STUDENT ENGAGEMENT AND LEARNING

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ABSTRACT

- This presentation is based on an exciting new empirical study of 21st century learning models, promoting both student engagement and learning. Participants will hear from Minnesota State University, Mankato undergraduate student researchers as they discuss applicable tips and strategies for effective classroom structure and teaching methodology, guided by applicable theory and taxonomy. Concepts, constructs, results and an open discussion of implications will also be provided.
LECTURE...ANYONE?
Researchers Found:

- Lapses can occur just 30 seconds into a lecture!
- Then, at 4-5 minutes and again at 7-9 minutes and again at 9-10 minutes
- After about 20-25 minutes of lecture, lapses occur every 2 minutes
- Average “Lapse” is about 1 minute
- They simply are NOT MOTIVATED to learn (or really tired LOL)
Using Problem-Based Learning with Teams

- We’re **not** going to lecture you
- 1st Learn by doing
- The we’ll explain the science
STEP 1:
SYSTEMATIC RANDOMLY ASSIGNED TEAMS

Everyone, stand up and grab your belongings
We’re going to be assigning you to your new team
Order from chaos: The “Birthday Exercise”
STEP 2: ROLES IN THE TEAM

- Teams need roles
- Roles change/rotate each week

- Assign the following roles
  - Speaker
  - Writer
  - Task Manager
  - Researcher
STEP 3: GIVE TEAMS A “PROBLEM”

- It is your new team’s task to solve the following problem (next slide):
- You might not know the “answer”, but all of you can help towards a solution.
- It’s Okay to disagree and learn from others
- Practice communication and professionalism

- This Process Should Promote Cognitive and Social Development:
  - Comprehension
  - Application
  - Critical Thinking
  - Creative Thinking
  - New Perspectives
  - Social Skills
  - Conflict Management
According to [suicide.org](https://www.suicide.org), **teen and adolescent suicides** have continued to rise dramatically in recent years. Consider these alarming figures:

- Every 100 minutes a teen takes their own life.
- Suicide is the third-leading cause of death for young people ages 15 to 24.
- About 20 percent of all teens experience depression before they reach adulthood.
- Between 10 to 15 percent suffer from symptoms at any one time.
- Only 30 percent of depressed teens are being treated for it.
- Rates of depression in teens are on the rise at an alarming (+37% in 2017) rate.
HERE’S WHAT YOUR TEAM NEEDS TO DO

▪ Use 1 piece of paper and pen

▪ Take 5 minutes to discuss
  ▪ Come up with at least 3 reasons so many teens become “depressed”
  ▪ What are at least 3 ideas/solutions to help

▪ Provide answers that are well thought out
  ▪ You may use any resources to find information

▪ Have your writer take down your answers
  ▪ Have your speaker ready to share w/ the big group
TEAM-BASED TESTING

- Open book, notes, device (I know, this seems crazy)
- One writer, one speaker to appeal question
- Here’s your test:

1. About ____ % of all teens experience depression before adulthood
   a. 10%
   b. 20%
   c. 25%
   d. 5%

2. Only ____ % of depressed teens are being treated clinically
   a. 5%
   b. 10%
   c. 20%
   d. 30%

1. B
2. D
OTHER EXAMPLES

- Parenting
- Marriage
- Dating
- Teen Pregnancy
- Friendship
- Communication
- Drugs/Alcohol
- Emotional Health
- Love
SUPPORT FOR PBL IN TBL (OUR STUDY)
ARE WE SCAFFOLDING? TEAM’S USE OF PROBLEM BASED LEARNING IN CHILD DEVELOPMENT AND FAMILY STUDIES

- Method

- A cross-sectional mixed method study was conducted using an online survey system (Qualtrics) to collect and store data. Participants ($N=103$) were recruited over two semesters (Fall 2017 & Spring 2018) through convenience sampling. Undergraduate students in the PI’s FCS 100 Personal and Family Living course were taught using problem based learning in teams. These students were asked to participate in a brief ten-minute survey. Participants were rewarded extra credit ($\leq 1\%$ of total points) in the course.
Frequency of Responses Measuring Attitudes about Teamwork

- **Strongly agree**
  - I learned more about the topics being taught by working with my team than I would have on my own
  - My teammates brought new ideas and insights that helped me solve real-life problems
  - After working with teammates, I am more confident in my ability to solve real-life problems

- **Somewhat agree**

- **Neither agree nor disagree**

- **Somewhat disagree**

- **Strongly disagree**
RESULTS

Independent sample t-Tests: Retrospective social and cognitive review of working in teams versus working individually. Five-point Likert Scale.

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<th>Teamwork</th>
<th>Individual</th>
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Note. *ES = X Teamwork – X Individual
SD

***p<.001 (two-tailed) *p<.05 (two-tailed).
QUALITATIVE REVIEW

- Qualitative Review: Qualitative results support quantitative findings, suggesting respondents preferred working in teams while partaking in problem-based learning. Teamwork allows for a plethora of social and cognitive developmental advantages. Inter-rater reliability was established.
CONCLUSIONS: WHO CAN USE THIS?

- Open discussion

- Our thoughts
Questions?
Comments?
KEY REFERENCES


Suicide.org: Suicide hotline numbers by state. Retrieved November 9, 2016.

RESOURCES

- Teen Depression
- Team-Based Learning Explained
- Problem-Based Learning Explained