

# Advanced Research Projects and their Benefits to Gifted Secondary Students

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Advanced projects provide exciting opportunities for gifted youth to learn beyond school settings and to acquire scholarly techniques for the future. Though few gifted students currently conduct college-level research projects, their secondary inquiries can positively shape their participation in collegiate and professional research (Powers & Tiffany, 2006). Specifically, these youths' secondary-level participation in major research projects can lead to their in-depth investigation of social and other problems, to their evolution toward in-depth and transformative knowledge (Rodriguez & Brown, 2009), and to their community-mindedness as scholars and citizens (Powers & Tiffany). Like many high-potential students, I benefited from a major research effort that enhanced four skills often stressed in advanced secondary-school research programs: completing work, taking notes, managing time, and asking for help.

## **A Research Project that Could Make a Difference**

As a high school sophomore, I participated in the Minnesota Department of Education Scholars of Distinction Program, with the hope that I might learn a range of high-level competencies important to my academic future.

I was not disappointed with the program's rigor or outcome. In Scholars, high school students learn to think as a scholar in Leadership, Mathematics, Science, Social Studies, STEM, or Theater Arts. Scholars' students carefully craft a thesis, conduct research, note conclusions, and write a paper on their findings. For my project, I investigated why Norway is a top nation for youths' nutritional health. Always interested in health sciences, I had become increasingly aware of my own Twin Cities suburban school's poor eating habits—practices far different from those of Norway. After observing my peers' unhealthy eating for years, I wondered how Norway had become a leader in health for teens. Throughout my project, I identified five ways in which Norway had promoted healthy teen eating: 1) cultural traditions, 2) school promotion, 3) governmental practices, 4) home promotion, and 5) a broad-based spread of dietary knowledge. Throughout this eight-month project, I learned valuable work completion, assistance taking, schedule management, and help seeking skills.

## **The Positive Challenge of Completing a Major Project**

As a pianist, guitarist, and flutist, I knew the discipline needed to finish others' artistic works. However,

I had little idea of how to undertake and finish a major creative-art or research product myself. My Scholars project was a large, high-level inquiry that was not for everyone, but it was for me. By engaging in such a huge project—and by finishing it without giving up, even though I sometimes wanted to—I proved that I could finish something important. Finishing activities is not only possible but also essential for gifted children (Rimm, 2005). Rimm holds that students can and should finish all kinds of research projects, boosting their confidence and intrinsic motivation for later inquiries. According to Robinson and others (2009), gifted children especially benefit from intrinsic motivation; and that motivation, along with specific skill factors, can enhance their future creative outcomes. Finishing the Scholars project helped me later in high school because it gave me the confidence to undertake larger, more complex projects intended to expand my knowledge and creativity. These projects included English papers, for which I had to locate and then weave various sources into argumentative essays; and Biomedical reports, for which I had to diagnose patient symptoms and then incorporate those wide-ranging characteristics into a single case study.

## The Notable Benefits of Notes

From the beginning, as I strove to complete my project, I needed to develop a comprehensive note-taking system and, like many recently motivated students, I actually figured out a workable approach. I have always loved organizing my planners and notebooks with different colored gel pens, so I felt very happy to incorporate color into my research notes. I coded the five project themes with varied colors and then wrote numbers by the colored notes so that the notes, in each highlighted section, would tell a story. In my system, yellow signified cultural traditions, pink represented school practices, blue showed governmental traditions, orange signified home promotion, and lavender revealed diffusion of dietary knowledge. In the yellow section, I numbered my notes from 1 through 23, all telling a chronological story of how cultural traditions supported healthy eating among all Norwegian teens. As I became better at note-taking, I shaved down my sectional note time for each colored portion, and achieved what I once considered unthinkable: I began to enjoy note-taking! By taking notes in school, even with self-devised systems, students incorporate needed facts and organize them in a way that pleases both them and the reader.

## Starting a Project Early and Reaping the Successes

To excel at Scholars, I had to learn to achieve effective note-taking—as well as other needed skills—on a timeline. Managing time is essential to gifted youth's lives (Rimm, 2005). Prior to Scholars, I had done everything at the last minute. I regretted it, and my parents got mad about it, but my agony created little improvement. When the next project came along, the cycle started all over again. My struggles occurred so many times that I became a master at winging projects and getting A's. This scenario could never happen with my large Scholars project. I had to start very early—in July, eight months ahead of the project's due date—and then labored consistently on it. Initially, eight months seemed like an eternity. However, I soon found how organizing and conducting research tasks takes some time.

I took several days to devise a schedule of articles for each project week and followed that investment of time with a schedule for my coloring and numbering of the five sections of notes. Such coding and outlining of specific tasks can be an important project activity for gifted students. Early planning, especially when practiced in self-organized and self-executed academic projects, can allow some gifted students to better control their overall lives. By planning their academic lives better, these students can sometimes begin to assume more control over their behavioral, social, and emotional lives (Sayler & Brookshire, 1993). Learning how to allocate time for a large paper certainly helped me to organize the rest of my weekly schedule. I was better able to assign time for schoolwork, extracurriculars, activities, and just being a teenager with my friends. I was also more efficient in doing my teachers' individual assignment. Instead of writing a large English essay the night before, I spaced it out and gave my teacher the best possible product. Even with all my coding, outlining, and advanced time management, I'll admit that I procrastinated on my Scholars project; but not as much as I had with similar work in the past.

## Being Bold Enough to Engage Help

To stay on top of my notetaking, time management, and other skills, I had to ask for assistance. I'm a bit shy, so I often try to figure things out myself rather than ask others. However, by taking the risk to inquire, I learned that it's not that big of a deal to get help. For example, I asked a Norwegian mentor for assistance in distinguishing, within her country, between a cultural tradition and a government policy, and between a school and a home practice. Although I was afraid of rejection, overall, I found that I was richly rewarded for such "abstract" questions. Understanding that different creative approaches are appreciated in different skill domains, I also integrated multiple perspectives into my project. In pursuing dynamic new perspectives in my project, and in seeing my teachers and mentors responding supportively, I learned that I probably was not bothering my teachers and mentors as much as I had previously thought. By the end of my project, I had checked back with each of my many reviewers to make sure that I had included all important, traditional, and non-traditional perspectives on teen nutritional health, including those derived from a Norwegian dietary expert, a parent, teacher, counselor, and principal. All were willing to help, verifying that there was no harm in asking!

## Six Tips for Teachers Who Wish to Stimulate Research Interest in their Students

- ▶ **Find right-sized opportunities**—neither too large nor small—for developing students' needed research skills.
- ▶ **Help students to start early** so they finish on time by checking in with them intermittently, and emphasizing their successes along the way.
- ▶ **Brainstorm note-taking systems** that might help students efficiently but comprehensively cover project material.
- ▶ **Devise time management systems** that guarantee youth enough time to finish tasks.
- ▶ **Locate some mentoring educators, content experts, and/or parents** who may be willing to help with projects within their areas of expertise.
- ▶ **Reflect with students about what was learned from the inquiry experience.** Follow-up with them about what went well, and what could have been better. Provide directions for future research if the student is interested.

This experience of validation from more knowledgeable others is important to students' long-term progress because they are learning early on that asking for help is not a bad thing, but actually is very beneficial. Each time, the process of asking becomes easier, until students are able to comfortably approach their teacher for help or even someone whom they admire but have not contacted before. Students will be able to learn more from these professionals and gain more outside experiences.

Thus, in my Scholars of Distinction research project on Norway's healthy eating habits, I learned many important skills. With the enhanced ability to finish my work, take notes, self-manage, and seek assistance, at age 15, I will certainly be better-positioned to use them

in my future college and professional careers. **THP**

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#### Resources for Teachers to Learn More about Advanced Research Efforts

- Davidson Academy. (2018). *Davidson Scholars Program*. [www.davidsongifted.org](http://www.davidsongifted.org).
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- Rodriguez, L. F. & Brown, T. M. (2009). From voice to agency: Guiding principles for participatory action research with youth. *New Directions for Youth Development, 123*, 19-34.
- Sayler, M.F., & Brookshire, W.K. (1993). Social, emotional, and behavioral adjustment of accelerated students, students in gifted classes, and regular students in eighth grade. *Gifted Child Quarterly, 37*, 150-154.

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tive strategies. Additionally, the National Association for Gifted Children ([www.nagc.org](http://www.nagc.org)) has avenues to assist educators and parents with nurturing and developing the social and emotional needs of gifted learners. Moon (2008) suggested personal and social developmental tasks for K-12 gifted youth.

Beyond the targeted grade level cluster strategies, there are several social-emotional strategies that can be employed across K-12 classrooms, are inter-disciplinary, and be implemented in a variety of settings. Three of them are journaling, bibliotherapy, and discussion groups.

#### Journaling

Journaling is a metacognitive reflection to stimuli. It serves as a record of students' thoughts, progress, interpretations, and as a conduit between the mind, environment, and emotional reaction. According to the field of positive psychology, journaling has many benefits. Among over 80 cited benefits ([positivepsychology.com/benefits-of-journaling/](http://positivepsychology.com/benefits-of-journaling/)), journaling can be an effective tool to reduce symptoms from post-trauma (e.g. Coronavirus) and assist with stress management, processing difficult emotions, and creating personal growth. Journals should not be graded, but used as an outlet for student expression.

#### Bibliotherapy

Using literature to support mental and personal well-being is an effective strategy when working with gifted learners at any age. Students can gain personal insight through the characters' struggles and resolutions. Even though gifted learners may be intellectually ahead of their peers, socially and emotionally they are likely to be at the same level. They are prone to feeling emotions and may need help managing

problems that they cannot solve intellectually. Bibliotherapy can be used to explore a variety of issues from giftedness to peer relations to anxiety and perfectionism.

#### Discussion Groups

Having students participate in small discussion groups around topics of personal interest is an effective strategy for allowing oral processing of issues, events, and interests. Discussion groups should be facilitated with equal participation, students trusting each other to speak openly and frankly, and with enough time to allow students' thoughts to be fully explored and validated.

Employing targeted social emotional strategies embedded in curricular approaches is a critical component of connecting students' personal self to others and content. It increases emotional health and well-being. It promotes holistic development of gifted learners, allowing for balanced attention to cognitive and personal growth. On the heels of a world gripped by the COVID-19 pandemic, being strategic about incorporating strategies to promote personal, emotional, and social growth may be the most important thing we can do as teachers. **THP**

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