



Spectrum
of Teaching Styles

Spectrum and satisfaction of students' basic needs, especially autonomy

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In this presentation

- I will argue that while researchers effectively applied Spectrum to promote students' **Intrinsic Motivation (IM)**,
 - Spectrum teaching styles are not included across all interventions emphasizing basic psychological needs (particularly autonomy) and IM in educational and youth sport settings.
- I will review some relevant research &
- I will make suggestions to promote the inclusion of Spectrum teaching styles in interventions aiming to satisfy students' psychological needs, IM and well-being.

Intrinsic/autonomous motivation is a very popular topic in PE literature

e.g. 177 citations within 18 months

Self-determination theory **applied to physical education: A systematic review and meta-analysis.**

[D Vasconcellos](#), [PD Parker](#), [T Hilland...](#) - *Journal of ...*, **2020** - [psycnet.apa.org](#)

In this review we examine the evidence regarding self-determination theory within the school physical education context. We applied a multilevel structural equation modeling approach to meta-analyze data from a systematic review that identified 265 relevant studies. In line with theory, autonomous motivation was positively correlated with adaptive outcomes and negatively correlated with maladaptive outcomes. Introjected regulation was modestly correlated with both adaptive and maladaptive outcomes. External regulation and ...

☆ Αποθήκευση  Παράθεση Γίνεται αναφορά σε 177 Σχετικά άρθρα Όλες οι 9 εκδοχές

Motivation Hierarchy*



EXTRINSIC MOTIVATION

Motivated to perform an activity to earn a reward or avoid punishment.



INTRINSIC MOTIVATION

Motivated to perform an activity for its sake and personal satisfaction.



Self-Determination Theory (SDT)

I can do amazing things!

And I am so happy to do it with these people!

That's what I really want!

PE teachers/environments
Satisfying the three needs for



- Competence
- Relatedness
- Autonomy



Intrinsic motivation



Well-being



Relatedness

What I mostly like is to meet by best friends

- Social connectivity & support promotes intrinsic motivation in Physical Education & Physical Activity



- **Relatedness**
 - Autonomy
 - Competence
- > Intrinsic motivation



Autonomy

Teacher, I prefer the 2nd option, I really like it!



We love this PE teacher because he satisfies our wishes

- Relatedness
- **Autonomy**
- Competence



Intrinsic motivation

Students have a voice

They make decisions about what,
how, & how fast they learn

They learn what they value

...and they don't feel obliged
or pressured!



PERCEPTION OF HIGH COMPETENCE MATTERS

I AM QUITE SKILLED ...



...and I can do it!

Because it creates high expectations for success

- Relatedness
- Autonomy
- Competence



Intrinsic motivation

PERCEPTION OF COMPETENCE MATTERS....

DEPENDING ON HOW WE JUDGE COMPETENCE:

in a Task-involving/Mastery, Personal Improvement oriented way

I AM QUITE
SKILLED ...



...AND I CAN
BECOME EVEN
BETTER

- Relatedness
- Autonomy
- Competence

Task-oriented perspective



Intrinsic motivation

Task-involving climate emphasizing competence improvement → positive effects on needs satisfaction,

when we increase task-involving we satisfy students' needs (particularly competence)

e.g., Di Battista et al (2018)

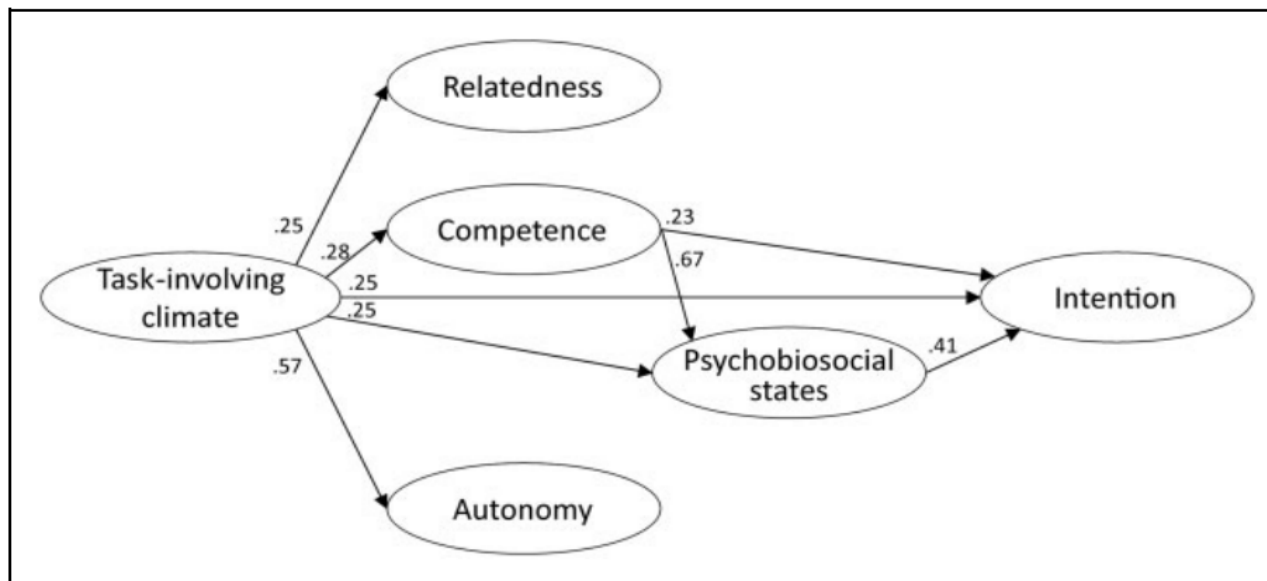


Figure 2. Serial mediation model of the effects of task-involving climate on intention to engage in physical activity through relatedness, competence, autonomy and pleasant/functional psychobiosocial states. Standardized factor loadings derived from structure equation modelling, with gender entered as a covariate in the analysis. Item indicators (loadings were $> .40$) are not included for simplicity. All paths are standardized and significant at $p < .001$ (two-tailed). Non-significant paths are omitted.

Student-centered teaching,
shifting decision making from teacher to students,

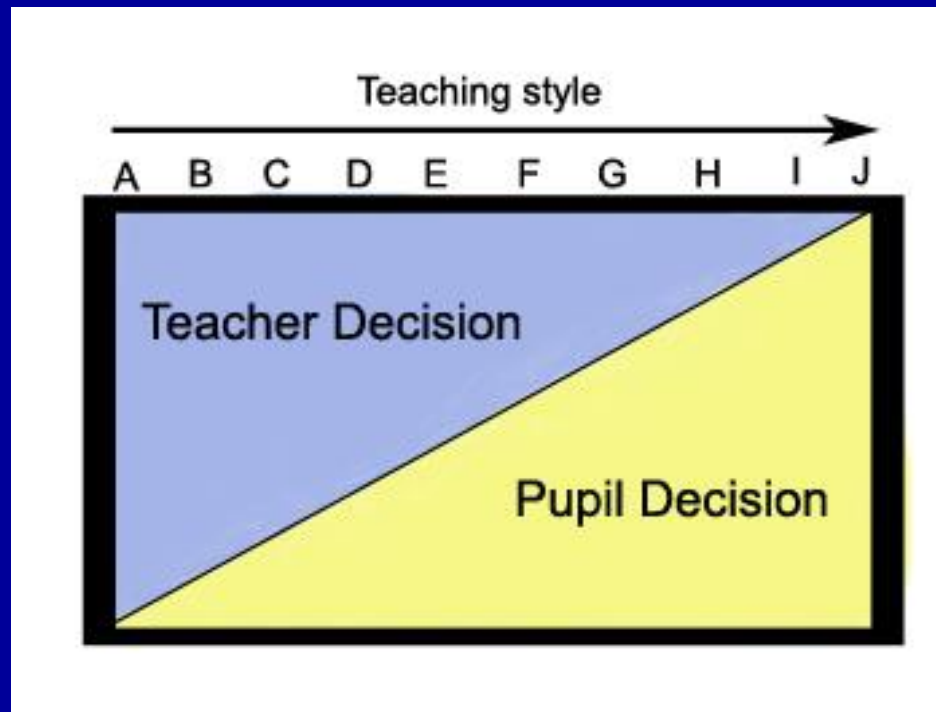
helps to create a motivational climate
that

- Emphasizes learning goals & mastery
- Satisfies students' needs of relatedness, competence and autonomy



Mosston's Spectrum is

- a *system* that:
- Identifies the placement of one teaching style relative to the others, based on the incremental and cumulative shifting of decisions from teacher to student

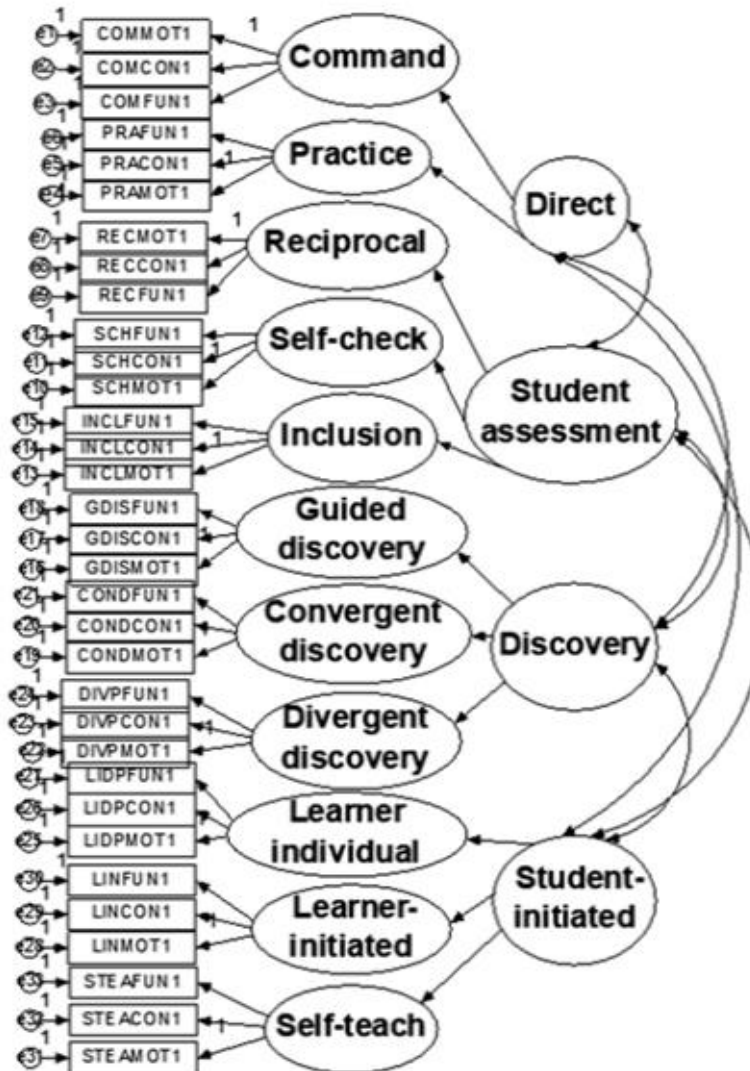


Higher-Order Factors and Measurement Equivalence of the Spectrum of Teaching Styles' Questionnaire Across Two Cultures

Ioannis Sympas, Athanasios Papaioannou, and
Nikolaos Digelidis
University of Thessaly

Gokce Erturan
Pamukkale University

Mark Byra
University of Wyoming



Cothran et al.'s (2000) tool was used to assess 298 Greek & 300 Turkish preservice PE teachers' perceptions of the Spectrum of teaching styles.

Following a scenario for each Spectrum teaching style responses to statements:

"I think this way of teaching would ..."

(1) make class **fun** for my students,"

(2) help students **learn skills and concepts**

(3) **motivate students to learn.**"

The model was invariant across the two cultures

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Direct & student-initiated learning styles do not share variance

	Dependent variable			
Predictors	Direct (Command/ Practice)	Student Assessment (Reciprocal/ Self-check/ inclusion)	Discovery (guided/ convergent/ divergent)	Student-Initiated Learning (Learner individual/ Learner initiated/ self-teach)
Direct	-	.246***	.099**	-.065
Student Assessment	.382***	-	.376***	.393***
Discovery	.124**	.302***	-	.261***
Student- Initiated Learning	-.075	.292***	.241***	-

*p<.05; **p<.01; ***p<.001. Standardized betas controlled for gender, age, country

Earlier research by Hein et al (2012)

- The relationship between teaching styles and motivation to teach among physical education teachers. *Journal of sports science & medicine*:
- Teachers' **intrinsic motivation** was related to the **student-centered or productive** teaching styles
- whilst **low intrinsically motivated teachers** adopt **more teacher-centered or reproductive** teaching styles

Examples of experimental studies

- Goudas et al (1995):
Inclusion style led to increase of **task-involvement & intrinsic motivation** in relation to direct style.
 - Digelidis et al (2003):
 - Christodoulidis et al (2001):
Year-long interventions including **reciprocal and inclusion** styles among others led to **higher task-involving** climates in relation to control groups.
- Morgan et al. (2005):
- Reciprocal** and **guided discovery** styles resulted in more **mastery/task-involving** and less performance-focused teaching behaviours and more **adaptive cognitive and affective** responses than the command/practice style.

Examples of experimental studies

- Papaioannou, et al (2012):
Students in the “self-check” style group scored higher in **mastery-oriented climate**, mastery goal, **intrinsic motivation** and metacognitive processes in relation to students in “practice” style.
- Chatzipanteli et al (2015):
Students in an experimental group taught with reciprocal, self-check, inclusion, guided discovery, convergent discovery, and divergent discovery styles, had higher scores in lesson satisfaction, **intrinsic motivation**, **identified regulation**, and metacognitive activities than students in a comparison group.

Examples of experimental studies

- Kirby et al. (2015)

Students' (18-26 y.o.) perceptions of **autonomy and competence and identified regulation motivation** in badminton increased as a result of **either practice or inclusion** styles intervention.

In their **practice** style **several decisions were shifted to students:**

1. selecting a partner of their choice in paired activities,
2. finding their own location to practise each task,
3. starting the task when ready to do so,
4. practising at the pace and rhythm that reflected their level of skill,
5. stopping a task when they felt they had completed it (i.e. independent of others completing the task),
6. asking questions for clarification.

← Isn't it quite similar to inclusion style?

Then, is command style the only one that might not satisfy students' needs for autonomy, competence, relatedness & promote intrinsic motivation?

- Maybe...
- Kirby et al (2015) acknowledged that their intervention of only three 50-min sessions might not be enough to show differences between styles.
- Teaching styles requiring **many decisions** from students might need **much longer time** to increase competence & then maximize autonomy.

Take care!

- If student-learning styles seem very challenging and **imposed** either to teachers or students, then predict **decrease of autonomy & intrinsic motivation!**



How we shift decisions to students is critical to promote autonomy, competence, support

- Allow for student input or choice *“Feel free to select a friend you want”*
- Provide rationales *“Doing that way allows you to develop creativity”*
- Allow student own paced progress *“Complete this exercise at your own pace”*
- Rely on invitational language *“You might want to try this”*

The importance of HOW we shift decisions & promote student-centered actions

- Might explain why Spectrum of teaching styles is NOT mentioned in any major reviews on SDT in PE
- E.g.,
- Vasconcellos, et al . (2020). Self-determination theory applied to physical education: A systematic review and meta-analysis. *Journal of Educational Psychology*, 112(7)
- Ahmadi, et al (2022). A Classification System for Teachers' Motivational Behaviours Recommended in SDT Interventions.

- Yet, it is hard to believe that the structure of teaching styles
- & the large variety of decisions given to students through productive even student assessment styles
- do not have a stronger impact on students' psychological needs & intrinsic motivation.

We need more experimental/intervention research on the effects of Spectrum styles on needs for autonomy, competence, relatedness & intrinsic motivation

- Preferably long-term research, also involving analyses of teachers' behaviors
- (but too difficult to ask teachers adopt specific teaching styles over a long period of time).



Several motivation researchers in PE might not be very familiar with Spectrum of teaching styles

- Spectrum researchers might implement collaborative research in the area of motivation and teaching styles and publish it in special outlets/issues to attract attention.
- It might be one of the actions of a new Special Interests Group between AIESEP, FEPSAC, EUPEA.

THANK YOU

