Developing and Implementing Enrichment Clusters: A Great Way to Start SEM Programs

Joseph S. Renzulli
Sally M. Reis
University of Connecticut
“Teamwork makes the dream work.”

Send Us an Email for the Renzulli Center Enrichment Cluster Exchange Database

ENRICHMENT CLUSTER IDEA EXCHANGE

From: Your Email
To: stephanie.huntington@uconn.edu
Cc: 
Bcc: 
Subject: ENRICHMENT CLUSTER IDEA EXCHANGE

Your Name, School, and District

Title
[Approximate Grade Levels]

30–50 Word Description
The Goals of The SEM

Enjoyment

Engagement

Enthusiasm For Learning
*Both ends of this continuum are important, and schools should integrate them whenever possible to produce the best balance between the two models of learning.
The Schoolwide Enrichment Model

Joseph S. Renzulli & Sally M. Reis

School Structures

Comprehensive Strength Assessment Portfolio

Curriculum Modification Techniques

Enrichment Learning and Teaching

Type I: General Exploratory Activities
Type II: Group Training Activities
Type III: Individual & Small Group Investigations of Real Problems

Regular Classroom Environment in General

Resources

- Renzulli Learning System
- Odyssey Learning
  - Strength-Based Identification Instruments
  - Curriculum Materials
  - (SEM-R; Mentoring Mathematical Minds Project M3, M2)
  - Staff Development Training Materials
  - Evaluation Instruments

www.gifted.uconn.edu
How Does The Schoolwide Enrichment Model Differ From Other Approaches to Total Talent Development?

For All Students and Special Interest Learning Groups

The Enrichment Triad Model

Curriculum Compacting for All High Achieving Students in Their Domain Specific Strength Area(s)
# TAXONOMY OF COGNITIVE & AFFECTIVE PROCESSES
(The "Type II Matrix" JSR: 2001)

## I. Cognitive Thinking Skills
- A. Creative Thinking Skills
- B. Analytic, Problem-Solving & Decision-Making Skills
- C. Critical and Logical Thinking Skills

## II. Character Development and Affective Process Skills
- A. Character Development
- B. Interpersonal Skills
- C. Intrapersonal Skills

## III. Learning How-To Learn Skills
- A. Listening, Observing, & Perceiving
- B. Reading, Notetaking, & Outlining
- C. Interviewing & Surveying
- D. Analyzing & Organizing Data

## IV. Using Advanced Research Skills & Reference Materials
- A. Preparing for Research & Investigative Projects
- B. Library & Electronic Reference
- C. Finding & Using Community Resources

## V. Written, Oral, and Visual Communication Skills
- A. Written Communication Skills
- B. Oral Communication Skills
- C. Visual Communication Skills

## VI. Meta-Cognitive Technology Skills
- The ability to identify trustworthy and useful information
- The ability to selectively manage overabundant information
- The ability to organize, classify, and evaluate information
- The ability to conduct self-assessments of web-based information
- The ability to use relevant information to advance the quality of one’s work
- The ability to communicate information effectively
What Are Enrichment Clusters?

**Non-graded groups of students who:**

1. *Share a common interest*

2. *Come together during specially designated time blocks to pursue their interests*

3. *Produce a product, performance, publication, presentation, contest or competition entry, or some form of service or community action project*
Two Major Decisions for Developing an Enrichment Cluster Program

1. Over time, provide clusters that cover the major areas of knowledge.

<table>
<thead>
<tr>
<th>General Performance Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
</tr>
<tr>
<td>Social sciences</td>
</tr>
<tr>
<td>Visual arts</td>
</tr>
<tr>
<td>Law</td>
</tr>
<tr>
<td>Physical sciences</td>
</tr>
<tr>
<td>Religion</td>
</tr>
<tr>
<td>Philosophy</td>
</tr>
<tr>
<td>Language arts</td>
</tr>
<tr>
<td>Music</td>
</tr>
<tr>
<td>Life science</td>
</tr>
<tr>
<td>Movement arts</td>
</tr>
</tbody>
</table>

2. In basic skill areas, provide an academic range of clusters that accommodate high levels of challenge for your highest achieving students in particular subject areas.

<table>
<thead>
<tr>
<th>Mathematics</th>
<th>Creative Writing</th>
<th>Science and Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High Achieving Students</strong></td>
<td><strong>All Students</strong></td>
<td><strong>All Students</strong></td>
</tr>
<tr>
<td><strong>All Students</strong></td>
<td><strong>All Students</strong></td>
<td><strong>All Students</strong></td>
</tr>
<tr>
<td><strong>All Students</strong></td>
<td><strong>All Students</strong></td>
<td><strong>All Students</strong></td>
</tr>
</tbody>
</table>
Example is the best school of mankind and they will learn at no other.

Philosopher, Edmund Burk
Social Entrepreneurship: Starting a Business to Help Others

Have you ever thought about raising money so you could help people in our community who may need something they can’t afford? In this cluster you will be asked who and how you might like to help others. We will have some local owners of small businesses tell you about how they got started and the things they did to promote their business. You can then make plans to explore the tools you need to actually start your own small business.

Type I Enrichment (Start-Up Activities)

Local business owners came in to tell how they started their businesses (A Donut Shop and a Children’s Toy Store)

Students brainstormed what types of businesses they might want to start to raise money for a charitable cause.
Video on Enrichment Clusters from NYC

• One of many that are available on the web

• Let’s watch the joy on the faces of the children... and their teachers!
Type II Enrichment: Skills and Resources

Divisions of Labor
- Designers
- Manufactures
- Advertising & Sales

From the How-To Books Database at www.renzullilearning.com

AMERICAN BUTTON MACHINES

A History of the Making
- Button Machines

American button machines is founded.

2005

The house was our sales office, while Keith and the truck wrote the delivery system.

Beyond the Business
Our business for change campaigns allows us to get back to the community to help our customers and the animal kingdom. Since helping to change the world, one button at a time.
Type III Enrichment

Development of a Real Product

Creative Button Boutique
The Basics of Enrichment Clusters

Major Features of Enrichment Clusters

Theme: Every Student is special if we create conditions that make that student a specialist in a specialized group.

1. The Golden Rule of Enrichment Clusters: All activity is directed toward the production of a product or service.

2. Students and teachers select the clusters in which they will participate. All students and teachers are involved.

3. Students are grouped across grade levels by interest areas.

4. There are no predetermined lesson or units plans.
5. The authentic methods of professional investigators are used to pursue products and service development. [How-to Books]

6. Divisions of labor are used to guarantee that all students are not doing the same thing.

7. Specially designated time blocks are set aside for clusters.

8. The Silver Rule of Enrichment Clusters: The rules of regular school are suspended!
Divisions of labor is very important.

Students should be doing different jobs based on their interests and strengths when carrying out their work.
Six Key Questions
[For Facilitating an Enrichment Cluster of Type III Investigations]

1. What do people with an interest in this area do?
2. What products do they create and/or what services do they provide?
3. What methods do they use to carry out their work?
4. What resources and materials need to produce high quality products and services?
5. How, and with whom, do they communicate the results of their work?
6. What steps need to be taken to have an impact on intended audiences?
A few things you should **NOT** do when you develop clusters...

- Develop unit or Lesson plans!
- Have predetermined expectations other than some kind of creative productivity.
- Talk too much.
- Have every student doing the same thing.
- Conduct a traditional, orderly, quiet classroom.
- Preparing students for a test.
What do we mean by creative/productive giftedness?

Sources of Information and the Development of Thinking Skills

Applying Knowledge & Skills to a Product, Performance, or Presentation

The Assembly Plant of Mind

Type 3 Enrichment
**SPORTS**
- Soccer
- Football
- Field Hockey
- Gymnastics
- Basketball
- Baseball
- Softball
- Swimming
- Diving
- Track and Field
- Etc.

**SCIENCE – MATH – TECHNOLOGY**
- Robotics Competition
- Math League
- Science Fair
- Computer Club
- Technology Group
- Rocket Club

**WRITTEN, VISUAL, AND PERFORMING ARTS**
- Drama Productions
- Newspaper
- Band
- Creative Writing Workshop
- Yearbook
- Chorus
- Computer/Graphic Design
- Fashion Design
- Video/Filmmaking

**CLUBS/EXTRACURRICULAR ACTIVITIES**
- Future Problem Solving
- National History Day
- Science Fair Coach
- Mock Trial
- Model UN
- Outward Bound
- Service Clubs
- 4-H
- Junior Achievement
- Invention Convention
- Boy Scouts/Girl Scouts
- Photography Club
- Future Farmers of America
Three Questions....

1. Who came?

2. What did the students do (not learn)?

3. What roles did you play?
High-End Learning
Teacher Roles and Responsibilities

Please list the roles you fulfilled in addition to or in place of instructor and disseminator of information?

- General Contractor
- Conductor (as in a symphony)
- Consultant
- Counselor
- Accountant, Fund Raiser
- Operations Manager
- Business Agent
- Forager/Scavenger
- Therapist, Confidant
- Advocate
- Production Manager
- Secretary
- Internet Detective
- Recorder (for young kids)

- Librarian
- Taxi Driver
- Coach
- Producer, Director, Stage Manager (as in a play)
- Press Agent
- Talent Scout
- Arbitrator
- Auditor
- Supply Sergeant
- Transportation Coordinator
- Caterer
- "Fixer" (something like a lawyer)
- Friend
- Editor
- Collaborator

These are some of the skills that define the role of what we call “The-Guide-On-The-Side” as opposed to “the sage-on-the-stage.”

The Teacher’s Role as Guide-On-the-Side
Your main role as an Enrichment Cluster facilitator
# The Teacher’s Role as Guide-On-the-Side

1. Keep an informal tracking of your verbs...

## Typical Verbs Used for Raising Questions About Three Kinds of Knowledge

<table>
<thead>
<tr>
<th>Received Knowledge Learning</th>
<th>Analyzed Knowledge Learning</th>
<th>Created Knowledge Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define</td>
<td>Explain</td>
<td>Point out</td>
</tr>
<tr>
<td>State</td>
<td>Interpret</td>
<td>Defend</td>
</tr>
<tr>
<td>Describe</td>
<td>Demonstrate</td>
<td>Differentiate</td>
</tr>
<tr>
<td>Identify</td>
<td>Conclude</td>
<td>Reconstruct</td>
</tr>
<tr>
<td>Label</td>
<td>Compare</td>
<td>Reorganize</td>
</tr>
<tr>
<td>List</td>
<td>Contrast</td>
<td>Reorganize</td>
</tr>
<tr>
<td>Match</td>
<td>Categorize</td>
<td>Construct</td>
</tr>
<tr>
<td>Outline</td>
<td>Design</td>
<td>Devise</td>
</tr>
<tr>
<td>Memorize</td>
<td>Speculate</td>
<td>Illustrate</td>
</tr>
<tr>
<td>Point to</td>
<td>Interpret</td>
<td>Infer</td>
</tr>
<tr>
<td>Recall</td>
<td>Relate</td>
<td>Compose</td>
</tr>
<tr>
<td>Select</td>
<td>Predict</td>
<td>Construct</td>
</tr>
<tr>
<td>Name</td>
<td>Estimate</td>
<td>Infer</td>
</tr>
<tr>
<td>Label</td>
<td>Extrapolate</td>
<td>Paraphrase</td>
</tr>
<tr>
<td>Arrange</td>
<td>Reconstruct</td>
<td>Translate</td>
</tr>
<tr>
<td>Report</td>
<td>Hypothesize</td>
<td>Evaluate</td>
</tr>
<tr>
<td>Give examples</td>
<td>Design</td>
<td>Defend</td>
</tr>
<tr>
<td>Calculate</td>
<td>Critique</td>
<td>Justify</td>
</tr>
<tr>
<td>Repeat</td>
<td>Distinguish between</td>
<td>Organize</td>
</tr>
<tr>
<td>Tell</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recognize</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

++ Set goals
++ Plan project (e.g., time lines, needed resources, action steps, intended outcomes, products, audiences)
++ Write (e.g., story, essay, proposal, musical score)
++ Interview
++ Investigate
++ Design
++ Formulate
++ Construct
++ Gather data
++ Organize
++ Produce
++ Schedule
++ Prioritize
++ Supervise
++ Organize
++ Negotiate
++ Monitor
++ Publicize
++ Communicate
++ Budget
The Teacher’s Role as Guide-On-the-Side

1. Keep an informal tracking of your verbs.

2. Review the rules for brainstorming.

3. Encourage brainstorming about product formats.

4. Encourage brainstorming about possible audiences.
Super Hint for High Interest and Engagement for All Students

Divisions of Labor
Finding Students’ Interests, Learning Styles, and Preferred Modes of Expressing Themselves

Reverse Engineering

Working “backwards” from interests, product, and expression style preferences to necessary skills for product development
### Expression Style Inventory (Sample Items)

Table 1: Expression Style Inventory Items, Factors/Components and Loadings:

<table>
<thead>
<tr>
<th>Name of Factor or Component</th>
<th>Item</th>
<th>Principal Factor Analysis (PFA) with Varimax &amp; Oblique Rotations</th>
<th>Principal Component Analysis (PCA) with Varimax &amp; Oblique Rotations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>PFA</strong></td>
<td><strong>PCA</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Number</strong></td>
<td><strong>Stem</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Varimax</strong></td>
<td><strong>Varimax</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Loading</strong></td>
<td><strong>Loading</strong></td>
</tr>
<tr>
<td>14</td>
<td>designing an interactive computer project</td>
<td>.86</td>
<td>.89</td>
</tr>
<tr>
<td>1</td>
<td>designing a computer game</td>
<td>.89</td>
<td>.89</td>
</tr>
<tr>
<td>44</td>
<td>designing a computer software program</td>
<td>.84</td>
<td>.89</td>
</tr>
<tr>
<td>54</td>
<td>designing a multi-media computer show</td>
<td>.82</td>
<td>.82</td>
</tr>
<tr>
<td>57</td>
<td>designing information</td>
<td>.82</td>
<td>.84</td>
</tr>
<tr>
<td>2</td>
<td>collecting clothing or food to help others</td>
<td>.83</td>
<td>.85</td>
</tr>
<tr>
<td>27</td>
<td>helping others by fund raising</td>
<td>.79</td>
<td>.82</td>
</tr>
<tr>
<td>17</td>
<td>helping other students</td>
<td>.71</td>
<td>.78</td>
</tr>
<tr>
<td>7</td>
<td>helping in the community</td>
<td>.78</td>
<td>.84</td>
</tr>
<tr>
<td>37</td>
<td>helping others by fund raising</td>
<td>.79</td>
<td>.84</td>
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<td>2</td>
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<tr>
<td>27</td>
<td>helping other students</td>
<td>.78</td>
<td>.84</td>
</tr>
</tbody>
</table>

**Instructions:**

Read each statement and circle the number that shows to what extent **YOU** are interested in creating that type of product. (Do not worry if you are unsure of how to make the product.)

- Not At All
- Of Little Interest
- Moderately Interested
- Interested
- Very Interested

**Example:** writing song lyrics

1. writing stories
2. discussing what I have learned
3. painting a picture
4. designing a computer software project
5. filming & editing a video
6. creating a company
7. helping in the community
8. acting in a play

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Just a Few Product Options

Things young people create as they investigate various topics of interest and interact with the principles, concepts and methodology of one or a combination of disciplines. The goal is always the same – Impact Upon Audience the raison d'être of the creative and productive person.

• Artistic Products
  – Architecture
  – Murals
  – Sculpture
  – Maps
  – Graphic, Digital, & Landscape Designs
  – Etc.

• Performance Products
  – Skits
  – Role Playing
  – Dance
  – Mime
  – Interpretive Song
  – Plays
  – Etc.

• Spoken Products
  – Debates
  – Speeches
  – Demonstrations
  – Panel Discussions
  – Book Talks
  – Poetry Readings
  – Broadcasts
  – Etc.

• Visual Products
  – Videos
  – Musical Scores
  – Blueprints
  – Diagrams/Charts
  – Timelines
  – Multimedia
  – Cartoons
  – Etc.

• Constructed Products
  – Puppets
  – Models
  – Robots
  – Set Designs
  – Gadgets
  – Furniture
  – Sports Equipment
  – Costumes
  – Jewelry
  – Software
  – Quilts
  – Gardens
  – Games (board & virtual)
  – Etc.
How do you like to express yourself?

- **Artistic Products**
  - Architecture
  - Murals
  - Sculpture
  - Maps
  - Graphic, Digital, & Landscape Designs
  - Etc.

- **Performance Products**
  - Skits
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  - Robots
  - Set Designs
  - Gadgets
  - Furniture
  - Sports Equipment
  - Costumes
  - Jewelry
  - Software
  - Quilts
  - Gardens
  - Games (board & virtual)
  - Etc.
Those aren’t just any old doodles, Ms. James. They’re notes for my graphic novel.
LOGISTICS

WHO: All students in your school, grouped by 2–3 grade levels (i.e., GRADES 1–3, 4–6)—All teachers and professionals in the school, parent volunteers, community members to work with professionals

WHAT: ENRICHMENT CLUSTERS FOR ALL, potentially sponsored by your PTO for expenses (but these are often not expensive)

WHEN: A SERIES OF TWO, EACH YEAR—8 in the fall and 10 in the spring, Friday or Wednesday afternoons

WHERE: All over the school, spaces for under 10 and up to 25 (with more than one adult.

WHY: Joyful Learning
Six Key Questions
[For Facilitating an Enrichment Cluster of Type III Investigations]

1. What do people with an interest in this area do?
2. What products do they create and/or what services do they provide?
3. What methods do they use to carry out their work?
4. What resources and materials need to produce high quality products and services?
5. How, and with whom, do they communicate the results of their work?
6. What steps need to be taken to have an impact on intended audiences?
Would you like to become a “Dumpsite Detective” and uncover ways to reuse our trash?

Would you like to see worms at work reducing our lunchroom garbage?

Join **The Recyclers** and become an expert in converting trash into *treasures*!

**Be a Mother Nature Super Hero and Save the World!**
The Alphabet can be found all around us...

Do you like to take pictures? Have an eagle eye? Join this cluster and use technology to take pictures of letters that you find in nature and architecture.
Cardboard Arcade

Do you like going to arcades?
Do you like to create things from leftover boxes?

Join us to help create the first ever
Kelly Lane School Cardboard Arcade!
Cooking With Books

Do you like to cook?
Do you like to read books?
Do you like to make recipes that go along with books?
Join us for some FUN!!!
Do you like to create with Duct Tape?
Do you like to make someone smile?
Can you imagine raising money for a charity of your choice?
Come and have some fun while we create Duct Tape crafts to make people smile.
Would you like to be a detective? Investigate crimes?

Have you ever wondered what it takes to solve a crime?

If investigating a crime, gathering evidence, and solving mysteries strike your curiosity then this is the cluster for you! Join The Crime Scene Detectives
Sample Cluster Descriptions

➢ The Poets’ Workshop

What is it like to be a poet? Explore the poetry of some of America’s greatest poets, including Robert Frost, Langston Hughes, Emily Dickinson and others. Write, illustrate, and perform original poems or interpret others’ work. Identify outlets for our work.

➢ Invention Convention

Are you an inventive thinker? Would you like to be? Come to this cluster to brainstorm a problem, try to identify many solutions, and design an invention to solve the problem. Create your invention individually or with a partner under the guidance of Bob Erickson and his colleagues. You may share your final product and the Young Inventor’s Fair, a statewide, day-long celebration of creativity.
The Arts and Mathematics

• The Electronic Music Research Institute.
• The Visual Artist’s Workshops
• The Meriden theater Company
• The Native American Dance Institute
• The Video Production Company
• The Young Musicians’ Ensemble
• The Photographers’ Guild
• The Math Materials Publication Company
• The Math Mentors’ Association
• The Female Mathematicians’ Support Group
• The Mathematics Competitions League
• *The Math Puzzle Challenge Quarterly*
Social Sciences and Humanities

- The Hispanic Cultural Awareness Association
- The Junior Historical Society
- The Social Science Research Team
- The Torrington Geographic Society
- The Creative Cartographers’ Guild
- The Young Authors’ Guild
- The Poet’s Workshop
- The African-American Literary Society
- The Investigative Journalism Group
- The Quarterly Review of Children's Literature
- Save the Theater Group
Technology and Sciences

• The Computer Graphics Design Team
• The Computer Games Production Company
• The Computer Literacy Assistance Association
• The Creative Software Society
• The Desktop Publishing Company

• The Save the Dolphins Society
• The Physical Science Research Institute
• The Mansfield Environmental Protection Agency
• The Experimental Robotic Team
• The Horticultural Beautification Committee
• Save our Rivers and Waterways
What Cluster will YOU facilitate?

• What will the title be?
• What is your first line of the description?
• Think about what you love to do in your spare time—get a fun, descriptive title.
• Talk to an expert who works in this area-get a guest speaker for a Type I.
• Go on line and find some fun background reading and video clips about your topic.
• Find a few examples of creative products, especially if they were done by young people and plan to talk about them with your students.
• Find some competitions and contests/ask what is a problem we can solve in our community or area?
Practical Information on Developing Enrichment Clusters
Tell a Story About Your Favorite Super Hero
Individualized Strength Assessment

- Interests
- Learning Styles
- Preferred Modes of Expression
- Achievement Levels

Resource Matching Search Engine
50,000 Enrichment Resources

https://renzullilearning.com
Research about the SEM and Enrichment Clusters

https://gifted.uconn.edu

https://gifted.uconn.edu/schoolwide-enrichment-model/semresearch/

https://confratute.uconn.edu
The Enrichment Cluster Happiness Scale

...and we hope this is the way your students will respond every day when they leave your enrichment cluster.
“Teamwork makes the dream work.”

Send Us an Email for the Renzulli Center Enrichment Cluster Exchange Database

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From: Your Email
To: stephanie.huntington@uconn.edu
Cc: 
Bcc: 
Subject: ENRICHMENT CLUSTER IDEA EXCHANGE

Your Name, School, and District
Title
[Approximate Grade Levels]
30–50 Word Description

Thank You
Joe & Sally