Introduction

Last year I was a first grade teacher at a school which subscribes to many rigid educational programs, such as a reading program, a math program, and a writing program, all of which must be followed to the word. At first this was good for me because, as a new teacher, I already had enough to do and learn without also having to plan all of these subjects as well. But after I got the hang of teaching a little more, I began to get the urge to try out new techniques and experiment with my own teaching style a little. However, with these programs being as time consuming and unchangeable as they were, it was impossible for me to find any time to try much of anything of my own. This is what caused me to start looking in new directions. I realized that if I was to conceivably grow as a teacher I had to be given the room and freedom to explore and learn through trial and error. Therefore, I decided to transfer schools. This year I find myself a third grade teacher at a vastly different school. My new school is so unstructured and open-ended in its expectations that at first I was intimidated. I was unaccustomed to such freedom and trust as a teacher. Although it was what I had ultimately wanted, I did not know where to begin in my teaching. So, I chose to take a professional day of leave and spend it observing the other 2nd/3rd grade teachers in my building, as I am the only straight third grade classroom. I wanted to find out what the other teachers were doing and how they were teaching the various subjects, especially language arts. I took the day off and went into their classes intending to bounce around between the three rooms and focus mainly on how language arts was being addressed. The first two classes I visited gave me some valuable information on various resources in the school which were open to my use, for instance certain books that could be used for language arts and where they could be obtained. The last classroom I visited, however, captivated my attention so fully that I decided to stay there for the remainder of the day and I

left feeling very inspired. Surprisingly however, it was not the handling of language arts that ended up interesting me the most in this class, although I did get some more useful ideas on this subject, as well. Instead, it was this teacher's overall manner in running her classroom. It seemed so energetic and her students were getting chances to partake in so many fun activities which I had never even had the time to do with my own students. Her students were obviously happy to be there and excited about what they were learning. The two dominant features of her classroom that grabbed my attention the most were the way she integrated her curriculum using thematic units and the learning centers she employed. She was a very organized, involved teacher and the more I talked to her the more I wanted to emulate her style. Seeing both of these techniques being utilized so efficiently and effectively in her classroom gave me hope that I could likely get them to work in my own classroom. I had learned about both thematic teaching and learning centers long before and had always been eager to attempt using these methods. However, being that I was at such a rigidly scheduled school the year before, I had never had the chance to try them out or even to see them in action. This experience was very exciting and inspiring to me and because of it I decided to focus my research on these two trends in education. I chose to look into the varying types of both thematic/integrated teaching and center-based instruction being utilized by teachers today in order to see how they compared to what I had observed. Also, I examined the reasoning behind these techniques and their popularity. And in closing, I explained how this research has impacted my own teaching practice today.

Types of Integrated/Thematic Teaching

The first type of integrated/thematic teaching that I discovered was, of course, the example that I observed in my own school, so this is where I began my research. The teacher I observed designs her themes with the other 2nd/3rd

grade teachers in my school and they are primarily science and social studies-based themes, which are carried out for about a month each. Some of these themes include "Outer Space and Our Solar System," "Animals and Their Habitats," "Earth Science," and "The United States." Each one is a theme that interests the children, as they are involved in the choosing process. Every traditional subject taught in her class ties into the theme, and many "special" subjects, such as art, music, and drama, are included in the daily schedule, too, since they happen to fit into the themes so nicely. Theme-related books at all reading levels can be found throughout her classroom and writing assignments are based on the theme, as well. The theme even encompasses all learning center activities. The theme permeates throughout the room and is evident in every part of the learning process. It was obvious to me that because of her use of themes her students are fully involved and very excited about learning.

Another approach to integrated/thematic teaching, that I have since read about, involves an alternative to employing a grade-wide participation in a monthly theme, as the 2nd/3rd grade teachers at my school do. Instead, in this approach, the theme is a school-wide, bimonthly undertaking. "All classes at the K-8 Aleknagik School in southwest Alaska revolve around a theme that has a science or social studies emphasis...Each of these themes is studied for eight to ten weeks and is supplemented by shorter, weeklong units (Peters, 1995)." In this approach all students learn the traditional subjects at their own ability levels, but each lesson and activity is tied into the theme somehow. "The reading classes use trade books exclusively...(some of which) clearly relate to the theme, while others have more obscure connections (Peters, 1995)." And at the end of each day everyone comes together for "Thematic Time,' which is a time for "all students (to) participate in an in-depth study of the theme by working on projects, doing research, or listening to lectures...in multi-age cooperative groups (Peters, 1995)." These projects include "a complex set of activities... integrat(ing) science, social studies, health, language arts, math, and art...Cooperation, research and presentation skills, and hands-on activities are all stressed (Peters, 1995)."

A third type of integrated/thematic teaching that I found mentioned in the research quite often is the 'concept and key question'-based approach. In this approach it is believed that "a theme tends to offer a principle or a generalization (and that)...questioning helps lead (the students) towards that generalization (Van Deusen, 1997)." In this type of integrated/thematic teaching the main focus is getting the students into "the habit of asking questions that arise from the important concepts of the discipline, just as professionals do (Howard, 1999)." Most teachers who teach this way seem to, at first, provide the key conceptual questions on the theme for their students, "which forces the students to consider the (theme) on a conceptual level (Howard, 1999)," thus allowing students to see the bigger picture and the inter-relationships between the different components. Then, after the students have had some experience with key questions, the teacher's goal becomes getting her/his students to "formulate (their own) personal inquiry questions and to conduct personal explorations (Berghoff, 2000)." Because concepts are so expansive, however, I found that concept-based themes are sometimes employed school-wide, where each grade level focuses on one particular concept for the year and the concept is then broken down into smaller related units.

Types of Center-Based Learning

The first kind of center-based instruction I will discuss is the example that I observed. In this classroom which I observed there is typically anywhere from 7 to 20 centers going on at the same time depending on the thematic unit, and each one focuses on a different skill, but all are based on the theme. For example, during the "Earth Science" theme, students at the dictionary center look up

certain words like "mineral" or "fossil" in the dictionary and write down the definitions and at the listening center students listen to a story about rocks on tape and answer questions. Also, at the art center students make a model of the different layers of the earth using different colors of clay, and at the cooking center students copy down a recipe for "sedimentary sweets" and then make it. Each center holds one to three students and students are assigned the groups with which they attend the centers. This is to make sure that the more able and experienced students accompany the less able or experienced ones. The student groups are encouraged to try to attend at least two centers per day. At each center there is some kind of work to be produced in order to keep the students accountable for their time spent there. Some examples of this work are the dictionary definitions, the copied recipe, and the clay model of the earth. Each child's collection of work is stored in a folder with a paper stapled on the outside, which has a blank shape for each center. Once a child has completed a certain center, he/she has to color in the corresponding shape on his/her folder, in order to keep track of which centers he/she has attended. At the end of the theme the child self-grades her/himself and then conferences with the teacher, whereupon she also grades the student's work. Then the student must take the folder home, share it with his/her parents, and bring it back to be stored in his/her portfolio.

In further researching learning centers I learned that there are also numerous other variations on this idea being used out there. Peggy Snowden and Linda Christian (1998) even classified learning center types into four levels, but even these four levels did not quite cover every variation I read about. However, since these four levels are sufficiently consistent with my findings, I will use Snowden and Christian's (1998) example to systematically recount the types of learning centers I came across. In the first level of Snowden and Christian's (1998) model, the learning center acts more like "a play-area...(for example) a block area, an art area, or a game area...The teacher provides materials and instructions. Likewise, the teacher has a specific management system and assigns children to centers. Usually there is some sort of rotation...and (the students) are rotated on a time basis...The activities are limited and the teacher chooses what materials are available and the time limit for use of the center (Snowden & Christian, 1998)." This is what is they called a "Teacher-planned/Teacher-directed" type of center.

I noticed that many of the examples of learning centers that I learned about, including the one I observed, fit into this level in at least one characteristic, that of the teacher deciding the time limit and the rotation of the students. In one example from my research the teacher "posts a schedule for the children to use to guide their rotation from one center to the next (Opitz, 1995)." In another example "each child is responsible for checking his or her own center schedule...(which includes the attendance of) three 20-minute centers per day (and is) posted on the message board (Burpo & Wheeler, 1994)."

A level two center, or a "Teacher-planned/Student-directed" center, is referred to as a "discovery learning" type of center (Snowden & Christian, 1998). In this type "the teacher provides the materials and has tentative, flexible, and nondirective objectives in mind. Materials are placed in the center and the teacher lets the children explore or "mess around" with the materials. Time and movement are much more flexible at this level (Snowden & Christian, 1998)." I found one example that seems to fit into this category. In this example the students are given a flexible "40 to 60 minutes of daily "invitation time," (where) the children are free to choose "invitations," or activity centers, where they want to work...Demonstrations (are) conducted in class to give them ideas about what is possible at each invitation, but the children are free to go where the media and materials lead them (Berghoff, 2000)."

A level three learning center is called a "Student-planned/Teacher-directed" type of center (Snowden & Christian, 1998). "At this level, a student or group of students initiate the center design through an activity or statement of interest. The teacher then takes advantage of this interest, comparable to what is called the 'teachable moment' (Snowden & Christian, 1998)." The previous learning center example that fit into level two so nicely also fits into this level to a certain extent because the "invitations" are "kept in tact as long as students are actively using them. When the interest in an invitation diminishes, the teacher invents a new demonstration to take its place (Berghoff, 2000)." So, even though the students are not the ones necessarily coming up with the ideas for the new "invitations," the duration of certain centers relies solely on the interest of the students.

The final and fourth level of learning centers is called a "Studentplanned/Student-directed" center (Snowden & Christian, 1998). This type of learning center consists of "independent, pair, or small group activities. Children design, supply, and operate the center. This level has the lowest amount of teacher control and the highest level of student direction. The teacher acts as facilitator and colearner...This type...is often used in classrooms for gifted children, who typically have the ability, task commitment, persistence, and creativity to profit from naturalistic learning situations (Snowden & Christian, 1998)." Without a doubt, this type of learning center is for the more experienced teachers and children, and so it was not found nearly as often in the literature. However, I did come across one example that seemed as close as possible for a teacher of a regular (as opposed to gifted) classroom to operate. In this example, each student, with the teacher's help, comes up with his/her own learning goals and plan for the use of learning centers. The teacher meets with each child in order to "choose activities that are appropriate for his or her grade level, rather than simply turning the students loose with the materials," as in level two centers. Marie Sloane (1998-1999) explains this example further.

The teacher meets with each student in order to decide what the student will study, learn, and practice. The teacher and student first choose the learning goals during an individual conference. As a facilitator of learning, the teacher does not make all of the choices, but instead involves the child in the decision process. The teacher asks what the child is interested in learning next, suggesting topics that the child might find interesting or skills that are appropriate to practice. Above all, the teacher reassures the child that the choices he or she makes are the right ones. Together, they discuss options for learning goals, each person contributing to what will finally be included in the child's plan.

Although it was fairly easy for me to place these various learning center examples into Snowden and Christian's (1998) four levels, I found that these levels left out one major component of center-based instruction that I came across quite often. This is the component of self-evaluation. Almost all of the examples that I found included some form of self-evaluation. Even the learning centers that I myself observed included this element, but the way in which the self-evaluation took place varied immensely. In the classroom I observed, as I mentioned earlier, each student has to complete some form of work at every center, which he/she collects until the end. Then he/she has to self-grade it all before conferencing with the teacher. In one of the other learning center examples, after visiting the centers for the day, students "return to their tables to write in their center journals (to answer such questions as) What did you do?, What did you use?, What was the outcome?, and How did you feel about it? (Burpo & Wheeler, 1994)." Also in this example each station is assigned a "specialist" who is responsible for "delegating responsibility, (for) making sure that all group members are engaged and always on task, (and for) reporting behavior challenges in writing to the teacher (Burpo & Wheeler, 1994)," which is yet another variation of delegating responsibility to the students. And finally in a third learning center example, the teacher employs learning center self-evaluation sheets, daily self-evaluation sheets, and weekly goal-related evaluation sheets. The students in this classroom "are expected to complete one center each day...(and) after center time (they) complete the self-evaluation forms (for that center), (and) then put their forms in their folders...(Then) at the end of each day... (the class) has a group meeting, (in which the teacher) asks students to bring pencils and their daily evaluation sheets. (She) then walks them back through the day, using the posted schedule as a guide to remind them of the many activities they have accomplished. (She then asks them) questions such as these: 'When you went to the reading center today, what did you do? How well do you think you did? Did you follow directions? Did you complete what you wanted to complete?'...(Then) on Fridays (she) asks students to take a look at their weekly goals (which they set for themselves on Mondays) and to think about how well they had accomplished them. (Then she asks each child to) color in the face on the evaluation sheet that shows how (he) thinks (he) did (Opitz, 1995)."

Reasons For Integrated/Thematic Teaching

Next, I wanted to look more into the reasons behind why these two teaching techniques are popular, modern trends. I wanted to know about the rationale behind them and their success. First I looked at integrated/thematic teaching. I found that advocates of thematic/integrated teaching have many arguments supporting this technique.

One benefit of using integrated/thematic teaching is that "it allows teachers to address important issues that cannot always be neatly packaged into subjects (Hargreaves & Moore, 2000)." This was definitely true in the thematic classroom I observed, where the students were getting opportunities to participate in several activities, such as art, music, drama and cooking, that I had only dreamed of having the time to fit into my non-thematic schedule. By focusing on a theme, it seems that every traditional subject, as well as non-traditional ones, can easily find a place to fit in, and this variety has been proven to be very beneficial to learning. "Harvard's Project Zero (Csikszentmihalyi, 1996) has demonstrated that students learn at higher cognitive levels when art and music are incorporated into learning experiences than when they are not. John-Steiner (1985) also asserted that intellectual work is richer when an individual can work with a combination of 'languages of the mind' (Berghoff, 2000)." Not only is thematic teaching beneficial for the learners, but it can be for the teachers of it, as well. With thematic teaching, issues that were once looked at as hindrances to teaching, such as the trials of adolescence or a shocking current event, can now be made into the "theme" and can go from a "distraction that once got in the way of teaching (to)...the focal point of learning itself (Hargreaves & Moore, 2000)." Of course this would undoubtedly make teaching much easier and more natural since the topics would already be relevant to real life and therefore be of interest to the students.

Speaking of relevance to real life brings me to another reason that I found for the utilization of integrated/thematic teaching. "Not many adults sit down and do math for 60 minutes and then spend an hour focusing on grammar. Real events require people to integrate different areas of knowledge (Peters, Schubeck, & Hopkins, 1995)." Andy Hargreaves and Shawn Moore (2000) help to illustrate this point further. The teachers in our study appreciated and worried about this: Would their students be ready for the changing workplace? What skills would they need to survive in the future world of work? The criticisms that employers have directed at schools, teachers, and school systems for failing to prepare students for the workplace had hit home with many educators, and they had started to respond:

I mean, the big thing that I've always said to the kids is that when you're an adult and you're out doing your job, you don't do 40 minutes of this and 40 minutes of that.... You just live. If you have to use your language skills to solve a problem or your mathematics skills or your science skills or whatever, you've got the skills, but you just use them. So, that's what we're trying to focus on with integration.

Opponents to thematic teaching may argue that the way in which subjects are taught can't possibly make much difference in how ready students will be for the workplace, as long as basically the same material is being covered. However, advocates see otherwise. With "the traditional approach...students often miss the meaning of information and lack the ability to apply what they do learn.... (But)...with...a theme....(where students get to)...actually apply the skills that they learn...they come to see how and why the skills are meaningful (Peters, Schubeck & Hopkins, 1995)," which obviously better prepares them to actually use these skills later on in the workplace.

A third major reason I came across for the implementation of integrated/thematic teaching has to do with research on how the human brain functions. Inga Randle (1997) explains.

As the brain attempts to make sense out of the chaos that surrounds each of us, it constantly searches for patterns that can impose meaning on the input received. The mind is genetically designed to learn from the natural world. The extent to which schools oversimplify, make logical, or restrict the world's natural complexity is the extent to which schools inhibit the natural workings of the mind and restrict a student's ability to learn.

"The traditional approach treats each class as an isolated unit with little, or in many cases, no integration between classes. Often...the students learn to view each class as an unrelated, separate entity. If any connections are found between subjects, they are most likely considered irrelevant. With...a theme,(however)... connections...are recognized and cultivated (Peters, Schubeck, & Hopkins, 1995)." One might wonder what the significance of making connections is anyway, but advocates of integrated/thematic teaching have answers to this, as well. "Our minds organize pieces of related information into complex webs, called schemata. New information becomes meaningful when it is integrated into our existing schemata...A thematic approach takes advantage of this process by having all the subjects revolve around a central theme, thus enabling students to develop complex webs of interconnected information (Peters, Schubeck, & Hopkins, 1995)." "If we don't teach to a concept or make connections for students, they will have no place to "hang" the (new) information (that we teach them) (Randle, 1997)."

This opportunity to learn more, which is provided students of an integrated/thematic classroom, is a powerful argument in itself, but there is also something to be said for the self-confidence which surely accompanies this ability to learn more. Kovalik and Olsen (1994) help to illustrate this point further.

The goal of the Integrated Thematic Instruction Model (ITI model)--and the innate drive of the human mind--is mastery...That is, the learner understands the skill or concept, knows how to apply it in the real world in similar (but varying) circumstances, and has incorporated it into a mental program. Such mastery or competence is at the heart of positive selfconcept, of a sense of empowerment and ability to direct one's life, and it is consistent with the brain's innate search for meaning.

Reasons for the Center-Based Approach

Last of all, I explored the arguments for the center-based approach. One main reason I found for the implementation of the learning centers approach is the opportunity it provides students to become independent, responsible, and self-evaluative learners. "Centers are places where children complete activities independently. Self-assessment is an activity that happens independently. Both encourage responsibility and ownership in learning. The two naturally go together (Opitz, 1995)." "Of equal importance in the ITI model is a focus on having students engage in constant and honest critical self-evaluation. Because the creation of lifelong learners is the goal of this instructional approach, teachers must work continually with students to help them develop the attitudes and skills necessary to be independent learners (Randle, 1997)." With center-based instruction even "at-risk' students become extremely independent in their learning...An observer will see every child engaged and excited about learning (Gutknecht & Gutknecht, 1997)."

"It's no longer enough for children to grow up to be rugged individualists with a competitive spirit. Just the opposite, in fact. It's becoming increasingly important in the modern world of work that people know how to cooperate with others, yet still be self-evaluative (Burpo & Wheeler, 1994)," which brings me to the next benefit of center-based instruction that I came across - the opportunities it allows for cooperative learning and the acquisition of social skills. "A wonderful side effect (of center-based instruction) is cooperative learning and the peer tutoring and sharing which occurs (Gutknecht & Gutknecht, 1997)." "Centers provide opportunities for children to socialize. Children are social beings and social interaction allows them to acquire a framework for interpreting experiences (Bruner & Haste, 1987)." "Centers' social nature invites children to talk about discoveries, help each other, and solve problems together, (Stone, 1996)" which definitely enhances their learning and prepares them for the future world of work. "The social nature of centers increases language activity - the foundation of all literacy learning (Stone, 1996)."

Finally, it has been shown that because the use of learning centers employs a variety of open-ended activities and integration of curriculum, it is a good way to meet the needs of diverse learning styles. It "is said to benefit all students by making learning more relevant to students' diverse lives and experiences...The burgeoning realities of ethnocultural diversity have...pressed educators to acknowledge the need to make the curriculum more responsive to the existing knowledge and learning styles of the diverse groups that make up a school (Hargreaves & Moore, 2000)." Centers provide an opportunity to do this. Beth Berghoff (2000) relates a first-hand experience of how the use of learning style, to learn both the curriculum and how to fit in socially.

It is not possible to know how learning might have proceeded for Peter if he had been in one of the other first grades in our school where there were no...centers...These were his favorite places for learning. He sought out sign systems other than language, and these systems supported his social interaction. Whereas he was passive and quiet when there was a language activity going on, he was engaged and talkative at the centers...He was able to maintain social status because he was an interactive learner in these settings.

The Affect of This Research on My Own Teaching Practice

Finally, I want to discuss how this research into integrated/thematic teaching and center-based learning has affected my own teaching style and practice. The part of it that has had the most influential affect on my own teaching style has been the observation of the thematic, center-based classroom

in my own school. Since the time of that observation I have been trying out techniques similar to this teacher's in my own classroom, but at a smaller scale and a slower pace, at least until I am a little more experienced with it all. I had always tried to do thematic teaching before, but last year without having the option to integrate my curriculum, I could never really find the time. And at the beginning of this year, without yet knowing how to do it any better, I fell back into a schedule similar to last year's. This, again left me with little time for themes, especially considering that about half of my class gets pulled out of the classroom in the afternoons, when our theme time was scheduled. I decided that now, with the use of centers, I can conveniently fit thematic instruction into them while also incorporating language arts, which allows my students to learn at least two major subjects at the same time. Our centers all relate to the theme, just as the teacher I observed does in her classroom. However, whereas she has her students attend two or three centers a day while she works with small reading groups, I decided that I would feel more comfortable having my students just do one center per day with my full attention and supervision. Similar to her style, though, I decided to have each center be equipped with some kind of work that the students must complete in order to keep them accountable for their time spent there. Also, just as she has her students do, I have each of my students collect his work in his own "Centers" folder and color in the blank shape for each center after attending Likewise, I similarly decided to make my themes mostly science and social it. studies-based. I chose to do this because the students get so little of these subjects at the elementary level, anyway, and yet they enjoy them so much. And similarly again, I also carry out my themes for about a month and then have the students self-evaluate their work. So far, we have completed one theme and are well into our second, and it has been a lot of fun. I've found that teaching this way is a lot of work in the beginning when I am getting new centers ready, but once the

initial organization and set-up is complete, there's not much to do for the rest of the month, which is nice. My students and I really enjoy and get excited about these teaching approaches and I am pretty sure we will continue to utilize them.

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Two Current Curricular Trends:

Integrated/Thematic Teaching and Center-Based Learning

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