

Why would I Teach that Way? Show me the Evidence!

Empirically Supported Best Practices for the Enhancement of Student Motivation, Engagement, and Learning Outcomes

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Best Practices for Teaching and Learning

- 16 Best Practices available on the FCTL website
 - <http://www.missouristate.edu/fctl/89072.htm>
- Focus on 3 of these practices
 - Provide empirical evidence
 - Provide examples of classroom applications
 - Hear your feedback and own examples



Best Practices for Teaching and Learning

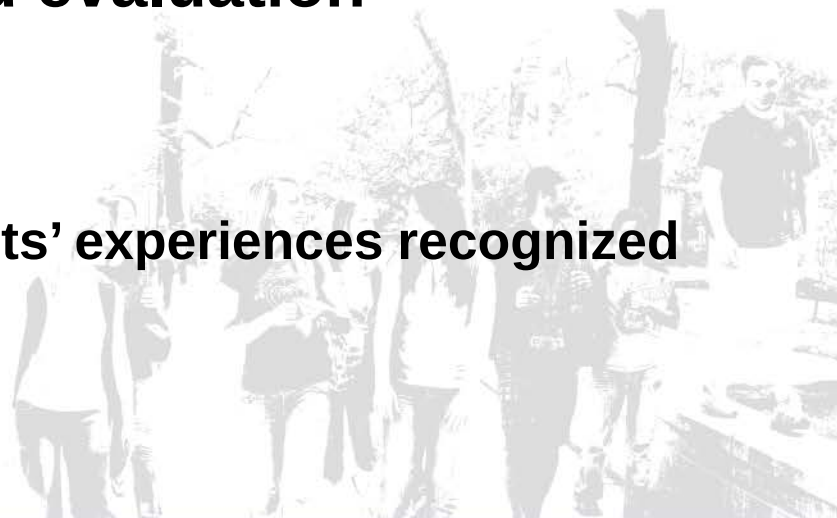
- Motivational Needs to be satisfied within the learning environment
 - [Autonomy](#)
 - [Competence](#)
 - [Relatedness](#)
- <http://www.missouristate.edu/fctl/73155.htm>





Focus Best Practice #1

- **When students are encouraged to take responsibility for their own learning, they are more likely to develop higher-order thinking skills such as analysis, synthesis, and evaluation**
 - **Foster student engagement**
 - **Recognize diversity of students' experiences recognized**



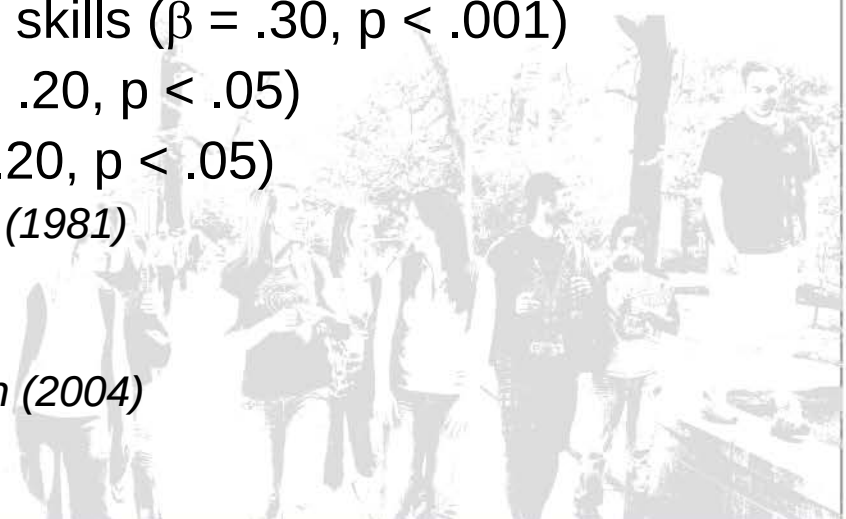
Empirical Evidence – Ownership of Learning

- Students levels of self-regulation toward a chemistry course was associated
 - Higher level of perceived competence ($\beta = .27, p < .001$)
 - Lower levels of anxiety ($\beta = -.19, p < .05$)
 - Less focus on graded performance ($\beta = -.19, p < .05$)
 - Higher level of interest in the course ($\beta = .40, p < .001$)
- Instructors who supported students' autonomy had students who were more self-regulated ($\beta = .15, p < .05$)
 - Performed better although less focused on grades ($\beta = .23, p < .01$)
 - ***Black & Deci, 2000***



Empirical Evidence – Ownership of Learning

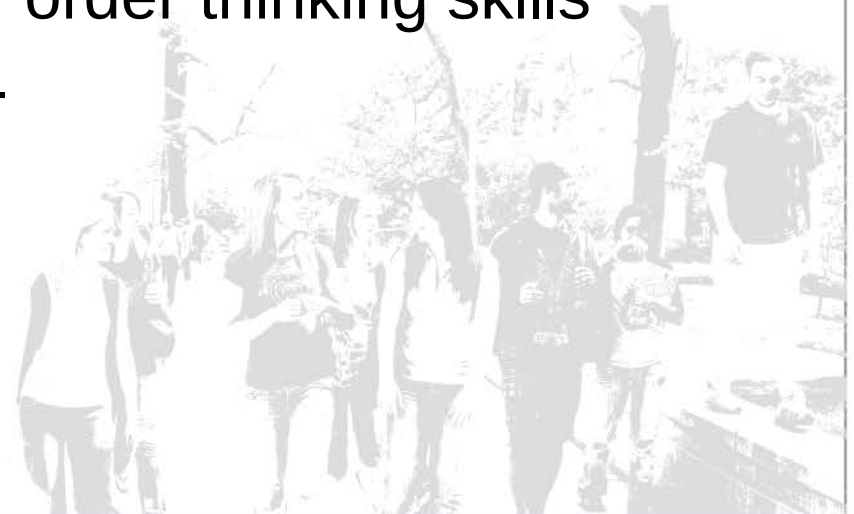
- The autonomy supportiveness of the learning climate was associated with
 - Higher levels of students' self-regulation and intrinsic motivation (β s between .50 and .80, $p < .001$)
 - Higher levels of problem solving skills ($\beta = .30$, $p < .001$)
 - Higher levels of satisfaction ($\beta = .20$, $p < .05$)
 - Higher levels of well-being ($\beta = .20$, $p < .05$)
 - *Deci, Schwartz, Sheinman, & Ryan (1981)*
 - *Ryan & Grolnick (1986)*
 - *Levesque, Knapp, & Fisher (2010)*
 - *Levesque, Zuehlke, Stanek, & Ryan (2004)*





Empirical Evidence – Ownership of Learning

- Pausing at three points in time during lecture to allow students to consolidate their notes was found to increase learning and higher order thinking skills
 - Ruhl, Hughes & Schloss (1987).





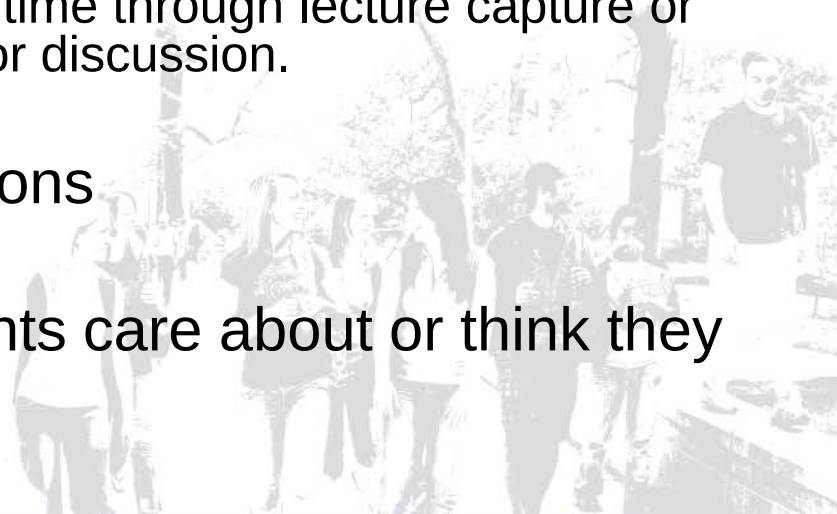
Suggested References – Ownership of Learning

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- Levesque, C. Zuehlke, N., Stanek, L. R., & Ryan, R. (2004). Autonomy and Competence in German and American Students: A comparative Study based on Self-Determination Theory. *Journal of Educational Psychology*, 96, 68-84.
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Classroom Applications

- Give opportunities for students to read, write, discuss, and engage in class discussions
 - Guided lecture: Lecture for 30 minutes, without students taking notes. Then allow students to write for 5 minutes what they recall and spend 15 minutes discussion in group
 - Make lectures available ahead of time through lecture capture or other mediums. Use class time for discussion.
- Give students choices and options
- Start with something the students care about or think they know





Classroom Applications

- Capture students' curiosity
- Work with students as a guide or facilitator of learning
- Help students apply knowledge to their daily lives
- Involve the students as co-creator of knowledge



What do you Think?

- Share your examples...



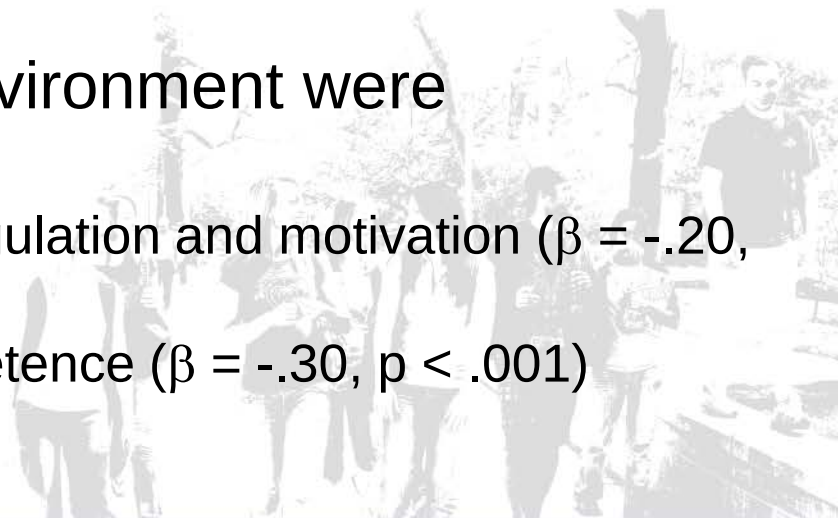
Focus Best Practice #2

- **Clearly articulated expectations, goals, learning outcomes, and course requirements increase student motivation and improve learning.**
 - Timely feedback
 - Informational feedback



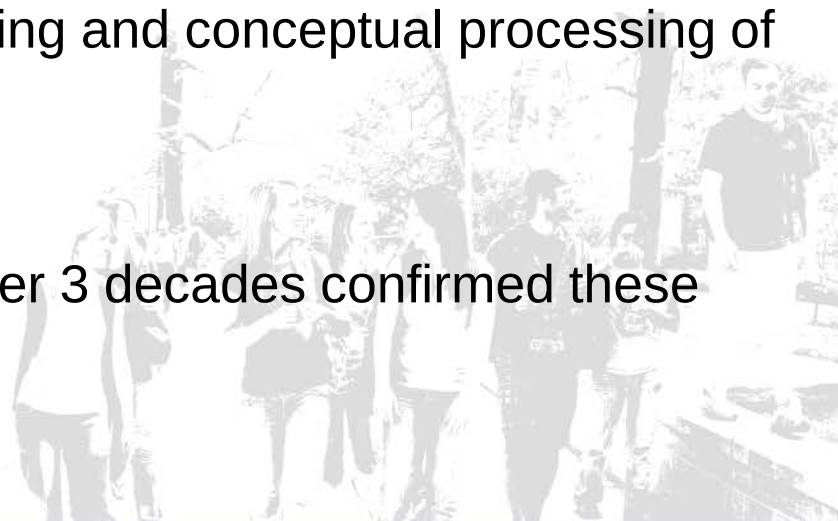
Empirical Evidence – Expectations and Goals

- Informational and timely feedback was associated with
 - higher levels of students' self-regulation and motivation ($\beta = .30$, $p < .001$)
 - higher levels of perceived competence ($\beta = .17$, $p < .05$)
 - *Deci & Ryan (1980)*
- Pressures in the learning environment were associated with
 - lower levels of student's self-regulation and motivation ($\beta = -.20$, $p < .001$)
 - lower levels of perceived competence ($\beta = -.30$, $p < .001$)
 - *Levesque et al. (2004)*



Empirical Evidence – Expectations and Goals

- Environmental pressures such as rewards and evaluations were found to
 - decrease creativity and interest in the task ($t = 2.23, p < .01$)
 - increase rote recall of information ($t = 3.18, p < .001$)
 - decrease complex problem solving and conceptual processing of information ($t = 2.63, p < .01$)
 - *Amabile (1982)*
 - *Grolnick & Ryan (1987)*
 - Meta-Analysis of 128 studies over 3 decades confirmed these results
 - *Deci, Koestner, & Ryan (1999)*



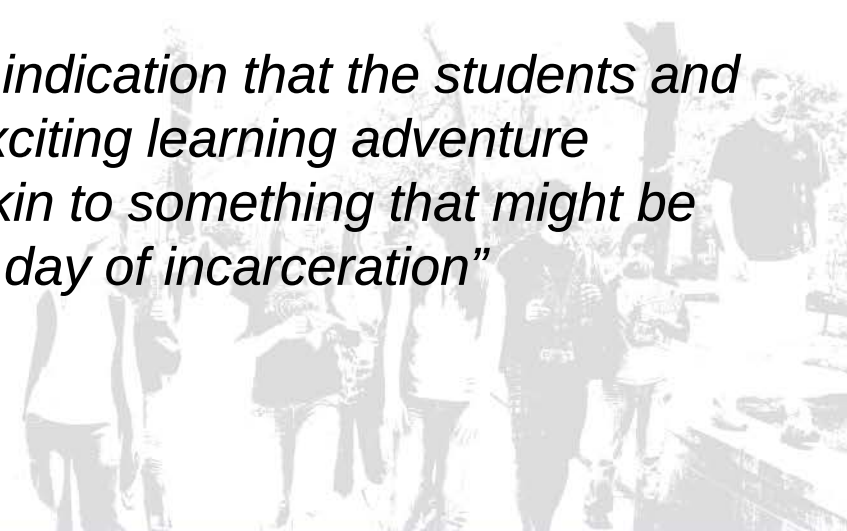
Empirical Evidence – Expectations and Goals

- Environmental pressures such as threats, surveillance, and deadlines
 - decreased motivation and interest ($p < .05$)
 - decreased time spent on task in a free choice period ($t = 2.69$, $P < .05$)
 - *Amabile, DeJong, & Lepper (1976)*
 - *Harackiewicz, Manderlink, & Sansone (1984)*



Empirical Evidence – Expectations and Goals

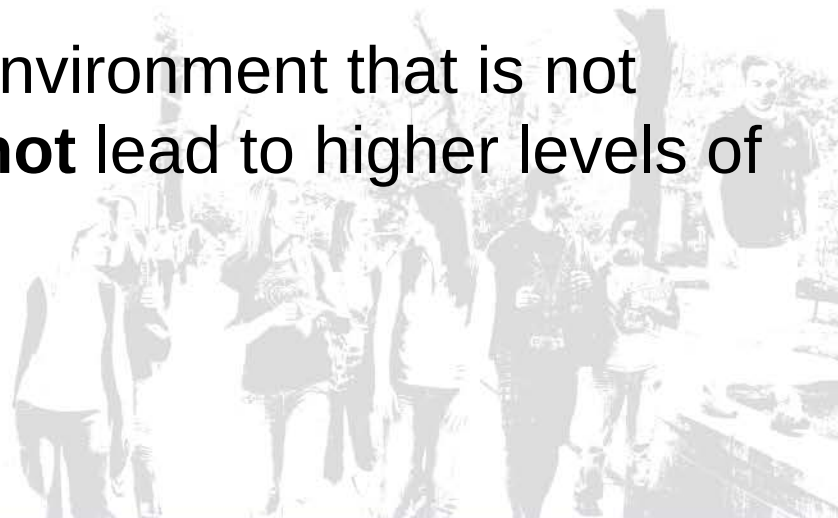
- Controlling syllabus (focus on policies, prohibitions, contingencies to cover student violations)
 - Decrease interest and self-regulation
- *“The typical syllabus gives little indication that the students and teacher are embarking on an exciting learning adventure together, and its tone is more akin to something that might be handed to a prisoner on the first day of incarceration”*
 - Singham (2007) p. 52





Empirical Evidence – Expectations and Goals

- Positive feedback enhances motivation **only when**
 - individuals feel ownership of their learning
 - autonomous regarding their learning or performance
- Building competence in an environment that is not autonomy supportive **does not** lead to higher levels of motivation
 - *Deci & Ryan (1980, 2000)*





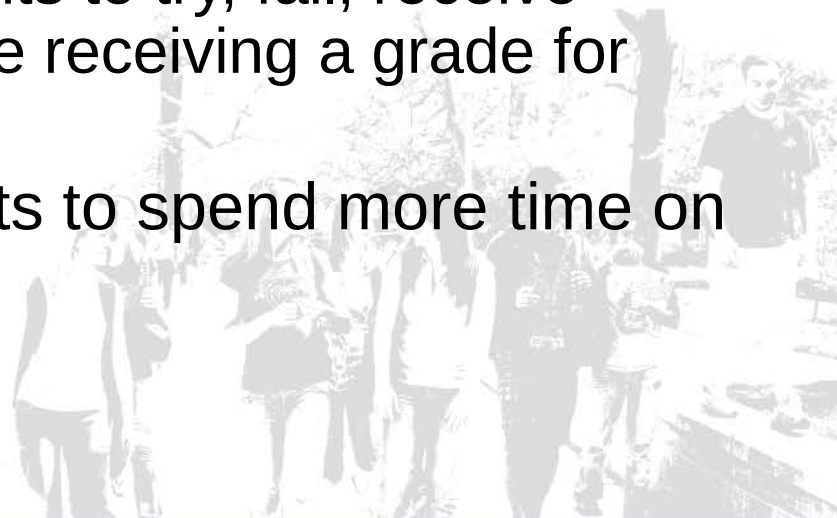
Suggested References – Expectations and Goals

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- Singham, T. M. (2005). Moving away from the authoritarian classroom. *Change*, 37, 50-57.



Classroom Applications

- Promote interest while learning
- De-emphasize evaluation and emphasize informational feedback
- Give the opportunity to students to try, fail, receive feedback, and try again before receiving a grade for their work.
- Give opportunities to students to spend more time on task
- Focus on learning outcomes



What do you Think?

- Share your examples...



Focus Best Practice #3

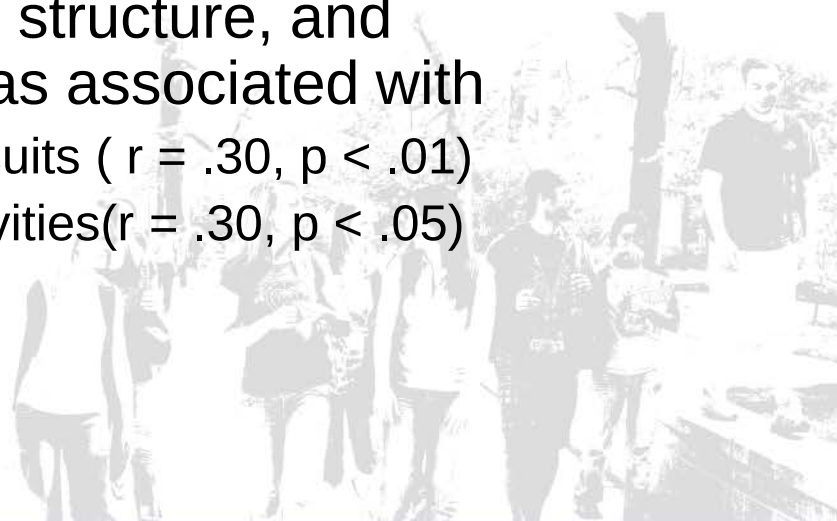
- If dialogue is encouraged between students and teachers and among students (in and out of class), thus creating a community of learners, student motivation and engagement can be increased
 - Learning cooperatively with peers not competitively





Empirical Evidence – Community of Learners

- Students who perceive their teachers as caring were found to be more motivated and engaged
 - *Ryan, Stiller, & Lynch (1994)*
- Autonomy support, appropriate structure, and **interpersonal involvement** was associated with
 - perceived value of academic pursuits ($r = .30$, $p < .01$)
 - self-regulation toward school activities($r = .30$, $p < .05$)
 - Performance ($r = .35$, $p < .05$)
 - *Grolnick & Ryan (1989)*
 - *Deci & Ryan (2000)*





Empirical Evidence – Community of Learners

- Research in cognitive psychology suggest that the more deeply we process information, the more likely we are to remember it
 - Talking about, synthesizing, organizing, or questioning information leads to deeper understanding
 - Process of metacognition
 - *Bain (2004)*
 - *Pintrich (2002)*



Suggested References – Community of Learners

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Classroom Applications

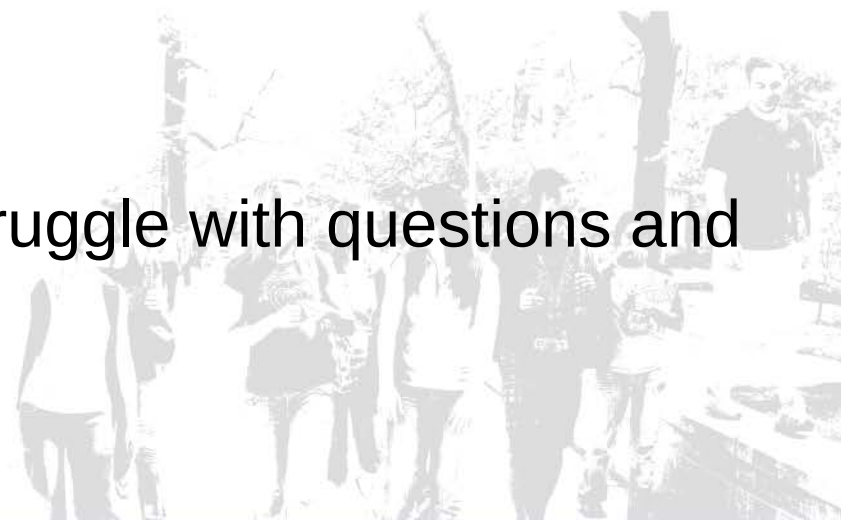
- Introduce some collaborative and group work
 - Groups should be heterogeneous. Diversity creates meaningful exchanges
 - Group work can be focused on events, problems and solving problems
- Minimize the use of evaluations tools that increase anxiety and competition
- Treat students with decency
- Learn students' name





Classroom Applications

- Partner in students' learning and make partnership explicit
- Think/Pair/Square/Share
- Let the students see your struggle with questions and see how you solve them





Classroom Applications

- Begin Discussions with
 - a controversy
 - a common experience
 - questions
 - a problem or a case study



What do you Think?

- Share your examples...



Take Home Points

- Teaching is not only about learning new techniques
- Teaching is about *how to effectively use* the tools and techniques that you have (pedagogy)
- Teaching is about creating a positive learning environment in which students **want to learn**
- Know your content
- Care about the students



follow your
PASSION
find your
PLACE

Discussion

