Section 1

Introduction: GED as Project

What we know about teaching and learning expands daily. While the process remains somewhat mysterious, we do know that, for adults and children alike, sitting in rows, listening to an instructor and filling in worksheets is not the most effective way to learn content or develop the higher order thinking skills of analysis, synthesis and evaluation.

Many GED learners entering the classroom anticipate learning their math, reading, writing, science and social studies in just that traditional style. However, *GED as Project* offers a different vision, embracing what we know about enhancing higher order thinking skills, using the content and material of the GED.

What Is GED as Project?

> *In its simplest form, project-based learning involves a group of learners taking on an issue close to their hearts, developing a response, and presenting the results to a wider audience.* (Heidi Spruck-Wrigley, 1998)

GED as Project gives instructors an approach to learning in the context of the GED. It is based on sound educational and cognitive research that are valuable to adult basic educators and the GED 2002 learner. To implement this approach, we use Learning Projects to help the student achieve success on the GED. Each Learning Project is broken down into manageable Inquiry Activities, helping the learner meet the objectives of each Learning Project and, ultimately, to meet the objective of passing the GED.

Project-based learning is a learner-centered, problem solving, inquiry- and skill-based experience that promotes analytical, creative and practical thinking, integrating content and skills. It allows for exploratory and discovery learning, where the learner constructs meaning for him/herself. For adults pursuing the GED, the often lengthy and complex tasks make a worthy project: GED preparation and skill acquisition. The projects are centered on the content of a GED practice test and the test-taking and thinking skills needed to succeed at passing the GED. Project-based learning recognizes the need for establishing background knowledge, linking learning to experience, achieving personal growth, and applying knowledge and skills to many different areas of our lives.

For the adult seeking the GED, many different aspects of achievement exist, often providing means to other ends, in addition to its being an end in itself.

GED as Project takes full advantage of the learner's desire to achieve the goal of passing the GED exam, placing the test and its content at the center of the project to be undertaken. Passing the GED is the context within which cognitive and problem-solving skills are developed.

Implicit in any project undertaken by any group are skills for structuring the interaction and pursuing the goals. A leader or a facilitator will almost always be needed. Initially, the instructor will design the Learning Projects and Inquiry Activities that make up *GED as Project*. As learners gain increasing familiarity with the approach, design and facilitation of the Learning Projects, learners and learning groups will gradually take on more responsibility for developing Learning Projects and Inquiry Activities.

All of us have pursued projects in our lives, both large and small. Like many projects, obtaining a GED is a more complex task than it may initially appear. Often, when adults enter a GED preparation program, they are not fully aware of all that is required to pass the test. Learners don't often know how the test is administered, how much time the test takes, what subject areas are addressed, how the subjects are tested, and what skills they will need to be successful. By pursuing *GED as Project*, learners not only come to understand the scope of the GED exam, they begin to develop the skills necessary to achieve academic success, building on and relating their efforts to the other successful projects they have pursued in their lives.

Thinking And Problem Solving

The revised content and approach of the GED 2002 expands the testing of higher order thinking skills, according to the GED Testing Service and other sources.[1] For instance, a marked increase in the use of graphics and visuals in the Math, Social Studies and Science tests requires both evaluation and synthesis of material. Throughout, more workplace-oriented documents and questions address life skills and problem solving. Further, questions in Language Arts-Reading favor analysis rather than literal comprehension. Science has a significant increase in application questions. Math will also introduce the use of calculators, standard grids and coordinate planes, all of which will require basic problem solving skills.

Therefore, preparation for the GED 2002 must center on not just knowing content facts, but on the understanding, application and analysis of the content material. Instruction must extend beyond recall of restricted content to develop broader, more transferable performances by learners in the test-taking situation, as well as in their everyday lives. The instructional approach offered in *GED as Project* attempts to facilitate that. The inquiry process focuses on:

- Asking questions
- Planning, assigning and performing the investigations
- Seeking to understand
- Sharing with others
- Reflecting and evaluating.

Each part of the process is essential to successful test taking, but, more importantly, all are necessary for successful living.

Successful Intelligence

What makes a person successful? How do successful people navigate life? Sternberg's theory of intelligence, or the Triarchic Model, posits three types of intelligence: analytic, creative and practical (Sternberg & Grigorenko, 2000), as follows:

- Analytical ability is used when a person analyzes, evaluates, compares and contrasts
- Creative ability is used when a person creates, invents or discovers
- Practical ability is used when a person puts into practice, applies, or uses what he or she has learned (p. 11).

Traditional schooling has long been strong in recognizing, developing and assessing analytic thinking; however, schooling has not routinely prized, recognized or developed creative or practical thinking. Yet all three are needed for success in life. Sternberg's research has shown that teaching to develop all three types of thinking can enhance performance on standardized and high stakes tests (Sternberg, 2000).

Adults who have not graduated from high school may not be academically inclined, but they have often become strong practical or creative thinkers. By adopting a Successful Intelligence approach to instruction, we will be encouraging learners to use their creative and practical thinking abilities, as well as developing the analytic approach in their efforts to pass the GED 2002.

Integration Of Content And Skills

Reading comprehension has long been presumed to be the basis upon which accomplishment in all other subject areas rests. Recent research in cognitive science suggests that to be most effective, skills need to be taught in the context in which they will be used, and that reading skills are subject-specific (Cromley, 1998). Reading for leisure is different from reading for information. Reading as a scientist, reading as a mathematician, or as a social scientist all utilize different skills. Mathematical reasoning in context or writing for a specific purpose will also utilize different skills. Consequently, we must better equip ourselves to understand and integrate the skills of reading, writing and mathematical reasoning within the content areas. We must not rely exclusively on decontextualized reading tests measuring reading levels, math tests measuring computational abilities, or simple writing samples to be reflective of a learner's skills, knowledge or ability. Performance on these measures does not necessarily transfer to other subject areas or contexts. To be effective, we must understand and teach subject- and context-appropriate skills in order to help the learner pass the GED.

GED as Project will introduce instructional approaches, strategies and activities that seek to integrate, not separate, the higher order thinking skills that transcend the five subject areas of the GED 2002, using inquiry-based, problem-centered projects derived directly from Official GED Practice Test items.

[1] GED Testing Service Video Conferences: "GED 2002 - Everything You Need to Know" 4/27/00 and "Making the Transition" 11/30/00, the GED Testing Service web site: www.gedtest.org; and Steck Vaughn's "GED Sampler" and "GED Instructors' Resource Guide," 2002.