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Effects of Professional Development on Using Differentiated Instruction with Gifted and Talented Students in the Library Media Center

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EFFECTS OF PROFESSIONAL DEVELOPMENT ON USING DIFFERENTIATED
INSTRUCTION WITH GIFTED AND TALENTED STUDENTS IN THE LIBRARY
MEDIA CENTER

A Specialist Project
Presented to
The Faculty of the School of Teacher Education
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
Of the Requirements for the Degree
Specialist in Education

By
Kristi Lynn Hayes

December 2011

EFFECTS OF PROFESSIONAL DEVELOPMENT ON USING DIFFERENTIATED
INSTRUCTION WITH GIFTED AND TALENTED STUDENTS IN THE LIBRARY
MEDIA CENTER

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I dedicate this thesis to my family who are a great inspiration to me and have been patient and understanding during my years of continuing education. Also, I would like to dedicate this work to my friend, Sarah, who helped greatly by providing encouragement throughout my pursuit of this degree.

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MEDIA CENTER

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51 Pages

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Library media specialists (LMSs) have a unique position within a school, which is the opportunity to reach out to every student, especially to gifted and talented students who can benefit from having more advocates within their learning communities.

Collaborating with other education professionals is beneficial to all students and many library media specialists already make this a normal part of their job responsibilities. The LMSs who are participants of Project CATALYST (Collaboration among Teachers and Librarians Yields Successful Teaching) are required to collaborate with classroom teachers in order to provide more enriching opportunities for students when they come to the library media center. So, the purpose of this project was to introduce gifted and talented terminology and strategies that focus on differentiated instruction for gifted and talented students to LMSs participating in Project CATALYST grant through the Ohio Valley Educational Cooperative (OVEC). This will meet two specific needs: providing the LMSs opportunities to collaborate with classroom teachers while becoming another resource for gifted and talented students that can enhance their learning beyond the classroom.

The LMSs who participate in Project CATALYST were introduced to specific gifted and talented terminology and strategies that focus on differentiated instruction for

gifted and talented students through a three-hour professional development. The participants completed an online pre-survey that identified the specific needs of the group and the professional development was designed with these needs in mind. After participating in the professional development, the participants were asked to complete an online post-survey to determine if the professional development was effective in changing the awareness and instructional practices of the participants when working with gifted and talented students. The pre- and post-surveys were analyzed to validate the effectiveness of the project and found that there was positive response by library media specialists to professional development on using differentiated instruction with gifted and talented students in the library media center. The small changes in instructional practices by 70 percent of the participants validate the effectiveness of the project in enlightening educators in the needs of gifted and talented students and the need to collaborate with other educators to provide enriching and challenging learning activities for these unique students.

OVERVIEW OF PROJECT CATALYST

This study is in response to a larger grant entitled, Project CATALYST, which is administered by OVEC (Shelbyville, Kentucky). This three-year grant (2010–2013) is funded by the Institute of Museum and Library Services and “provides 29 school library media specialists and six county public librarians with professional development focusing on the themes of literacy/reading skills, information literacy/researching skills and subject areas of infrequent LMS/teacher collaboration such as science, math, art and more” (Mansfield, 2010). The project has five objectives: 1) increase access to relevant, rigorous professional development focused on Library Science, 2) increase opportunities for meaningful instruction-oriented collaborations between librarians and teaching staff, 3) increase opportunities for meaningful collaborations between school and local library media specialists, 4) increase student literacy in reading and writing in Year One, Two, and Three, and 5) increase student information literacy in Year Two and Three (Oyer, 2011).

This paper focuses on the objective to increase meaningful collaborations between librarians and teachers by addressing the need to use differentiated instruction with gifted and talented students in the library media center. An overview of gifted and talented characteristics, specific terminology and strategies for differentiated instruction, and the use of professional development to effect change in instructional practices will be provided within this paper.

LITERATURE REVIEW

According to Barbara Clark (2008), “Giftedness is a label used to indicate a high level of intelligence; it has a dynamic quality that can be furthered only by participation in learning experiences that challenge and extend the child’s level of intelligence, ability, and interest” (p. 6). When educators work with students, the focus must be to meet the needs of their students, no matter where their academic ability lies. Our profession is required to make sure our instructional practices are research-based and effective so that the learning of each student is continuous.

Unfortunately, most federally funded programs are focused on meeting the needs of at-risk students and not for providing enrichment programs for gifted and talented students. Budget cuts and the focus on students with special needs have reduced the time and funding allotted for gifted and talented students. Researchers have found that the needs of gifted and talented students are not being met during the school day and that the opportunity for these students to receive special programming is crucial (Gittman & Koster, 2000).

One program that some states are using, not only for at-risk students but for gifted and talented students, is Response to Intervention (RtI). The RtI program, created when The Individual with Disabilities Education Act (IDEA) was rewritten in December 2004, provides early intervention to students whom are at risk, academically and behaviorally, as well as a monitoring system to provide data for identifying students with learning disabilities (Fuchs et al., 2007). Some states, including Montana, feel that gifted and talented students deserve optimal learning conditions and “in the world of gifted education, this refers to implementing and sustaining efforts which ensure our students

have access to differentiated curriculum, flexible pacing, cluster grouping, acceleration and other universal interventions available to all students in the regular classroom” (Hall et al., 2009, p. 2). Montana’s Office of Public Instruction wrote a detailed plan of action in their document, *Response to Intervention and Gifted and Talented Education* (2009). RtI’s foundation is built upon three tiers. Within Tier 1, the most important strategy to meet the needs of gifted and talented students is by providing differentiated instruction. This tier is provided by classroom teachers and grouping students is the best way to meet the individualized needs of gifted students. In Tier 2, Montana’s plan focuses on “Strategic Targeted Intervention” where gifted and talented students are placed in small groups with other students based on their strengths and interests (Hall et al., 2009). This tier is where library media specialists can come into play as an additional resource to provide small group instruction in collaboration with classroom teachers and the school’s gifted and talented teacher. Some of the strategies provided in Tier 2 would be a good merging between the library media center and the classroom, such as cluster grouping, competitions or advanced clubs, cooperative grouping with like-ability learners, extra-curricular learning, mentorships, and/or theme-based units. Table 1 within the article, *RtI for Nurturing Giftedness: Implications for the RtI School-Based Team*, shows a comparison between the traditional RtI structure and how it could work for gifted learners. The RtI principle, collaborative structure, states, “Gifted education professionals collaborate with general education teachers to identify and serve high-achieving students in need of differentiated services” (Hughes & Rollins, 2009, p. 37).

So, how does all this connect with library media specialists? When the American Association of School Librarians & Association for Educational Communications and

Technology published the document, *Information Power: Guidelines for School Library Media Programs* (1988), it changed the perception of what a library should be within a school environment. This document set out clear guidelines on engaging in collaborative teaching. Now library media specialists must become instructional consultants with the educators in the school to bring into focus the importance of the resources offered by library media center programs. In the article, *Collaborating from the Center of the School Universe* (2006), the author describes her journey in making the library media center at her school the center of the school's universe. When she was hired, the library media center was located in the basement of the school and by no means the "center" of anything. However, by bringing her collaborative programs to the teachers and students, they could no longer ignore the resources offered by her innovative library media center programs. She goes on to describe the different styles of collaboration she saw when working with various teachers in her school, such as the 'long-standing and highly organized veteran collaborative partners', the 'novice collaborators', and the 'truly collaboration-resistant colleagues' (Buzzeo, 2006, p.19). She states, "We must take every step necessary to put our library media centers at the center of the school universe – and the most essential step of all is collaboration" (Buzzeo, 2006, p.19).

How can collaboration help enrich the learning of gifted students? In one high school it became evident through student and teacher surveys that Advanced Placement (AP) students did not receive Information Literacy instruction. Their teachers felt these students should be able to do research by themselves – a mythical assumption of many teachers that have not had training on the needs of gifted students. The library media specialists shared the data with the AP teachers and some agreed to collaborate to

“design, implement, and assess a research project for these students” (Snethen & Cornelius, 2010, para. 9). By collaborating with the AP teachers, the library media specialists were able to instruct “them on the information literacy skills that would help them efficiently and effectively work through the research project” (Snethen & Cornelius, 2010, para. 9). The reward for this collaborative process has been well worth the effort from the library media specialists in convincing the AP teachers that these students have needs that must be met and these needs can be met by collaboration. Student comments after the collaborative lesson were very positive, such as, “My biggest growth during the process of writing this research paper was to become more realistic about my topic” and “I’ve never had an easier time writing a research paper” (Snethen & Cornelius, 2010, para. 10). The authors state, “The librarian is now an integral part of the research process and students know when researching for any class they can come to the library for help” (Snethen & Cornelius, 2010, para. 13).

Not only is it important for teachers to see the benefit of collaboration but it is also imperative that the school administrators understand how beneficial the collaborative process can be to improving student achievement. Anderson (2007) states:

Today more than ever, the season is right and educational ground is fallow for a strong administrative/library media center team. No Child Left Behind forces us to focus on the bottom line of student achievement. It is a time for all hands on deck to meet the diverse needs of all students. It is a time for collaboration, a time to maximize resources, a time to rally the staff, a time to analyze the data, and a time to think both inside and outside the library media center. (p. 22)

She goes on to describe the areas of expertise that a library media specialist can offer to the school. Many of these roles involve reading practice and teaching research skills in collaboration with classroom teachers. She challenges administrators to become a “library media center advocate” and provide the resources and time for the library media specialist to meet with classroom teachers for collaborative planning. By having the support of the administrators in the building there is no end to the heights student achievement can reach with teachers working with the library media specialists.

Gifted and Talented Characteristics

According to the National Association for Gifted Children (2011) the No Child Left Behind (NCLB) definition of gifted and talented is as follows:

The term ‘gifted and talented’, when used with respect to students, children, or youth, means students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services or activities not ordinarily provided by the school in order to fully develop those capabilities. (Title IX, Part A, Section 9101(22)) (Page 544) (NCLB Background Information, para. 8)

According to NAGC (2011), under the law, “states are required to explain the method used to define ‘annual yearly progress’ and may use a host of academic indicators, including changes in the percentage of students in gifted and talented, advanced placement, and college preparatory programs. (Section 1111(b)(2)(C)(vii)). (Page 24)” (NCLB Background Information, Part A section, para. 1). NAGC (2011) describes Section 2122 which allows Local Education Agencies (LEA) to apply for money from

the state to “provide training to enable teachers to address the needs of students with different learning styles, particularly students with disabilities, with special learning needs (including students with gifts and talents)... (Section 2122(b)(9)(A)) (Page 210)” (NCLB Background Information, Part A section, para. 3).

According to Clark (2008), “As human beings develop higher levels of functioning, many unique patterns and traits emerge...There are many characteristics, however, that gifted individuals have in common” (p.73). By understanding the characteristics in each area of giftedness, teachers and parents are better able to work together to provide a challenging and rigorous curriculum for these unique students. Table 1 shows the common characteristics for each area of giftedness according to information from Clark (2008) and Hall et al. (2009).

Table 1. Gifted Characteristics

Area of Giftedness	Common Characteristics
General Intelligence	<ul style="list-style-type: none"> • Extraordinary vocabulary • Exceptional understanding of complex or abstract ideas • Advanced sense of humor • Amazing curiosity • Extraordinary speed in processing information • An unusual capacity for memory
Specific Academic Intelligence	<ul style="list-style-type: none"> • Exhibits extended attention in math, science and/or humanities • Displays a passion for a topic of interest • Works extensively on projects of interest • A need for precision in thinking and expression
Creativity	<ul style="list-style-type: none"> • Strong visual thinking or imaginative skills • Transfers ideas and solutions to unique situations • Resists external control, tests and challenges limits • An awareness of detail

Leadership	<ul style="list-style-type: none"> • Relates to and motivates other people • Unusual capacity for organization of projects and people • Listens to and respects others opinions • A need for the world to be logical and fair • A rapid and thorough comprehension of the whole idea or concept
Visual/Performing Arts	<ul style="list-style-type: none"> • High ability in visual arts • Unusual ability to create, perform, or describe music • Unusual talent in drama or dance • Fascination with ideas and words

By understanding the characteristics of gifted and talented students, educators are better equipped to plan more challenging activities that will engage students in active learning. For decades, brain research has proven that experiences beginning at the infant stage help the brain develop and allow children to reach the highest potential that they are capable of achieving. Vygotsky’s “zone of proximal development” theory encourages teachers to teach to the child’s higher level to reach that potential. This is especially true for gifted students that move through new skills at a fast pace. This allows them “continuous progress at their own rate” (Clark, 2008).

As children continue to develop, the characteristics of giftedness become more noticeable. During the early school years, educators can support gifted children by providing a “responsive learning environment” (Clark, 2008). This type of educational environment provides students with rich experiences and a variety of resources and materials. Students are encouraged to work on their strengths, abilities, needs, and interests in order to optimize their learning. Other factors that contribute to this type of learning environment is positive discipline and actively engaging children in visual,

auditory, mental, and motor skill activities. Since early language development is a common characteristic of gifted learners, it is important to expand on this area of learning in the early years to build a strong language foundation. Clark (2008) states,

According to Vygotsky and Luria (1994), language is a mental tool that allows thinking to be more abstract, flexible, and independent from any immediate stimuli. Language builds the cognitive processes in part by allowing the child to imagine, manipulate, and create new ideas and in part by facilitating a shared experience in which the child exchanges social information with others (p. 100).

Reading skills fall into this area of development, and it is important to use the advantages of rapid learning gifted children show at this young age. When children begin to move into adolescence, the characteristics become more pronounced for the identified areas of giftedness. Children of this age group begin to look to peers and other role models for acceptance and will begin to feel isolation if they are unable to find their “niche” within their learning environment. Support is very important during the physical, emotional, and intellectual transitions taking place in the students. Being gifted during this stage of development can be very stressful if there is not a support system in place that provides acceptance, belonging, and ways to build self-esteem (Clark, 2008).

Strategies for Differentiated Instruction

Part of the support system that gifted and talented students depend on is the educators they come into contact with in the learning environment. Library media specialists are a vital part of that support system. Some of the skills being taught in the library lend themselves very easily to differentiated activities or strategies. Collaboration between the library media specialist, classroom teacher, and the gifted resource teacher

can produce learning plans that provide opportunities for gifted students to engage in higher-order thinking through differentiation. According to Roberts and Boggess (2011), “The school librarian usually has more resources at her disposal than any other person in the school. Becoming a lifelong learner requires accessing resources that allow a student to both answer and ask good questions” (p.164). As a resource for gifted and talented students, library media specialists can find unique ways to work with these students. Some ideas include the creation of book clubs, keeping in touch with the reading interests of this subpopulation, and collaborating with classroom teachers on teaching research or technology skills geared toward gifted students. Bibliotherapy is another important way that library media specialists can reach out to gifted students having problems with social-emotional development. These unique students need to make a connection with the issues explored within books and how it relates to what they might encounter or feel. Many references are provided by Roberts and Boggess (2011) in the teacher resource book, *Teacher’s Survival Guide: Gifted Education*, such as, *Eggbert, the Slightly Cracked Egg* by Tom Ross (1997), *The Little Cupcakes* by Anthony King (2005), or *Stand Tall, Molly Lou Melon* by Patty Lovell (2001) (pp.165-166).

According to Hall, Strangman, and Meyer (2003),

To differentiate instruction is to recognize students' varying background knowledge, readiness, language, preferences in learning and interests; and to react responsively. Differentiated instruction is a process to teaching and learning for students of differing abilities in the same class. The intent of differentiating instruction is to maximize each student's growth and individual success by

meeting each student where he or she is and assisting in the learning process (p. 3).

Differentiation began as a combination of many different theories and practices and its foundation is grounded in the work of Vygotsky's theory of the zone of proximal development (ZPD). Meeting the students at their level of readiness and teaching skills slightly above their level of mastery is what makes instruction differentiated at challenging levels. Hall et al. (2003) states,

The design and development of differentiated instruction as a model began in the general education classroom. The initial application came to practice for students considered gifted but whom perhaps were not sufficiently challenged by the content provided in the general classroom setting. As classrooms have become more diverse, differentiated instruction has been applied at all levels for students of all abilities" (p. 6).

There are three elements of the curriculum that can be differentiated according to Carol Tomlinson. Content, process, and products are easily adapted to meet the needs of all students. The following guidelines should be used "for forming an understanding of and developing ideas around differentiated instruction" (Hall et al., 2003, pp. 3 - 5).

Content

- Using a variety of elements and materials will support the instructional content and access to content is the key for continuous learning.
- Making all tasks and objectives align with learning goals is essential. Having an "objective-driven" menu allows teachers to provide the next instructional learning to students at all levels of mastery (Hall et al., 2003)

- Instruction should focus on the concepts and principle that all students need to learn but the complexity of the content “should be adjusted to suit diverse learners” (Hall et al., 2003).

Process

- One key to successful differentiated instruction is the consistent use of flexible grouping. The most important aspect of flexible grouping is that the groups are not fixed and that grouping and regrouping must change as needed based on “the content, project, and on-going evaluations” (Hall et al., 2003).
- Classroom management that benefits the organization and delivery of differentiated instructions will benefit students and teachers.

Products

- Preassessment and continuous informal assessments of student readiness and knowledge are a necessary component of an effective differentiated classroom. These will provide data for teachers to use so they can provide “a menu of approaches, choices, and scaffolds for the varying needs, interests, and abilities that exist in classrooms of diverse students” (Hall et al., 2003).
- Tasks should allow students to be engaged and responsible explorers of the content being taught. There should be interest and challenge for all students.
- Products and expectations should be varied according to the student’s need and knowledge level. “A well-designed student product allows varied means of expression and alternative procedures and offers varying degrees of difficulty, types of evaluation, and scoring” (Hall et al., 2003).

By using these guidelines, teachers should take the data provided by preassessment to build lessons that will engage students in the content by learning within flexible grouping and chances to show their learning by offering variety of choices and products at different levels of difficulty. The learning must be “just right” for each student. Roberts and Boggess (2011) state, “The key is to start with one differentiation strategy and then to build a repertoire of strategies” (p. 82) One reason is because differentiated instruction, while not impossible to implement, can be difficult if the teacher does not have the knowledge base or understanding of what it is and how it looks in a classroom. Another issue is that teachers have a difficult time planning for a wide range of learners and especially advanced learners. A common myth among educators is that gifted students can “make it on their own” which is a misconception that needs addressing (Roberts & Boggess, 2011).

One way to address this misconception is through professional development aimed toward educators who are responsible for delivering instruction to gifted students beyond the gifted resource teacher. Knowledge about how gifted students learn and how to incorporate specific differentiation strategies should be part of any professional development offered to educators whom are working with gifted students but have not earned a gifted studies certificate. Conklin and Frei (2007) describe six ways that gifted students learn and share some ideas for differentiation (pp. 45-48).

1. “Gifted children learn new information in shorter time frames and tend to remember what was taught better than the average student” (Conklin & Frei, 2007). If a gifted student passes the preassessment with an 80 percent, they should not be required to sit through the same lessons as a student who made a zero on the preassessment. The

teacher should have learning plans for enrichment activities or acceleration of the curriculum.

2. “These exceptional children can observe concepts and ideas at more complex and abstract levels than most children their age” (Conklin & Frei, 2007). Teachers should not try to teach higher-order thinking skills in isolation but incorporate them within the content being taught. By using the higher levels of Bloom’s taxonomy to plan activities for gifted students the teacher will engage these students without having them feel isolated from the rest of the students.

3. “At times, gifted children ‘learn’ not to be so gifted when they quickly discover that being gifted only calls for additional work” (Conklin & Frei, 2007). Using tiered assignments instead of giving busy work to gifted students is a more positive way to encourage advanced students to not shut down or become underachievers.

4. “Gifted students have a passionate interest in selected topics and desire to spend large amounts of time on the topic before moving on to new material” (Conklin & Frei, 2007). Allowing gifted students the opportunity to “continue” learning about a topic of interest can be managed by creating an individualized learning contract. This will allow the teacher to continue moving forward with the curriculum but allow the student to focus and eventually share what they have learned about the topic on their own.

5. “Gifted students need opportunities to express their own creativity so that it will grow and develop” (Conklin & Frei, 2007). Gifted students should be allowed to demonstrate their learning in ways that match their creative intelligence. Learning to solve real-world problems also allows students to think creatively.

6. “Like everyone else, gifted students have various ways through which they can demonstrate their intelligence” (Conklin & Frei, 2007). Learning styles are unique to each student and teachers need to take the time to find out what the learning styles of their students are, especially when working with gifted students. Using the learning styles of the students to fashion learning activities will let students express their individuality.

The next step after learning about how gifted students learn is to find some specific differentiated strategies that can be incorporated in any learning environment, such as the library media center. *Strategies for Differentiating Instruction: Best Practices for the Classroom* (2009) provides inexperienced teachers or teachers with limited knowledge of differentiation ways to use differentiation strategies in learning environments to best meet the needs of all students, especially gifted students. Roberts and Inman (2009) focused on making sure that educators just beginning to use differentiation would be successful in their journey of meeting “the needs, interests, or abilities” of all their students. By using the information from this book in professional development settings, presenters can feel confident that the participants will come away with the knowledge needed about differentiation strategies that they can incorporate immediately when they return to their learning environment. The best and easiest strategies to introduce are the Bloom Chart and Think-tac-toe. Learning about Bloom’s taxonomy is in most aspiring educators’ coursework so beginning differentiation experiences by creating a Bloom Chart should be fairly straightforward. The essence behind the Bloom Chart is to use the same content or topic but vary the learning activities by using the different levels of Bloom’s taxonomy such as, create, evaluate, analyze, apply, and remember/understand. According to Roberts and Inman (2009) the “Bloom

Chart provides an easy way to design learning experiences that allow the content to remain the same while altering the process and the product to provide challenge and choice” (p. 69). This will allow all children to learn the same topic or content but on different levels. By using preassessment data, the educator already knows who is ready for the content and those who are above or below the readiness level. So, by offering different levels of learning, with the same content, each student will be able to have “continuous learning” throughout the unit. The best ways to infuse this strategy is to use it within centers and in-class activities.

The following Bloom Chart is an example from Roberts and Inman (2009) based on “Figure 5.7. Bloom Chart: Social Insects” (p.77):

Bloom’s Taxonomy Level	Differentiated Activity
Create	Based on your understanding of social insects, create a social insect that would fit into an ecological niche of your choice. Select a product that will allow you to explain about your new insect and why it fits into the specific environment.
Evaluate	Using criteria that you establish, judge which social insect is best suited for survival alongside human habitation. Share your point of view in a scientific paper or an editorial.
Analyze	Compare and contrast two or three examples of social insects. Show your evidence with a Venn diagram or an essay with illustrations.
Apply	Identify three examples of social insects and show how each fits the concept of social insect. Your product can be an exhibit with explanations or a photo essay.
Remember/Understand	Identify the concept of social insects in terms of physical structure and behaviors. Produce a poster or a skit to demonstrate what you have learned.

The Bloom Chart above is just one way to present the material to students but the concept of the chart is the same no matter which way it is presented. An important factor is to make sure that the tasks are engaging at all levels and that there is enough challenge at each level so that all students are learning new material. Before introducing the chart to students, the rubric or scoring guide created for establishing criteria for the products should be explained in detail to students so they have a clear understanding of the expectations.

Think-tac-toe is another easy differentiation tool that can be taught to beginning educators working with differentiation. Roberts and Inman (2009) describe the strategy as a way to provide “multiple options in a tic-tac-toe format for student projects, products, or lessons. Students select one activity from each row to complete” (p. 103). As with the Bloom Chart, students should be allowed to make changes to the product as long as the new product shows the teacher the same content knowledge as the original product and a rubric is available. Creativity is encouraged with all products. Think-tac-toes can consist of squares ranging from fewer than nine or more than sixteen. There are many ways to use this strategy such as project to accompany unit, semester review, or unit assessment. One of the best ways to differentiate with Think-tac-toes is basing it on the different learning styles.

The example below is from Roberts and Inman (2009) based on “Figure 7.8. Think-tac-toe: Burial in ancient civilizations” (p.112):

China: Warriors of Xian	Compare and contrast the burial of Xian with the burial of another ruler in a different culture, producing a Venn diagram or an	Describe the warriors of Xian and their story in a dialogue or an illustrated story. (Oral or visual)	Apply what you know about the burial customs of emperors in China that lead to the burial site at Xian in an illustrated essay or a
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	essay. (Written)		model with explanation. (Kinesthetic or written)
Egypt: Pharaohs and Pyramids	In a series of paintings, depict basic religious beliefs the Egyptians held that can be surmised through their leaders' burials. (Visual)	Construct a model depicting a typical pyramid of a pharaoh. (Kinesthetic)	Become an Egyptian architect and design a tomb for the pharaoh. Present your ideas to the pharaoh through a role play or a written proposal. (Oral or visual)
Ethics and Beyond	Defend your judgment in response to the following statement in a debate or an editorial: burial sites are sacred and should remain untouched. (Oral or written)	Create burial customs that include art and artifacts for another culture. You may select the product that will let you express your ideas. (Any)	Chart major discoveries and insights about ancient civilizations that stem from archeological excavation of burial sites. (Visual)

As with the Bloom Chart, students should be aware of the expectations by providing them with a rubric or scoring guide. Since the Think-tac-toe was designed to address the content in a variety of ways, students will be responsible for exploring and learning the same content with the same expectations. Learning the content is more important than the product being used and creativity is to be encouraged.

Another easy strategy for educators just learning about differentiation is Jigsawing. This strategy is used mainly within the reading or language arts activities but it can also be useful for other content areas, such as, science or social studies.

Differentiation comes into play when the content being taught is covered from different types of texts at different reading levels to meet the needs of all students. Michael Ford (2005) describes the Jigsaw strategy as “a way to organize learning” (p. 9). He also says that “its basic premise is that each team is responsible for one predetermined portion of the text and reports on what they learn to the other groups, who read other portions of

text” (p. 9). Another way to differentiate is to make the portions “vary in length, conceptual load, vocabulary, and potential interest” (Ford, 2005). If the flexible groups are formed correctly, each team member should learn the content successfully.

Effects of Professional Development on Changing Instructional Practices

So, what is the best way to impart this knowledge to beginning teachers or educators who are unaware of the needs of gifted students or how to implement differentiated instruction? The best way would be through professional development sessions that focus on the needs of the group within the session. Research shows that professional development that is geared toward a specific group with a specific purpose has more effect than a generic professional development given to the whole school faculty which consists of classroom teachers, special area teachers (arts & humanities, physical education, library media, and/or other areas used to provide classroom teachers a planning period), special education teachers, and other instructional personnel (Guskey, 2002). A generic professional development session will not be as effective as professional development that is modified for a specific group, such as library media specialists.

According to Scot, Callahan, and Urquhart (2009), “When education practice needs to be changed or improved, one primary remedy is professional development of teachers”. However, most professional development has been found to be ineffective due to the nature of the “one-shot” type of workshops and the lack of follow-up or purpose. Research has shown that in order for true change to take place from professional development that the group of educators in the workshop must be a team that has been given a “common, stated purpose”. Scot et al. (2009) list conditions that will make the

learning more effective for the group: 1) group must be a real team, 2) have a compelling direction for its work, 3) have an enabling structure that facilitates rather than impedes teamwork, and 4) operate within a supportive organization (p. 43).

Knowing that regular education training coursework for teachers only skims the surface of how to work with special need students (lower ability and higher ability) and focuses mostly on teaching to the average student, how can professional development help educators diversify their instructional practices to reach the needs of the lowest and highest ability students? In the report, *Preparing Teachers to Develop and Enhance Talent: The Position of National Education Organizations* (2003), the authors state, “If classroom teachers are to be the primary service providers for the full range of academic diversity, including students who are advanced well beyond their age peers, these teachers need more adequate preparation for their responsibilities” (p. 4). They offer several recommendations such as, pre-service preparation for all upcoming classroom teachers, on-going staff development for all classroom teachers, and encouraging educators to earn a gifted endorsement (Callahan, Cooper, & Glascock, 2003).

Where does that leave the educators who work with gifted students yet have not received the needed training to meet the needs of these unique students? Sabatini (2001) states,

It is important that a strong collaborative relationship exist between experts and novices. On the surface, this mentorship role involves experts providing a strong knowledge base, nurturing and guiding novice members. A deeper interrelationship would ensure greater preparedness to take on challenges like modifying the regular curriculum to address the advanced learning needs of gifted

students. Through their expertise and research, teachers would feel supported in their advocacy efforts (p. 174).

By providing ways for educators, other than gifted resource teachers, to become advocates for gifted and talented students is the underlying purpose behind learning about the needs of gifted and talented students. Professional development sessions in isolation are not an ideal way to prepare educators for working with gifted students, but it is preferable to leaving them with no knowledge or a way to become an advocate for these students.

Purpose of the Study

In the area of using differentiated instruction with gifted and talented students in the library media center, there is much to learn. Library media specialists have standards that must be addressed during the course of a school year in much the same way as a classroom teacher. However, because of their unique position within the school, there are ways to maximize the resources provided to include collaboration with the gifted and talented teacher and the classroom teacher to include differentiated instruction for GT students. Library media specialists who have never been trained or made aware of the needs of gifted and talented students are less likely to collaborate, not because they are unwilling but due to a lack of knowledge and skills on meeting these needs. By providing a three-hour professional development with an overview of giftedness, specific terminology and strategies to use, and how to create a differentiated unit in collaboration with classroom teachers to the library media specialists participating in the CATALYST grant, it is hoped that these participants will make instructional changes with regards to

working with gifted and talented students and make more effort to collaborate with the classroom teachers. This project addresses the following hypotheses:

Hypothesis One: Library Media Specialists participating in professional development on using differentiated instruction with gifted students in the media center will make changes to their instructional practices.

Hypothesis Two: Library Media Specialists participating in professional development on using differentiated instruction with gifted students in the media center will use the information to collaborate with classroom teachers on providing enriching instruction for gifted students.

In the past, LMSs were considered just a “keeper of books” and were used to provide additional planning for teachers. Libraries were a place to drop off students. In today’s world of accountability, this mind frame is no longer feasible or effective. Considering the requirements of the CATALYST grant, it is hypothesized that some instructional changes will be made by the library media specialists receiving the professional development within the limits of their instructional day (flexible or structured scheduling). It is also hypothesized that more collaboration between library media specialists and classroom teachers will take place by providing more enriching instruction for gifted and talented students due to more knowledge on what the needs are for these special students from the professional development.

In addition to these hypotheses, the following research questions will be addressed: Do LMSs have a better perception of how they can become a better resource for gifted and talented (GT) students after receiving professional development on the special needs of GT students?

METHOD

Participants

Due to the nature of this project, all appropriate materials were submitted and approved by the University's Human Subject Review Board. The formal acceptance was granted (See Appendix A) along with the informed consent with no known risks to the human participants.

The targeted participants of this project are the twenty-nine members of the Project CATALYST overseen by the OVEC office in Shelbyville, Kentucky. These members are from six different counties within the OVEC region. Twenty-nine pre-surveys were sent out at the beginning of September 2011 and as of the deadline, twenty-four participants had completed the survey. However, one participant was unable to attend the professional development on September 20, 2011, and so that pre-survey data will not be included in the analysis. Overall, the 83 percent participation rate from the CATALYST members assures the author that the results will be consistent with the majority of the group.

All participants are females working in their school as the library media specialists. The majority of the participants work in an elementary school (70%), 17 percent are in a middle school and 13 percent are in a high school. The highest percent of participants are from Simpson county (39%) and the lowest percentage of participants coming from Jefferson county (5%). Having six different Kentucky counties represented in Project CATALYST ensures that there is a diverse group of participants for the project.

Materials

The pre- and post-survey questions were created with the advice and input from Dr. Julia Roberts, Executive Director of The Center for Gifted Studies. The surveys (see Appendices B and C) were divided into four sections: Participant demographics, responsibilities of working with gifted and talented students, instructional practices using differentiated practices with gifted and talented students, and knowledge of specific terminology. The post-survey added one more section, reflection, which was a short response question to gauge the impact on the participants' instructional practices since engaging in the professional development on September 20, 2011.

Section four and five of the surveys used a four-point Likert scale format ranging from "not at all" to "all the time" on section four and "not at all" to "very knowledgeable" on section five. After the pre-survey was closed and analyzed, the development of the professional development began and focused on the areas of higher need signified by the answers given by the participants. The areas of need in section four were items three and four and in section five the professional development would focus on the following terminology: Bloom Chart, Think-tac-toe, Jigsaw, and cooperative groups.

This project was based on participants receiving a professional development session by the author and then returning to their respective schools to utilize some of the differentiated strategies with groups of gifted students. The materials for the professional development were created by the author and used from professional texts that met the need of the session. Three PowerPoints were created to set the pace of the session and a binder full of information and resources was created and given to each participant. The

session lasted three hours in which the participants were taught by lecture, hands-on activities, partner and cooperative group work, and a chance for reflection.

Research Method

The purpose of this study was to determine the effects of professional development on instructional practices of library media specialists when working with gifted and talented students. Specifically, will the participants utilize the new strategies after going back to their home school? An online pre- and post-survey design was utilized to compare participant answers from before receiving a three hour professional development and their answers after receiving the three-hour professional development. In order to ensure measurable and reliable results a Likert scale was used for both surveys and the same questions were used for both surveys to ensure a true comparison in the analysis. Values were assigned to each item within section four and section five and relative comparisons were made between pre- and post-surveys.

Procedure

As a participating member of Project CATALYST, the idea for the project was sparked by a discussion with Diane Goodwin, Project CATALYST Coordinator, during a monthly meeting. After sharing a successful collaboration based on working with gifted fifth-grade students during spring 2011, Ms. Goodwin suggested that the collaboration should be shared with the CATALYST members during the meeting in September 2011. The idea was presented to the committee chair of this project, and it was approved. The appropriate documents were prepared and filed with the University Human Subjects Review Board. Once approval was given, an online random number program was used to assign each participant with a random number that would be used in place of their name

on the surveys. This random number was used for both pre- and post-surveys. The pre-survey link was sent to all twenty-nine members of Project CATALYST at the beginning of September. Once the online link for the pre-survey was closed, twenty-four participants had completed the survey. The pre-survey data results were analyzed to find areas of highest need for this group in using differentiated instruction with gifted and talented students in the library media center. The three-hour professional development session was developed based on these areas of need. During the professional development the participants were informed about gifted characteristics and how gifted students learn. A binder full of information and resources was also given to each participant and included items such as copies of each PowerPoint, information about specific differentiation strategies, and examples from two differentiated units geared for gifted and talented students with student artifacts. Several weeks after the professional development was delivered, the online post-survey link was emailed to the participants with a deadline of two weeks for completion. The participants were asked to use the same random number assigned to them for the pre-survey so the data, while remaining confidential, could be compared informally. No personal identification was collected, and only aggregate data are being reported.

RESULTS

This project studied the pre- and post- perceptions and knowledge of library media specialists after attending a three-hour professional development session addressing the use of differentiated instruction with gifted and talented students in the library media center. The items of the survey being analyzed and reported on are:

- Section 4, item 3: I use specific differentiated strategies with the Gifted/Talented students, such as, Bloom Chart, Think-tac-toe, etc.
- Section 4, item 4: The assignments I give differ based on the learning needs of Gifted/Talented students
- Section 5, item 1: Bloom Chart
- Section 5, item 2: Think-tac-toe
- Section 5, item 5: Jigsaw

The first hypothesis predicted that library media specialists participating in professional development on using differentiated instruction with gifted students in the media center will make changes to their instructional practices. To address the first hypothesis, item 3 from section four, items 1, 2, and 5 from section five were analyzed by using the values assigned to the four possible responses (Likert scale of 1 being “not at all” and 4 being “all the time” (section 4) or “very knowledgeable” (section 5). The item with the largest positive gain was in the knowledge of the term Jigsaw with a gain of 0.75. The item with the least positive gain was in the knowledge of the term Bloom Chart with a slight gain of 0.17. The values were averaged from all twenty-three participants for the pre- and post-surveys and compiled in the following table.

Table 2. Survey Averages for pre and post survey items addressing Hypothesis 1

Section and Item #	Pre-Survey Avg	Post-Survey Avg	Differences
Section 4, Item 3	1.708333	1.95833	+0.25
Section 5, Item 1	3.166667	3.333333	+0.17
Section 5, Item 2	1.583333	2.708333	+1.13
Section 5, Item 5	2.25	3.00	+0.75

From the positive differences in all four items, the prediction of the first hypothesis can be said to be validated. The participants of the professional development were able to go back to their respective schools and implement some small changes in their instructional practices, which is also supported by the reflection responses on the post-survey in Section 6.

The second hypothesis maintained that the library media specialists participating in professional development on using differentiated instruction with gifted students in the media center will use the information to collaborate with classroom teachers on providing enriching instruction for gifted students. To address the second hypothesis, item 4 from section four was analyzed by using the values assigned to the four possible responses (Likert scale of 1 being “not at all” and 4 being “all the time”). The values were averaged from all twenty-three participants for both the pre- and post-surveys. This survey item focused on differing assignments for gifted and talented students based on their learning needs. The pre-survey average was 1.875 (on a scale of 1 being the lowest and 4 being the highest) and after participants attended the professional development the post-survey average increased to 1.958, for an increase of 0.083. From the positive difference, the prediction of the second hypothesis can be said to be validated. The

participants of the professional development were able to go back to their respective schools and collaborate with teachers to plan creative lessons with other educators, which is also supported by the reflection responses on the post-survey in Section 6.

So, in addition to these hypotheses, the following research question is addressed. Do library media specialists have a better perception of how they can become a better resource for gifted and talented students after receiving professional development on the special needs of GT students? By reviewing the above data from the comparison of the pre- and post-survey items and reading the positive reflective responses from 70 percent of the participants, the data results substantiate that there were small but significant changes in the way library media specialists view their role in becoming a better resource for gifted and talented students.

DISCUSSION

The purpose of this study was to examine the effectiveness of professional development on using differentiated instruction with gifted and talented students in the library media center.

Implications on providing professional development to library media specialists

The focus of Project CATALYST is to provide specialized professional development to library media specialists. The professional development opportunities are delivered in the areas of collaborations, building technology knowledge, and learning how to teach information literacy skills to 21st Century learners.

This type of professional development is important for two main reasons. First, most professional development delivered at schools or within school districts is not geared toward library media specialists, but is geared toward classroom teachers and how they can improve student achievement. Second, the chance to work with and share ideas with other library media specialists is important to the continuing growth of our profession. Being the only library media specialist in the school environment makes the job more difficult with limited chances to collaborate and share ideas with others.

Limitations

Several limiting factors may have affected the outcome of this project. Sample size was limited to only library media specialists participating in Project CATALYST and the size of this group was twenty-nine, with only twenty-three actually participating in the study. This is a very limited sample of library media specialists within the OVEC region.

Another factor is the availability of the participating library media specialists to find time to collaborate with classroom teachers in order to create lessons using the differentiating strategies to engage the gifted learners in the library media center. Most of the library media specialists in Project CATALYST are on a fixed schedule (provide planning for teachers) and are unable to meet with teachers on their planning time for collaborative planning and teaching.

Future Research

Future research may want to utilize a larger scale of participants and not limit the survey to just using differentiated instruction with gifted and talented students. It would be beneficial to show the impact of specified professional development for library media specialists and how student engagement would increase with more collaboration with classroom teachers. Although it is time consuming, a more systematic direct observation and use of personal interviews might offer more valuable information than informal online surveys.

It is obvious that more research is needed on the effects of professional development on library media specialists since there were minimal findings while conducting research for this project. More research on the effects of collaboration is essential if the position of library media specialists is to be considered more than babysitter or keeper of books by the other staff/faculty members in the school.

Summary

Overall, the findings of this project were very positive. The areas that the professional development focused on were utilized by the majority of the participants and

the reflections from the post-survey gave a sense of enthusiasm for incorporating more of the strategies to better serve the gifted and talented population of the participants' school. Some of the reflections focused on appreciation of gaining a better understanding of the gifted population.

“Many of my activities in the library are geared for individual abilities. Since the PD on 9-20-11, I am more consistently aware of having more appropriate expectations from some students. The PD provided valuable information and resources for lesson planning.” (Participant #321)

“Overall awareness was heightened.” (Participant #270)

“The professional development has made me more aware and cognizant of gifted and talented students' needs and I have made adjustments as I saw appropriate to my instruction and services.” (Participant #297)

However, the most positive reflections came from participants whom are revising their instructional practices to reach out and engage gifted students within the lessons they deliver in the library media center in collaboration with other educators.

“While many of the things I heard about during the professional development session weren't totally new to me, I have found myself becoming more intentional about using the strategies. For example, I recently used Jigsaw during collaboration with a third grade class.” (Participant #154)

“The ways you presented to work with GT students was very helpful. I'm using the Tic-tac-toe chart and the Bloom Chart for two of my groups. I've also shared with my staff. Differentiation is a big buzzword, but

not many know how to do this, and they have found your activities very helpful.” (Participant #341)

“I am now working with a group of G/T students once a week. Because it’s a small group and focused on language arts we have not tried any differentiated instruction as yet.” (Participant #323)

“Since the professional development, I have developed activities to use with the gifted students based on the strategies discussed. For example, I have created a Think-tac-toe activity sheet for the students which contain activities that meet the needs of the various types of learners in my group.” (Participant #500)

“I have already incorporated some strategies that I learned at the PD, such as Think-tac-toe. The students really enjoy choosing different activities and enjoy sharing with the group. As more teachers are finding out that I am working with two small reading groups, they are asking me to collaborate with their class – I love it.” (Participant #457)

“I went back and talked with our gifted source and she was thrilled that I would work with groups of gifted kids through collaborative lessons in addition to the regular class lessons. I am excited!” (Participant #380)

The overall reflective responses were positive (70%) with 30 percent of the responses stating that their instructional practices “haven’t changed” (Participant #403) or they “have not had a chance to do any real differentiation yet” (Participant # 196). The implications for providing specific professional development for library media specialists is positive when it deals with changing instructional practices and providing opportunities

for collaboration with other teachers. When the positives are in direct correlation with improving student learning and engagement, then all effort should be given to make the changes needed to provide library media specialists with professional development that will allow them to grow professionally. This implies that overall enlightenment about the diverse needs of all students is important in all teacher training programs, including library media education.

LITERATURE CITED

- American Association of School Librarians & Association for Educational Communications and Technology. (1988). *Information power: Guidelines for school library media programs*. Chicago, IL: American Library Association.
- Anderson, C. (2007). Adequate yearly progress (AYP) at your library media center. *Library Media Connection*, 25(4), 22-24.
- Buzzeo, T. (2006). Collaborating from the center of the school universe. *Library Media Connection*, 24(4), 18-20.
- Callahan, C., Cooper, C., & Glascock, R. (2003). *Preparing teachers to develop and enhance talent: The position of national education organizations*. National Association for Gifted Children.
- Clark, B. (2008). *Growing up gifted (7th ed.)*. Columbus, OH: Pearson Education.
- Conklin, W. & Frei, S. (2007). *Differentiating the curriculum for gifted learners*. Huntington Beach, CA: Shell Education.
- Ford, M. P. (2005). *Differentiation through flexible grouping: Successfully reaching all readers*. The University of Wisconsin Oshkosh: Learning Point Associates.
- Fuchs, D., Fuchs, L.S., Compton, D.L., Bouton, B., Caffrey, E., & Hill, L. (2007). Dynamic assessment as responsiveness to intervention: A scripted protocol to identify young at-risk readers. *Teaching Exceptional Children*, 39(5), 58-63.
- Gittman, E., & Koster, J. (2000). *Analysis of a teacher checklist used for assessment of students eligible for placement in a gifted and talented program*. Paper presented at the Annual Meeting of the Northeastern Educational Research Association: Ellenville, NY.

- Guskey, T. R. (2002). Professional development and teacher change. *Teachers and teaching: Theory and practice*, 8(3/4), 381-391.
- Hall, M., Poole, D., Rearden, M., Carlstrom, R., Smith, S., & Speaks, J. (2009). *Response to intervention (RtI) and gifted and talented education (GT): "All educators for all students"*. Office of Public Instruction. [opi.mt.gov]
- Hall, T., Strangman, N., & Meyer, A. (2003). *Differentiated instruction and implications for UDL implementation*. Wakefield, MA: National Center on Accessing the General Curriculum. Retrieved from <http://aim.cast.org/learn/historyarchive/backgroundpapers/differentiated>.
- Hughes, C. E., & Rollins, K. (2009). RtI for nurturing giftedness: Implications for the RtI school-based team. *Gifted Child Today*, 32(3), 31-39.
- Mansfield, K. (2010). District highlight: CATALYST. *Kentucky School Library Media News*, 2(2), 1.
- National Association for Gifted Children. (2011). *No child left behind background information*. Retrieved from <http://www.nagc.org/index.aspx?id=999>.
- Oyer, E. (2011). *C.A.T.A.L.Y.S.T. Interim Report*. EvalSolutions Inc.
- Roberts, J. L. & Boggess, J. R. (2011). *Teacher's survival guide: Gifted education*. Waco, TX: Prufrock Press.
- Roberts, J. L. & Inman, T. F. (2009). *Strategies for differentiating instruction: Best practices for the classroom (2nd ed.)*. Waco, TX: Prufrock Press.
- Sabatini, L. M. (2001). Giving pause to giftedness: Where do we go from here?. *Journal Of Secondary Gifted Education*, 12(3), 174.

Scot T. P., Callahan, C. M., & Urquhart, J. (2009). Paint-by-number teachers and cookie-cutter students: The unintended effects of high-stakes testing on the education of gifted students. *Roepers Review*, 31, 40-52.

Snethen, T. & Cornelius, A. (2010). All the way to the end zone. *Teacher Librarian*, 38(1), 20-23.

APPENDIX A

HSRB Approval and Informed Consent



A LEADING AMERICAN UNIVERSITY WITH INTERNATIONAL REACH
HUMAN SUBJECTS REVIEW BOARD

In future correspondence, please refer to HS12-020, August 4, 2011

Kristi Lynn Hayes
c/o Dr. Roberts
School of Teacher Education
WKU

Kristi Lynn Hayes:

Your research project, *Effects of Professional Development on using Differentiated Instruction with Gifted and Talented Students in the Library Media Center*, was reviewed by the IRB and it has been determined that risks to subjects are: (1) minimized and reasonable; and that (2) research procedures are consistent with a sound research design and do not expose the subjects to unnecessary risk. Reviewers determined that: (1) benefits to subjects are considered along with the importance of the topic and that outcomes are reasonable; (2) selection of subjects is equitable; and (3) the purposes of the research and the research setting is amenable to subjects' welfare and producing desired outcomes; that indications of coercion or prejudice are absent, and that participation is clearly voluntary.

1. In addition, the IRB found that you need to orient participants as follows: (1) signed informed consent is not required; (2) Provision is made for collecting, using and storing data in a manner that protects the safety and privacy of the subjects and the confidentiality of the data. (3) Appropriate safeguards are included to protect the rights and welfare of the subjects.

This project is therefore approved at the Expedited Review Level until August 1, 2012.

2. Please note that the institution is not responsible for any actions regarding this protocol before approval. If you expand the project at a later date to use other instruments please re-apply. Copies of your request for human subjects review, your application, and this approval, are maintained in the Office of Sponsored Programs at the above address. Please report any changes to this approved protocol to this office. A Continuing Review protocol will be sent to you in the future to determine the status of the project. Also, please use the stamped approval forms to assure participants of compliance with The Office of Human Research Protections regulations.

Sincerely,


Paul J. Mooney, M.S.T.M.
Compliance Manager
Office of Research
Western Kentucky University



IRB APPLICATION # 12-020
APPROVED 8/4/11 to 8/1/12
EXEMPT EXPEDITED FULLBOARD
DATE APPROVED 8/4/11

cc: HS file number Hayes HS12-020

The Spirit Makes the Master



INFORMED CONSENT DOCUMENT

Project Title: Effects of Professional Development on using Differentiated Instruction with Gifted and Talented students in the Library Media Center

Investigator: Kristi Lynn Hayes, School of Teacher Education, 502-348-6257

You are being asked to participate in a project conducted through Western Kentucky University. The University requires that you give your consent to participate in this project.

The investigator will explain to you in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may ask him/her any questions you have to help you understand the project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have.

1. Nature and Purpose of the Project: The purpose of this project is to introduce specific gifted and talented terminology and strategies that focus on differentiated instruction for gifted and talented students to Library Media Specialists participating in the C.A.T.A.L.Y.S.T. grant through OVEC.

2. Explanation of Procedures: An online survey (SurveyMonkey) will be sent out to all library media specialist participating in the C.A.T.A.L.Y.S.T. grant upon approval of project by IRB. Then, professional development training will be delivered to 31 library media specialist on using differentiated instruction with gifted and talented students in the library media center. The professional development will take place at the OVEC office in Shelbyville. All the technical support needed will be available. After the PD, a post online survey will be sent out and knowledge/data gathered from research and surveys will be analyzed.

3. Discomfort and Risks: No discomfort or risks are known at this time.

4. Benefits: Subjects will gain knowledge of specific differentiated strategies that will improve their instructional practices when working with gifted and talented student in the library media center.

5. Confidentiality: Participant's name and school name will not be used. Participants will be assigned a random number to use for identification purposes on the surveys for later analysis of the data. Correlation between the participant's name and the random number will only be stored on a thumb drive dedicated to this project. On the post-survey, participants will be asked to write a reflection. If no identifying components are found in the reflection it might be used within the thesis; however, if ANY identifying components are found (i.e. proper nouns) the written response will be discarded and not used in any way. District names will be used only to describe the where participants are located in relation to each other. All data will be used with respect to participant's confidentiality. Once the project is completed and thesis has been written and approved by WKU, all data related to this project will be locked in Dr. Roberts' office in a sealed

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envelope to be destroyed on August 1, 2015.

6. Refusal/Withdrawal: At any time, participants may request to not participate in the project, with the exception of the professional development since it is considered part of your requirement of the C.A.T.A.L.Y.S.T. grant through OVEC.

Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

Your continued cooperation with the following research implies your consent.

Link for Pre-Survey: <https://www.surveymonkey.com/s/C5BMFPN>

Link for Post-Survey: <https://www.surveymonkey.com/s/C5HPSFB>



IRB APPLICATION # 12-020
APPROVED 8/4/11 to 8/1/12
EXEMPT EXPEDITED FULLBOARD
DATE APPROVED 8/4/11

THE DATED APPROVAL ON THIS CONSENT FORM INDICATES THAT
THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Paul Mooney, Human Protections Administrator
TELEPHONE: (270) 745-4652

APPENDIX B

Pre-Survey

PreSurvey: "Effects of P.D. on using D.I. with Gifted & Talented students in

***1. Dear CATALYST Colleagues,**

My Specialist Project Thesis is focused on the "Effects of Professional Development on using Differentiated Instruction with Gifted and Talented Students in the Library Media Center". In order to obtain data for my thesis I will be delivering a Professional Development session on September 20, 2011 at our meeting with OVEC. The Pre and Post Surveys will be analyzed to determine the effectiveness of the P.D. and will remain confidential. No individual names or school names will be used in the thesis or at any other time, only the school districts will be mentioned in the Background Information to explain the nature of the participant group. In the email that this link was given, you received a number. This number will correlate with your name in a database I will establish and contain only on a thumb drive. It will be locked up in my advisor's office at the end of the project and destroyed after three years. There is a separate consent form that will be given to you on September 20, 2011 and it will explain the project in more detail. Thank you for your time,

Kristi Hayes

Please fill in the following information. Information gathered in this survey will be analyzed as a whole and not as individuals. All individual information gathered will remain confidential.

Number from Email:

School District:

***2. Grade levels included within your school. You may need to select more than one answer.**

- Elementary (Preschool - 5th)
- Middle (6th - 8th)
- High (9th - 12th)

PreSurvey: "Effects of P.D. on using D.I. with Gifted & Talented students in

*3. Level of responsibility for teaching gifted and talented students within your job as Library Media Specialist.

- Expected, part of job responsibilities
- Collaboratively done, but not expected for my job responsibilities
- None, not an expectation or part of my job responsibilities

PreSurvey: "Effects of P.D. on using D.I. with Gifted & Talented students in

*4. Using Differentiated Instruction with Gifted/Talented Students in the Media Center.

Please rate the statements on the following scale.

	Not at All	To Some Degree	Most of the Time	All of the Time
1. I preassess students or use the collaborating teachers' preassessment data to determine the level of understanding of Gifted/Talented students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I consistently use flexible or cooperative grouping (or request the collaborating teacher(s) to create groups) before collaboration begins.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I use specific differentiated strategies with the Gifted/Talented students, such as, Bloom's chart, Think-Tao-Toe, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. The assignments I give differ based on the learning needs of Gifted/Talented students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PreSurvey: "Effects of P.D. on using D.I. with Gifted & Talented students in

*5. Comfort Level with Terminology

Please rank your comfort level (knowledge of) the terms on the following scale.

	Not at all	Little knowledge	Some knowledge	Very knowledgeable
1. Bloom's Chart	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Think-Tac-Toe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Venn-Diagram	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Paired Reading	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Jigsaw	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Flexible Groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Cooperative Groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

APPENDIX C

Post-Survey

PostSurvey: "Effects of P.D. on using D.I. with Gifted & Talented students in

***1. Dear CATALYST Colleagues,**

This is the PostSurvey for my Specialist Project Thesis that is focused on the "Effects of Professional Development on using Differentiated Instruction with Gifted and Talented Students in the Library Media Center". In order to obtain data for my thesis I delivered a Professional Development session on September 20, 2011 at our meeting with OVEC. Since that time you were encouraged to utilize the differentiated strategies discussed with Gifted/Talented students during collaborations. Thank you for allowing me to share my work and knowledge with you...and thank you for your participation in my project.

Kristi Hayes

Please fill in the following information. Information gathered in this survey will be analyzed as a whole and not as individuals. All individual information gathered will remain confidential.

Number from Email:

School District:

***2. Grade levels included within your school. You may need to select more than one answer.**

Elementary (Preschool - 5th)

Middle (6th - 8th)

High (9th - 12th)

***3. Level of responsibility for teaching gifted and talented students within your job as Library Media Specialist.**

Expected, part of job responsibilities

Collaboratively done, but not expected for my job responsibilities

None, not an expectation or part of my job responsibilities

PostSurvey: "Effects of P.D. on using D.I. with Gifted & Talented students in

*4. Using Differentiated Instruction with Gifted/Talented Students in the Media Center.

Please rate the statements on the following scale.

	Not at All	To Some Degree	Most of the Time	All of the Time
1. I preassess students or use the collaborating teachers' preassessment data to determine the level of understanding of Gifted/Talented students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I consistently use flexible or cooperative grouping (or request the collaborating teacher(s) to create groups) before collaboration begins.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I use specific differentiated strategies with the Gifted/Talented students, such as, Bloom's chart, Think-Tac-Toe, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. The assignments I give differ based on the learning needs of Gifted/Talented students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PostSurvey: "Effects of P.D. on using D.I. with Gifted & Talented students in

*5. Comfort Level with Terminology

Please rank your comfort level (knowledge of) the terms on the following scale.

	Not at all	Little knowledge	Some knowledge	Very knowledgeable
1. Bloom's Chart	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Think-Too-Too	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Venn-Diagram	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Paired Reading	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Jigsaw	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Flexible Groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Cooperative Groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***6. Reflection:**

Please write a reflection on how your instructional practices of using differentiated instruction with gifted/talented student in the Library Media Center have or haven't changed since participating in the professional development "Using differentiated instruction with gifted and talented students in the Library Media Center" that was delivered on September 20, 2011.

Please give specific examples; however, please avoid using any identifying components in your response. If no identifying components are found in the reflection it might be used within the thesis; however, if ANY identifying components are found (i.e. proper nouns) the written response will be discarded and not used in any way.

