

EPTS Curriculum Model in the Education of Gifted Students

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Título: El Modelo de curriculum EPTS para la Educación de los Alumnos Superdotados.

Resumen: En este artículo el autor revisa el modelo de los Programas para alumnos Superdotados y Talentos (EPTS, por sus siglas en inglés) desarrollados en la Anadolu University. Se discute como dichos programas se han desarrollado a través de múltiples fases, la forma en que estos se usan para desarrollar programas educativos para alumnos superdotados y la investigación llevada a cabo sobre la efectividad de este modelo educativo. El modelo EPTS tiene dos dimensiones: habilidad y contenido. La dimensión de habilidad tiene una estructura jerárquica compuesta por tres niveles de destrezas cognitivas. La dimensión de contenido es la extensión del currículo ordinario pero organizado en cuatro niveles: datos, conceptos, generalización y teoría. En el artículo también se incluye una breve crítica sobre el estado actual de los programas curriculares en la educación de alumnos superdotados.

Palabras clave: Educación de alumnos superdotados, EPTS, Curriculum para superdotados.

Abstract: In this article, the author reviews the EPTS Model (Education Programs for Talented Students) and discuss how it was developed through multiple stages, the ways it is used to develop programs for gifted students, and then presents research carried out on the effectiveness of this model in the education of gifted students. The EPTS Model has two dimensions: ability and content. The ability dimension has a hierarchical structure composed of three levels of cognitive skills. The content dimension is the extension of the regular curriculum but organized at four levels: data, concept, generalization and theory. Included in the article also is a brief critics of the current state of curricular programs in gifted education.

Key words: Gifted Education, acceleration, EPTS, Gifted curriculum.

Introduction

A good curriculum for gifted students should include certain design parameters (Borland, 1989; Maker & Schiever, 2010; Tomlinson, 2008; Van Tassel-Baska, 1998). This is not the case for most programs in gifted education. Tomlinson (2009) used the “patchwork” metaphor to describe current programs in gifted education that lack essential parameters. According to this metaphor, curriculum for gifted students has represented a patch-on approach by default over the years. A patchy program is detached from the general curriculum, and it is an extra rather than an extension of the regular classroom content, it does not have a coherent scope and sequence of content and skills across grades, and it lacks articulated elements such as a specified philosophy and well-defined goals and learning outcomes.

Even though having such drawbacks, many programs in gifted education have sustained its existence for years. The survival of such programs in gifted education is no surprise as there is so much need and parental support for special education for gifted students. Indeed, Van Tassel-Baska and Brown (2007) asserted that gifted education as a field around the world relies on faithful application of curriculum and program models. If true, this claim invalidates the necessity, not the scientific rationale, of many gifted education programs currently under administration. This claim also uncovers the fact that the influence of many of the models on the growth of gifted students is unknown or unproven. For example, Van Tassel-Baska and Brown (2007) reviewed existing program and curriculum models frequently used in

gifted education and determined any evidence of effectiveness for their use with gifted populations. They identified 20 models frequently used with gifted students; but, only 11 of them met the criteria for a curriculum model. Of these models, unfortunately only five were found to have some evidence of effectiveness with gifted students.

The EPTS (Education Programs for Talented Students) Curriculum is a universal model, and therefore can be used to develop both enriched and accelerated-enriched curricular programs for gifted students for most subject areas in most program options at all grade levels. The EPTS Curriculum model includes the four principles that are important parameters in the curriculum design for gifted students. These are universality, specificity, utility, and flexibility. These principles also are supported by leading experts in curriculum models for the gifted (e.g., Tomlinson 2009; Van Tassel-Baska & Brown; 2007). According to the universality principle, curriculum for the gifted should be applicable across a variety of grouping settings, such as special schools, self-contained classrooms and pull-out programs. Specificity principle suggests that the curriculum should have well-defined specific learning outcomes identified based on specific learning needs of gifted students. Utility principle allows the curriculum to be applied to most subject areas, such as science and mathematics. Lastly, according to the flexibility principle, the curriculum model should be applicable across all grade levels. In short, a curriculum model for gifted education is not sufficient and comprehensive enough if it is only for a particular grade level or a specific subject area or if it does not have systematic elements for designing curricular programs.

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EPTS Curriculum Model

The EPTS Curriculum Model is a comprehensive skill and content-based model for developing programs in the education for gifted students (Sak, 2009b, 2011a, 2011b, 2013). It was developed based on an integration of the theory of successful intelligence (Sternberg, 1997) and its teaching principles (Sternberg & Grigorenko, 2000, 2007), and research on creativity and problem solving. Sternberg (1997) identified analytical, creative and practical abilities as components of intelligence and suggested that successful people use all three abilities to achieve success.

The theory of successful intelligence explains intellectual bases of success. However, what is missing in a curriculum based on this theory to foster excellence is the content or knowledge component. Knowledge is a requisite component for excellence since excellence is built on experience and knowledge (Ackerman & Beier, 2003; Ericsson, 2006; Ericsson, Nandagopal & Roring, 2005). For example, based on the theory of successful intelligence, Sak (2009a) proposed a model of mathematical ability that included knowledge as well as the abilities of the successful intelligence as essential components of excellence. The analytical, creative and practical components are necessary but insufficient for excellent performance in any fields. Likewise, knowledge component also is a necessary but insufficient component for excellence. That is, these components are jointly sufficient for excellence.

The EPTS Curriculum has two dimensions (Sak, 2011a, 2011b). The first of the dimensions includes three components of ability (figure 1). The second dimension is com-

posed of content component. The ability component was developed through four stages. First, the analytical, practical and creative components of successful intelligence were used as the first-order ability to construct a general framework for the new model. Then, all of the original skills of these components defined in the theory were evaluated for their importance, and thirty-five of them were selected to be appropriate for the model. After some of these skills were revised, they were integrated in the model as the second-order broad skills. Second, new second-order broad skills were identified through the review of literature on creativity and problem solving and included in the model. Third, the second-order skills were further analyzed through the review of related literature to identify their subskills that could be used as specific learning and development outcomes. The analysis yielded a substantial number of subskills. Then, they were defined and labeled as the third-order subskills. Fourth, the sub-skills were evaluated for their importance and appropriateness before they were added to the model as the third-order subskills. The final EPTS curriculum included three first-order abilities, 43 second-order skills and 152 third-order sub-skills (see Appendix A, B and C). These subskills were labeled as the EPTS skills. The analytical component includes eight broad skills, such as problem defining and forecasting, and twenty-eight sub-skills. The creativity component has seventeen broad skills, such as idea generation and creative imagination, and fifty-eight sub-skills. The practical component consists of eighteen broad skills, such as setting priorities and completing tasks, and sixty-six sub-skills.

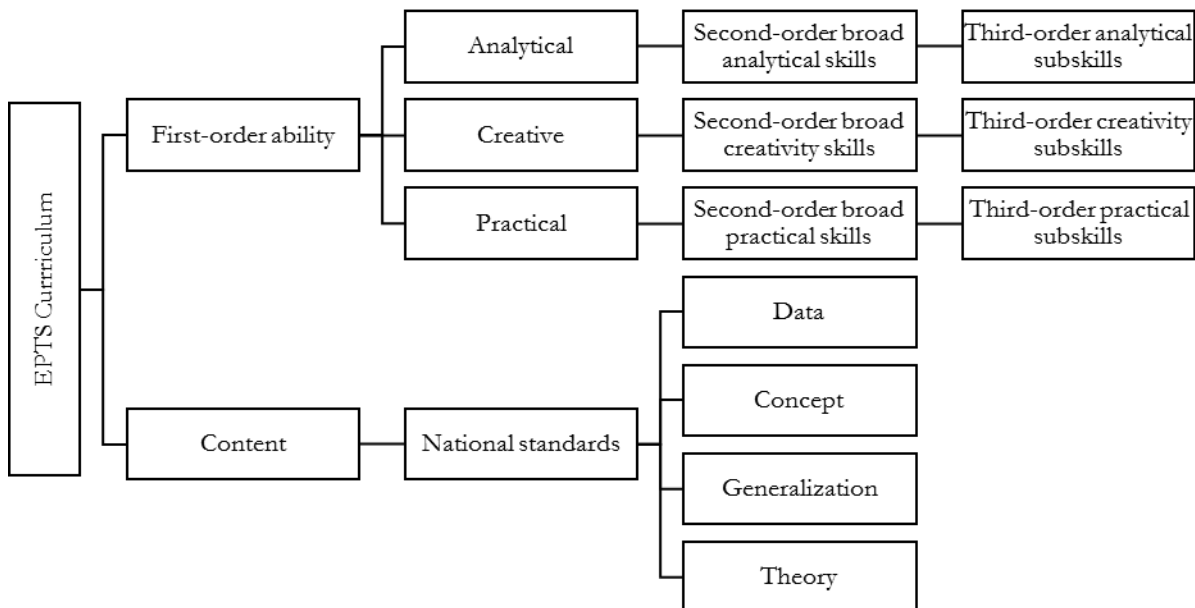


Figure 1. EPTS Curriculum Model.

The content component of the EPTS is composed of national standards at each grade level and used with the EPTS skills for developing accelerated and enriched theme, unit or lesson plans. Contrary to the ability component, this component of the EPTS curriculum does not have specific learning outcomes; instead national standards both at the regular level and accelerated level at each grade are suggested to be used because national standards vary both from country to country and from grade to grade. However, in developing curricular themes, units and lessons using the EPTS Model, content standards are revised according to Banks and Clegg's classification of knowledge (Banks & Clegg, 1990). The classification includes four levels of knowledge: data, concept, generalization and theory. Data refers to factual knowledge. For example, the number of languages spoken in the world is a factual knowledge. Conceptual knowledge is an abstract idea drawn from particular instances. World language, for example, is a concept referring to a language spoken internationally. Generalization refers to general statements, laws, principles or propositions about the whole drawn from the parts of the whole. For instance, the proposition that languages that do not have written language disappear over time is a generalization based on particular cases. Theories are the highest level of knowledge. A theory is an idea or a set of ideas, generalizations or propositions offered to explain some phenomenon. For example, the gestural theory about the origin of languages are based on several hypotheses, generalizations and evidence (Lefebvre, Comrie & Cohen, 2013). National standards often include data and concept levels only but excludes generalization and theory levels. The inclusion of four levels of content in the EPTS programs better promotes conceptual learning.

Development of Enriched and Accelerated Programs Using the EPTS Curriculum

Acceleration and enrichment have been the dominant approaches for differentiating the education for gifted students. According to some researchers, acceleration is viewed to be one of the most ideal models in educating gifted students (Colangelo, Assouline & Gross, 2004; Stanley, 1977; VanTassel-Baska, 2005) whereas enrichment is so deemed by others (Renzulli & Reis, 2000). For example, Steenbergen-Hu and Moon (2011) did a meta-analysis on the effects of acceleration on gifted students' academic achievement. They reviewed 38 studies published from 1984 to 2008. The results of the study showed that acceleration had positive impact on students' academic achievement. Nevertheless,

meta-analytic studies have shown both approaches to have positive learning effects when they are well-designed and used together (Kulik & Kulik, 1992). Indeed, one of the key beliefs guiding the most curriculum models in gifted education is that confluent approaches that allow for both advanced content learning and enriched experiences should be used for serving gifted students (Triffinger, Nassab & Selby, 2009; VanTassel-Baska, 2000).

Aligned with research findings, the EPTS Curriculum is used together with both enrichment and acceleration approaches to develop curricular programs for gifted students (Sak, 2011a). The EPTS skills are integrated with standards of the regular curriculum or advanced contents using the EPTS Lesson Plan Form (Appendix D) to develop enriched and accelerated-enriched EPTS programs that include both ability outcomes and knowledge outcomes (see figure 2). As shown in figure 2, the combination of the 152 EPTS skills together with regular content standards and accelerated content standards produces a possibility for the development of numerous different lesson plans at each grade level. Acceleration is carried out by transferring higher-grade level contents. Any content acceleration also contains enrichment activities designed by integrating the EPTS skills into the accelerated content. This way of acceleration and enrichment promotes the development of advanced content knowledge, conceptual learning and enhancement of higher-order thinking skills.

The purpose of the enrichment of the EPTS is to develop process skills in students and to make their knowledge applicable outside the learning situation. Acquisition of knowledge that is transferable in different situations is a complex learning leading to cognitive flexibility (Gruber & Mandl, 2000). EPTS units are designed so that the same concepts are treated in different units as transversal contents, facilitating their transferability. Transferability of knowledge also is the basis of interdisciplinary learning, a principle recommended for the education of gifted students (Maker, 1982; Maker & Schiever, 2010; VanTassel-Baska, 1992). Transferability of knowledge increases by the use of multiple perspectives on problem solving rather than through abstract context-free learning (Gruber & Mandl, 2000). Applied in gifted education, the single use of acceleration with an emphasis primarily on learning advanced content helps students learn those contents, but could lead to decontextualized learning, and therefore may not result in the acquisition of transferable knowledge. This idea is one of the rationales for combining enrichment and acceleration in the EPTS.

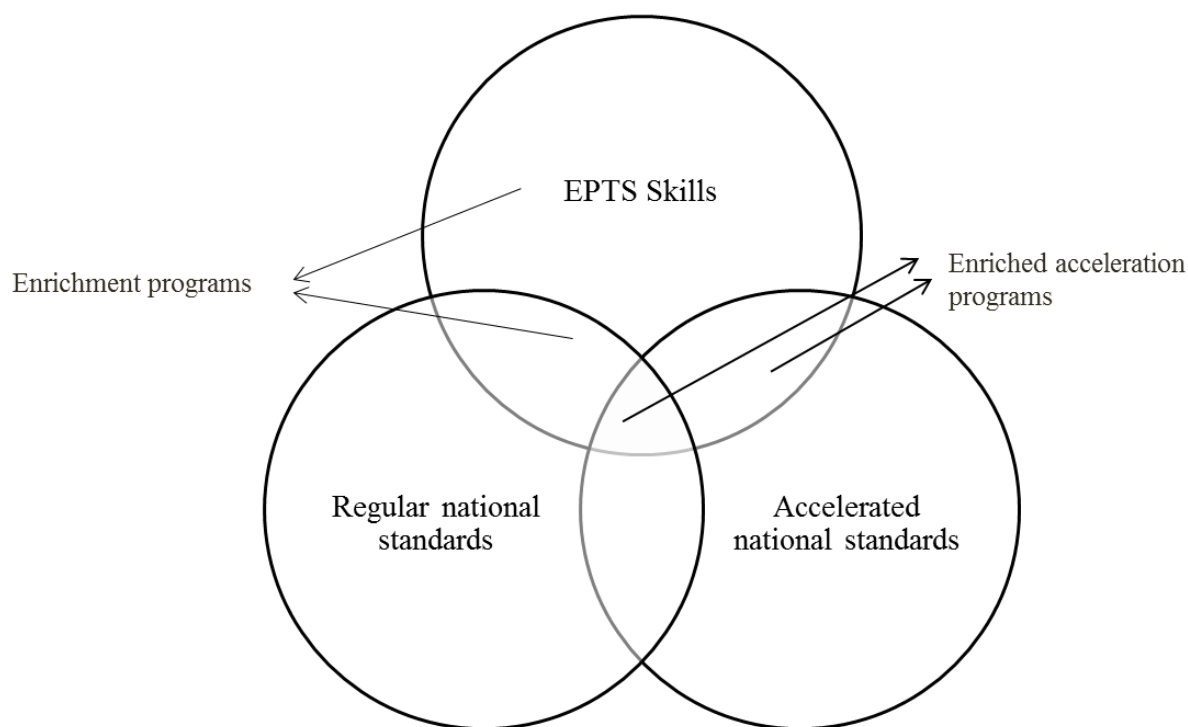


Figure 2. Combination of the EPTS Skills and Content Standards in the Development of Lesson Plans.

Research on the EPTS Curriculum

Research has been conducted to support the effectiveness of the EPTS Curriculum with gifted students within a variety of educational settings during the last six years. Specifically, significant growth gains in mathematical creativity and competency, scientific creativity and creative writing and linguistic competency have been demonstrated for gifted classes using the developed curriculum units in language arts, science and mathematics.

In some studies, the EPTS Curriculum was used to teach sixth, seventh and eighth grade gifted students in an after school program for gifted students at Anadolu University. During the implementation of these programs, growth in gifted students' mathematical creativity and scientific creativity regularly were measured using the Creative Mathematical Ability Test and the Creative Scientific Ability Test in pretest and posttest settings (Ayas, 2012; Sak, 2013, 2014; Sak, Demirel-Gürbüz, Bal-Sezerel, Ayas & Özdemir, 2013; Sak & Karabacak, 2010; Sak, Karabacak & Kılıç, 2009). In these studies, gifted students' creativity both in mathematical domain and in scientific domain was found to increase significantly from pretest measurements to posttest measurements. Specifically, after students attended the EPTS, they produced more creative hypotheses about scientific facts, designed more effective experiments to test hypotheses, and evaluated scientific evidences more effectively. In the mathematical domain, they posed more original problems and developed more original strategies and methods to solve mathematical problems.

In another study, the social validity of the EPTS was investigated. This study included an examination of middle-school gifted students' perceptions about the EPTS programs offered as after-school programs at Anadolu University and their satisfaction with the quality of the programs. Findings showed that students had high satisfaction with the EPTS programs, an evidence for the social validity of the EPTS (Sak, 2011a; Sak, et. al., 2013). Social validity studies are important for education programs for gifted students; because they show students' perceptions and satisfactions about these programs and the sustainability of these programs are mainly dependent upon students' satisfactions and positive perceptions. Indeed, most withdrawals of gifted students from special education programs presumably result from their dissatisfaction with these programs.

The EPTS Curriculum also has been used in developing programs for gifted students in full-time self-contained classes in Anabilim Schools in Istanbul, the first project school where the EPTS model was applied. In this project, special programs for mathematics, language arts, social studies and science courses were developed at the first, second, third and fourth grades using the EPTS Curriculum Model and national standards. The program of each course included five to seven themes and each theme was composed of four to five lesson plans. All of the themes in mathematics were extensions of the regular curriculum whereas the themes in the other courses were either extensions of the regular curriculum or completely unique, such as electricity as an extension and extraordinary habitats as a unique theme in science. At least 25% of the content of all the courses included upper

grade standards. The programs for these courses incorporated both enrichment in content and process and acceleration in content. A program book for teachers and a workbook for students were developed for each course. In order to teach these courses, the regular courses of students were compacted and accelerated 40%. In the remaining time, the EPTS programs were used as parallel programs to the regular courses throughout the school years. During the project, students' creative thinking and problem solving skills in reading, writing, mathematics, and science were measured in pretest and posttest settings at each grade level. In all the comparisons, students were found to have significant gain scores (Sağlam-Demir & Aksoy-Pehlivan, 2013; Sak, Akyol, Sağlam-Demir, Aksoy-Pehlivan, Dora, Özdek & Karakan, 2014). Particularly important finding in these studies was students' progress in analytical and creative thinking. Stu-

dents were found to do much better in finding and redefining problems, producing ideas, constructing different types of analogies and associations and developing strategies for solving problems.

In conclusion, the EPTS Curriculum Model has been found effective in the education of gifted students in a variety of domains in both self-contained classrooms and after-school programs at different grade levels. Our next research agenda is to extend our research on the effectiveness of the EPTS Model on gifted students' thinking and problem solving skills in other areas, such as social domains. Finally, the EPTS team keeps working on the EPTS Curriculum Model with an emphasis on analyses of intelligence, creativity, problem solving and learning theories to identify new thinking and problem solving skills that could be integrated in the EPTS Curriculum Model.

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Appendix A. EPTS Analytical Ability Skills

Broad Skills (2nd Order)	Subskills (3rd Order)	Definition
1. Identify problems	1. Recognize problems	Recognize the existence of a problem
	2. Differentiate problems	Discriminate among problems and distinguish the real problem causing the result
	3. Understand problems	Describe the nature and causes of problems in detail and relationships between causes and problems
	4. Define problems	Define or explain problems concisely
2. Plan resources	5. Partition time	Partition time according to work and work according to time
	6. Partition work	Partition work according to individual characteristics
	7. Balance	Make a balance between production and consumption
3. Organize information	8. Classify information	Categorize, organize, order or rank information or data according to similarities or commonalities
	9. Construct relations	Make relations among data or information
	10. Describe information	Explain information from many perspectives
4. Develop strategies	11. Communicate	Orally or symbolically present information
	12. Develop outlines	Develop a general outline for problem solving process
	13. Formulate solution plans	Develop successive stages for problem solving
	14. Develop alternatives	Produce alternative solutions for possibilities
	15. Evaluate strategies	Evaluate and assess solution plans
5. Monitor problem solving	16. Observe strategies	Examine problem solving steps
6. Evaluate results	17. Verify solutions	Verify quality of solutions
	18. Compare results	Compare results with certain criteria
	19. Subjective evaluation	Determine the value of results using different perspectives
	20. Objective evaluation	Determine the value of results using objective criteria
7. Make decisions	21. Analyze data	Analyze data related to decisions
	22. Produce decisions	Produce logical decisions based on data
	23. Generate criteria	Generate criteria to choose among decisions
	24. Compare decisions	Compare and contrast decisions using criteria
	25. Choose decisions	Choose most appropriate decisions
8. Forecasting	26. Construct relations	Construct cause-effect relations
	27. Predict	Predict consequences or effects
	28. Postdict	Postdict causes of results

Appendix B. EPTS Creativity Skills

Broad Skills (2nd Order)	Subskills (3rd Order)	Definition
1. Redefine problems	1. Restate problems	Represent problems, ideas or products in different verbal, visual or symbolic ways
	2. Reconstruct problems	Change the structure of problems, ideas or products
2. Question assumptions	3. Critique assumptions	Critique prevalent beliefs, rules, dogmas and scientific knowledge
	4. Develop alternatives	Develop alternative arguments against prevalent assumptions
3. Generate ideas	5. Fluent idea generation	Generate many ideas for a problem
	6. Flexible idea generation	Generate varied ideas for a problem
	7. Original idea generation	Generate unusual ideas for a problem
	8. Detailed idea generation	Add details to ideas
4. Market creative ideas	9. Emphasize on strengths	Convince others by emphasizing strengths and future benefits of ideas or products
	10. Emphasize on weaknesses	Convince others by emphasizing weaknesses of other ideas or products
	11. Prove differences	Demonstrate differences of ideas or products from other ideas or products
	12. Select the true target	Select the most appropriate audience for marketing ideas and products
5. Creative imagination	13. Descriptive imagination	Visualize details or development of events, ideas or products
	14. Sequential imagination	Envision sequential consequences of behaviors, events or inventions
	15. Mental rotation	Rotate and transform objects in mind
6. Perceive multiple facets of knowledge	16. Objective interpretation	Interpret an idea from all perspectives
	17. Subjective interpretation	Interpret one's ideas from your perspective
	18. Rationalize similarity	Explain an idea according to one's perspective
	19. Build empathy	Evaluate ideas by putting yourself into others' shoes
7. Overcome obstacles	20. Identify real problems	Identify the real problem causing the challenge
	21. Persevere trying	Persist trying in spite of difficulties
	22. Determine optimal time	Find out the best time to solve problems
	23. Develop solution strategies	Develop strategies to overcome obstacles
8. Take risks	24. Identify risks	Identify true risks
	25. Evaluate risks	Evaluate significance of risks
	26. Identify sensible risks	Identify and select risks that could be handled
	27. Take sensible risks	Take sensible risks by evaluating risks' qualities
	28. Control fear of failure	Start tasks with small and easy steps
	29. Try new ideas	Try unusual ideas or approaches that are different from the general
9. Tolerate ambiguity	30. Persist on creativity	Persist working until achieving the creative result
	31. Incubation	Wait in a conscious period to achieve the best result
10. Build self-efficacy	32. Develop goals	Develop goals for personal growth
	33. Explore personal capacity	Clarify real capacity by examining earlier achievements
	34. Initiate without hesitation	Put ideas into practice without hesitations
	35. Succeed based on goals	Complete goals step by step
11. Discover self	36. Find out your strengths	Explore your own strengths by comparing your skills to those of others
	37. Realize your weakness	Realize your own weaknesses by comparing and contrasting your skills to those of others
	38. Uncover your prejudices	Find out what types of prejudices you have
	39. Understand your personality	Discover your personality characteristics
	40. Understand your cultural background	Understand who you are in terms of cultural make up
	12. Explore true interests	41. Identify excitement
42. Identify career interests		Identify career interests
43. Identify academic areas		Identify intensity of interests towards academic areas
13. Postpone expectations	44. Balance expectations	Realize big achievements always do not bring about big rewards
	45. Delay little rewards	Put off little rewards to accomplish big goals
14. Model creativity	46. Model unusual personality	Dramatize another personality
	47. Focus on unusual ideas	Consciously insist on generating extraordinary ideas while rejecting conventional ideas
	48. Encourage unusual ideas	Show interests in unusual ideas rather than conventional ideas of others
15. Motivate self	49. Concentrate on personal value	Develop goals according to personal characteristics and values
	50. Concentrate on the beneficial	Determine personal benefits of work in short run and long run

Broad Skills (2nd Order)	Subskills (3rd Order)	Definition
	51. Find out value of interest	Work in personal interest
	52. Develop goals	Develop achievable goals
	53. Develop successive goals	Set up successive goals in the order of minor goals to major goals and easy goals to difficult goals
16. Formulate associations	54. Formulate knowledge associations	Associate information, ideas or facts with other information, ideas or facts
	55. Construct visual associations	Associate visuals with other visuals
17. Construct analogies	56. Make direct analogies	Explore or construct similarities among seemingly dissimilar ideas, objects or facts
	57. Build personal analogies	Transport yourself into something or someone else to reinterpret the world
	58. Develop symbolic analogies	Combine contradictory ideas, objects or images or build metaphors to describe another thing

Appendix C. EPTS Practical Ability Skills

Broad Skills (2nd Order)	Subskills (3rd Order)	Definition
1. Control impulses	1. Think further before decisions	Make decisions after further thought
	2. Act on a plan	Act on step-by-step plans
	3. Prevent the first act	Postpone the first act to save time for further thinking
	4. Evaluate responses	Evaluate responses before reacting
2. Persevere without persevere	5. Make sensible decisions	Persist on working consciously on achievable goals
	6. Identify achievable goals	Discriminate achievable goals from unachievable goals
	7. Reschedule work	Delay solutions of problems until the most appropriate time and conditions are present
3. Match goals and individual characteristics	8. Develop competence profile	Identify individual strengths and weaknesses
	9. Develop interest profile	Identify personal interests
	10. Develop goals profile	Identify personal goals
	11. Evaluate goals	Identify goals that intersect with personal interests and abilities
4. Put into practice	12. Select ideas	Select ideas based on their doability
	13. Develop plans	Develop implementation plans to apply ideas
	14. Implement plans	Implement ideas according to plans
5. Focus on the result	15. Develop outlines	Develop outlines of end-products or results
	16. Focus on the result	Focus on the quality of the end product while ignoring details in the course of product development
	17. Revise the result	Critically evaluate the quality and standards of the product and revise it according to characteristics of target audience
6. Complete tasks	18. Find appropriate results	End tasks with satisfactory results
	19. Minimize steps	Reduce the number of steps to finish tasks in time
7. Commit to goals	20. Generate alternative goals	Generate alternative goals to accomplish
	21. Select goals	Evaluate and select most appropriate goals
	22. Commit to goals	Commit oneself to goals
8. Avoid procrastination	23. Set priorities	Set priorities or order of completion for tasks from minor goals to major goals, easy goals to difficult goals or most important goals to least important goals
	24. Split tasks	Split tasks into steps, develop completion schedule for steps and complete tasks step by step
	25. Monitor progress	Monitor the progress in each step of the task
9. Assign responsibility	26. Take responsibility	Take individual or group responsibility
	27. Assess contribution	Assess personal contribution to success and failure
	28. Accept responsibility	Accept personal contribution to success and failure
	29. Avoid blaming	Avoid blaming others for failures of oneself
10. Manage self-pity	30. Diagnose reasons of problems	Diagnose personal and external reasons of problems
	31. Revise goals	Develop achievable new goals
	32. Examine past successes	Use past successes to motivate oneself to achieve new goals
	33. Emphasize on progress	Find new areas in which progress is possible and persist on progress in these areas
11. Be Independent	34. Manage ego	Uncover and avoid egocentric behaviors
	35. Take responsibility	Take individual responsibility in tasks
	36. Make individual decisions	Make individual decisions for personal problems
	37. Increase self-confidence	Work on tasks for which you have strengths and develop strategies to improve your weaknesses
	38. Develop self-esteem	Evaluate your successes and personal challenges to develop a positive self-image
	39. Become a leader	Take leadership responsibility
12. Overcome personal difficulties	40. Develop perseverance	Persist on trying to solve problems
	41. Postpone solutions	Postpone solutions by the best time and conditions
	42. Develop best strategies	Leave strategies that do not work and find new strategies that work
13. Concentrate	43. Design environment	Design environments optimal for concentration on tasks
	44. Explore study styles	Discover study styles by trials that support concentration
	45. Order tasks	Design a work schedule for tasks that interrupt concentration
	46. Manage interfering thoughts	Control thoughts that disrupt thinking while on tasks
14. Plan sensibly	47. Set priorities	Set priorities in tasks according to certain criteria
	48. Develop timetables	Develop timetables for completing tasks
	49. Partition tasks	Partition tasks into achievable steps
	50. Selectively reject	Say no to new tasks that reduce performance for other tasks

Broad Skills (2nd Order)	Subskills (3rd Order)	Definition
15. Set priorities	51. Identify goals	Identify short-term and long-term goals
	52. Select goals	Select goals that have most priorities
	53. See the big picture	Disregard details and small steps to focus on and accomplish big goals
16. Develop self-confidence	54. Carry out self-evaluation	Analyze individual characteristics and identify personal goals and tasks that are appropriate for individual characteristics
	55. Assess past	Explore past successes, their reasons and results and personal contribution to these successes
	56. Prioritize goals	Develop strategies to achieve goals step by step by starting with minor goals and carrying on with big goals
	57. Improve basic skills	Identify and improve basic skills that are necessary for tasks to be undertaken
	58. Correct mistakes	Find out mistakes and develop strategies to correct these mistakes
17. Manage thinking styles	59. Carry out situational analysis	Analyze situations or problems to determine what thinking styles might be the most effective if used
	60. Monitor thinking styles	Systematically observe thinking styles in idea generation and problem solving processes
	61. Do self-critics	Compare thinking styles being used in idea generation or problem solving to thinking styles that should be used
	62. Change thinking styles	Change thinking styles that are not effective in problem solving with the most effective ones
18. Use experience effectively	63. Find out negative personal experience	Uncover ineffective strategies, emotions, behaviors or thoughts in problem solving in the past
	64. Identify positive personal experience	Discover effective strategies, emotions, behaviors or thoughts in problem solving in the past
	65. Analyze negative experience of others	Examine and avoid the use of strategies of others that lead to failures
	66. Analyze positive experience of others	Explore and use success strategies of others

Appendix D. EPTS Lesson Plan Form

LESSON PLAN	
A. LESSON INFORMATION	
Lesson: Analytical Reading and Creative Writing	Theme/Unit: Habitats
Topic: Wetland and Lost Habitats	Grade: 6 Time: 5 hours
Goal: to analyze, interpret and evaluate a reading text related to habitat, to relate wetlands to habitats, to draw conclusions about habitat lost, and to write persuasive essays about the need to protect habitats	
Concepts: habitat, wetland, swamp, endangered species, restoration	
B. LEARNING OUTCOMES	
Content Standards	EPTS Learning Outcomes
Students 1. identify evidence that supports inferences drawn from the text. 2. determine the main idea, theme or topic of a text. 3. analyze the development of the main idea throughout the text. 4. analyze connections or distinctions between ideas or events in a text through comparisons, analogies, or associations. 5. examine the structure of a text. 6. explain how a text presents information sequentially, comparatively etc.	Students 1. make predictions through cause and effect relations presented in a text about habitat lost. 2. evaluate conclusions drawn from the text through the use of objective evidence and reasoning. 3. write a unique persuasive essay about habitat lost. 4. identify an important problem related to the main idea or theme of the essay. 5. produce novel solutions for the problem of the essay. 6. develop outlines to write a persuasive argument throughout the essay to support the solution.
C. ACTIVITY	
Write the instruction in detail for teachers to carry out the lesson appropriately.	
Activity 1. Reading passage "Wetlands and Lost Habitats:" Read the text, answer questions and discuss answers.	
Activity 2. Predictions about habitat lost: Make predictions from evidence about habitat lost presented in a short passage.	
Activity 3. Word analysis: Analyze terms related to habitats.	
Activity 4. Creative writing: Make a paragraph planning chart to identify claims, reasoning, evidence and connections to write a persuasive essay about habitat lost; write a persuasive essay using the chart.	