This paper discusses strategies with the potential to enhance student learning, teacher collaboration, building management, and joy within the rural school setting. With the goal of fostering education that makes sense to students, three general categories of strategies are considered: curriculum, classroom management, and building management. Contrasts are drawn between an empirical approach to teaching in which the teacher constructs information and transmits it to students and a rationalist approach in which the teacher creates an environment in which students can construct their own knowledge. Creating an educational environment where students are comfortable, part of a learning community, challenged appropriately, and engaged in developing their own sense of content mastery is not a textbook-based program. Teacher collaboration will be smoother if teachers maintain an awareness of the classroom environment: level and quantity of open-ended activities, student stress, ways stress is handled, and integration of nontraditional learning tools. Classroom techniques include physical arrangements and student grouping to combat isolation, teacher cooperation on homework loads and consideration of whether homework is appropriate, behavior management through "wait time" and active student participation, and planned sequence of instructional "events." Examples of building-level arrangements that promote collaboration in rural schools include staff efforts to "validate" every child, multiage grouping, and horizontal and vertical team planning sessions. (Contains 14 references.) (SV)
Tools of the Trade: Effective Strategies To Support the Collaboration of Educators in Rural Schools

B. Keith Salyer, Alberta Thyfault, and Christina Curran
TOOLS OF THE TRADE: EFFECTIVE STRATEGIES TO SUPPORT THE COLLABORATION OF EDUCATORS IN RURAL SCHOOLS

The students who are successful at making sense of the world are those who believe that the world makes sense. Education must make sense to the students if they are to use what education offers to make sense out of their world. While no educator would purposefully engage in practices that make learning more difficult, inadvertently this is the end result in many classrooms. Students often struggle to make sense of their education and leave school not in command of a world that makes sense to them, but simply as a survivor.

Making education make sense for students given the diversity of individuals, their worldly experiences, the external demands in curriculum and assessment is not an easy job. However, if educators adhere to some basic concepts they can facilitate students making sense of the world. The goal here is to offer a beginning list of content considerations that have been effective in rural education classrooms in fostering education that makes sense to students. These considerations will be broken down into three general categories: Curriculum, Classroom Management, and Building Management.

Curriculum

Curriculum must begin where students are and not with page one of the curriculum guides. Howard Gardner noted, “The biggest mistake of the past centuries in teaching has been to treat all children as if they were variants of the same individual, and thus to feel justified in teaching them the same subjects in the same ways” (Siegel & Shaughnessy, 1994, p.564). There are many inherent implications when the curriculum becomes responsive of the needs of students instead of the normative demands of legislators, textbook companies, etc.

Empirical Teaching vs. Rational Learning “Children learn for the sake of learning; their minds seek knowledge like the eye seeks light” (Locke, 1693 p. 118-119). Learning is not a difficult process. All children learn to communicate, develop motor skills, internalize social morays, etc., all before school age. By exposing students to situations that take advantage of their natural curiosity learning can be promoted. Kamii (1985) citing Piaget’s work noted that children are motivated to construct knowledge for themselves and that the constructed relationship (logico-mathematical) based on interaction (sensory based) with the physical environment is much more important than any empirical learning. For example, when a toy manufacturer makes a product they create many near-identical toys. However, when a child gets one of the toys and plays with it and develops an experience base with that particular toy it is no longer like all the rest. To an outsider it may appear that all the toys are alike but the child knows better. When a student constructs a concept that rational learning has a profound and lasting impact on the student cognitive structure and hence life decision making tools. Educators have a choice of constructing the information for the students and trying to coerce them to ingest it or develop an environment where students can actively construct their own understanding of a concept.

The difference between an empiricist and rationalist classroom can be seen in the following illustration. One teacher passed out calculators to all the students and had them follow along with her as she demonstrated the functions of all the keys on her overhead projector version of the same calculator. Students spent 35 minutes watching and following the teacher. This teacher constructed the knowledge for the children and then worked at getting them to integrate it through a teacher lead demonstration. Another teacher passed out calculators to her class the week prior to beginning her lessons on calculator usage. She let the students play with the calculators for several
minutes and then asked them to hypothesize about the function of each button. The students spent their free time
rest of the week working on the their hypothesis. Students who knew nothing of multiplication figured out that
pushing $4+4+4=$ was the same as pushing $3 \times 4=$. Students constructed logico-mathematical knowledge for
themselves instead of having it delivered to them prepackaged. Similarly, a fifth grade learning disable student had
trouble multiplying his 9’s, 11’s and 12’s. After analyzing the table he discovered a pattern that allowed him to
think the problems through and obtain the products by logical processing of a self-constructed algorithm instead of
the rote mechanics of the teacher prepared algorithm.

When students are given situations that are relevant to their world and interests they will construct a
personal knowledge that is much more profound. However, establishing an environment with situations that
stimulate personally constructed knowledge is more difficult to create than using empirically created lessons. It is
important that teachers get together and support each other in developing learning environments where children are
presented with the raw materials (physical) from which to build their own cognitive understanding (logico-
mathematical). Through collaboration teachers can brainstorming ideas that take advantage of the resources
available, incorporate the contextual world of the students, assess intrapersonal strengths and weaknesses of students
and faculty, and design an environment where the academic skills developed instead of taught.

Curriculum has typically been viewed as a product that if formed, packaged, and then delivered for students
to absorb. The empiricist view that knowledge is constructed for children is an appealing idea, especially given the
time constraints of schools. But the logico-mathematical position supported by Piaget’s work indicates that children
do not really know how to integrate a content into their daily lives unless they construct the knowledge for
themselves. This may seem to be trivial point but in reality it is a major rift between the predominant educational
philosophies found is practice today.

Responsive Rational Curriculum. Responsive curriculum requires that the teacher make a concerted effort
to get to know and keep pace with the skills development of each student. Knowing the strengths and weaknesses,
likes and dislikes, contextual level of understanding, etc. of each student allows the teacher to create a learning
environment that allows individuals to actively make sense of new content skills. The students are provided within
contextual situations, designed to be moderately challenging. Research has shown that if a task is too challenging
the student feels a heightened level of threat and withdraws without developing ownership of the skill (Hart, 1975).
Equally non-productive is a task that is too low-stress as it requires little active thought from the student and hence
is not integrated into the existing cognitive framework.

Creating an educational environment where students feel comfortable, part of a learning community,
challenged appropriately, and are actively engaged in developing their own sense of content mastery is not a
textbook based program. It will emerge from the respectful environment as teachers and students work together to
explore content as applied to the real world. Open-ended activities or contextual situations that require students to
develop procedures as a part of the product have been shown to increase student’s learning while reducing discipline
issues (Kamii, 1985). Currah and Felling (1997) developed a first through ninth grade curriculum to teach fractions
using a game format. The games engage students in a variety of situations that require them to manipulate objects,
communicate their thinking about fractions to the other players, as well as record their fractional representations in
mathematical form. Students enjoy the game atmosphere and format while the real world ties that are included in
the activities provide for expansion of contextual content relations.

The collaborative process between teachers will be smoother if there is a cognitive awareness of the degree
of stress that is maintained within classrooms by the various types of activities. The level and quantity of open-
ended tasks as well as the way student stress is dealt are highly correlated factors in the formation of a successful
collaboration or are generally the basis for lines that are drawn for an impending territorial war.

Integration of Non-Traditional Curriculum Tools. The curriculum defines the skills that students need to
have mastery of according to the guidelines of the learned societies, national, state, and local authorities. The
teacher job from a constructivist position is to establish an environment that will provide the students with the
opportunity and tools to develop these skills in a meaningful and purposeful manner. The tools that are used for
such development should be at the discretion of the teacher. The teacher should survey all the tools and based on
the known needs of the students select a variety of tools to be placed in the learning environment. Textbook should
be taking a backseat to the ever expanding variety of formats of classroom instructional tools are available for today’s students.

The special education teacher is often at the forefront in utilization of new technology and/or adapting curriculum innovations as they part of the constant vigilance to find ways to address each child’s strengths and weaknesses. These same teachers are often the ones that adapt common everyday objects into cheap efficient manipulatives. A byproduct of the special and regular education teachers’ collaboration is the infusion of alternative curriculum tools into the regular education classroom. It is the diversity of tools in the educational environment as we move away from the 2-deminional textbook that will facilitates the self-development of meaningful skills by students. A third grade teacher along with her collaborative special education partner devised 5 games around a statistics and probability objective. The games were made from readily available materials that included dice, cards, computer programs, pop bottle lids (that the kids help collect), one inch tiles donated by a local store, laminated poster size game boards constructed as part of a 5th grade art project, etc. The expense of the weeklong unit was minimal and yet students were joyfully engaged in activities that facilitated their construction of knowledge and as a bonus discipline problems were reduced. This same material could have been presented to the students in an organized formulaic textbook approach without all the extras but the quality of learning for all children would have been dramatically diminished.

Classroom Management

While classroom management is an encompassing topic that includes instructional events, room arrangements, procedures, time sequence, etc. we have selected three areas that are particularly pertinent to the collaborative process for rural educators. The three areas to be addressed include homework, grading, participation opportunities, and the development of daily instructional events.

Physical Arrangement. The physical arrangement within a classroom can isolate students or be inclusive by nature. Research has shown that there is an inverse relationship between learning and the position in the classroom (Good & Brophy, 2000). The more isolated a student is from the teacher and other students the less is learned. The array (six rows of eight chairs) seating template is one of the least effective for whole classroom learning. The further a child is removed from perceived access to the teacher the flatter the learning curve becomes.

Several tactics have been used to combat the isolation issue. Creative room arrangements where access and mobility are kept at the forefront can increase individual student’s learning and decrease discipline problems. Classroom arrangements where rows are 3-4 seats deep and allow the teacher and students to have ready access to each other as well as the learning materials in the classroom are the most productive environments. Alternative room arrangements may include learning stations where students rotate throughout the room as the demands of the learning task change. Marilyn Burns (2000) promotes forming and reforming learning groups as the demands of each day’s learning task change. A key point in planning for success is that the groups that are formed should be at random or be planned by the teacher. Students should not be allowed to form their own learning groups as it can lead to a conflict between individual student agendas and the learning task agenda.

Homework. Epstein (1998) identified ten common reasons that homework is given. The ten reasons were: Practice, preparation, participation, personal development, peer interactions, parent-child relations, parent-teacher communication, public relations, policy, and punishment. Good & Brophy (2000) note that practice, preparation, personal development, and parent-child relations are the only valid reasons to assign homework. Given that these are the only four valid reasons for homework there are considerations and implications that need to be examined. If homework is assigned for practice and preparation then the amount of homework should be limited to 20 minutes per content area a day. If too much is assigned students learn to dislike school and the personal development goal becomes void. In the classroom the environment is designed to allow a child to explore and construct personal knowledge while being guided by peers and the teacher. When a child is at home often the feedback systems that help a child further exploration are not available. Frustration and discourse for learning are often the byproducts of homework.

Teachers can also cooperatively plan their homework assignment and assessments so that students are not overwhelmed. A small rural school in Washington organized, by grade level, according to a schedule. All students had reading oriented assignments four nights a week. In addition on Monday and Wednesday evenings each week
the students would have Language Arts and Science while, on Tuesday and Thursday they would have Math, Social Studies/Geography. Students were also assessed once a week in each area but on a similar schedule: Tuesday - Language Arts, Wednesday - Math & Science, etc. Maintaining a consistent, scheduled rotation of homework and assessments made the extracurricular work much more manageable which, parents and students appreciated.

Prior to making each homework assignment ask if it is a valid assignment, given for a valid reason. Some research suggests that homework below the 5th grade (except in reading, applied foreign language, and playing a musical instrument) has little benefit and may actually be harmful to the child’s learning potential in later grades (Elkind, 1992).

Participation. Classroom behavior management and instructional strategies have been linked very successfully for many years. Mary Budd Rowe in 1972 developed the concept of "wait-time" which allowed students the opportunity for "think-time". Rowe (1972) defines wait time, as is the amount of silent time a teacher allows to pass before and after a student response to a question. Rowe’s research documented that teachers typically wait less than 30 seconds after asking a question before calling on students to respond. For many students this provides little opportunity to process the question and formulate an answer. Her research documented that a teacher waited 0.9 seconds after a student response before asking another question. The average teacher asked three to five questions within one minute. The concepts of "wait-time" and "think-time" can provide teachers with an effective instructional strategy to increase student active participation in learning, which in turn increases time on task. With increased student participation in the learning process the management of the classroom and instruction is maximized.

The research to support the bases for this was initially documented by Benjamin Bloom (1976). Bloom believed that effective methods of estimating the quality of instruction for a group or individuals are to document the extent of the students’ overt or covert active participation in the learning process. He continues to directly tie the overall quality of instruction with the issue of classroom management. Bloom advocates that when the overall quality of instruction is poor, teachers can expect to have discipline and student management problems. Therefore, increasing active participation by more students will decrease discipline and student management problems.

Bloom (1976), Goodlad (1983), and Rowe (1978) produced a significant body of research over the past three decades that have provided teachers with instructional opportunity to increase student active participation through the use of overt and covert active participation. Active participation is the process by which the minds of learners are consistently engaged in the learning task. Goodlad (1983) stated that if academic learning does not engage students, something else will—that something else takes away the student's attention from the learning task. The benefit of overt participation is that the teacher can readily assess the whole class by checking for understanding several times during an instructional period and not needing to wait until a test at the end of the week.

Overt, meaning observable, something that can be seen and thus it can be measured. Examples of overt phrases included, "draw", "write", "signal". The use of hand signal, number fans, and number cards provide a quick assessment. Asking the class to signal "yes" or "no", through sign language or response cards is very effective. The teacher can pose the question and she/he can readily observe the responds of the whole class not just the answer of one student at a time with the more traditional approach. With this information the teacher can assess his/her teaching and determined if reteaching the concept is needed.

Covert, meaning covered up or hidden, is typically a behavior that cannot be seen. However, covert participation is very important and when paired with overt participation can assist students in the learning process. Covert prompts can include, "think about", "imagine", visualize in your mind". A teacher can ask the student to think about a solution to a problem (covert) and then request that the students turn to a neighbor and discuss (overt) their solutions. Wolf (1986) supports the inclusion of overt and covert active participation as a means to increase student learning. While many may view this as only an instructional specific modification, the essence of this provides students with an enriched opportunity to participate in a variety of styles and offers the teacher an effective and efficient way of assessing the class's or checking for understanding, thus increasing positive classroom management.
Instructional Events. The work of Gagne (1992) emphasized the difference between planning a lesson and designing an effective instructional sequence. While the two are related it is important for novice teachers or experienced teachers that are novice to a content area to do more in depth planning for the instructional delivery of a lesson. Teachers who are well versed in the content and experienced often do the instructional events as a matter of habit. Regardless of the experience level when teachers begin to plan lessons together it is advisable to have a template of to design the classroom actions around. Gagne's instructional events provide an effective and easily constructed format. The effective instructional sequence is made up of nine instructional events that may be utilized in the order that is most appropriate for each specific lesson. While order and even repetition of the instructional event may vary it is vital that all nine events are utilized during the instructional sequence. Each of the nine instructional events is briefly summarized below.

- Attention Getting Devise – Devise a variety of ways that are comfortable for you as the teacher and effective in getting your students' attention. The goal is to relate the attention getting device to the lesson that is to be presented so continuity is maintained. Consider the use of cues in math and science to alert students to content.
- Inform the Learner of the Objective – Let the students know what skill will be taught that day and what will be expected from each student at the end of the lesson.
- Recall Prerequisite Learning – If the objective for today requires students to possess pertinent information that information should be quickly reviewed prior to beginning the new lesson.
- Teach the New Content – Provide the students with activities that require the new skill(s) and have them raise questions as they work with the task/skill. Manipulatives should be readily available for use in the instructional, guided practice, and individual phases of the lesson. Students must be actively involved at high rates of participation. Demonstrate and provide a permanent product as needed of the content. Teachers may also embed the use of memory devices such as mnemonics to assist learners in acquiring new content (Mastropieri & Scruggs, 2000; Miller & Mercer, 1998)
- Group/Guided Practice Note: Students work in groups or as a class with an organized set of problem solving opportunities. By working in groups (pairs preferred) the students get to guide and validate each other's work. (Do not allow students to select a partner. As the teacher you know the strengths and weaknesses of your students and are much more capable of pairing students that will compliment each other on a learning task so, plan ahead.)
- Individual Practice – Since the goal is to get all students to master the skill it is essential that after the guided practice phase each student be given individual opportunities to demonstrate their skills.
- Feedback – The teacher should provide non-judgmental feedback aimed at improving the student’s performance. This should be task specific and yet acknowledge effort, ideas, and risk-taking.
- Assessment – This is an ongoing process that helps the instructor and the students monitor the progress that is being made. The major purpose of assessment is to guide the teacher in constructing learning activities for future lessons.
- Retention and Transfer – The goal is to relate the skills that were developed throughout the lesson to the students' lives and real world experiences.

Building Management

The structure within a building can hamper or promote active collaboration between faculty, parents, counselors, staff, and even students. As with curriculum and classroom management there are many areas that could be review and discussed but teaming and validation have been selected for presentation in this paper. These two building structure modifications were selected as they have been shown to be effective in rural schools, do not require financial expenditure by the school, and they have the potential to impact all students.

Validation. One of the worst things that can happen to a child is that he/she becomes invisible. We all need validation and yet so many students and teachers do not receive any positive recognition. An expectation in every school building and system should be that there is an ongoing process for validating students and faculty.

Many of the everyday operations of a school building as well as the classroom are potential tools for validating the worth of a child. However, equally true is that if teachers and administrators do not plan for these validating experiences the daily operations have a tendency to gravitate towards a devaluing of students. Even the grading system found in the majority of the classrooms is designed by its very nature to validate the flaws a student makes not the successes he/she may have. Recognizing the accomplishments and celebrating the successes a student
has would produce a much more psychologically secure environment and in effect reduce student insecurities. These type of modifications are not hard to make and the effects are dramatic.

A small rural school in southern Texas was plagued by truancy, vandalism, violence, etc. The school counselor gave each teacher three index cards and asked that they write the names of their three “most” troubled students on the cards. At the next faculty meeting the cards were collected and thrown into a hopper. All school personnel (teachers, counselor, administration, secretaries, janitors, cooks, bus drivers, etc.) were then ask to randomly draw two cards. The faculty and staff were asked to make a concerted effort to connect with the two students they drew on a daily basis. Students were invited to have lunch with the faculty or staff member. Some students were given special seats on the bus so the bus driver could get to know them better. Some students were given passes to the sporting events as special guests of the faculty or staff member. Each day 136 of the highest risk children were recognized by an adult. Over the course of four months the number of disciplinary referrals dropped over 40%. Parents, teachers, staff members, and students noticed the difference in their school. Validation is an exponentially powerful resource tool that cost little to implement.

Horizontal & Vertical Team Planning Sessions. European rural schools commonly utilize multiage classrooms so that the older students can help in the education and management of younger children. While multiage groups are used in the United States it is rare and usually limited to special education classrooms. Certain aspects have been integrated into some building management plans, such as the school-within-a-school and looping options. The school-with-in-a-school designed to allow large buildings with multiple classrooms to place build teams of K-5/6 grade groups of teachers as a micro school within the larger school. Each micro school has lunch, recess, etc. together which allows for vertical teaming and collaboration between teachers from the K-5/6 contents. If we extend this concept to also allow for common planning times for the grade level teachers the best of both worlds can be created. Teachers can actively plan and do cross-age programs as well as build cohesion within each grade level. The vertical and horizontal teaming approach help to also build community within the school. Teachers get to work together as well as the students at each grade level and across grade levels have quality contact with each other. While teaming takes planning and time the benefits are bountiful.

Summary

Each topic discussed in this paper has the potential to enhance learning, collaboration, building management, and joy within the rural school setting. However, just like the textbook information passed down to students millions of times a day without active engagement this information has no power to produce a better school environment. It is up to each teacher, student, administrator, and parent to take ownership of the research findings in actively working to create that unique productive environment. Learning is power but as Einstein said, “Knowledge is advanced more by asking the right question than having the right answer.” Ask questions and develop meaning from the answer you find.

References


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