RESEARCH STARTERS
ACADEMIC TOPIC OVERVIEWS

Academic Learning Time

Curriculum Organization > Academic Learning Time

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Abstract

An overview of Academic Learning Time and its role and impacts on student learning in public school education environments is presented. Also presented is a brief overview of the research substantiating appropriate Academic Learning Time and its relationship to specific subjects. Further analyzed are ways transitions impact Academic Learning Time and specific research based high probability and low probability task sequences are presented that offer options for success in learning environments. Applications that include roles and impacts on certain groups including students, teachers, and administrators are outlined. Solutions are offered to help them develop the most effective programs through consistent, research based methodologies that includes time-on-task, homework, and student achievement.

Overview

Academic Learning Time can be described as the amount of time a student spends engaged in an academic task that the student performs with high success (Fisher, Marliave, & Filby, 1979, p. 52). Academic Learning Time might also be described as relevant time a student spends engaging in academic tasks while performing those tasks with a high rate of success. Academic Learning Time tends to vary with the length of the school year, the number of hours in a school day, the amount of absenteism, and the time it takes to transition from one class to another and organize class activities (Brandt & Gunter, 1981, p. 151). The basic elements of Academic Learning Time include "allocated time, student engagement, and student success rates" (Fisher, Mariave, & Filby, 1979, p. 52). Central to understanding Academic Learning Time is how Academic Learning Time directly impacts student learning. Teachers are key facilitators in providing the most appropriate Academic Learning Time for each subject; therefore, teachers and administrators must understand the importance of these roles and plan lessons accordingly to maximize time-on-task behaviors by easing transitions and thereby increasing student success.

Academic Learning Time occurs when the conditions of allocated time, student engagement, and student success rates are applied simultaneously. These three ingredients of Academic Learning Time are essential to student achievement. In order to facilitate understanding of how each of these ingredients contributes to student achievement, a definitional understanding must be provided. First, allocated time for a given activity is typically a block of time that is set by the teacher. Allocated Time might be decided individually by students or jointly between the teacher and the student. Allocations of time may be different or individualized for specific students in the same classroom. Second, Engaged Time

Keywords

Allocated Time

High Probability Task Sequences

Low Probability Task Sequences

Student Engagement

Student Success Rate

Transitions

occurs during a portion of Allocated Time when students are paying attention. Typically, during Engaged Time, students will be "manipulating something, reading, thinking, interacting with other students, or in some way processing information about the task." Third, the Student Success Rate occurs when there is a strong correspondence between Engaged Time and the task the teacher is asking the student to complete. For example, if the task is so difficult that the student produces few correct responses, then limited learning will take place. In contrast, if a student produces many correct responses, then it would indicate that the child is learning (Fisher, Marliave, & Filby, 1979, p. 52). This would suggest that the evidence of student success is precipitated through multiple events occurring at the same time.

More current literature continues to support evidence of a strong correlation between time and achievement. However, some literature indicates that Allocated Time refers to the total number of days or hours students are required to attend school. Engaged Time refers to the part of the day when students are participating in learning activities. Student Success or Learning refers to the time during Engaged Time when the material is neither too easy nor too hard and instructional activities are challenging, but still allow for success. Despite the thirty years of consistent thinking that Allocated Time produces a strong connection to student achievement, research now suggests inconsistencies with this previous theory ("Making Time Count," 2001).

Academic Learning Time Today

In reconsidering the time element in student achievement, it has now been determined that other key factors besides time also influence student learning. These factors include:

- Improving classroom management in order to minimize disruptions or disciplinary actions;
- Ensuring developmental appropriateness of curriculum and instruction in order to maximize student thinking and match content with readiness for learning; and
- Increasing student motivation by offering instructional activities that maximize interest and limit repetitive activities ("Making Time Count," 2001).

Overall, each of these three interventions has been identified as key indicators for motivating students and constructing student success.

Additional evidence suggests that increased achievement is not necessarily derived from more time in school, but instead directly correlates with maximized Academic Learning Time. Another key factor that leads to success in academic learning environments is the possibility of extending the school day or school year, particularly for specific groups that may need intensive support. This factor alone has led to increased student achievement. Also, important to recognize, Engaged Time must also be maximized, because Allocated Time on its own does not lead to substantial achievement gains ("Making Time Count," 2001). In order to maximize student success; this evidence suggests that more than just three factors lead to student achievement. Rather than only three variables, research has now established the critical aspects of how time is spent and what happens during each aspect of the instructional day.

The most recent research has identified transitions and efficiency as key indicators of facilitating increased achievement. Given the current landscape of educational responsibilities, state mandated academic standards, and high stakes testing, educational professionals must be able to access evidence based strategies for helping children transition quickly and and keep them engaged longer. Paine, Rosellini, Deutchman, and Darch (1983) suggested that "smooth transitions provide more time for academic instruction and reduce" behavior management dilemmas (in Lee, 2006, p. 313).

While multiple options exist for educators to use, one specific technique has produced evidence that helps students accomplish initiating tasks faster and stay engaged longer (Lee, 2006, p. 313). These involve high probability tasks and low probability tasks.

High Probability & Low Probability Tasks

According to Lee (2006), High-probability (High-P) request sequences, when employed effectively, make it more likely that non-preferred behaviors will occur. To initiate this intervention, "a series of brief requests with a high probability of compliance is administered just prior to a request with a Low Probability (Low-P) of compliance" (p. 313).

High-P requests include asking students to take out a pencil, write their name on a sheet of paper, and writing the date at the top of the paper. These High-P requests will be initiated just prior to requesting students to begin their math seatwork, which is arguably a Low-P request. Research from multiple studies suggests that engaging a series of High-P Requests just prior to initiating a Low-P Request will carry over and increase compliance to a request that previously resulted in non-compliance (Lee, 2006, p. 313). These High-P request sequences have been observed across populations and have included young children with behavioral problems (Davis & Reichle, 1996), special education populations (Harchick & Putzier, 1990), and general education students (Ardoin, Martens, & Wolfe, 1999). As outlined in Lee (2006), observed requests included:

- Self care (Mace & Belfiore, 1990),
- Communication (Davis, Brady, Hamilton, McEvoy, & Williams, 1994; Sanchez-Fort, Brady, & Davis, 1995), and
- Transition from activity to activity (Ardoin et al., 1999), and intervenors (Mace & Belfiore, 1990).

Experimentors include, but are not limited to,

- Classroom teachers (Ardoin et al., 1999),
- Parents (Ducharme & Worling, 1994), and
- Same-age peers (Davis & Reichle, 1996).

All of the results have previously been limited to self-care and communication and have only recently been used in school settings, which have strong indicators for student academic success (Lee, 2006, p. 313).

The High-P request intervention is based on the Theory of Behavioral Momentum (Nevin, 1996) which describes the "dynamic of behavior intervention in changing environments" (Nevin, Mandell, & Atak, 1983). Interestingly, Nevin "theorized that behavior possesses a momentum much like that found in physical objects" (cited in Lee, 2006, p. 313). According to Nevin's theory, behavioral momentum is impacted by behavioral mass, which is "determined by the level of reinforcement associated with a specific stimulus condition" (cited in Lee, 2006, p. 313). In contrast, behavioral velocity has been determined as the "rate of response" attributed to specific behaviors. These similarities with physics indicate that "engaging in a series of tasks with a high probability of occurrence increases the overall rate of responding and subsequent reinforcement for a given task which subsequently results in increased compliance to less preferred steps or problems within that same task" (Lee, 2006). The overall goal in thinking about behavioral momentum in terms of transition directly relates to how students respond during a given activity and offers specific approaches to increasing student productivity during transitions from one favorable activity to a perhaps less than favorable activity. Each of these sequences and their relationship to maximizing Academic Learning Time by minimizing off task behaviors during transition times suggests strong indicators for educational professionals. Homework is another component of Academic Learning Time that is not readily addressed in the literature.

Homework

Simons (1989) considered two main goals that homework should emphasize which include the "didactic and pedagogic function". The didactic function aspires to improve learning processes. Homework that may be used to improve the didactic function teaches students how to study independently. The "pedagogic function aims to teach students how to study independently" (cited in De Jong, Westerhof & Creemers, 2000, p. 132). According to multiple scholars, homework has a direct impact on positive achievement. In defining homework academic achievement time, teachers should remember that a homework policy should be developed to produce best outcomes. A homework policy is a logical system of written rules and procedures. In outlining the goals and importance of homework, teachers should offer motivational strategies for how to stimulate doing homework, expectations for how to evaluate homework, role plays on how to offer feedback, and a pre-set lessons on how to do homework. Additionally, teachers should offer a time frame on completing homework, and an outlined expectation from parents (de Jong, Westerhof & Creemers, 2000).

Homework policies should include guidelines for helping students solve problems about their homework which might include: inadequate planning, difficulties in completing homework because homework is too difficult, and students not completing homework at all. For teachers the most problematical issues are related to differentiated instruction, controlling how homework is done, and motivating students to do their homework and how to study (de Jong, Westerhof & Creemers, 2000, p. 135). According to other researchers, homework policies are effective and promote student success and indicate that teachers who give "a lot of homework to students have a higher average achievement level than schools where the amount is low" (p. 135). Teachers need to remember that homework is a complex issue and much debate continues regarding parental perceptions of homework and student levels of independence. Homework needs to be relevant about what has been pre-taught at school. Collaboration with grade level teams would also help alleviate parental concerns and create connectivity.

Applications

Students

Academic Learning Time and Student Achievement are significant in implications for students in Public Education Environments. Given that "children are not small adults who only need to know more, but are unique human beings who move through predictable stages of development" a requirement is needed for adults to offer alternative methods of teaching, varieties of instructional materials and strategies, inquiry based models of instruction, and an increased awareness of specific Piagian levels of development (Brandt & Gunter, 1981, p. 151). Further needed are specific accommodations for children with specific types of learning problems.

Mainstreaming can impact student learning in various ways both for general education students and special education students. Multiple concerns are presented in providing optimum and differentiated Academic Learning Time for all children in a Public Education Environment (Brandt & Gunter, 1981). Additionally, specific subjects, including reading and math can be examined in terms of Academic Learning Time and student engagement. For students learning these subjects, instructional time can vary depending on goals and objectives. Teachers must know their students in order to differentiate appropriately.

Teachers

The use of Academic Learning Time has multiple implications

for teachers. In evaluating the best use of Academic Learning Time, teachers need to understand how Academic Learning Time is assessed, and teachers need to establish ways to accomplish appropriate planning time. Teachers also need to know ways of conducting task analyses of instructional materials and establishing an observation system for monitoring time-on-task for individual pupils. For the practicing teacher, several essential concepts and skills would help teachers construct more effective Academic Learning Time. Some of these concepts and skills that are helpful include curriculum analysis and design, selecting specific learning objectives, integrating an appropriate use of technology, learning alternative teaching methodologies, and appropriating inquiry based methods of instruction (Brandt & Gunter, 1981, p. 151). Research has clearly indicated that teachers who wish to maximize Academic Learning Time would be most successful by integrating many of these strategies for classroom success.

In order to best structure Academic Learning Time so that it can be maximized, teachers should be offered the opportunity to receive Professional Development in areas that support most effective practices increase instructional skills and promote differentiation strategies ("Making Time Count," 2001). Further implied within these practices, additional needs are required for administrators in promoting these learning and planning opportunities.

One important factor that teachers need to remember in planning academic time is the roles of school district administrators, state legislators, and parents. Teachers plan the daily allotment of how daily academic time is spent in terms of academic instruction and specific ways minutes of time in the classroom are spent. Much of this academic time is driven by mandates from legislators and district officials. Teachers need to be aware of the ways outside forces play a very real role in the classroom environment. Before teachers are first hired by a given district, teachers need to spend some time researching district requirements that require time on-task students need to be taught for different subjects. These factors would be helpful to discuss during the interview process, because these questions will be asked during the interview process and will most likely pertain to a teacher's philosophical overview of how class time should be spent. After teachers are hired, they should also not expect that this information will be given to them. Instead, teachers need to ask other members of their grade level team or seek help from a curriculum coach within the district. In addition to the academic time spent within the classroom, teachers also play a key role in planning some academic time outside the classroom in terms of homework.

Administrators

At the building level, administrators hold multiple responsibilities in assuring appropriate uses of Academic Learning Time by teachers and for students. In order to facilitate the most effective use of Academic Learning Time, teachers require professional development that extends their knowledge of content and improves instructional skills. Included with improved instructional skills, teachers also require ways to differentiate instruction for individualized student needs. In order to support teachers in these endeavors, administrators need training and support in becoming strategic thinkers who can organize staffs and schedules to focus their capacities on instruction and learning ("Making Time Count," 2001).

At the district level, administrators hold the responsibility for providing time inventory analysis coupled with the examination of best-practice models, which should form the basis for decision-making. To promote most effective uses of time, administrators should consider block scheduling, year-round schedules, appropriate uses of homework, extended day programs, and summer and after school programs. Creative scheduling and alternative scheduling models could allow learning supports that support smaller class sizes and core academics ("Making Time Count," 2001).

Additionally, district level administrators should utilize "focused, cohesive programs of professional development for teachers and school leaders" ("Making Time Count," 2001). These programs are important for developing the needed knowledge and skills for making most appropriate uses of time. Districts can also foster opportunities for teachers to work together in collaboration in order to cohesively plan.

Issues

Overcoming Barriers to Efficient Uses of Academic Learning Time

In order to efficiently plan and use Academic Learning Time, several barriers must be overcome. Firstly, teachers must understand the multiple factors that influence Academic Learning Time. These factors include academic standards imposed by legislators and Education Directors. These factors also are represented by standardized tests that students must take in order to prove their knowledge in specific academic areas. It is advised that teachers become knowledgeable about academic requirements in individual states and ways these requirements are underscored by No Child Left Behind. Secondly, teachers must look for ways to integrate multiple academic disciplines in their planning. The integration of academic planning ensures that subjects are not taught in isolation. Connected learning more deeply impacts academic performance and enables students to make sense of what is being taught. Implementing this strategy alone could make a tremendous difference in utilizing effective Academic Learning Time. Thirdly, teachers should consider collaborating with other teachers as a means of aligning curriculum to state or district standards.

Conclusion

Academic Learning Time is a factor that all educators must consider, because of the multiple implications of appropriate planning and effective integration of disciplines. Teachers only have a specific window of opportunity to ensure that they teach what they must teach. In order to successfully understand these factors, teachers must spend time reviewing curriculum, understanding state standards, and familiarizing themselves with state and district mandates. Successful mentoring by other teachers,

cross-grade teams, collaboration, and communication are helpful strategies for ensuring relevance and rigor. Homework is a small piece of the larger puzzle, but should still be considered as an important instructional strategy.

The last part of the Academic Learning Time puzzle is in creating connectivity and motivation for students. In order to maximize learning time, students must be fully engaged in their instruction. Teachers should consider abandoning their favorite lessons in order to prosper student choice to ensure relevance. Teachers must be knowledgeable about their students and how their students learn. At the beginning of the year, teachers should consider constructing positive relationships with students, learning what motivates their students, and then fostering a bank of knowledge based on the needs and knowledge of their students. This bank of knowledge can then be utilized to help teachers successfully plan Academic Learning Time, as well.

Terms & Concepts

Allocated Time: Allocated time for a given activity is typically a block of time that is set by the teacher. Allocated Time might be decided individually by students or jointly between the teacher and the student.

High Probability Task Sequences: High-P Task Sequences are interventions that practitioners can use to make it more likely that a non-preferred behavior will occur. These task sequences are considered as preferred tasks.

Low Probability Task Sequences: Low-P Task Sequences are descriptors of non-preferred tasks. These are tasks that students may not prefer.

Student Engagement: Student engagement is the portion of Allocated Time in which students are actively engaged in an assigned task.

Student Success Rate: The Student Success Rate can also be identified as student learning. It is not only influenced by the amount of student engagement, but it also indicates a strong match between a given task and the individual student.

Transitions: Transitions can be described as evidence based methods that help children shift from one task to another while maintaining their engagement with the learning.

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