The educational research framework

The Future of Technology and Science Education in Saudi Arabia Topic: The future role of technology in secondary school, education in Saudi Arabia.

Research problem: What is the role of technology in secondary school, science education in Saudi Arabia? What technological innovations would it be most beneficial to add?

Statement of problem: Historically, education in Saudi Arabia has neglected science and technology as subjects of education and tools for education. Instead, it has emphasized religious training and education. According to Caryle Murphy, " many Saudis attribute the new stress on science to King Abdullah bin Abdul Aziz, who even before becoming king in 2005 was urging more attention to science and math in school curricula." (Murphy, 2010) This is the goal.

Technology is one of the important pillars to access to knowledge and sharing information and experience between science students and scientists around the world (Balanskat, Blamire, & Kefala, 2006). Therefore, it is important to integrate technological innovation into this new emphasis on science education. At present, schools in Saudi Arabia still use traditional ways to teach science subjects. This makes science learning very hard and boring to students.

The education of science in Saudi Arabia should include many ways to learn science, such as the internet. Using the internet in education can lead to many benefits for the students and teacher because it impacts on education and training systems by revolutionizing education in all levels and offering increased interaction and effectiveness in learning (Al-Sadan, 2000). In addition, these new technological tools such as the Internet, virtual classrooms forums, and discussion boards as well as up-to-date laboratory

facilities will enable science students and professionals to share information and knowledge with ease and have significant impacts on science education.

The Journal of Science Education and Technology offers many articles detailing the ways that science education can benefit from technology. Also, the ICT Impact Report explains the way that education in the European Union uses new technology. It will provide many examples of how new technology could be applied in Saudi Arabia.

Research questions:

1. How do secondary science students in Saudi Arabia perceive the usefulness of technology in learning science?

2. What technologies do they find most useful?

2. How do secondary science teachers in Saudi Arabia perceive the usefulness of technology in teaching science?

3. What technologies do teachers find most useful?

4. What technology do teachers and students think would be most useful to add to the teaching of science in Saudi Arabia?

Research Methods

I will use three research methods to answer these questions. I will use a survey of secondary school teachers and students that addresses my research questions.

I will use personal interviews of some of the subjects in the survey to add details to the survey answers and determine why they find certain technologies useful and why they think other specific technologies should be added to the teaching of science in secondary schools in Saudi Arabia. This will give me a clear view to understand the problems.

Third I will use a two part literature review. I will review literature about the use of technology in teaching science in other countries. For this I will review Journal of Science Education and Technology and document like The ICT Impact Report. Also, I will review Kingdom of Saudi Arabia government documents to determine what the government wants to achieve in technology in science education and what it is doing to achieve those goals.

References

Al-Sadan, A. (March 2000). Educational Assessment in Saudi Arabian Schools. Assessment In Education: Principles, Policy and Practice. 7: (1), 143 – 155.

Balanskat, A., Blamire, R., & Kefala, S.(2006). The ICT Impact Report. http://ec. europa. eu/education/pdf/doc254_en. pdf. Retrieved October 20, 2010.

Journal of Science Education and Technology. Volume 1 / 1992 - Volume 19 / 2010.

Murphy, Caryle. (October 12, 2010). " Saudi Arabia maps genome and educational future". Global Post. http://www. globalpost. com/dispatch/education/101011/saudi-arabia-science. Retrieved November 11, 2010.