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Adaptive Mapping of Cybersecurity Competence Assessment Methods

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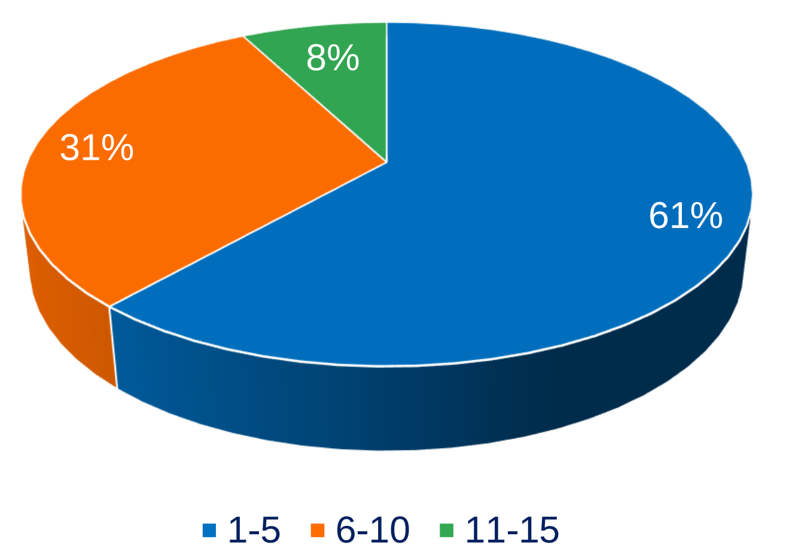
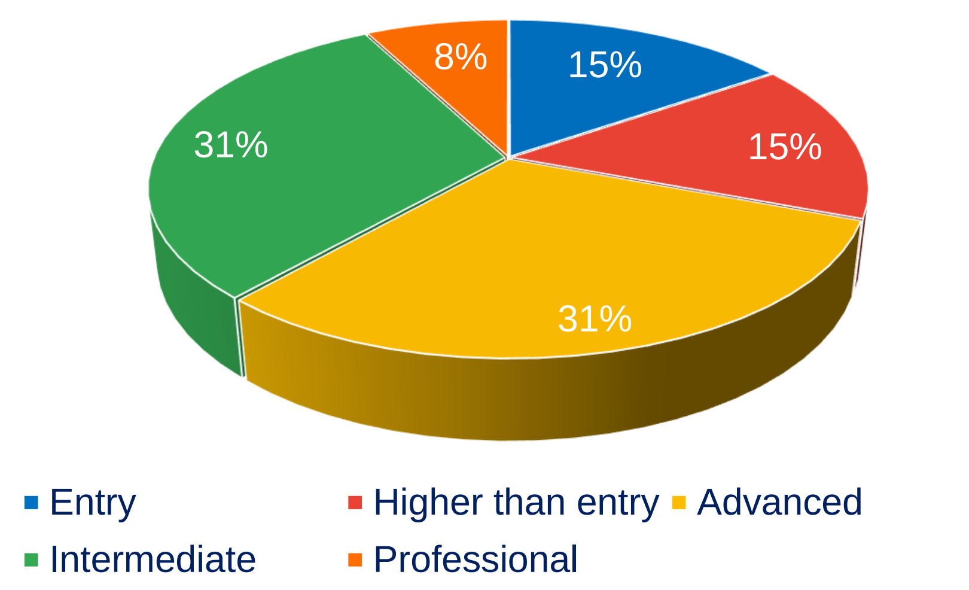
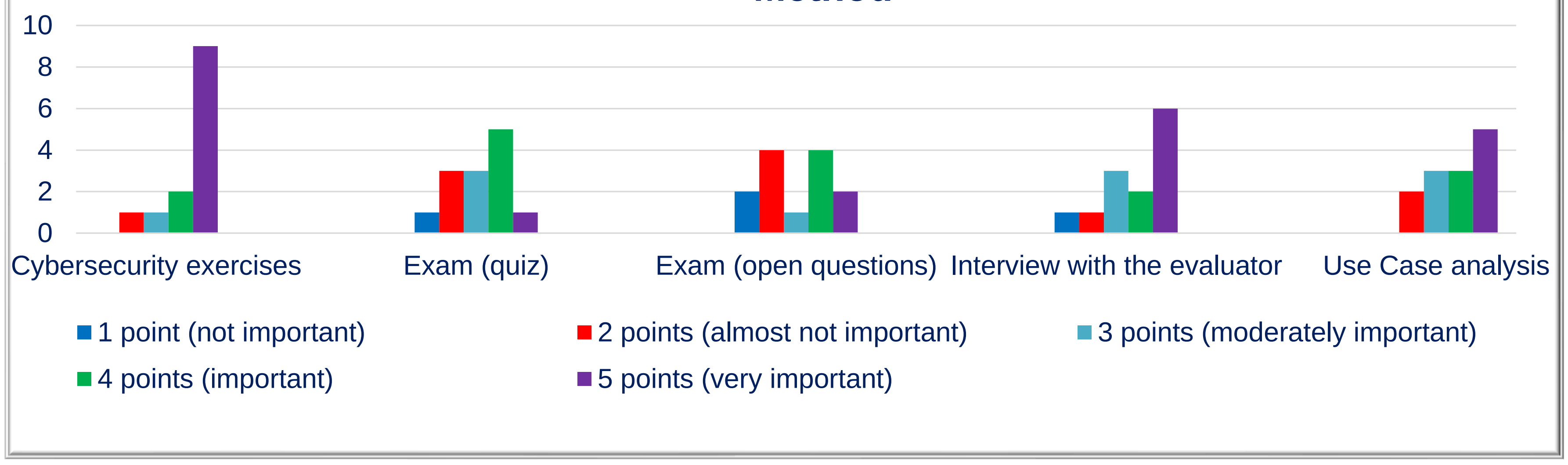
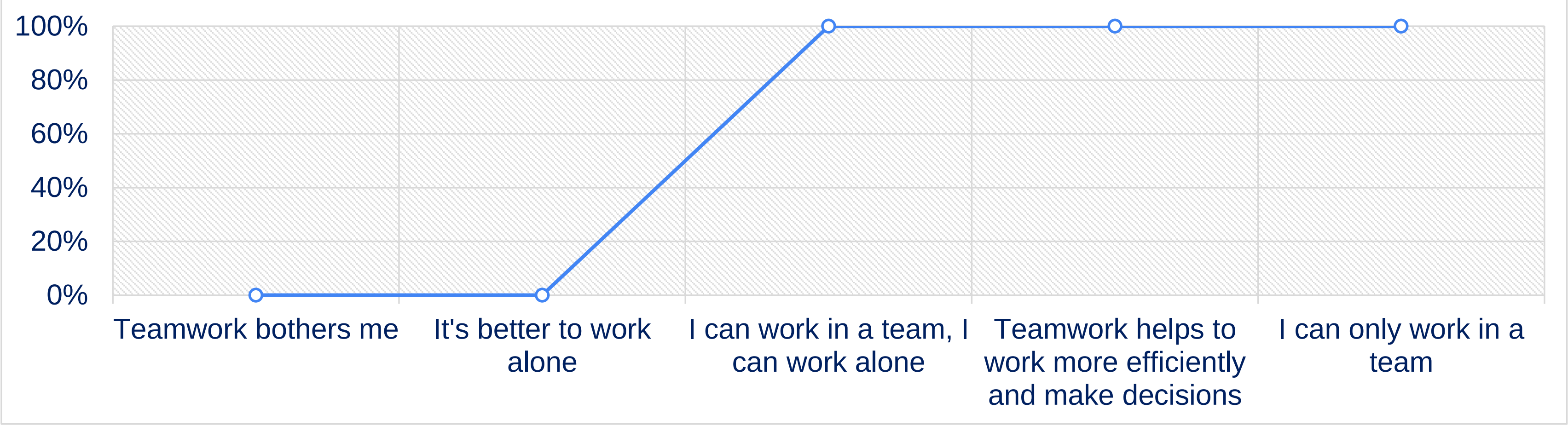
Summary: The goal of this research was to make the analysis of cybersecurity competence assessment methods based on data collected using surveys of the participants of the cybersecurity defense exercise „AMBER MIST 2023“ and the biggest hackathon of cyber defense and security innovations in the Baltic States - FIRE SHIELD 2023. Educational and social-psychological aspects were included in the surveys. Also, the adaptive mapping of cybersecurity competence assessment methods was proposed based on the different data. Moreover, Bloom’s taxonomy was used for mapping cybersecurity competence assessment methods. It helps to understand the relation between the competence model and assessment methods and complements cybersecurity training programs.

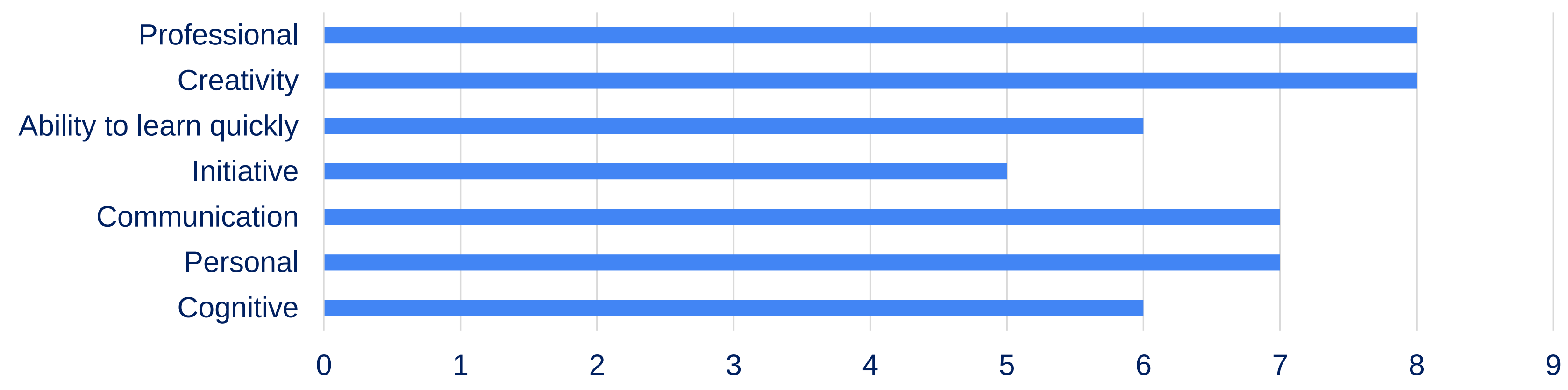
ANALYSIS OF SURVEY RESULTS

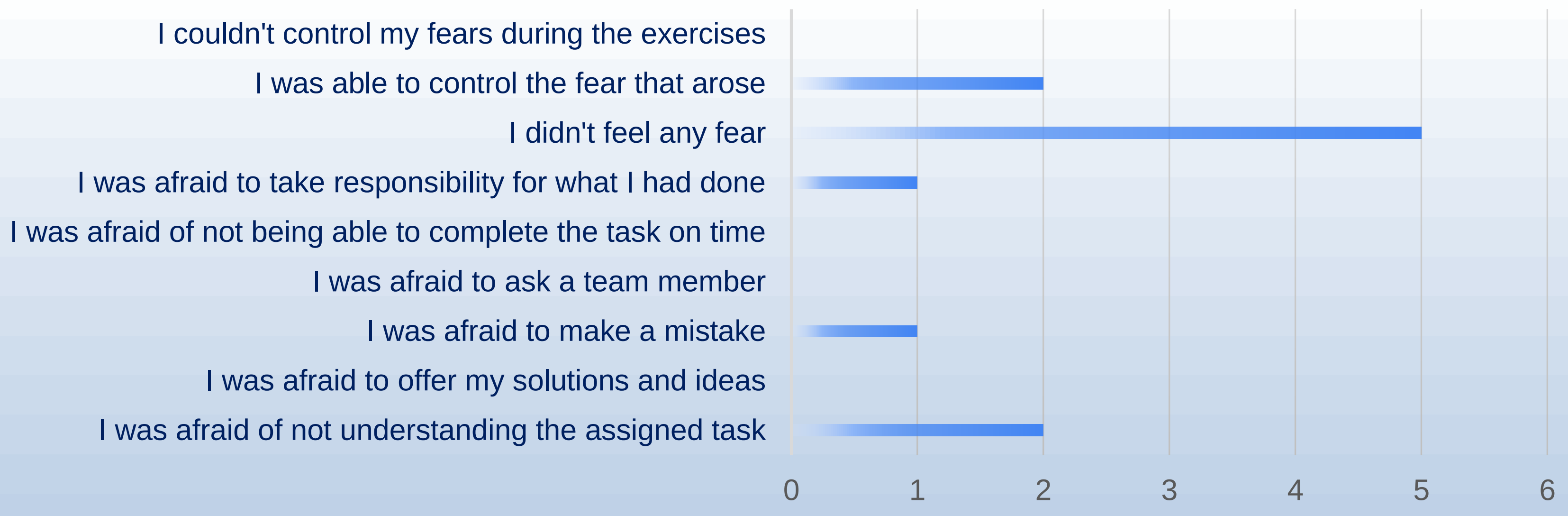

Years of Work Experience


Professional Level in Cybersecurity

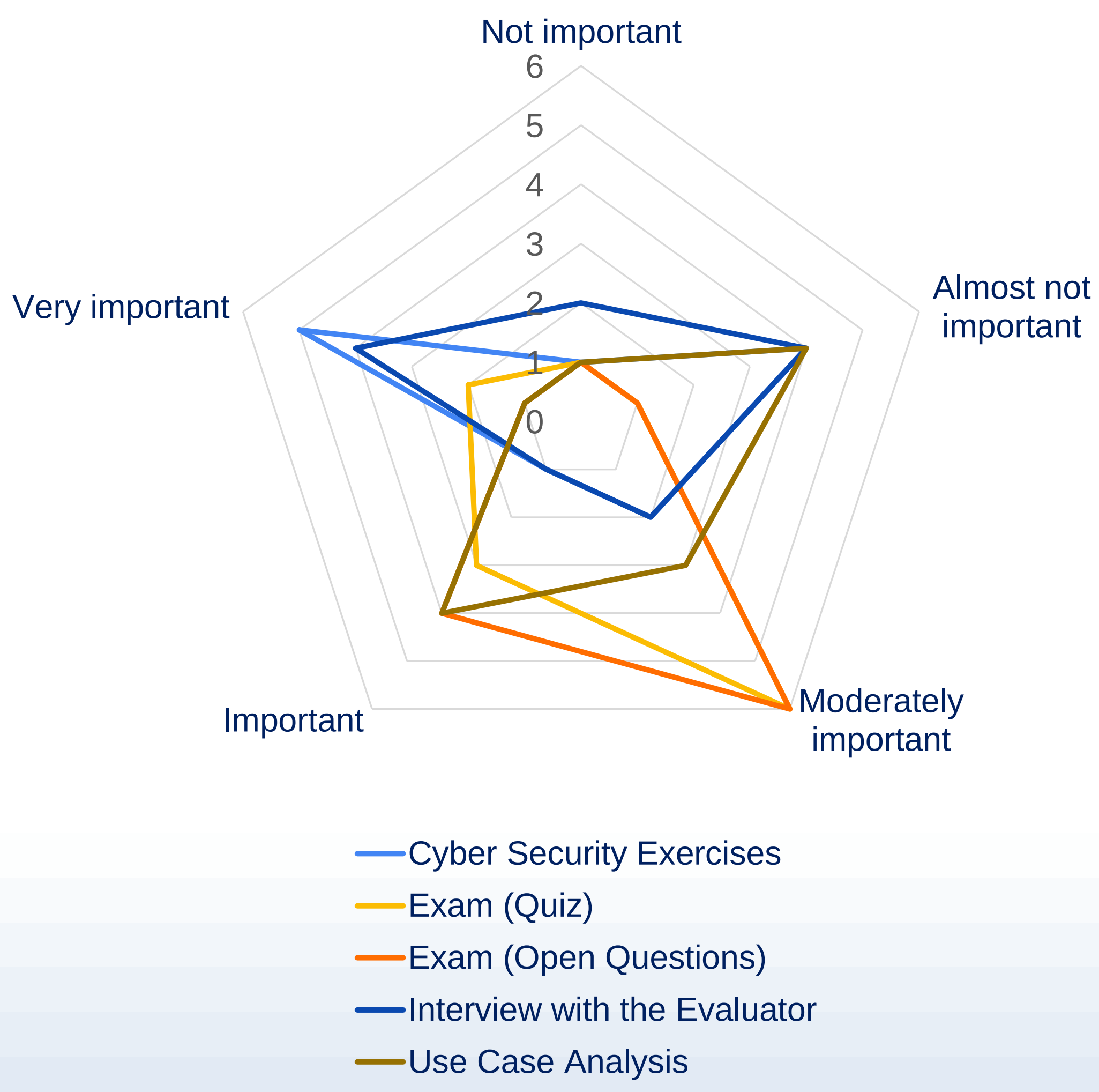

The Importance of the Cybersecurity Competence Assessment Method

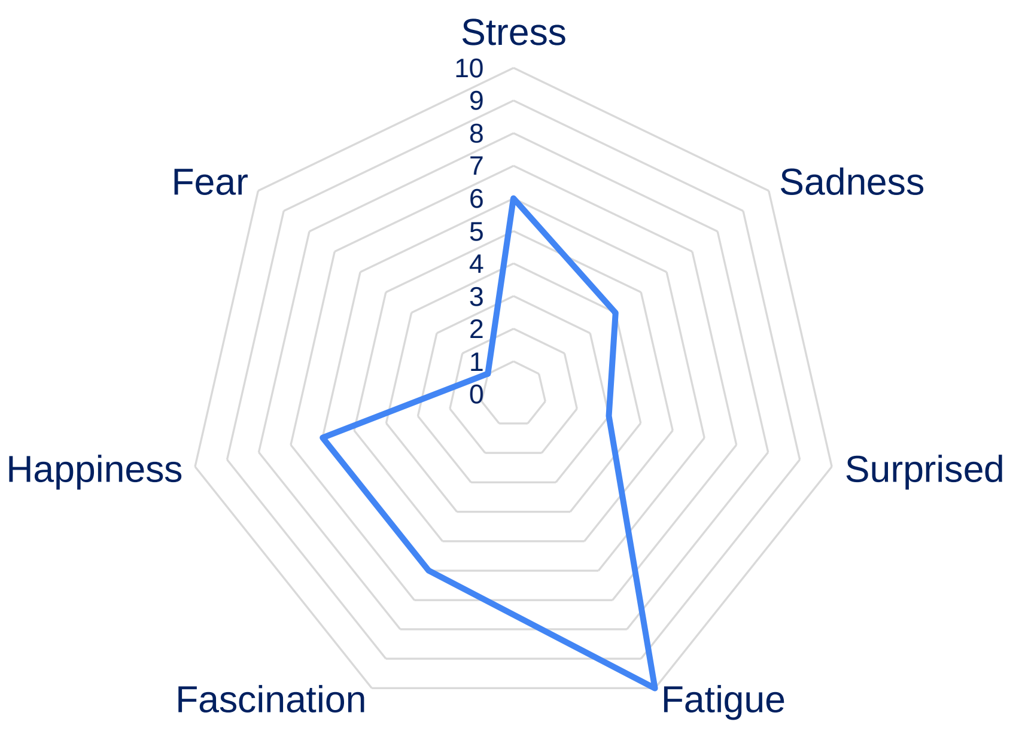

Research on Teamwork

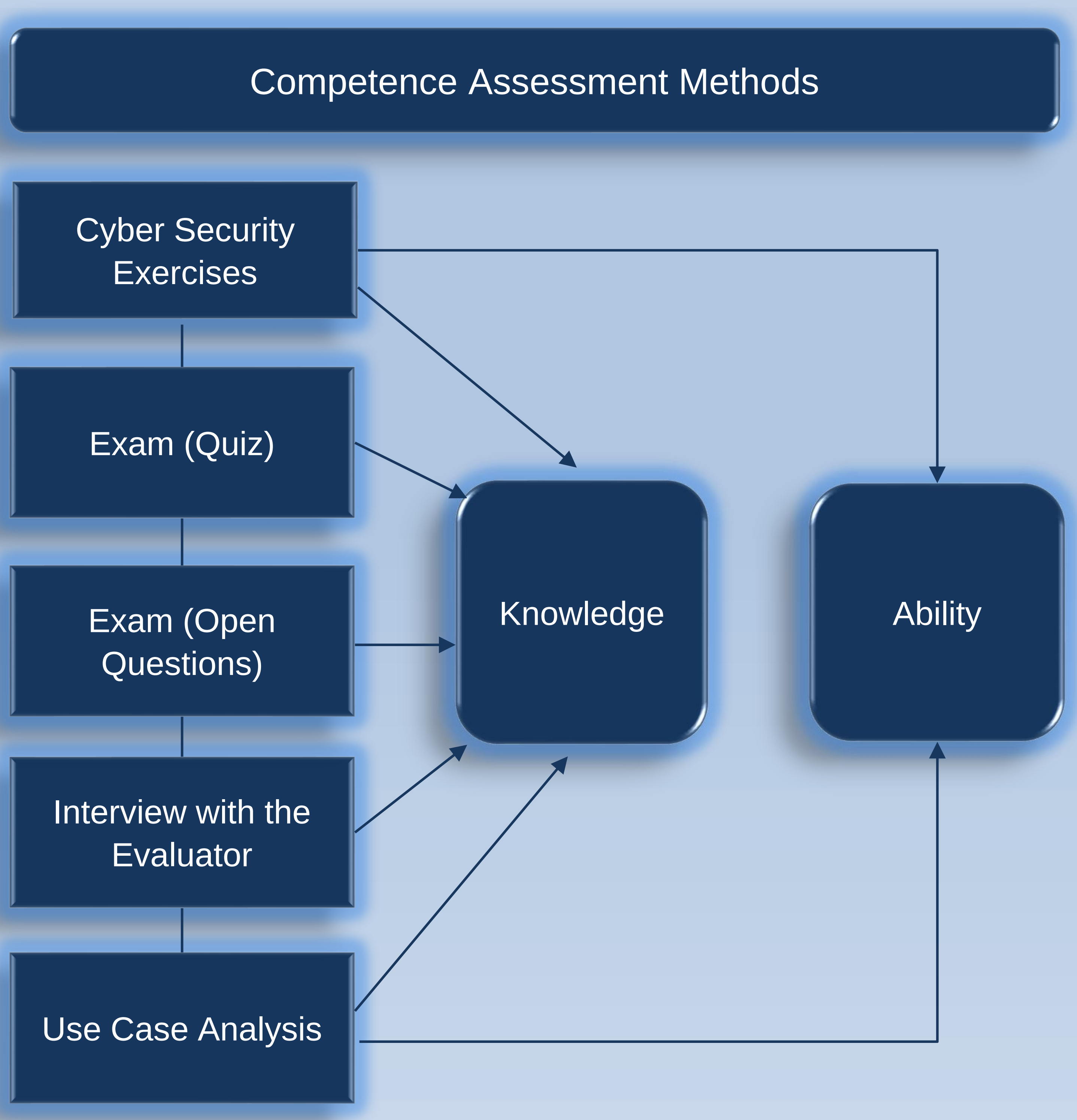

New Competencies Acquired During the Cybersecurity Exercises


Control of the Fear

ANALYSIS OF STRESS AND EMOTIONS


Stress Level During Assessment


Emotions Experence During Cybersecurity Exercises



Bloom’s Taxonomy Level

	Remember	Understand	Apply	Analyze	Evaluate	Create
Cyber Security Exercises	5	5	5	5	5	3
Exam (Quiz)	4	3	2	2	0	0
Exam (Open Questions)	5	4	2	2	0	0
Interview with the Evaluator	5	5	1	3	2	0
Use Case Analysis	5	5	5	4	4	1