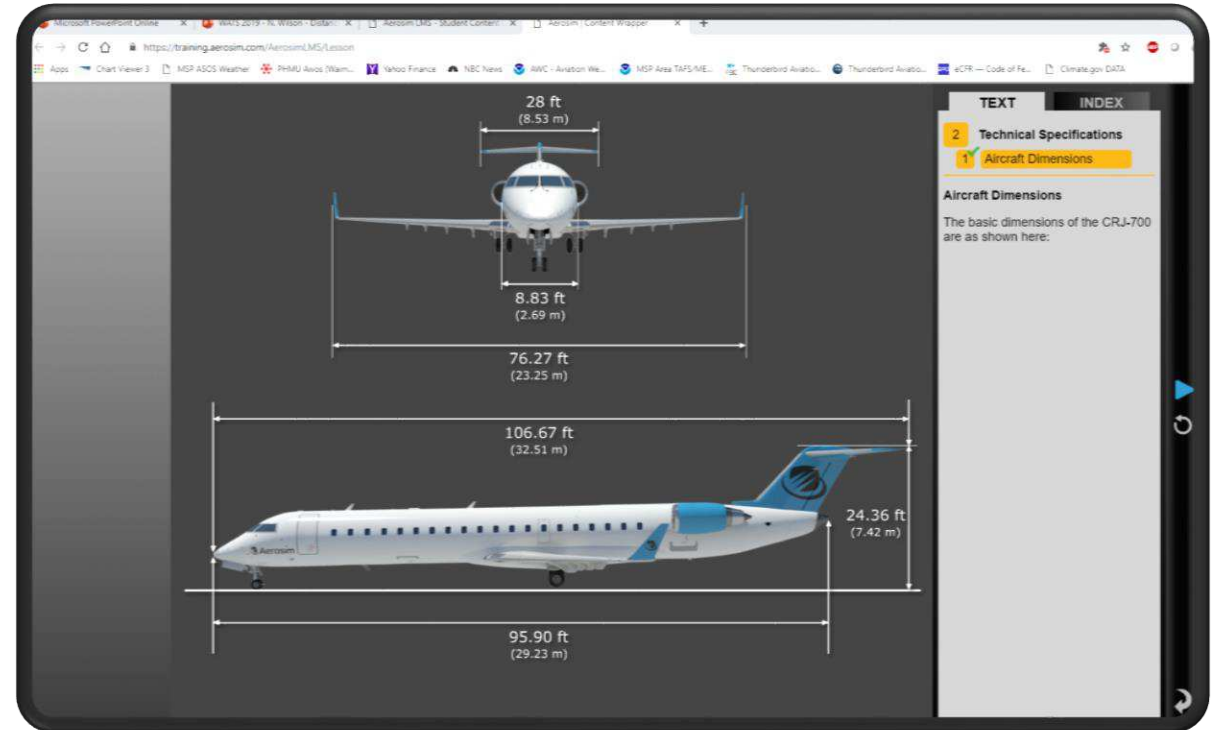


"At first I felt that the class was **unnecessarily hard**, but now looking back at the class I am **grateful for how in-depth it was in increasing my knowledge of aircraft systems.**"



Conclusions & Recommendations

- Students see **utility** in courseware and blended learning.
- **Supplemental instruction needed** based on experience level.
- Suggest "**changing the pace**" periodically to avoid burnout.
- Advise **expectations of study time**, not just focus on module run times.
- Noted **evolution to identity** as professional aviator.



L3 Commercial Training Solutions, ETHOS Courseware

Comments & Questions?

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