

Advancing College and Career Conversations in Middle School through Game Based Learning: Future Quest Island Evaluation Findings

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Research with middle school students has indicated that they are ready to talk about college and careers. However, these students need and desire direct instruction to understand how to prepare for these goals (Hart & Paiewonsky, 2010; Mittendorff, den Brok, & Beijaard, 2010). Future Quest Island (FQI), an online accessible tool and curriculum, was designed to jump-start middle school students' thinking about college and careers and facilitate teacher engagement in college and career conversations for students in grades 6–8.

FQI was piloted for five years in partnership with multiple schools and special educators in 20 educational settings in Massachusetts and Rhode Island. During these five years, project staff collected data from teachers, students with and without disabilities, and families in order to continuously improve FQI and evaluate its impact.

ABOUT FUTURE QUEST ISLAND



FQI is comprised of island locations, including College & Career Cove, About Me Mountain, Social Sanctuary, Video Cave, and My Hut. Each location is designed to meet a variety of curriculum goals and objectives. Each student in a classroom creates their own account and avatar with which, throughout the school year, they explore each of the locations on the island. An accompanying Teacher Toolkit provides a related curriculum and materials for teachers to use in the classroom to expand on students' knowledge about college and careers, self-determination, online safety, and social-emotional skills as they complete the FQI activities.

RESEARCH METHODS

In the final year of the project, 15 schools participated. We focused our analysis on the sites with strongest fidelity, which included 6 teachers' classes.

To measure change in knowledge and perceptions, we collected student surveys on four topics: self-determination, college expectations and knowledge, career expectations and knowledge, and online safety knowledge. Students were instructed to take pre-surveys located on the island at the beginning of the 2017–2018 school year. For the remainder of the school year, teachers implemented the FQI curriculum in their classrooms and students completed activities on the island.

At the end of the school year, students re-took the surveys for post-test data. The FQI team developed its own surveys to assess career and college expectations and online safety knowledge. We used the AIR Self-Determination Assessment to measure students' self-determination.

RESULTS

Most of the significant change from the beginning to the end of the school year was in the college readiness and career exploration measures. On the college readiness survey, there was significant change in 6 of 13 items (see Table 1). Mostly these reflected increased (self-reported) knowledge about college, jobs, and other options for after high school or increased optimism for the future ("I plan to graduate high school," "I have a lot of options for what to do right after high school").

On the career exploration survey, there was a significant change in 9 of 14 items (see Table 2). These changes reflected an increase in career exploration activities (talking to teachers and friends about careers, hearing guest speakers, doing a school project, looking at websites, and finding out about careers) as well as knowledge (being able to define "career" and having a sense how much money people make in different jobs) and optimism ("I have lots of options for my future career").

There was little change in online safety knowledge (1 of 8 items) or self-determination (3 of 26).

Table 1: College Readiness (N=70 students)

	Pre	Post
Rating on a 1-4 scale (1=strongly disagree; 4=strongly agree)		
I plan to graduate from high school*	3.6	3.8
I know what my options are for high school	3.3	3.4
I know what I am looking for in a high school	3.3	3.3
I know what my options are for right after high school*	3.0	3.2
I have a lot of options for what to do right after high school*	2.9	3.2
I have thought about whether I want to go to college	3.4	3.5
I have about the right amount of information about my options for college*	2.7	2.9
I know how much it costs to go to college*	2.9	3.1
I know how much school or training I need to get the job or career I want*	3.0	3.2
Percent answering correctly		
Choose the correct definition for college	41%	40%
Choose the correct definition for trade school	43%	41%
Percent that has...		
Talked to family members about graduating high school	80%	81%
Talked to family members about going to college	77%	84%

* Statistically significant finding, $p < 0.1$

Table 2: Career Expectations and Knowledge (N=66 students)

	Pre	Post
Percent answering correctly		
Choose the best definition for career*	47%	64%
Which of the following is the most important in choosing the best career goal for you as an individual?	47%	58%
Percent that has...		
talked to friends about college and careers*	74%	88%
talked with teachers or other adults at your school about career options?*	69%	82%
heard guest speakers talk about careers at school*	53%	85%
looked at websites and/or videos about careers*	62%	77%
completed a classroom project about career interests*	26%	44%
found out what careers match their interests and skills*	73%	82%
talked with an adult about their job or career	86%	80%
Average rating on a 1:4 scale from 1=strongly disagree to 4=strongly agree		
I know what my career options are	3.2	3.2
I know what job or career I am interested in	3.2	3.3
I have an idea about how much money people make in the careers I'm interested in*	2.9	3.1
I have lots of options for my future career*	3.1	3.3
I have about the right amount of information about my career options.	2.8	3.0

* Statistically significant finding, $p < 0.1$

DISCUSSION

These findings suggest that the FQI curriculum is having an impact on exposure to, knowledge of, and thinking about college and careers for middle school students with and without disabilities. The fact that most changes for students were in the college and career topic areas is consistent with the project's focus over the past few years on building up content in those areas. Other evaluation mechanisms, including interviews with students and teachers and surveys of teachers, consistently showed college and career knowledge and exploration to be strengths of FQI.

Building on these strengths, the next iteration of FQI, Future Quest Island-Explorations (FQI-E), will be a game-based, personalized learning curriculum for upper elementary students that focuses on college and career awareness, self-concept, and social-emotional skills. The FQI-E curriculum embeds student agency and the evidence-based Possible Selves framework aligned to national standards of the American School Counselors Association and International Society for Technology Educators.

Through qualitative research findings, administrators and educators emphasized the need to begin college and career exploration in elementary school to encourage and prepare students for successful transition to middle school, high school, and post-secondary options. With FQI, we have made progress toward that goal. We look forward to engaging and empowering a broader range of students as the project continues to evolve.

Think College



FAST FACTS, Issue No. 23, 2019

FAST FACTS is a publication of Think College, a project of the Institute for Community Inclusion at the University of Massachusetts Boston, funded by a grant from the Office of Postsecondary Education (Grant No. P407B100002). The opinions contained in this document are those of the grantee and do not necessarily reflect those of the funder.

Recommended citation for this brief: Shepherd, J., Sulewski, J., and Zalewska, A. (2019). *Advancing College and Career Conversations in Middle School through Game Based Learning: Future Quest Island Evaluation Findings*. Think College Fast Facts, Issue No. 23. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

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