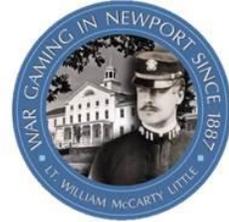




# WAR GAMING

UNITED STATES NAVAL WAR COLLEGE



## **Enhancing Student Learning through Gaming at the Naval War College**<sup>1</sup>

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As a professor in the War Gaming Department and student in the evening fleet seminar program at the Naval War College, I often think about how learning complex subjects - such as strategy and policy, joint military operations, and theater security decision making - can be enhanced, complimented, and facilitated through the use of active cooperative learning techniques - most notably gaming.

While faculty continue to adopt proven pedagogical techniques to enhance student learning, three attributes of future leaders will remain constant; the ability to think critically, analyze complex problems, and understand human decision making. From informing the development of the legendary Rainbow Plans during the interwar years to helping the City of New York examine their collective incident response procedures and processes in the wake of September 11<sup>th</sup>, War Gaming at the Naval War College has empowered leaders for over a century to think differently about problems and make strategic and operational decisions in highly complex and dynamic environments.

Today, professors have access to more information about learning than any time in history. This knowledge has evolved to the point where we can always improve our craft. Effective teaching and learning has changed considerably over the past decade. Rather than relying mostly on the transfer of knowledge from faculty to students through one-dimensional lectures, students and faculty actively collaborate to improve their knowledge, skills, and abilities. Cooperative learning encourages active student participation and creates an environment that involves students making decisions and rationalizing and understanding the effects of their decisions.

There is a growing body of literature that attests to the benefits of active cooperative learning. In fact, meta-analysis of over 600 experimental and 100 correlational studies indicate that active cooperative learning results in higher academic achievement (Johnson et. al., 1998). Felder and Brent (1999) found that you could use active learning to cover the syllabus and effectively apply active learning methods in

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<sup>1</sup> The opinions, conclusions, and recommendations expressed or implied are those of the authors and do not necessarily reflect the views of the U.S. Naval War College, the Department of the Navy, or the Department of Defense.

large classes. By analyzing pre- and post-standardized physics exam data for over 6000 students, Hake (1998) found that students taught with an interactive engagement method retained twice the knowledge compared to students taught using traditional lecture-style teaching. Williamson and Rowe (2002) observed that students are also more willing to ask the instructor questions (in class or through office visits) when taught by cooperative-learning techniques compared to sections taught through traditional methods.

Games come in different forms and are designed to explore and inform specific objectives and research questions. They range from complex, multi-sided technology-assisted games to basic, single-sided seminar style games and board games. This no 'one-size fits all' solution provides faculty from any department the freedom to design and incorporate any style of gaming in their course to enhance student learning. For example, using games to teach and reenact historical battles would enable students to garner deeper insights into the decision-making processes made by historical figures, generate and debate alternative operational and strategic decisions, and enhance their understanding and retention of core course concepts. As demonstrated over the years, gaming can be an effective technique to explore the interrelationship between instruments of national power across the spectrum of conflict, understand how organizations make decisions, and identify force requirements, deficiencies, and risks; all concepts that students study as part of the core curriculum at the Naval War College. Despite students playing in one of the two annual Joint Military Operations Capstone Exercises or participating in the highly selective Maritime Advanced Warfighting School, Halsey or Mahan groups, and Homeland Security elective, they get minimal exposure to cooperative learning exercises (e.g., gaming) during their short stay in Newport.

I increasingly make active cooperative learning exercises a core part of the graduate courses I teach in the areas of social science research methods and national security. In doing so, I notice that students develop higher levels of knowledge, reasoning, and problem solving, forge deeper and more meaningful relationships with their peers, and improve self-confidence and awareness of their own strengths and weaknesses. Active cooperative learning also engages students who otherwise might not participate in class discussions. These personal observations are grounded in student performance on exams and essays, the depth and breadth of in-class discussions, and student feedback from course critiques. By no means am I advocating for removing traditional lecturing from the classroom or eliminating the use of case studies. Both remain an effective way to present information and help students learn from historical events, but relying on these modes of instruction alone can limit many students' abilities to process large amounts of information and think critically about complex problems.

Adding variety in the classroom is a key to understanding for students. Rather than teaching a subject in the same manner over and over again, we should consistently modify our perspective and approach the concept in a different way. Gaming is just one cooperative learning technique that when combined with others, can make learning and teaching an active, effective, and enjoyable way to discover and transfer knowledge in the classroom. Applying this teaching strategy would enhance, compliment, and facilitate the teaching of core concepts covered in the curriculum at the U.S. Naval War College.

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