Effective Room Arrangement:
Middle & High School
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Licensure and Content Standards

This IRIS Case Study aligns with the following licensure and program standards and topic areas.

**Council for the Accreditation of Educator Preparation (CAEP)**
CAEP standards for the accreditation of educators are designed to improve the quality and effectiveness not only of new instructional practitioners but also the evidence-base used to assess those qualities in the classroom.

- **Standard 1: Content and Pedagogical Knowledge**

**Council for Exceptional Children (CEC)**
CEC standards encompass a wide range of ethics, standards, and practices created to help guide those who have taken on the crucial role of educating students with disabilities.

- **Standard 2: Learning Environments**

**Interstate Teacher Assessment and Support Consortium (InTASC)**
InTASC Model Core Teaching Standards are designed to help teachers of all grade levels and content areas to prepare their students either for college or for employment following graduation.

- **Standard 3: Learning Environments**

**National Council for Accreditation of Teacher Education (NCATE)**
NCATE standards are intended to serve as professional guidelines for educators. They also overview the “organizational structures, policies, and procedures” necessary to support them.

- **Standard 1: Candidate Knowledge, Skills, and Professional Dispositions**
Effective room arrangement refers to a thoughtful composition of a classroom’s many physical elements—including seats and desks, books and other materials—to establish a learning environment that facilitates effective instruction and student growth. Just as they help develop significant relationships with students, celebrate students’ cultural diversity, and create a safe learning space, so too do carefully arranged classrooms better promote student learning and appropriate interaction. More, well-designed classroom environments:

- Decrease the likelihood of inappropriate student behavior
- Provide structure and predictability
- Increase academic engagement
- Positively impact student performance

Through effective classroom arrangement, teachers can facilitate a variety of instructional activities and support the unique needs of their students. They can also reduce disruptive behaviors and the subsequent loss of instructional time. Keep in mind that, because every classroom has its own needs, there is no one best way to design a classroom environment. That said, teachers can use the practices described in this case study unit as a sound foundation upon which to begin building their own effective classrooms.

Now let’s look at the practices we will cover:

- Facilitating Efficient Traffic Patterns
- Supporting Frequent Interaction
- Matching Room Arrangement with Instructional Format
- Minimizing Distractions and Disruptive Events

These practices will be explored on the following IRIS STAR Sheets.

What a STAR Sheet is…

A STAR (STrategies And Resources) Sheet provides you with a description of a well-researched strategy that can help you solve the case studies in this unit.

Resources

Effective Room Arrangement: Middle & High School
Facilitating Efficient Traffic Patterns

About the Strategy

Facilitating efficient traffic patterns involves arranging the physical aspects of the classroom (e.g., learning materials, equipment, the students themselves) to ensure that everyone, teachers and students alike, can navigate the room and access materials without difficulty.

What the Research and Resources Say

- Eliminating physical barriers and creating ample walkways can facilitate students’ and teachers’ movement and prevent them from colliding with objects or each other or interrupting one another’s work (Jones & Jones, 2007).
- By intentionally designing and managing effective traffic patterns, teachers can increase classroom safety (Sprague, 2007).
- Effective traffic patterns and easy accessibility to storage, resources, and tools are important components of conducive learning environments (Emmer & Evertson, 2017).
- Flexible access to furniture, equipment, and supplies helps establish student independence in the learning environment (HEFCE, 2006).

Tips for Implementation

- Arrange the classroom to promote a smooth traffic flow that lessens the likelihood that areas will become congested or be left unsupervised.
- Assess the classroom for the presence or absence of a “bump factor.” Challenging behaviors are more likely to occur when students or teachers routinely bump into each other, one another’s belongings, or tables and desks.
- Place frequently utilized supplies, equipment, and materials in easy-to-access locations.
- Create walking space between and around classroom furniture and equipment. Unused or unnecessary furniture and equipment should be removed.
- Teach students procedures and routines to navigate the classroom, including transitioning between activities, accessing materials and supplies, and practicing emergency drills and other safety procedures.

Keep In Mind

- One way to test the traffic patterns in the classroom is simply to walk through the designated areas with the chairs placed as though students were seated in them.
- Because blocked walkways can be problematic or even hazardous in an emergency, it is a good idea to make note of items that might hinder efficient traffic patterns while practicing emergency drills.
Effective Room Arrangement: Middle & High School
Facilitating Efficient Traffic Patterns

- Some students, such as those who use wheelchairs and walkers, may benefit from additional space for movement (e.g., wider aisles) as well as storage for any special equipment.

**FYI**

Efficient traffic patterns allow teachers to more easily incorporate purposeful movement during instruction (e.g., physical games, hands-on tasks, role plays). This type of movement has many benefits, such as helping students to:

- Contend with stress and anxiety (which is a natural occurrence for adolescents due to hormonal shifts that they experience and especially for those who live in poverty and experience chronic stress)
- Process information
- Maintain engagement
- Feel more positive and motivated
- Reduce off-task behavior
- Improve academic achievement

**Resources**


Effective Room Arrangement: Middle & High School
Facilitating Efficient Traffic Patterns


About the Strategy

Supporting frequent interaction is the practice of arranging the physical aspects of the classroom (e.g., materials, equipment, desks) to ensure that the teacher can move easily throughout the environment to more efficiently access, engage with, and monitor student learning and behavior.

What the Research and Resources Say

- Teacher interaction with students is correlated to student seating location (Good & Brophy, 2008; Emmer & Evertson, 2017; Rogers, 2011; Weinstein & Novodvorsky, 2011).
- Frequent teacher movement encourages students to remain on-task and offers the teacher insight into student discussions, work habits, and progress (Weinstein & Novodvorsky, 2011).
- When the teacher is in close proximity, the rate and probability of student engagement increases (Hazari, Cass, & Beattie, 2015; Wubbels, Brekelmans, de Brok, Wijsman, Mainhar, & van Tarwijk, 2015).
- When teacher-to-student interactions increase, positive adult-student relationships develop, students are more likely to be engaged, and the occurrences of problem behaviors decrease (Hafen, Ruzek, Gregory, Allen, & Mikami, 2015; Simonson & Myers, 2015; Nguyen, Cannata, & Miller, 2018; Kwok, 2019).
- Effective monitoring and supervision require that the teacher move frequently throughout the classroom and maintain constant lines of sight to each student (Emmer & Evertson, 2017; Weinstein & Novodvorsky, 2011).

Tips for Implementation

- Create a clear line of sight to students to easily monitor them from any location.
- Consciously place bookcases, file cabinets, and other pieces of equipment so as not to block accessibility to students. Check for blind spots by standing in different locations in the room.
- Circulate among students as they work to assess and address each student’s academic and behavioral needs.
- Move frequently throughout the room when providing instruction to monitor student engagement and performance.
- When moving through the classroom, do so with purpose so as not to distract students unnecessarily.

Keep In Mind

- By continuously moving throughout the classroom, the teacher can maintain proximity to all students, thereby heightening their attention to tasks and expected behaviors.
Effective Room Arrangement: Middle & High School
Supporting Frequent Interaction

- Frequent movement among students allows the teacher to offer immediate learning assistance as well as to provide frequent encouragement and timely feedback, all of which increases student engagement.
- Some students benefit from more frequent teacher interaction and monitoring.

Resources


About the Strategy

Matching room arrangement with instructional format involves promoting student academic and social-emotional learning by arranging the classroom to facilitate the lesson and supporting activities.

What the Research and Resources Say

- Seating arrangements should match the instructional format (e.g., whole-group, small-group) inasmuch as these arrangements establish both academic and social expectations (Chance, 2015; Emmer & Evertson, 2017; Gremmen, van den Berg, Segers, & Cillessen, 2016; Weinstein & Novodvorsky, 2011; Wong & Wong, 2009).
- Flexible room arrangement supports a variety of instructional formats, which help keep students actively engaged (Wong & Wong, 2009; Harvey & Kenyon, 2013).
- Students feel increasingly challenged and competent when their classroom environment is clearly and coherently structured to support specific kinds of instruction and activities (Kunter, Baumert, & Köller, 2007).
- Grouped seating arrangements can increase student social interaction, while seating in rows can increase on-task behavior and the amount of independent work that students complete (Gremmen, van den Berg, Segers, & Cillessen, 2016; Wong & Wong, 2009).
- Room arrangements that support collaborative activities can improve social interactions among peer learners, which in turn can help improve student academic performance (HEFCE, 2006).

Tips for Implementation

- For each lesson, select an instructional format and then choose a room arrangement that best supports it. See the table below for further information and guidance.
- Involve students in designing effective arrangements for different instructional formats to increase their engagement in academic learning and to build their sense of ownership of the classroom.
- If you frequently rearrange the classroom for specific instructional formats within a class period, teach students how to do so quickly in response to a verbal or visual cue. Though this will require practice, it will create smoother transitions between activities.
- Provide a clear line of sight from wherever the students are seated to wherever instruction is taking place (e.g., at a smart board, via overhead projector screen, at the demonstration table).
### Possible Room Arrangements

<table>
<thead>
<tr>
<th>Instructional Format</th>
<th>Room Arrangement</th>
<th>Benefits</th>
</tr>
</thead>
</table>
| Independent work (e.g., tests, lectures) | Seats are arranged in rows or paired rows (see examples A and B on the next page) | • Allows student to focus on the teacher  
• Increases positive behaviors (e.g., raising hand for assistance)  
• Promotes on-task behavior during independent work |
| Group work (e.g., partner activities, small-group discussions) | Seats are arranged in clusters (see examples C and D on next page) | • Facilitates interactions among group members  
• Allows students to attend to instruction or independent work |
| Demonstrations or discussions | Seats are arranged in a U-shape or multiple U’s of five or six students (see examples E and F on the next page) | • Allows all students to have direct eye contact with the teacher and their peers  
• Promotes greater communication among the group |

**Note:** The classroom designs on the next page offer only a few arrangement options. Because of the diversity of the types of student seating and room sizes, we are unable to provide an exhaustive array. Additionally, for illustrative purposes, the classroom designs below contain only the basic features of a typical classroom. As such, features such as bulletin boards, supply and storage areas, and equipment have not been included.
Effective Room Arrangement: Middle & High School
Matching Room Arrangement with Instructional Format

Independent Work / Tests / Beginning of the Year / Lecture

A

B

Group Work / Stations

C

D

Demonstration / Discussion

E

F
Keep In Mind

- Different instructional formats might require different room arrangements.
- Continual rearrangement of the classroom can be disruptive. Teachers should plan their room arrangement to fit the majority of the day’s instruction and adjust it to meet other lesson purposes only when necessary.
- When designing seating arrangements to support different instructional formats, teachers should make sure there is enough room to move freely about the classroom and monitor student engagement.
- Students who have their back to an instructional area can more easily avoid engaging with the lesson than those who are facing the area.
- U-shape classroom arrangements are most effective in classes of 20 or fewer students. For larger classes, teachers may want to create multiple smaller U’s of five or six students.

Resources


About the Strategy

Minimizing distractions and disruptive events involves arranging the physical aspects of the classroom (e.g., materials, equipment, students’ desks) to reduce distractions and the occurrence of challenging behaviors that might interfere with learning.

What the Research and Resources Say

• Effective teachers proactively prevent distractions and disruptive events by purposefully organizing the materials and space in their classrooms (Stronge, Ward, & Grant, 2011).
• By minimizing classroom distractions, teachers can increase students’ sense of psychological safety. This is particularly important for students who might be experiencing stressful situations or events (e.g., poverty, homelessness, abuse) (Weinstein & Novodvorsky, 2011).
• A well-thought-out room arrangement can help reduce student distractions when incompatible activities (e.g., independent work and small-group instruction) are taking place at the same time (Weinstein & Novodvorsky, 2011).
• Because crowded rooms tend to foster challenging behaviors, teachers should arrange the room to provide ample space for learning (Weinstein, 1979; Garrett, 2014).

Tips for Implementation

• Identify potential distractions in the classroom. These might include structural elements of the classroom itself (e.g., windows, doors), equipment (e.g., computers, an aquarium), noises (e.g., from the pencil sharpener), and individuals.
• Sit at each location in the classroom to experience potential distractions that students might encounter.
• Relocate items, equipment, or individuals as needed to minimize distractions.
  ◦ Arrange high-traffic areas (e.g., pencil sharpener, trash can) to avoid congestion and to minimize distraction caused by their use.
  ◦ Arrange classroom elements (e.g., desks, bookshelves) to avoid crowding.
  ◦ Provide work areas that are quiet and distraction-free.
• Position the desks of students with challenging behaviors near areas with limited distractions and greater access to work materials and teacher support.
Effective Room Arrangement: Middle & High School
Minimizing Distractions and Disruptive Events

Keep In Mind

• Individual students find different things distracting. Whereas one student might be distracted by a noise in the classroom, another might ignore it entirely.
• Although some items cannot be relocated, the teacher can minimize their disruptive effects through other means. For example, a distracting computer monitor might be turned to a different angle or blocked by a temporary partition like a trifold display.

Resources


Background

Student: Kiani  
Age: 16.3  
Grade: 10th

Scenario

Kiani, a sophomore with autism spectrum disorder (ASD), is attending a new rural county high school. The district merged multiple smaller high schools to provide more course options than offered at the smaller sites. Last year as a freshman, she was one of 56 total students. She is now one of 224 students in her sophomore class. Kiani was initially apprehensive about attending a new school, but with time and support from her teachers she has become comfortable in her new setting. Kiani was excited about the chance to take Spanish as it was not offered at her small high school and it quickly became her favorite class.

Lately, Kiani seems disconnected during her Spanish I class’s small-group conversation exercises. During these exercises, students are asked to converse in groups of 2–3 and discuss a “hot topic” prompt using as much Spanish as possible. Kiani’s participation, however, has been inconsistent, and sometimes she fails to take part at all, which is surprising to her teacher as Kiani usually enjoys discussing topics of her choice. Kiani’s IEP requires that she be seated near the dry erase board where her teacher displays the class’s learning targets, assignments, and lesson directions. However, after making a sketch of the classroom arrangement (see below), her teacher suspects that Kiani’s seating location (starred) might be a factor in her disconnected behavior. Because of this, the teacher decides to rearrange the classroom to help Kiani:

- Increase the frequency of her participation in each assigned conversation exercise
- Increase the duration of her participation in each assigned conversation exercise to five minutes
Possible Strategies

- Matching Room Arrangement with Instructional Format
- Minimizing Distractions and Disruptive Events

Assignment

1. Read the STAR Sheets for the possible strategies.
2. Use the seating arrangement sketch above to identify two issues (one for each strategy) that may be negatively affecting Kiani’s participation.
Background

Student: Sadiq
Age: 12.3
Grade: 7th

Scenario

Sadiq is a 7th-grader who missed much of his 6th-grade year after sustaining a spinal cord injury during a football game. Following months of difficult in-patient physical therapy to rebuild his motor memory, balance, and the muscle strength in his legs, Sadiq has returned to school, although he is not yet fully recovered. His balance is still somewhat precarious, and a fall could be disastrous. Because of this, Sadiq uses a walker most of the time. In English class, he is seated in a protective position near his teacher’s desk (noted by the red star in the illustration below). There, Sadiq has a place to put his walker where he can easily access it. The quality of his academic work shows that he is quickly catching up with his peers; however, his social skills are not progressing at the same pace. He frequently displays inappropriate behavior which is impacting his ability to make friends. With all this in mind, Sadiq’s teacher reassigns his seating location to help him:

• Increase his positive social interactions with peers
• Increase his safe movement to and from the smart board and his seat, as well as into and out of the classroom, to give Sadiq the same opportunities as the other students for interaction with the whole class

Possible Strategies

• Facilitating Efficient Traffic Patterns
• Supporting Frequent Interaction
Assignment

1. Read the STAR Sheets for the possible strategies listed above.
2. Using the table below:
   a. Identify the pros of each seating location.
   b. Identify the cons of each seating location.
   c. Rank the seating locations from most suitable (1) to least suitable (3).

<table>
<thead>
<tr>
<th>Seat</th>
<th>Pros</th>
<th>Cons</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Background**

Student: Sophia  
Age: 17.5  
Grade: 12th

**Scenario**

Sophia, a high school senior, is taking biology lab as a requirement for graduation. It is midway through the semester and she is barely passing the class. Sophia has ADHD and is nearly always in motion, whether it be adjusting her lab equipment, rearranging her seat, or pacing around the lab. Her apparent restlessness is usually evidence that she is off-task. During these lab sessions, the biology teacher begins with whole-group instruction and a demonstration of the activity and then allows students to work in small groups to complete the activity. As the students are working, the teacher moves from group to group to support students learning and check their progress. Unfortunately, Sophia’s lack of focus often hinders her participation in small-group activities and prevents her from completing independent assignments. To address this issue, the biology teacher speaks with a colleague who wonders whether Sophia’s seating location could be causing her distractions. With this in mind, Sophia’s teacher makes a sketch (see below) of the classroom and notices several reasons Sophia might be off-task. The teacher plans to meet with Sophia to discuss ways they can rearrange her seating position (starred) in order to help Sophia:

- Increase the amount of time on-task during small-group lab activities
- Increase the number of assignments completed
Possible Strategies

• Facilitating Efficient Traffic Patterns
• Supporting Frequent Interaction
• Matching Room Arrangement with Instructional Format
• Minimizing Distractions and Disruptive Events

Assignment

1. Review the STAR Sheets for the possible strategies listed above.
2. Referencing the classroom sketch above, list two potential reasons Sophia could be off-task. Make sure to identify at least one reason for whole-group demonstration and one for small-group lab activities.
3. Using the classroom sketch above:
   a. Suggest a seating location for Sophia that could potentially increase her on-task behavior during both whole-group demonstration and small-group activities.
   b. Give a rationale for the seating location, making sure to reference the strategy or strategies you used to do so.
Background

Students: Owen Regina Portia Quincé
Ages: 16.2 17.7 15.5 16.5
Grade: 10th 12th 10th 11th

Scenario

Owen, Regina, Portia, and Quincé are journalism students at a suburban high school. The school principal has a special education background and supports multiple efforts to maximize opportunities for students with special needs. In particular, he works to match student schedules with specific interests they have. Owen, Regina, Portia, and Quincé all indicated they would like to be involved with the student yearbook, which is developed as part of the journalism class. Immediately before their journalism class, the students have a small-group intervention session in reading. The special education teacher has asked the journalism teacher to seat these students separately from one another as a way to encourage them to interact with different peers. To help create these new seating assignments, the special education teacher offered the following information to the journalism teacher.

Owen
- Is shy
- Is easily distracted, especially by computers
- Does a good job of pretending to be on-task when he does not understand how to do something or isn’t interested

Regina
- Works well in groups
- Is a strong reader and writer
- Requires a wheelchair for mobility

Portia
- Needs to be near the smart board to see written material
- Is easily distracted by other students
- Likes to volunteer to help the teacher

Quincé
- Is talkative
- Benefits from movement
- Gets along well with other students

Possible Activities
- Facilitating Efficient Traffic Patterns
- Supporting Frequent Interaction
- Matching Room Arrangement with Instructional Format
- Minimizing Distractions and Disruptive Events
Assignment

1. Review the STAR Sheets for each strategy listed above.
2. Assign each of the four students one of the lettered seating locations in the classroom sketch below.
3. Explain why you selected these specific seating locations and indicate which strategies you used to make your decisions.
Background

Student: Jamison
Age: 14.8
Grade: 8th

Scenario

Jamison is an 8th-grader who has recently transitioned from a remedial to a regular mathematics class at a large, urban junior high school for eighth and ninth graders. Jamison is a well-liked, team-oriented individual who enjoys lots of friends across multiple social groups. As a strong forward on the school basketball team, Jamison also demonstrates leadership skills on and off the court. Much as was the case in his remedial class, mathematics instruction in Jamison’s new classroom is typically conducted through paired- and small-group interactions. The special education teacher anticipates that Jamison’s strengths will help him to compensate for prior struggles with math. Although Jamison has progressed this semester to just below grade level in this subject, he remains slightly insecure.

Areas of Strength

- Participates well in group activities
- Has a strong interest in science and sports
- Follows oral directions well

Assignment

1. Review all of the STAR Sheets.
2. Complete the room arrangement sketch below to meet the class’s instructional needs and to support Jamison. Be sure to include:
   a. 26 student desks, including one designated with a star for Jamison
   b. 1 teacher desk
   c. 1 group table
   d. 1 trash can
3. When you have completed your room arrangement sketch:
   a. Explain your rationale for the sketched classroom arrangement.
   b. Justify your decisions for Jamison’s seating location.
   c. Identify which strategies you used to help make your decisions.
   d. Indicate how those decisions support Jamison.
Effective Room Arrangement: Middle & High School
Level C • Case 1

CASE STUDY

[Diagram of a classroom layout]

- Dry Erase Board
- Computer
- Bookcase
- Windows
- Door
- Teacher’s Desk
- Student’s Desk
- Jamison
- Group Table
- Trash Can

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