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Integrating Physical Activity in the College Classroom: Strategies for Implementation

2021 Conference on Higher Education Pedagogy February 5th, 2021 Stacia C. Miller, Ph.D. Suzanne F. Lindt. Ph.D. Hildi Nicksic. Ph.D. Midwestern State University Midwestern State University Texas A&M University



Attendees will...

- •Justify integration of movement in the college classroom Compare experiences of activity implementation across classrooms
- •Consider possible concerns and ways to diminish barriers to activity in the classroom
- •Engage in example movement activities
- •Prepare to offer movement in own classrooms

Stand Up Yes!!



- 1. I teach face-to-face 2. I teach classes of 50+.
- 3. Seating in my classroom is flexible.
- 4. I teach STEM coursework.
- 5. I teach undergraduates.
- 6. I support college-level education in a non-teaching capacity. 7. I engage my students in movement in the classroom
- 8. I'm excited to learn more about movement for my students!

Movement and Learning Research

- Helps students think deeply about content
- · Physical activity and active learning strategies enhance:
 - Cognition
 - Attention and focus
 - Academic achievement 0 • Engagement
 - Classroom motivation
 - 0 Blood flow to the brain



Focus on College Students

- · Link between activity and cognition even at cognitive peak
- Students spend about 30 hours/week in sedentary behavior
- Emerging focus on minimizing passive learning
- Movement in college classroom:
 - Increased focus and attention
 - Engagement and interaction
 - Student appreciation and enjoyment
- · Professors may perceive barriers to offering movement Resources to help!



Meet Dr. Miller ٠ Teacher, pet lover, traveler, reader

- Former k-12 Physical Education teacher 11th year at Midwestern State University Model movement in classes for preservice teachers Research projects- movement in the college
- classroom
 - Trainings for inservice teachers and college nrofes
 - Edited a Textbook on Movement Integration for K-12









- Teacher, reader, runner, nature-lover 10+ years at elementary and middle school
- Inherently offered movement
 Prompted doctoral studies
- Prointpied outcolai studies
 o Focus on classroom physical activity
 o Trainings for classroom teachers
 Sixth year at Texas A&M University
 o Active engagement in class
 o Trainings for college professors

Our Foundational Teaching Goal

to provide a meaningful and effective learning experience where students think critically and practice application of content



Why We Offer Movement

Effective pedagogy: active engagement

- Observed benefits Classroom climate
- Attention and focus
- Engagement
- Interest and enjoyment
- Supportive evidence

Student learning preparedness and achievement

When We Integrate Movement

Often in conjunction with exchange of ideas, as an opportunity to digest/reflect, or as an attentional reset



Application of content Practice critical thinking Introduce topics Review of content Check for understanding

Barriers We've Overcome

Student disinterest

Disabilities Lack of space

Non-flexible seating

Chairs bolted to floor Crowded classrooms

Physical distancing requirements



Other Potential Concerns: Connecting to content Potential for noise and disruption Time availability

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How We Integrate Movement: Sample Activity

 Buddy Up Carousel

 Four Corners Jigsaw

Musical Pairs

- Stand up, Hand up, Pair up
 - Stand up, High five, Affirmation
 - Standing Partner Chat
 - Two-jack Share
- Voting on the Move
- Ready Set Share Stand and Stretch
- Walk and Talk / Move and Mull

Case Study: Voting with Your Feet

- Teacher Prep:
 Create questions/prompts that elicit decision making or varying viewpoints.
 Place questions in slides to display on the screen.
 Display signs on the classroom walls or on the screen to indicate direction of
 movement. It is a continuum.
 You can use 'agree or disagree', "true or false", or a "this or that" type statement.
 Students stand up behind their desk in a squared off space (if round tables students all
 move toward the center of the room).
 Once the question is posed, students move to indicate their answer. For example, if
 they feal neutral theur may state in the middle. If they terophy area they may upwer diverse they may upwer gives the students and they are state in the middle. Once the question to posed, students move to indicate their answer. For example, if they feel neutral they may stay in the middle, if they strongly agree they may move right, and if they strongly disagree they move left. After each question you can discuss the varying viewpoints. Students may want to change their answer after the discussion.







Case Study: Carousel

- Teacher Prep;
- Post blank pages around room, one per topic/question List of topics/questions
- Student Activity:
 - 3-4 students per page write responses to topic
 Groups rotate to each page Read, Revise, Expand, Add
 - Back to first page: Group reviews all information and drafts single "takeaway"



Carousel: Tips for Implementation

- Limit prep by presenting slide with list of topics numbered write topic by
- Make the space work for you (and students) Use hallway as needed
 Anticipate and respect limitations
- Break large classes into two rotation groups Duplicate post-it topics
- More topics = Shorter rotations 60 seconds
- Use a course review Tangible demonstration of learning



Teacher Perception of Student Response

- I notice maximized participation/engagement
- during movement activities. Good ideas come from the opportunity to .
- discuss/digest and students often seem more willing to talk when debriefing. Students are often smiling and laughing. C
- Students are orient stiming and latugring. Students appreciate learning and experiencing a variety of learning and teaching strategies for their future classroom. Though they may be rejuctant at first students
- enjoyed moving around to find new partners or work in new groups. Increased participation from all, provides opportunities for all students to engage.

Student Reactions to Active Engagement

Though I initially did not see the point in some of the activities that we would do in small groups, I quickly saw how helpful they were to reinforce what was learned in lecture. These activities forced me to not only recall the information that was list presented, but to also put it inno yoon words and think about its implications or how it relates to a bloger picture. Because of these activities I was not merely memorizing the information, but I was gaining an understanding of it."

"The in-class activities such as move and mull helped me put what I learned in lectures into my own words, which typically helps me understand and remember information better."

"...the class activities not only tests our knowledge of the topic in hand, but also these activities allowed us to learn about our peers' opinion or perspectives."

"What I found most interesting about this class was the style in which we learned.... allowing us to work in groups, get up and stretch, and complete interactive assignments. I believe that these styles of teaching allowed me to better understand some more difficult topics."

"I think doing activities helps us learn because we are forced to learn the material and it sticks in our head easier."

Student Reactions to Specific Activities

"[Two-jack share] allowed for us to go into more detail with just one other person and really discuss certain things about the information in the course on a more intimate scale." "...jumping jacks...really helps us **stay focused and pay attention**"

"The Carousel...was the most engaging...because we had to think of ideas so quickly which helped me retain it more."
"...whether one wanted to be engaged or not, the required movement AROUND the room made it interactive."

"Move and Mull **really helped me maintain the information** I learned because it gave me an opportunity to discuss what was lectured to us and **clarify terms or concepts** that were unclear to me." "Any time we had walk and talks I had to go back to my notes and refresh which **allowed me to understand the material** better. Also, hearing someone else's thoughts was very helpful."

Quantitative Student Perception

	Statement Agreement (%)			
Outcome	Two-Jack	Carousel	Walk & Talk	Out-of-Seat (Other)
Increased engagement	83.34%	94.05%	85.52%	97.68%
Enhanced understanding	64.29%	88.09%	78.95%	84.89%
Aided retention	64.29%	86.91%	77.63%	87.21%

Lessons Learned

Trial and error is okay

Be consistent and persistent

Start on day 1 Treat participation and engagement as regular class routine Proactively explain reasoning Simplify prep

Make it work for you!

Breakout Activity: Virtual Move and Mull!

Directions:

- 1. As a group, determine your activity (jacks, squats, etc.)
- 2. Take turns responding to prompt
- After each speaker, full group completion of 2 activity reps
 Collectively after all share reply, discuss, debate, inquire

Prompt:

• How have you used movement in your classes in the past? (Or why haven't you?) What 'nugget' from this session will help you to engage your students in movement? (Or to promote active learning?)



Resources:

Activity Ideas:

- <u>https://classroomsinmotion.com/</u> (site created and maintained by Dr. Hildi Nicksic)
- Infp://www.coloradoediniliative.org/wp-content/uploads/2014/08/CE1-Take-te-Break-teacner-toonswayare
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Thank you for attending!



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