

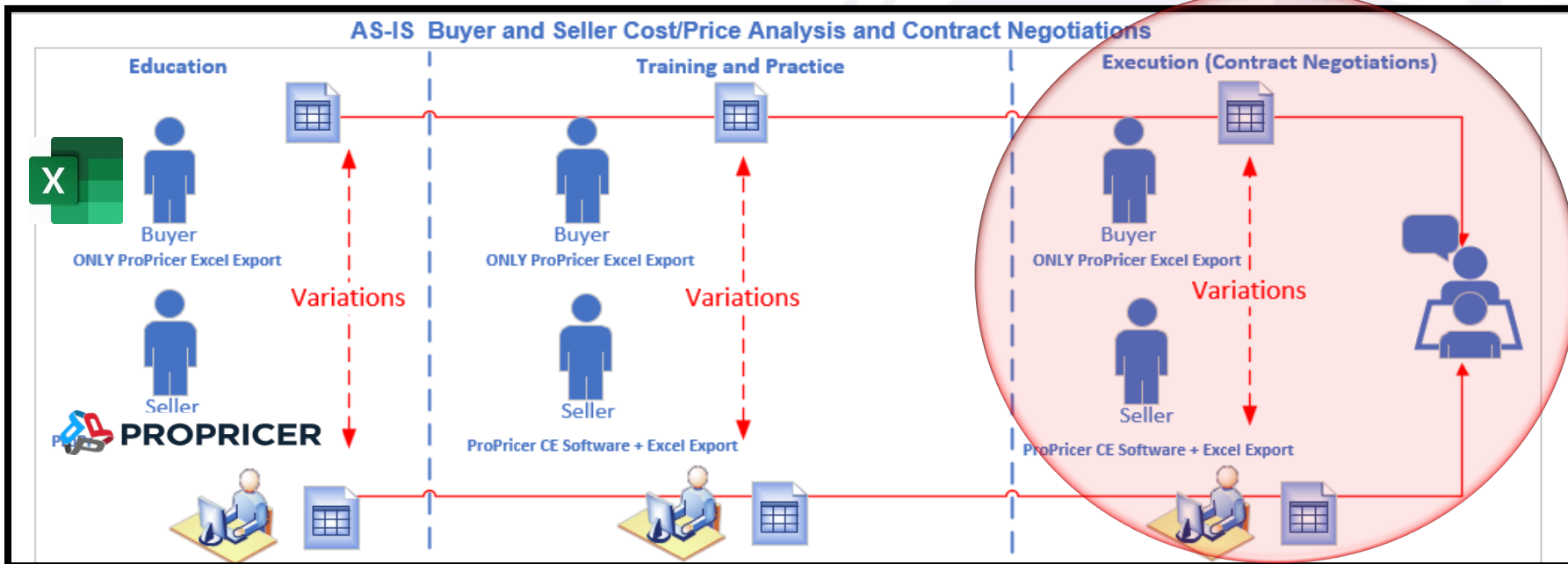


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**The Efficacy of Optimized
Government-Industry-Academia Co-Education
(G-I-A Co-Ed)
for Major Weapon Systems Cost/Price Analysis and
Contract Negotiations**

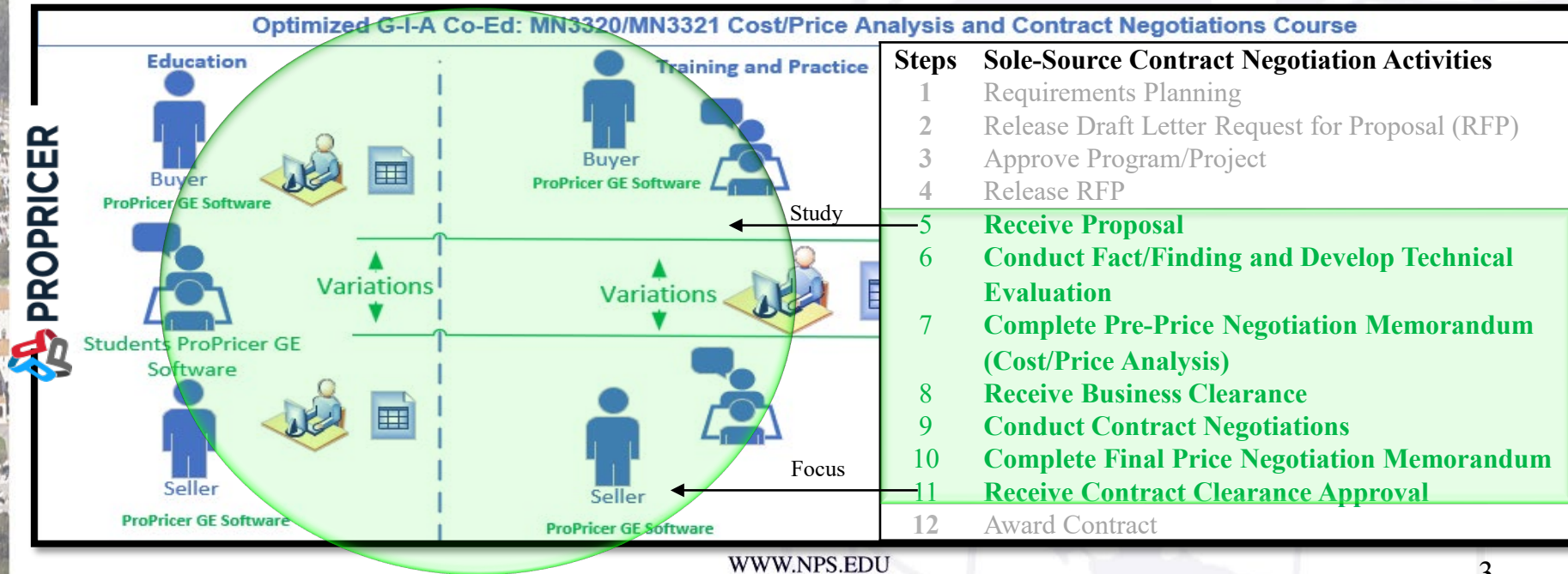
Kelley Poree, CPCM, CFCM
Contract Management Area Chair
Acquisition Management and Contracting Lecturer
Department of Defense Management
Naval Postgraduate School
kelley.poree@nps.edu

- Buyer and seller **variations in education, training, and practice domains exist** across the major weapon system cost/price analysis and contract negotiations ecosystem.
- The ecosystem's provision of limited joint **education, training, and practice before** execution profoundly impacts the process (e.g., differing competence and confidence levels and **limited opportunities to create conditions** for trust and innovation).
- 77 Major Defense Acquisition Programs and 12 – 15 Major Defense Contractors must **deal with it/figure it out** during execution (e.g., personnel turnover, training, new policies, budget pressures, mission execution pressures, etc.).



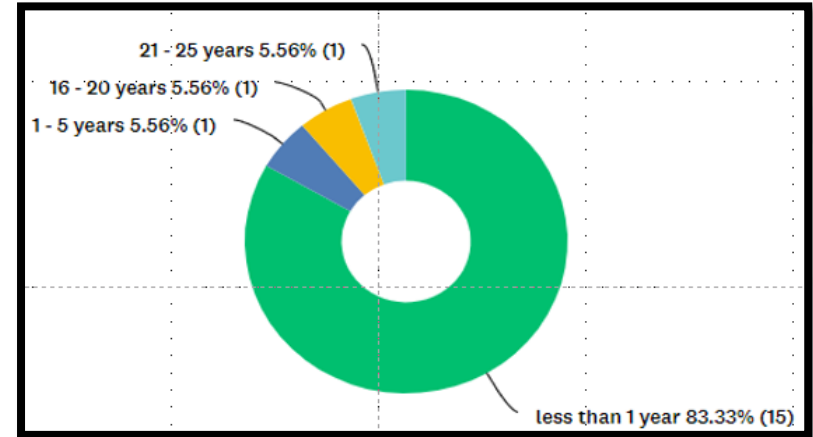
Approach and Research Question

- **Approach:** Qualitative study to explore participants' (graduate students, buyers, and sellers from a major weapon system program office in the Midwest) perceptions on the efficacy of **G-I-A Co-Ed using ProPricer Government Edition (GE)** for a sole-source cost/price analysis and negotiations.
- G-I-A Co-Ed leverages Etkowitz's (2003) Triple Helix Theory, "Innovation in a knowledge-based economy lies in the university-industry-government interaction" (p. 295). **Industry** is the **production hub**, the **government** establishes **contractual relationships**, and **academia** produces a **wellspring of new technology and knowledge** (p. 235).
- **Research Question:** How do participants perceive the efficacy of optimized G-I-A Co-Ed in enhancing high-trust collaboration and innovation between buyers and sellers?





Participants	Population	Class Percentage
U.S Army	13	42%
U.S. Navy	9	29%
U.S. Marines	3	10%
U.S. Air Force	2	6%
Government Buyers	2	6%
Industry Sellers	2	6%
Total Class Population	31	100%



Summary

Tasks	4
Resource Assignments	18
Hours	139K
Units	0
Cost	\$267K
Direct Cost	\$7,988M
Tot Ovhld	\$5,811M
G&A	\$2,41M
Total Cost	\$16,204M
Profit	\$2,43M
Total FCCOM	\$115K
Total Price	\$18.7M

Summary By Year

Year	Cost	Profit
2023	\$2,120	\$2,619
2024	\$2,20	\$2,619
2025	\$2,419	\$2,619

Summary By Type

Type	Percentage
Labor	97.96%
Travel	0.79%
Subcontractor	1.24%

Proposal Data View - 54-H5 Tower Program, Ver. IGCE

WBS	Resource Ty...	Resource	Hours	Labor Ovhld	Fringe	Mat hnd	Tot Ovhld
1.1.1.1	Labor	Contract Admin	9,336.00	\$130,216.26	\$195,108.08	\$0.00	\$325,324
1.1.1.1	Labor	Prog-Mng-01	9,038.00	\$228,373.40	\$342,180.73	\$0.00	\$570,554
1.1.1.1	Labor	Prog-Mng-02	8,442.00	\$231,083.36	\$346,241.18	\$0.00	\$577,324
1.1.1.1	Labor	Prog-Ctrl-Analyst-01	8,840.00	\$135,603.31	\$203,178.71	\$0.00	\$338,783
1.1.1.1	Labor	Prog-Ctrl-Analyst-02	7,538.00	\$126,808.44	\$190,002.02	\$0.00	\$316,810
1.1.1.1	Labor Total		43,194.00	\$852,084.76	\$1,276,711.72	\$0.00	\$2,128,796
1.1.1.1	Travel	Trvl		\$0.00	\$0.00	\$0.00	\$0
1.1.1.1	1.1.1.1 Total		43,194.00	\$852,084.76	\$1,276,711.72	\$0.00	\$2,128,796
1.1.1.1.10	Labor	Prod-Mng-01	11,720.00	\$127,755.62	\$209,519.22	\$0.00	\$337,274
1.1.1.1.10	Labor	Prod-Mng-02	10,627.00	\$125,269.32	\$205,441.68	\$0.00	\$330,710
1.1.1.1.10	Labor	Prog-Ctrl-Analyst-01	8,641.00	\$132,550.70	\$198,605.86	\$0.00	\$331,156
1.1.1.1.10	Labor	Prog-Ctrl-Analyst-02	8,045.00	\$135,337.47	\$202,781.39	\$0.00	\$338,118
1.1.1.1.10	Labor	Tech-Mng	11,124.00	\$198,845.48	\$297,537.91	\$0.00	\$496,383
1.1.1.1.10	Labor Total		50,157.00	\$719,758.58	\$1,114,286.06	\$0.00	\$1,834,044
1.1.1.1.10	Travel	Trvl		\$0.00	\$0.00	\$0.00	\$0
1.1.1.1.10	1.1.1.1.10 Total		50,157.00	\$719,758.58	\$1,114,286.06	\$0.00	\$1,834,044
0002			93,351.00	\$1,571,843.35	\$2,390,997.78	\$0.00	\$3,962,841
0003			46,085.00	\$761,805.41	\$1,080,422.14	\$0.00	\$1,842,227
Grand Total			139,436.00	\$2,333,648.76	\$3,471,419.93	\$0.00	\$5,805,068



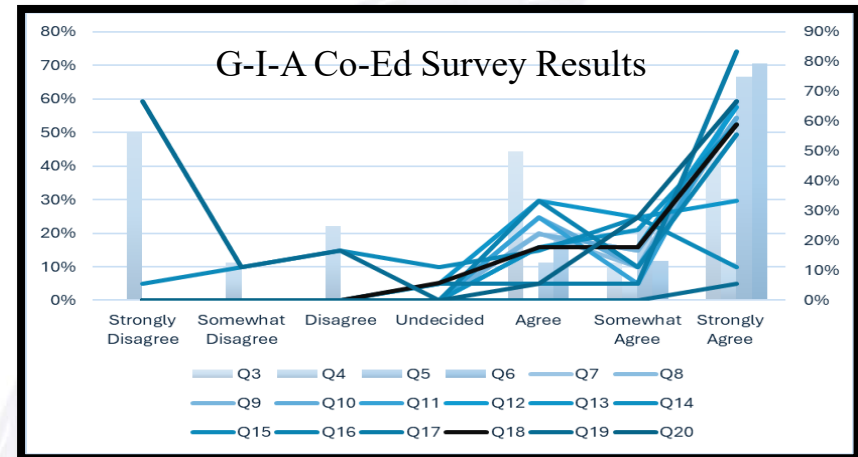
Buyer-Seller Ecosystem Variations Exist

- **Statement 3. 44% Strongly Agreed, 11 % Somewhat Agreed, and 44% Agreed** that variations exist in buyer and seller education, training, and practice.
- **Statement 4. 50% Strongly Disagreed, 11% Somewhat Disagreed, and 22% Disagreed** that education, training, and practice variations **DO NOT negatively affect buyer and seller abilities** to conduct major weapon system cost/price analysis and contract negotiations.

G-I-A Co-Ed Minimizes Buyer-Seller Ecosystem Variations

- **Statement 11. 67% of the respondents Strongly Agreed, 6% Somewhat Agreed, and 28% Agreed** that participating in G-I-A Co-Ed earlier in the buyer and seller professional development process could **increase individual competence** in major weapon systems cost/price analysis and contract negotiations.
- **Statement 12. 65% of the respondents Strongly Agreed, 18% Somewhat Agreed, and 18% Agreed** that participating in G-I-A Co-Ed earlier in the buyer and seller professional development process **could increase the organizational capability** to deliver major weapon systems on time and within budget.

Participants	Number	Responses	Response Rate
Academia Student/Buyers	13	8	62%
Academia Student/Sellers	13	7	54%
Government Buyers	2	2	100%
Industry Sellers	2	1	50%
Total	30	18	60%



G-I-A Co-Ed Enhances Trust, Collaboration, and Innovation

- **Statement 18. 59% Strongly Agreed, 18% Somewhat Agreed, 18% Agreed and 6 % were Undecided** on whether participation in G-I-A Co-Ed creates the conditions for forging and **enhancing trust** relationships between buyers and sellers.
- **Statement 20. 67% of respondents Strongly Agreed, 28% Somewhat Agreed, and 6% Agreed** that G-I-A Co-Ed creates the environment for **buyer/seller collaboration and conditions for innovation.**



Results (Continued)

No.	Participant Comments
1	“The course was challenging and rewarding. It provided real-world experiences and points of view from civilians currently in the work field. I learned a lot that I can apply in my career field.”
2	“Incorporation of industry and external acquisition professionals provides unique insight into the challenges we face outside the classroom. Using new and innovative contract pricing tools (ProPricer GE) was enlightening, and I saw that progress can be made in efficiency and effectiveness. ”
3	“ Excellent interactivity with the class; the course is well designed to promote learning by doing. ”
4	“The course was well designed to integrate government and industry in the educational setting to better prepare students for the realities of the mission.”
5	“The co-education between the government and seller representatives was beneficial.”
6	“Integrating software to the academic environment.”
7	“Industry partner presence. Choice of case studies. Tutorial Support. Take home lab assignments. Group assignments”
8	“The course was a good blend of student experience, industry inputs and point of views in the form of guest appearance, and customized course content lead by Prof. Poree.”
9	“Continue implementing guest attendance for real-world civilians. Their perspective was beneficial for altering the government's mindset and point of view. Pro Pricer was a great program to practice with and learn.”
10	“ Interacting with ProPricer and industry partners was eye-opening. Negotiating among classmates was a great learning experience. Seeing how two groups reached different outcomes (yet still sealed the deal) highlights the complexity of issues we will face when we return to the field. ”
11	“I watched the last lecture, during which you demonstrated ProPricer with the IGCE and seller’s proposal. ProPricer would have been awesome when I was a buyer a/o PCO! It makes everything SO MUCH EASIER!”
12	“Buyers and sellers have different education, training, and practice paths.”

Question: What you learned in the course	MAX	MIN	AVG	STDEV	VAR
1.1. I developed new skills and abilities.	5	3	4.81	0.48	0.23
1.2. I improved my understanding of the subject.	5	4	4.89	0.32	0.1
1.3. I strengthened my analytic capabilities.	5	4	4.93	0.27	0.07
1.4. I enhanced my ability to think critically.	5	3	4.85	0.46	0.21
1.5. Overall, I learned a great deal.	5	3	4.9	0.46	0.2
Question: Content and design of the course	MAX	MIN	AVG	STDEV	VAR
2.1. The course material engaged me in the subject matter.	5	4	4.81	0.4	0.16
2.2. The course assignments reinforced course content.	5	5	5	0	0
2.3. The course content was relevant to my program of study.	5	4	4.96	0.19	0.04
2.4. This course was academically challenging.	5	3	4.59	0.57	0.33
2.5. Overall, the course was well designed.	5	4	4.9	0.36	0.1

Student Course Evaluation Scores

- Overall, the results revealed that **student buyers and student sellers developed** new skills and abilities and **improved their understanding of the concepts** and activities associated with major weapon systems cost/price analysis and contract negotiation, with scores of **4.82 / 5.00 (or 96%)** and **4.89 / 5.00 (or 98%)**, respectively.
- Regarding course design, respondents scored the relevance of the course content to the program of study **4.96 / 5.00 (or 99%)**.





Conclusion and Recommendations

Conclusion

- Buyer-seller variations exist in the cost/price analysis and contract negotiation ecosystem.
- G-I-A Co-Ed minimizes ecosystem variations.
- G-I-A Co-Ed enhances trust, collaboration, and innovation **early in the buyer/seller professional development cycle.**
- Everyone—stockholders, suppliers, employees, and customers—benefits from an optimized system (Deming, 2018, Location, 447).

Recommendations

- Expand G-I-A Co-Ed opportunities to more buyers and sellers supporting major weapon systems to confirm and strengthen findings
- Future researchers should compare the cost/price analysis and contract negotiation process timelines in an organization without ProPricer to a test case within the organization with buyers and sellers that use ProPricer through the twelve (12) steps in the sole-source contract negotiations process.

Optimized G-I-A Co-Ed: MN3320/MN3321 Cost/Price Analysis and Contract Negotiations Course

