Liberating Educational Technology Through the Socratic Method

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INTRODUCTION

Digital literacy and technology are instruments for human communication and behavior (Lemke, 2010). The skills and attributes the human person needs for responsible citizenship, and work-performance, is being re-defined by, what Dede (2010) called "information and communication technologies." In the educational world, November (2012) claimed that a revolution is happening where teachers are harnessing the uses of technology in their courses. Moreover, the influence technology is having on society is fundamentally changing the nature and functions of schools (Lever-Duffy, McDonald, & Mizell, 2010). While one should celebrate the positive results of the role technology has given students in their educational endeavors, our celebration must be tempered with caution. Recent research suggest that suggests that technology, in the form of laptops, has not raised student achievement in any significant way (Goodwin 2011; Hu 2007). If this is the reality that confronts us, we are then pressed to respond. The question for educators is what kind of response? What are the answers to this problem that seems to be growing? This chapter, per the author, suggests that a return to something used in antiquity may be the answer. This chapter explores the use of the Socratic method as a teaching technique that can give direction to the lack of pedagogical vision in the great One to One debate currently confronting schools.

BACKGROUND

In 2009, Arne Duncan, U.S. Secretary of Education exhorted public schools nationwide to implement technology in public schools (Lemke, 2010). He indicated at a national consortium that "good teachers can utilize new technology to accelerate learning and provide extended learning opportunities for students" (Lemke, 2010, p. 245). As one example of this desire to increase educational technology, schools began to invest millions of dollars in One to One laptop programs (Goodwin, 2011).

However, even before this speech by Duncan, issues were raised concerning One to One laptop programs. Hu (2007) indicated that school districts in New York and elsewhere were seeing One to One laptop programs as major obstacles to student learning. As early as 2007, the United States Department of Education found that there was "no difference in academic achievement between students who used educational software programs for math and reading and those who did not" (Hu, 2007). Studies in Texas and Michigan showed mixed results in student achievement when it came to the effectiveness of laptop programs (Goodwin, 2011).

One cannot also discount the influence teaching has on successful laptop programs (Stansbury, 2010). Studies published in the *Journal of Technology, Learning and Assessment* at Boston College's Lynch School of Education indicated that "the most important factor of all is the teaching practices of instructors – suggesting school

laptop programs are only as effective as the teachers who apply them" (Stansbury, 2010). This is further confirmed from results of a recent study of 997 schools in the United States indicating that one of the factors that added to successful laptop programs was teacher training (Goodwin, 2011).

Hence, educators must seize upon the notion that before laptops are given to students, a commitment to teacher training is needed (November, 2010). Norris and Soloway (2010) echoed this sentiment; they wrote: "To make the computer an essential tool in the classroom, and thus to realize the potential value added from technology, we need to redefine the curriculum in terms of what gets taught, and we need to redefine how it gets taught" (p. 1).Indeed, Pearlman (2010) made the bold claim that simply putting computers in the hands of students is not a solution, but actually "reinforces the old teacher-directed whole group instruction" (p. 127). The common experiences of schools that have embraced laptop programs has been to add on the technology to the same lesson assignments, instead of changing the nature of the lesson assignments. Students have been given the technology, but the lessons have not changed, resulting in the laptop becoming high-priced notebooks (November, 2010).

THE SOCRATIC METHOD

Socrates continually asked insightful questions that reflected the reality that learning came from within (Cookson, 2009). This can be an important teaching technique. As Paul and Elder (2007) noted,

Teachers, students, or indeed anyone interested in probing thinking at a deep level can and should construct Socratic questions and engage in Socratic dialogue. The purpose of using Socratic questioning in teaching may be to probe student thinking; to determine the extent of their knowledge on a given topic, issue, or subject; to model Socratic questioning for them; or to help them analyze a concept or line of reasoning (Pg. 36).

To fully articulate this argument, we first turn to a working definition of the Socratic method. While various definitions exist, the chapter, per the author, puts forth the following,

In the Socratic method, the classroom experience is a shared dialogue between the teacher and students in which both are responsible for pushing the dialogue forward through questioning. The "teacher" or leader of the dialogue asks probing questions in an effort to expose the values and beliefs which frame and support the thoughts and statements of the participants in the inquiry. The students ask questions as well, both of the teacher and each other (Reich, 2003) (P. 1).

The intention is to advance the discussion through dialogue and to uncover, dissect and critically examine accepted positions. This is fundamentally done through thought-provoking and specific questioning. This is clearly the way of Socrates (Cookson, 2009). He [Socrates] would engage his students through questioning and examination of beliefs (Gose 2009; Morrell 2004). This kind of dialectical practice that Socrates espoused leads one to the "good life" (Yengin and Karahoca, 2012). According to Cookson (2009) ultimately, Socrates

Believed learning came from within and that the best and most lasting way to bring latent knowledge to awareness was through the process of continual questioning and unconventional inquiry. For Socrates, answers were always steps on the way to deeper questions (P. 1).

Socratic questions are broken down into basically three kinds: Spontaneous, Exploratory and Focused (Paul & Elder, 2007). The spontaneous question is motivated from a genuine curiosity on the teacher's part. They are unplanned and arise from conversations that take various paths. Examples could be asking for evidence, asking for others opinions on a given topic, or examples based on a point made during the discussion.

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