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# INTEGRATING STEAM IN ENGLISH 8 TO ENHANCE STUDENTS' COMMUNICATION COMPETENCE AND ENGAGEMENT



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## INTRODUCTION

Within the strategic framework of Vietnam’s 2018 General Education Program, English is no longer treated as a mere set of grammatical rules but as a key communicative tool for global integration. Eighth grade marks a vital shift from basic structures to purposeful communication. However, speaking anxiety and passive participation remain significant challenges in rural classrooms. This "communication gap" often stems from a lack of relatable, real-world contexts in traditional lessons. While the Global Success 8 textbook includes "Project" sections designed for active learning, these are frequently overlooked or handled inadequately due to time constraints. Consequently, there is an evident necessity for a more radical, hands-on approach – one where students use English naturally to complete real-world projects. This initiative stems from the need to revitalize the classroom by merging English instruction with the dynamic world of STEAM.

## RESEARCH QUESTIONS

- RQ1:** To what extent does STEAM integration affect Grade 8 students' English communicative competence?
- RQ2:** How does STEAM integration affect students' engagement, motivation, and attitudes toward English?

## THEORETICAL FRAMEWORK

This study is theoretically anchored in the interaction between STEAM education and the 5E Instructional Model. Yakman (2008) conceptualizes STEAM as an interdisciplinary approach that promotes integrative and experiential learning. In our English classroom, this means language serves as the medium for Science, Technology, Engineering, Arts, and Mathematics. Teachers moved away from rote memorization and adopted the 5E Cycle (Engage, Explore, Explain, Elaborate, Evaluate), a constructivist journey that ensures students are cognitively active at every stage.

Furthermore, the intervention is aligned with Vietnam's Digital Competence Framework for Learners issued under Circular No. 02/2025/TT-BGDĐT. Digital tools function not as distractions, but as cognitive amplifiers. By designing technical models or editing media, students move from “knowledge telling” to “knowledge transforming”. Authentic STEAM challenges such as designing a “Safety Map” for natural disasters or an “Invention of the Future”, provide opportunities for meaningful communication while helping to reduce students' performance anxiety.

## REFERENCES

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Ministry of Education and Training. (2025). *Digital Competence Framework for Learners* (Circular No. 02/2025/TT-BGDĐT).

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## METHODOLOGY

This study employed a quasi-experimental research design involving 171 grade 8 students. The experimental group participated in a series of STEAM-integrated projects, while the control group followed conventional instruction. The intervention utilized a systematic **5E-based STEAM** workflow:

**Engage:** Real-world multimedia videos were used to stimulate curiosity and establish authentic project contexts.

**Explore:** Students conducted independent research on thematic vocabulary and technical data using ChatGPT and other resources.

**Explain:** Students clarified concepts and presented preliminary understandings, standardizing the targeted linguistic structures for their specific projects.

**Elaborate:** Students were assigned roles such as *Leader, Researcher, Designer, Presenter* and applied integrated skills to create products via Canva and CapCut.

**Evaluate:** Competence was assessed through pre/post-speaking tasks, student interest surveys, and collaborative rubrics tracking both technical quality and English-language accuracy.

## KEY FINDINGS

**RQ1 (Competence):** The results indicated a substantial improvement. Students reaching “Good” and “Excellent” ratings in communication rose from 35.7% to 65.6%. The rubrics for group work showed that collaboration and creativity scores jumped from 40.4% to 78.5%, suggesting increased use of the target language during collaborative problem-solving.

**RQ2 (Engagement):** The classroom atmosphere shifted from passive to dynamic. Student interest (those rating “Agree” or “Strongly Agree”) rose sharply from 45.2% to 80.9%. Qualitative reflections revealed that students no longer felt like they were just doing homework; they felt like creators, often spending extra time outside of class to perfect their English narrations for their CapCut videos.

Results before and after the intervention

| Evaluation Criteria        | Phase             | Control Group | Experimental Group |
|----------------------------|-------------------|---------------|--------------------|
| Learning Interest          | Pre-intervention  | 44.1%         | 45.2%              |
|                            | Post-intervention | 55.3%         | 80.9%              |
| Communicative Competence   | Pre-intervention  | 35.0%         | 35.7%              |
|                            | Post-intervention | 45.7%         | 65.6%              |
| Collaboration & Creativity | Pre-intervention  | 42.5%         | 40.4%              |
|                            | Post-intervention | 50.0%         | 78.5%              |

## RECOMMENDATIONS

**Teacher as Facilitators:** Teachers should move from information providers to facilitators of autonomous learning.

**Purposeful Digitalization:** Technology should be used purposefully rather than for its own sake. ChatGPT can support idea generation, while Canva can provide visual scaffolding for English output.

**Authentic Evaluation:** Teachers can incorporate Gallery Walks, peer feedback, and product presentations to make assessment more communicative and meaningful while fostering students' confidence, pride, and healthy competition.