To Boldly Go:
Instructional Technology and Environmental Science

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EXECUTIVE SUMMARY

In an effort to help special needs students in the classroom, many teachers work very hard to differentiate curriculum for their struggling students. According to A Nation Deceived (Colangelo, Assouline, & Gross, 2004), the one group of students in American schools who make little or no yearly progress are the gifted students in the classroom. Enriching the curriculum for gifted students does not appear to be a high priority for teachers (Horne & Shaughnessy, 2013). Increasingly, teachers turn to the computer to provide independent work for students, relegating education to a solitary endeavor. Social skills and collaboration are traits encouraged in many classrooms. Instead of isolating gifted students, technology can be integrated into instructional strategies in order to enrich the curriculum for all students. Enrichment can become an integral part of instruction. Technology can create learning environments that challenge gifted students.

SETTING THE STAGE

"Captain, an incoming message has been received."
"On Screen"
The Admiral's face filled the large screen. "Attention"

The room immediately quieted. All eyes turned towards the screen as everyone snapped to attention and saluted the screen.

The Admiral glared round the room. "That's better," he snapped. He paused, and then continued, "At ease. Captain, StarPoint received your last report. You are about to enter a sector of space that has recently been explored by a scout ship. We would like you to divert your ship to the Galation Planetary system. The scout ship has compiled a data report of each of the five planets in this system. Your science crew is to review the data reports of each planet. Using the data, determine which planet would be best for colonization or mining. You will be arriving in the planetary system in two days. As you know, a decision to colonize in this system cannot be determined by data alone. StarPoint would like members of your science teams to shuttle to the planet's surface and explore. The recommendation of your team should be sent to StarPoint with available information and a variety of reasons to determine if it would be acceptable for colonization or mining. The data reports will be beamed to your ship computer. This is an important mission and StarPoint is looking forward to your Report.

"Aye, Aye, Admiral."

The Admiral's face faded from the screen.

The Captain pulled the Data reports folders off the desk, darkened the screen, turned to her crew, and dismissed them for recess.

"After recess", she reflected, "The students should be ready to look at the top secret reports."

BACKGROUND

What message does it send to a student to be assigned a project on the computer and sent to research independently while the teacher works with the rest of the class? How connected is the student to the rest of the students when engaged in solitary projects, reports, and online activities? Gifted students are often left to be solitary learners in social classrooms. Expected to teach themselves, with minimal guidance, learning can become an individualized experience in the classroom with distance education courses often providing a means for connecting and learning (University of Plymouth, 2006). Yet, although many gifted students are likely to be introverted (Silverman, 1986), students need social interaction.

Educational and Social Needs of Gifted Students

Gifted students are a unique group of students who have educational needs that are rarely being met in the classroom (Colangelo, Assouline, & Gross, 2004). Teachers (White. 1993) usually misunderstand divergent thinkers, whose instruction should

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