Reflective Paper: Teaching Research Skills to High School Seniors

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   This reflective paper will explore the issue of teaching research skills to high school seniors. It will examine these issues: what are the research skills that high school graduates need and to what extent are those skills lacking, why is there a need for improved research skills among students graduating from high schools, and what are the best ways for the students to learn these skills. The teacher-librarian's, (or school librarian/media specialist's) role in each of these elements will provide focus to this examination.

   The foundation for this inquiry has been clearly stated by the American Association of School Librarians in their *Standards for the 21st Century Learner* (2007). Numerous national and state agencies, organizations and departments of education have, in documents like *The Common Core Standards for English Language Arts* and *Guidelines for Pennsylvania School Library Programs* (2011), have asserted the primacy of the *Standards'* recommendations.

   The *Standards* provide a clear definition of research. Beyond the core described in the *Standards*, there are a number of specific intellectual, attitudinal and procedural components that make up the crucial set of research skills. O'Sullivan and Dallas (2010) mention the need for students who can "evaluate and analyze information, and use it to solve real-world problems." The Eberly Center for Teaching Excellence at Carnegie Mellon University has said

that research is a complex skill calling for a variety of sub-skills that include procedural knowledge (for example, how to use a database), critical thinking (when evaluating search results), and strategic analysis (as when deciding which procedures and tools are best for given research questions). So, for high school seniors, research is not only a task given by teachers in order to produce assignments, it is a key path to learning, and the many skills that are used for research include both mental tools and attitudes that foster life-long learning, and specific techniques for the procedures of research.

A report by Pew Internet/Pew Research Center (Purcell et al., 2012) which used a survey of over 2,000 AP and NWP high school teachers, found that most teachers rated their students only good or fair at specific research skills. The great majority of the teachers surveyed reported that students relied too heavily on search engines, that their critical thinking powers were sub-par, and that universal, uncritical internet use had made students far too comfortable with "borrowing". O'Sullivan and Dallas (2010) state that high school grads need "higher-level" skills in the areas of information gathering, communication, critical thinking and problem thinking when they enter university and that there is a "skills gap" between the expectations of the post-secondary academic world and the high school. They point out that the research expectations of high school classes, (to produce reports), and university/college classes, where complex research requiring critical thinking is needed, are "fundamentally different" and affirm that college freshmen are underprepared for the research

required of them. In some cases, university students lack research skills that are particular to certain fields of study. One common example is the lack of the mathematical skills to handle statistics in social science courses – higher-level mathematics is not a prerequisite for either admission or for the particular course, but lack of the skill makes research impossible (Payne and Israel, 2010). That problem can be extended and stated as a principle: a proven grounding in research skills is not required to enter university, but weakness in those skills makes university research very difficult.

Naturally, weaknesses in research skills impact high school seniors in their high school learning as well as in their post-secondary prospects. Purcell et al. (2012) note that most teachers assign at least one research paper (and that students overwhelmingly rely on Google, Wikipedia, and YouTube as their main resources!). Students who lack the fundamental research skills and aptitudes spelled out in the AASL *Standards* will suffer, not only in the research they perform in high school, but also, since those mental skills underpin all learning, in the rest of their schooling and in the process of life-long learning.

How can students learn the crucial research skills they need? The answer lies in the school library, and in the role of the teacher librarian. School libraries are the information resource hubs of the schools. They are the spaces most likely to contain the physical resource collections and the connections to online resources that students need. Most importantly, the school library is the

headquarters of the school librarian/media specialist, the person who can best provide the expertise to impart those skills to students.

The number of possible approaches to teaching research skills is as great as the number of different Grade 12 classes undertaking research, but the general method most likely to succeed is a collaborative method, with the school librarian working together with the classroom teacher and the students, teaching research skills while actually undertaking research. O'Sullivan and Dallas (2010) describe a high school research paper class, where students produce a major research paper step-by-step, working through a systematic research process that emphasizes at each point the analytical and technical skills needed. This approach is probably less common than teacher librarians cooperating with individual teachers on selected units, working both in-class and in-library to guide the students into the steps that will enable them to research their assignments at the appropriate level of rigor and critical thinking.

In this author's reference work in a university library, the most common experience with freshmen has been trying to help them through their frustration and bewilderment at the requirements of research. Though university library (and teaching) staff can (and often need to) help students with both individual assistance and intentional, class-wide instruction, the better place to teach those crucial research skills is in the schools, with the highest level of instruction given to high school students. The best person to give that instruction in collaboration with the classroom teacher is the school librarian/media specialist.

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