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Testing vs. Teaching: The Perceived Impact of Assessment Demands on Middle Grades Instructional Practices

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Abstract

As a result of the pressures of educational reform and high-stakes assessment, some schools run the risk of foregoing active, student-centered learning activities for building test-taking skills and the memorization of discrete facts (Gredler, 1999; Jackson & Davis, 2000). Coupled with the additional pressure to fulfill the expectations of *No Child Left Behind* (NCLB), educators may feel the need to abandon the tenets of the middle school philosophy for more teacher-centered instructional approaches. Since the enactment of the Kentucky Education Reform Act (KERA) in 1990, schools and teachers have been accountable for the achievement of students and implementation of the state's assessment standards. Using the responses of 216 educators from 17 middle schools in Northern Kentucky, this descriptive study explores middle grade teachers' perceptions of how high-stakes testing and state accountability standards influence instructional strategies utilized in the classroom. Results indicate that though teachers acknowledge the importance of including active and student-centered strategies on a consistent basis, the state tests seem to drive the curriculum and warrant more teacher-focused instructional methods—lecture, worksheets, and whole-class discussion. In addition, recommendations are offered to improve instructional practice, enhance middle grades teacher preparation programs, and guide future research.

Introduction

Proponents of the middle school philosophy assert that middle grade adolescents must experience a variety of instructional strategies beyond the traditional teacher-centered approaches to receive quality, educational experiences (NMSA, 2003). The enactment of the Kentucky Education Reform Act (KERA) in 1990 provided a specific means to accomplish this task, causing Kentucky's public schools to focus increased time and energy on improving student achievement. The primary indicator of improved student achievement essentially exists in the form of standards as measured by high-stakes assessments. As a result of the increased pressure for students to perform well on the tests, many teachers are relying on instructional strategies that increase the amount of exposure to the test-aligned curriculum, rather than emphasizing application of the curriculum. This study explores middle grade teachers' perceptions of how high-stakes testing and state accountability standards influence instructional strategies utilized in the classroom.

Review of Literature

The need for assessment has been a critical element in the educational system in the United States (Glaser & Silver, 1994; Goertz & Duffy, 2003). However, the shift in emphasis towards specific academic standards and

corresponding assessments has dramatically altered the role of testing in schools for both teachers and students. Throughout the 1990s, the majority of states in the U.S. initiated educational reforms in an effort to establish academic standards. The Commonwealth of Kentucky was one of the first to establish such standards. To improve the educational experiences and outcomes for students, the state enacted the Kentucky Education Reform Act of 1990. The reform act focused attention on six key goals and academic expectations that all students should master upon completion of high school: (1) students are able to use basic communication skills and mathematics in their everyday lives, (2) students are able to apply core concepts of mathematics, sciences, arts, humanities, social studies, practical living, and vocational studies to solve problems, (3) students are able to become self-sufficient individuals, (4) students become responsible and active members of the community, (5) students learn to solve problems in both school and life situations, and (6) students learn to integrate and connect experiences from all subject fields to learn new information and expand current knowledge (University of Kentucky, 2004). In an effort to hold individual schools accountable for student academic progress, Kentucky also enacted the Commonwealth Accountability Testing System or CATS (Kentucky Department of Education, 2004). Essentially, CATS was a high-stakes testing system with school-level rewards and sanctions attached to the outcomes. Ideally, such a system would lead to improved instructional practice and student achievement.

Though the intent of most states utilizing high-stakes testing is admirable, the negative consequences often outweigh the potential benefits. In terms of positives, high-stakes testing helps schools set performance goals, provides a focus for the curriculum, reveals academic progress to the public, and potentially provides additional funding support through federal programs (George, 2002; Goertz & Duffy, 2003; Sloane & Kelly, 2003). However, Nichols and Berliner (2005) cite several negative consequences associated with high-stakes testing. These consequences include (1) administrator and teacher cheating, (2) student cheating, (3) exclusion of low performing students from testing, (4) misrepresentation of student dropouts, (5) teaching to the test, (6) narrowing the curriculum, (7) conflicting accountability ratings, (8) questions about the meaning of proficiency, (9) declining teacher morale, and (10) score reporting errors. Furthermore, while one of the goals of high-stakes testing is to improve student academic performance, Amrein and Berliner (2003) report that there is little evidence to support this cause. Analysis of high-stakes test data from 28 states suggest that the performance of high-stakes testing states remains comparable to the non-high-stakes testing states in the nation.

McEwin, Dickinson, and Jenkins (2003) assert, “young adolescents who are enrolled in middle schools that have faithfully followed the middle school model score the highest on high stakes standardized tests” (p. 67). One key component of this model is the use of a variety of appropriate instructional strategies. NMSA (2003) acknowledges that “teaching approaches should enhance and accommodate the diverse skills, abilities, and prior knowledge of young adolescents, cultivate multiple intelligences, and draw upon students’ individual learning styles” (p. 25). Cooperative learning, experiments, demonstrations, simulations, Socratic seminars, reciprocal teaching, discovery learning, debates, learning centers, role-playing, service learning, group projects, independent study, and hands-on learning projects are commonly considered developmentally responsive techniques that are effective at helping middle school students learn and master concepts (Jackson & Davis, 2000; Manning & Bucher, 2005; NMSA, 2003). Daniels and Bizar (1998) further add that best classroom practice includes six basic structures: integrated units, small group activities, representing-to-learn, classroom workshop, authentic experiences, and reflective assessment.

Developmentally responsive instructional practice requires actively involving the middle grades student in the learning process. Research indicates that young adolescents are best engaged through meaningful, hands-on activity (Eggen & Kauchak, 2001; Needels & Knapp, 1994) and experience greater academic success when included in the decision-making process (Messick & Reynolds, 1992). Furthermore, Zemelman, Daniels, and Hyde (1998) stress the importance of collaborating with peers and participating in active and meaningful learning experiences. They conclude that students, “learn most powerfully from doing, not just hearing about, any subject” (p. 9).

No single instructional strategy is necessarily better than another. Jackson and Davis (2000) assert, “As to the choice of which strategy to use when, it depends on three key connections for instruction: the curriculum to

be learned, the assessments to be used to show what the students have learned, and the students themselves" (p. 85). In essence, teachers must get to know their students' learning preferences and then select instructional strategies accordingly.

Regardless of the specific instructional strategy utilized in the classroom, middle schools must take the following tenets into consideration when developing academic lessons for students: (1) providing a curriculum that is relevant, challenging, integrative, and exploratory, (2) using multiple learning and teaching strategies that are considered developmentally responsive, and (3) developing assessments that promote quality learning (Anfara et al., 2003). Furthermore, Jackson and Davis (2000) recommend focusing instruction on the following connections: (1) building on what students already know, (2) focusing instruction around the student, (3) providing enriched and varied learning environments, (4) focusing content around key concepts, (5) challenging students to their maximum potential, and (6) connecting the content to the students' lives. When teachers incorporate these components into the lesson, learning is maximized.

Method

Site Selection and Participants

This study was part of a larger study examining the implementation of the middle school concept in Northern Kentucky. Inclusion in the study was based upon two criteria—geographic location and identification as a middle school. Participating schools included urban, rural, and suburban middle schools located in six Northern Kentucky counties. As in any region, a variety of grade configurations and school names exist; however, only those schools in the six-county region identified, in name, as a middle school were included in the target population. Though the name of a school does not necessarily reflect the nature of a school's programs, the researchers assumed that schools identified as middle schools were more likely to adhere to middle school tenets and were included in the study. The target population excluded schools identified as junior high or elementary schools, as well as community, charter, vocational, and non-public schools. In all, 17 schools met the criteria for inclusion in the study.

Based upon official records from the Kentucky Department of Education, the 17 schools of the target population employed 804 certified personnel at the time of the study. The limited number of schools made it feasible to use comprehensive sampling procedures, a plan which includes all units with specified characteristics in the sample (Wiersma, 2000). Therefore, all 804 certified personnel in the 17 identified schools were included in the sample.

Data Collection

The researchers developed the *Middle School Concept Implementation Survey* (MSCIS) to collect data from middle school personnel. The MSCIS consisted of 66 Likert-format items, three open-ended response items, and demographic data items. Researchers derived survey items from, and correlated with, the characteristics of effective middle schools proposed in *This We Believe* (NMSA, 2003), the NMSA position statement. The researchers collected data in an online, electronic format, which they believed would facilitate data collection. Of the 804 eligible participants in the sample, the researchers received 216 responses (26.8%). Responses came from all 17 schools in the target population.

Data Analysis

Three data sets were analyzed for this study. The first set consisted of 13 Likert-format items, each having four possible responses. Each item was designed to provide an overall picture of the support for the middle school concept, the training and efficacy of the teachers, and the support for various instructional strategies proposed by *This We Believe*. For each survey item, the researchers calculated the percentage of all participants selecting each of the four choices— strongly disagree, disagree, agree, and strongly agree.

The purpose of the second data set was to determine the most common instructional strategies utilized in the region's middle school classrooms. The researchers restricted this item to current classroom teachers, so administrators were directed to omit it. Of the 216 survey respondents, 182 classroom teachers responded to

this item. The prompt asked teachers to reflect on their teaching practices over the past 30 days and to select from a list those instructional strategies that they used. The list included a category for "other" with space for respondents to add strategies that were not included on the list. For each strategy, the researchers calculated the percentage of respondents who reported using the strategy.

The final data set included respondents' comments to the following open-ended response item: *In what ways does preparation for the state assessment and the writing portfolio influence your instructional practice and choice of teaching strategies?* The researchers collected the responses and analyzed them for common themes, both positive and negative. Though not all responses fit neatly into categories, most addressed one of two primary issues—(1) the influence of portfolio preparation on instructional time and practice, and (2) the influence of state assessments on curriculum selection and assessment strategies. In all, 146 survey participants responded to the open response item.

Results

Support for the Middle School Concept

Based on the responses of survey participants, the middle school concept enjoys broad support in Northern Kentucky across both teaching and school-level administrative ranks (see Table 1). Respondents reported overwhelmingly (92%) that the teachers in their school support the tenets of the middle school concept. Furthermore, it is the teachers' perception that their administrators also supported the middle school concept and are generally effective at defining the middle school concept for the faculty and staff (79%).

Table 1
Responses to MSCIS Likert Items: Support for the Middle School Concept

MSCIS Statement	Percentage of Respondents (Number)			
	Strongly Disagree	Disagree	Agree	Strongly Agree
Teachers at my school support the middle school concept (n=216)	1% (3)	7% (15)	68% (146)	24% (52)
Administrators at my school support the middle school concept (n=215)	1% (3)	10% (22)	55% (119)	33% (71)
Administrators at my school are effective in defining the middle school concept (n=213)	4% (8)	17% (37)	51% (108)	28% (60)

Teacher Training and Efficacy

While the middle school concept appears supported by both teachers and administrators, more than half of the teachers (59%) responding to the survey indicated they did not enter the teaching profession with the sole intent of teaching middle grades adolescents. Despite this fact, almost 90% of the respondents believed they were adequately prepared to address the developmental needs of middle grade students, and nearly 100% of the teachers acknowledged that they enjoy working with middle grade students.

While exploring teacher expectations for students, most teachers (94%) reported they expected all of their students to be successful academically. Though the majority of teachers indicated they had high academic expectations for students, slightly more than one fourth of the respondents (26%) believed they did not successfully teach all of their students (see Table 2).

Table 2
Responses to MSCIS Likert Items: Teacher Training and Efficacy

MSCIS Statement	Percentage of Respondents (Number)			
	Strongly Disagree	Disagree	Agree	Strongly Agree
I entered the teaching profession with the sole intent of teaching middle level adolescents (n=216)	15% (32)	44% (96)	19% (42)	21% (46)
I feel adequately prepared to address the developmental needs of my students (n=215)	2% (4)	8% (18)	55% (118)	35% (75)
I enjoy working with middle grades students (n=216)	0% (1)	0% (0)	37% (80)	62% (135)
I expect all of my students to be successful academically (n=206)	1% (3)	4% (9)	55% (113)	39% (81)
I successfully teach all of my students (n=208)	0% (0)	26% (54)	58% (120)	16% (34)

Reported Use of Teaching Strategies

Throughout the course of the school year, teachers indicated they use of a variety of teaching strategies in their classrooms. In fact, 88% of the teachers reported the utilization of cooperative learning activities on a consistent basis, 91% regularly provided opportunities for students to engage in critical thinking activities, 80% incorporated problem-based learning activities, and 97% reported they connected the curriculum to real-life situations on a routine basis. Teachers seemed less inclined to integrate instruction using team-based thematic units or integrated curricula. Nearly half (41%) reported that teachers in their school did not make efforts to integrate curriculum (see Table 3).

Table 3
Responses to MSCIS Likert Items: Reported Use of Teaching Strategies

MSCIS Statement	Percentage of Respondents (Number)			
	Strongly Disagree	Disagree	Agree	Strongly Agree
I utilize a variety of teaching strategies in my classroom (n=206)	0% (0)	0% (0)	51% (106)	49% (100)
I utilize cooperative learning activities on a consistent basis (n=206)	0% (0)	12% (24)	60% (124)	28% (58)
I consistently provide opportunities for students to engage in critical thinking activities (n=206)	0% (0)	9% (19)	64% (132)	27% (55)
I consistently engage students in problem-based learning activities (n=205)	0% (0)	20% (42)	57% (117)	22% (46)
Teachers at my school integrate curriculum through thematic or integrated units (n=201)	4% (9)	37% (75)	49% (98)	9% (19)
I consistently relate course content to real-life situations (n = 202)	0% (0)	3% (7)	54% (109)	43% (86)

While teachers acknowledged the need for varied instructional practices and 100% agreed that they utilized a variety of instructional strategies on a consistent basis, when asked to identify the instructional techniques used in their classroom within the last 30 days, the overwhelming majority reported the utilization of whole-class discussion (93%), lecture (90%), and worksheets (86%) as the most commonly utilized practices. The instructional strategies reported the least included reflective writing, journaling, inquiry-based activities, Internet or Webquest, integrated or thematic units, oral and written reports, literature circles, and Socratic seminars (see Appendix A).

Influence of State Accountability Measures

When asked to describe the influence that state-mandated assessment and portfolio requirements had on their instructional practice and choice of teaching strategies, respondents, in many cases, had strong opinions. Though the largest share of the responses highlighted the negative impact state assessments had on their classroom practices, some responses were positive. Analysis revealed that most responses addressed one of two issues—the influence of portfolio preparation on instructional time and practice and the influence of state assessments on curriculum selection and assessment strategies.

The influence of portfolio preparation. As part of the state assessment system in Kentucky, seventh grade students prepare a writing portfolio containing four prescribed writing samples. The guidelines for completing these writing pieces are clearly defined, and, though all teachers may participate, much of the responsibility for portfolio completion rests with seventh grade language arts teachers. Some respondents to the MSCIS perceived the portfolio requirements as a means of focus for classroom instruction and a worthwhile teaching tool. They expressed their support for the portfolio with the following statements:

> Writing portfolios … are worthwhile as a teaching tool.
>
> It [portfolio] greatly influences my teaching style. I try to teach students through exploration and writing.
>
> State testing covers all of the areas I would be addressing anyway: reading, writing, grammar, mechanics, vocabulary, and spelling.
>
> It [portfolio] encourages me to teach students to communicate their thinking.

Other respondents, however, found it difficult to be supportive of the portfolio requirement. In their opinion, the portfolio has become the primary focus of seventh grade language arts classrooms to the exclusion of other valuable topics of instruction. Their comments included:

> State writing portfolios are the main focus of instruction.
>
> As far as writing goes, it is the absolute central focus of the seventh grade language arts curriculum.
>
> I teach language arts. The portfolio has become the sole focus, unfortunately.
>
> It [portfolio] completely dominates the language arts curriculum.
>
> I teach 7th grade language arts, so my whole focus is, unfortunately, portfolios.
>
> The writing portfolio influences the amount of time that can be spent on other concepts, so it influences the amount of time to teach concepts. The amount of time spent on portfolios limits what can be covered in language arts.

> Portfolio requirements take 30 days of teaching out of my school year, which leaves even less time to prepare students for state testing.
>
> Due to preparing for the writing portfolio, four weeks are allotted out of my social studies class to research, write, edit/revise, and complete final copy for the transactive piece.

One respondent, in particular, had very strong feelings about the influence the portfolio assessment has on classroom practices. The teacher acknowledged the pressure to maintain high test scores, yet expressed concern over the amount of time devoted to portfolio writing and the potential for unethical assessment practices associated with high-stakes assessments of this nature.

> Tremendously. The pressure to keep the scores up and rising is constant, I think, for all teachers. The preparation of teaching students how to answer open response questions for the state's format is ongoing in all content areas so that the content areas being tested in a particular grade level are affected. The portfolios eat up time that should be used for teaching content material. I learned what these poor middle school kids are doing in high school and struggled with it, so what do you expect from them? The teachers who do the portfolios are prepping and priming kids all the time. Ask the kids if they really feel the work is theirs. The majority will tell you they have a lot of teacher input. This goes on all over the state. How else can they survive? I don't do the portfolio, but I have always believed it was a waste of time, money, and energy for these kids.

The influence of state assessment on teacher practices. As with the influence of the portfolio, teachers were divided on the influence of state assessments on their teaching practices. Some found the state assessment to be a useful tool to provide focus and pace to instruction, and they did not feel that they permitted the assessment to affect significantly their choice of instructional strategies. These teachers noted:

> It helps me set the pace and focus on the areas that I feel will be tested more heavily.
>
> I make choices of teaching strategies so that students can use what they learned and connect it to the task asked of them.
>
> I try to keep student interest by varying student activities and assignments. I also try to consistently test informally and formally to assess student comprehension.
>
> Preparation for the state assessment provides a focus for concepts that need to be covered.
>
> None. I do not teach to a test.
>
> I consider the testing, but use any strategy that will reach my students.
>
> It guides what I teach to a great extent. It does not dictate my strategies. They are based on student need.

Though some found the state assessment to be beneficial and to have little impact on their teaching strategies, the vast majority of those responding to this survey item felt strongly that the assessment weighed heavily on their minds. Many reported that the state assessment "drives" the curriculum and that they find themselves "teaching to the test." There was an overwhelming sense that the state assessment dictated their practice and, in a sense, forced them to use ineffective, teacher-focused instructional strategies. Representative comments included:

> I feel that I have to teach to the test!
>
> The test is the driving force for me.

> It determines the curriculum.
>
> It (the test) runs the curriculum. If the school is being graded on the state assessment, is that not what the state feels is THE MOST important information for a student to learn?
>
> I believe it takes up too much time. The varying degree of students' abilities limits the overall variety of instructional topics.
>
> Preparation for the state assessment is a roundabout way of telling the kids what is on the tests.

Through their comments, respondents expressed, once again, the enormous pressure they felt to do well on the state assessments. Due to the perceived time pressure, they resorted to "coverage" over in-depth study of instructional topics as evidenced in the following sentiments:

> State assessment encourages coverage and review of specific topics.
>
> Preparation for the state assessment is a crucial part of planning and developing curriculum in my teaching strategies. I am not able to teach areas as in-depth as I would like. My teaching strategies vary; however, at times, they seem limited to basic concepts.
>
> It does not give many choices for teachers. It is also very stressful and time-consuming.
>
> It [the test] is the only thing we are allowed to focus on. Trying to get all the core content covered is impossible with regular class time. If I tried other activities or strategies, I would not get the content covered that needs to be (covered) before state testing.
>
> It [the test] guides it. What I do is solely based on core content. If I cannot justify it by core content, I don't do it. I simply don't have the time to do anything else.
>
> I'm in a crunch to get all my core content at least introduced before testing begins. This means I just hit the high points in some concepts.
>
> It keeps me focused on core content issues and sometimes restricts the depths of lessons because I need to move on.
>
> Unfortunately, with the extremely broad core content that I have, I do not have enough time to do as many "fun" math activities that I would like to do.
>
> Unfortunately there are times that I am so driven to "cover" all of the material that is on our core content that I feel like I don't achieve the mastery level I should with my students. I'd like to have time to implement more cooperative learning and performance assessments than I am able to.

Likewise, teachers responding to the survey felt the need to align their assessment strategies to the state assessment. Some expressed the desire to use research-supported authentic assessments but did not because these techniques were not used on the state assessment.

> It really doesn't influence my teaching strategies, but it does influence my assessment strategies.
>
> State assessment is a critical element in our instruction. I subscribe to the philosophy of authentic assessment as the only true way to assess a student; however, that is not how the state assesses students. We must alter our plans to prepare them for the CATS test.

> Unfortunately, a lot. We are always looking for ways to improve the test scores and portfolio pieces, but it is not always in the best interest of the students. Some of the instructional time is spent reviewing for the test and not on new material. The schools want us to teach and grade using groups, technology, hands-on, but that is not the way the students are tested.

One teacher summed up the feeling of many of the respondents when she stated, "Preparation for the state assessment is goal number one!"

Discussion

A primary purpose of the study was to provide a "snapshot" of the status of middle grades education in the region. Respondents offered valuable insight on the status of the middle school concept in the region and the potential effect of high-stakes assessment demands on instructional practice. However, results of the study are not conclusive because nearly three fourths of the potential participants did not respond to the MSCIS. The possibility exists that the views and perceptions of the non-respondents differ from the perceptions of those who responded. The researchers can speculate why non-respondents did not participate in the survey. Potential reasons for non-participation include: the time of data collection was close to the administration of state assessments; the lack of personal access to participants through electronic mail; and possible difficulty accessing the survey on the Internet.

This study reveals that both school-level administrators and teachers in Northern Kentucky offer broad-based support for the middle school concept. Despite the fact that some teachers report that their administrators ineffectively define the concept for their buildings, the vast majority agree that the middle school concept is strongly supported by both teaching and school-level administrative ranks. Such uniformity of perceptions between the two groups suggests greater potential for agreement between the school's purpose and mission (Kirby & Anfara, 2000), an essential element for implementation of the concept within the school. Though broadly stated support is encouraging to the researchers, and may suggest that students in Northern Kentucky's middle schools are more likely than not to attend schools that adhere to the tenets of the philosophy, one cannot assume a direct correlation between support for, and implementation of, the concept. The reported lack of integrated curriculum and various forms of developmentally responsive instructional strategies cause the researchers to question the perceived level of implementation of some middle school components. Additional investigation is needed to explore not only the level of implementation in the region, but also the quality of implementation. Although such investigation falls outside the scope of this study, future research will include qualitative analysis (i.e., observation, case studies).

Despite the fact that more than half of the teachers teaching in the region's middle schools did not enter the profession with the sole intent of teaching middle grades adolescents, most feel that they are adequately prepared to fulfill their responsibilities, that they enjoy working with middle grades students, and that they expect their students to be successful academically. These perceptions bode well for middle grades students in Northern Kentucky. The strong likelihood exists that students will reap the benefits of attending schools where teachers enjoy middle grades students, feel adequately prepared to teach at that level, and expect students to achieve academically. Twenty-six percent of these teachers, interestingly, do not feel that they successfully teach all of the students in their classrooms. Responses to the MSCIS did not reveal the reasons of this discrepancy, but the researchers speculate that this lack of efficacy on the part of the teachers may stem from their lack of specific training for teaching at the middle level, a situation that can improve with strong, informed leadership (Lipsitz, 1984), additional targeted professional development, and rigorous initial teacher preparation (Clark & Clark, 1993).

Reported Use of Teaching Strategies

The use of multiple learning strategies is beneficial for meeting the needs of a diverse student population (NMSA, 2003). The teachers responding to the MSCIS indicated the use of a variety of instructional strategies, some of which were engaging and widely accepted as developmentally responsive and effective practices (i.e., discussion, demonstration, and visual media). Specifically, the vast majority of the respondents reported regular use of whole class (93.4%) and small group (82.4%) discussion.

Troubling, however, is the widely reported use of often ineffective strategies such as lecture (90.1%) and worksheets (85.7%) to the exclusion of more developmentally responsive and academically engaging strategies like hands-on experimentation (46.7%), reflective writing (38.5%), inquiry (35.2%), integrated units (30.2%), literature circles (8.8%), and Socratic seminars (6.0%). Nearly 74 percent of the respondents indicated that they successfully teach their students while, at the same time, reporting the use of ineffective instructional strategies. The mismatch between the choice of instructional strategies and the teachers' perceptions of success warrants further investigation. Differing definitions of success could account for the apparent mismatch, indicating a need for additional clarification.

Most respondents to the MSCIS did not enter the profession with the sole intent to teach at the middle level. Lack of training in effective middle grades instructional practice may account for the teachers' decisions to use more teacher-driven instructional approaches, which may contribute to their reported lack of efficacy. Additionally, teacher comments to the open response items of the MSCIS lead the researchers to believe that content area teachers are aware of those strategies that research supports as "best practice," but choose to use strategies that they believe to be more efficient in an effort to address their perceived lack of time due to assessment pressures and the need to emphasize coverage of material. Furthermore, the pressures of assessment may cause the respondents to resort to instructional strategies with which they are most comfortable. As Leonard (1968) states, "educators feel justified in clinging to methods that have been developed, hit or miss, over the centuries—even when they are shown to be inefficient" (p. 214).

Influence of State Accountability Measures

Assessment is a widely accepted and necessary practice in education, but the increased emphasis on high-stakes assessment with attached rewards and sanctions has changed the landscape in many schools. Those responding to the MSCIS validate this point. Though some respondents find the state assessment in Kentucky to be a beneficial instructional tool that provides focus for instruction and keeps teachers "on track," most feel state assessment mandates have negatively affected their use of instructional time and selection of instructional strategies.

Teachers in Northern Kentucky feel, first and foremost, that the pressures of state assessments, including the seventh grade portfolio assessment, have negatively influenced the curriculum. Teachers consistently report the practice of dedicating blocks of time, often weeks of instruction, to the development of portfolio writing samples and test preparation. They are frustrated by the loss of valuable instructional time that could be used for content area instruction. As a result, teachers are choosing to limit the curriculum to only those concepts that will be assessed on state-mandated exams. Perceived time constraints find teachers resorting to "coverage" of content over in-depth learning.

Second, teachers' comments reveal that the pressures of assessment also negatively affect their choice of instructional strategies. Many view the state assessment as their "driving force" causing them to "teach to the test," "focus on coverage" over in-depth study, limit their instruction to the topics on the assessment, change their instructional and assessment strategies, and even consider unethical behavior. The teachers' comments also highlight the mismatch between research-based assessment strategies and those used for state assessments. As several respondents point out, colleges of education and school district leaders promote the use of research-based assessment strategies, including authentic assessments, but this is not the means of assessment used by most large-scale testing programs. One teacher articulates the philosophical mismatch in this way: "I subscribe to the philosophy of authentic assessment as the only true way to assess a student; however, that is not how the state assesses students. We must alter our plans to prepare them for the CATS test."

Recommendations

The findings of this study compel the researchers to propose three primary recommendations to address the concerns of the teaching vs. testing debate. First, educational researchers must further investigate the level and quality of implementation of the middle school concept. Future studies should further assess the implementation of the middle school concept, investigate the selection and amount of time devoted to various

instructional strategies, and explore the potential correlation between the use of "best practice" as defined by the middle school concept and state assessment scores. In addition to quantitative data, qualitative measures including observations, teacher logs of instructional practices, and interviews with administrators, teachers, parents, and students would provide deeper insight into the status of middle grades education.

Second, educational researchers must further investigate the nature of high-stakes assessment, its effect on instructional practice, and its validity as a measure of student, teacher, and school success. The researchers do not propose the elimination of state assessment measures, but the improvement of those measures and the use of valid measures to enhance, not impede, instruction. This might demonstrate a need to de-emphasize the importance of high-stakes measures of achievement and utilize more authentic assessment tools. Additionally, attention must be given to the implication that one must use efficient, yet ineffective, instructional strategies (i.e., lecture, worksheets) to "cover" the content for state assessments within the current time constraints. Regardless of the situation, research-based best practices are the most effective. In a climate filled with anxiety over high-stakes assessments and perceived time pressures, teachers cannot afford to use ineffective practices. They must strive to provide students with a curriculum that is relevant, challenging, integrative, and exploratory using multiple means that are developmentally responsive (Anfara et al., 2003; NMSA, 2003).

Finally, to address the need for increased use of effective instructional practices, teachers and school-level administrators, both preservice and inservice, must receive additional training in the use of developmentally responsive instructional strategies for middle grades students. Teacher education programs must enhance their preparation of teachers by continuing to research effective instructional practice, modeling integrative curriculum at the university level, and identifying exemplary middle grades field placements that provide preservice teachers with exposure to theory in practice.

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Appendix A

Reported Use of Instructional Strategies

MSCIS Survey Item: During the past 30 days, which of the following instructional techniques have you used in your classroom? (Check all that apply.)

Instructional Strategy	Percentage Reporting Use (n = 182)
Whole class discussion	93.4
Lecture	90.1
Worksheets	85.7
Small group discussion	82.4
Demonstrations	76.9
Open response questions	72.0
VCR/DVD	68.7
Guided note taking	65.4
Individual student projects	64.3
Student self-assessment	63.7
Textbook exercises	60.4
Graphic organizers	59.3
Group projects	51.1
Student peer assessment	46.7
Hands-on experiments	46.7
Sustained silent reading	45.1
Current events	44.5
Manipulatives	44.0
Reflective writing	38.5
Journaling	37.9
Memorization	37.4
Inquiry	35.2
Internet / Webquest	34.1
Round robin reading	31.9
Integrated units	30.2
Written reports	29.1
Oral reports	26.4
Children's literature/trade books	25.8
Non-required portfolios	17.0
Other	14.8
Literature Circles	8.8
Socratic seminars	6.0