

# Autonomy Support and Engagement in Montessori & Traditional Prekindergarten Classrooms

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## Introduction

Adopting a **self-determination theory** framework, this study sought to promote prekindergarten students' motivation and engagement by having teachers participate in a theory-based intervention to help them incorporate autonomy-supportive classroom techniques.

The study also examined potential differences between traditional public prekindergarten teachers and Montessori public pre-kindergarten teachers.

The study attempted to replicate and extend the Reeve, Jang, Carrell, Jeon, & Barch (2004) study that showed high school teachers would increase autonomy-supportive teaching after a training intervention and that their students would then demonstrate increased engagement.

In the current study, support was not found for the autonomy support training intervention leading to greater autonomy-supportive teaching or engagement. However, significant results were found in four areas:

- Prior to any training, Montessori teachers were more autonomy-supportive than the traditional teachers
- The teachers' self-reported score on the Problems in Schools Questionnaire (PSQ; Deci, Schwartz, Sheinman & Ryan, 1981) predicted the raters' initial autonomy scores of the teachers
- When engagement did increase for the traditional teachers, it was a function of structure and not autonomy support, while for the Montessori teachers it was a function of both autonomy support and structure.
- At baseline, prekindergarten and preschool teachers appear to use and endorse more autonomy-supportive techniques than elementary, middle, or high school teachers.

## Method

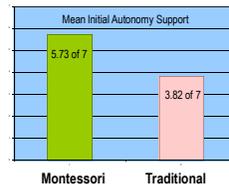
• Participants: 13 pre-kindergarten teachers, 9 Montessori and 4 traditional, all Caucasian females with state certification.

• Raters: trained raters visited each classroom three times to score teachers' autonomy support, providence of structure and involvement with students, as well as overall student engagement.

• Timeline: Prior to training, teachers completed the Problems in Schools Questionnaire (PSQ; Deci, Schwartz, Sheinman & Ryan, 1981). All teachers were observed by the raters, and then the experimental group attended a workshop on autonomy-supportive techniques, made classroom signs to cue new learning, and had access to a website to review autonomy support. Teachers were observed again, and the delayed treatment group participated in the workshop. Teachers were then observed a third and final time.

## Initial Autonomy Support

The Montessori teachers were more autonomy supportive prior to any intervention training than the traditional teachers,  $t(11) = 2.62, p < .05$ . They were indeed following through on the expectations of the Montessori philosophy and their training. By avoiding overly didactic, controlling methods, they nurture the students' inner motivational resources, and promote autonomy support



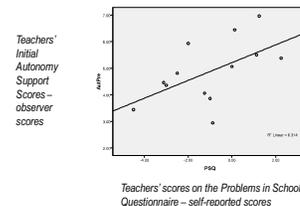
## What does Autonomy Support look like?

In this study, there were four main characteristics that were used to define Autonomy Support:

- **Supporting students intrinsic motivation**
  - Finding ways to tap into students' interests rather than using rewards
- **Using informational language**
  - Explaining why rather than commanding
- **Promoting the value in activities**
  - Helping students see the importance in activities instead of "because I said so"
- **Accepting negative affect**
  - Empathizing with students rather than becoming angry

## Teacher – Observer Agreement

Teachers' scores on the Problems in Schools Questionnaire predicted their first round autonomy scores from the raters,  $r(11) = .56, p < .05$ . The PSQ is designed to measure the teachers' naturally occurring autonomy-supportive nature. The teachers were able to rate their own autonomy supportiveness through the Problems in School Questionnaire (Deci, et al, 1981), and this score predicted the raters' scoring of autonomy supportiveness in the initial round of rating. This shows that prekindergarten teachers are able to identify the motivating style that they use in the classroom and that classroom observers agree with the teachers' self-report.



## Sources of Engagement

While no significant gains in autonomy support or engagement resulted from the training workshop, any gains seen in engagement from the first rating period to the third were attributable to increases in autonomy support and structure for the Montessori teachers and only to increases in structure for the traditional teachers

Type	Eng Gain from Autonomy Support Gain	Eng Gain from Structure Gain	Eng Gain from Autonomy Support Gain factoring out Structure Gain
Traditional	$p < .095, ns$	$p < .05, R^2 = .94$	$p < .070, ns$
Montessori	$p < .001, R^2 = .85$	$p < .05, R^2 = .46$	$p < .001, R^2 = .89$

## Autonomy Support Across the Grades

While this study focused on prekindergarten teachers, primary Montessori teachers and traditional 4 year old kindergarten teachers, there are links with other findings across multiple grade levels.

- In a similar study (Reeve, et al., 2004), **high school teachers' mean initial autonomy supportiveness was lower** than the prekindergarten teachers in this study rating, 3.5 of 7 (average) versus 4.86 (above average). Much of this difference is due to the Montessori teachers in this particular study.
- In an ongoing multi-national study, **preschool/prekindergarten teachers endorsed controlling techniques significantly less** than elementary and high school teachers (Reeve, et al., in process). There appears to be evidence to suggest that autonomy-supportive teaching is strongest in early childhood, but weakens over time.

## Future Research

- Are people who are naturally more autonomy supportive choosing Montessori training over traditional teacher training programs?
- Or are Montessori training programs producing teachers who are **more** autonomy supportive?
- Conversely, are traditional teacher preparation programs producing teachers who become **less** autonomy supportive?
- Why are prekindergarten and preschool teachers more autonomy supportive than elementary, middle, and high school teachers?
- What role does structure play in traditional and Montessori classrooms across the grades?
- Do more supportive environments encourage all teachers to be more autonomy supportive with their students?

## Classroom Implications

- **Engagement comes from autonomy support and structure**
  - Recent research (Jang, Reeve, & Deci, 2010) suggests that autonomy support and structure rise and fall together – not separately. In the classroom, teachers can combine scaffolding and clear expectations with informational language about topic of interest to the children. This was seen clearly with the Montessori teachers in the current study, whose students displayed a modestly higher level of engagement across the study.
- **Tap into students' intrinsic motivation**
  - Teachers can praise effort and process, provide interesting activities with options for choice, and be open to student suggestions. Avoid rewards, praise for the work, emphasizing grades, and comparing students.
- **Listen and acknowledge with empathy**
  - Using empathy allows teachers to show they understand how the student feels. When teachers validate feelings and do not get angry or try to fix the feelings, students feel less controlled.
- **Explain why something needs to be done and promote the value**
  - This is especially important when teachers ask students to complete tasks that are uninteresting or tasks that seem unimportant. Limit words like should, have to, and need.

## Limitations of the Current Research Study

- This study encountered limitations that the seminal study (Reeve et al., 2004) did not.
- Over 100 pre-kindergarten teachers were recruited, 17 agreed to participate, and data was collected for 13
- The teachers recruited for the study were scattered at dozens of sites across a large city. This limited the possibility that teachers could join as a group and also discouraged many teachers from participating due to travel to off-site training.
- The active nature of the pre-kindergarten classroom meant that the two observers, sitting in different vantage points in the room, were the only people in the room sitting still, and that included the teacher.
- There is no "back of the room" in pre-kindergarten.

## Literature Cited

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