

What practices are used by pre-service teachers to support the psychological needs of students? Validation of an observation grid for high school education

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Abstract

Internships are considered an essential part of the teacher education program (Kervick et al., 2020). In Québec and Belgium, pre-service teachers are expected to do a minimum of 700 hours of practical training (ME, 2020; FWB, 2000). While internships are perceived by trainees as the most important part of their training (Malo, 2010), high dropout rates among young Canadian and Belgian teachers, along with the burnout experienced by many of them (Hugues et al., 2014; Kamanzi et al., 2017), suggest they are not sufficiently prepared to face the profession's demands. This raises a crucial question with regard to pre-service training: how can trainees be encouraged to reach their full potential, with the support of their trainers (associate teachers and university supervisors), to help them effectively negotiate their entry into the teaching profession? According to self-determination theory (SDT; Ryan & Deci, 2020), every individual has three basic psychological needs (BPNs) whose fulfillment is necessary for motivation, well-being and optimal functioning. These needs are autonomy (the individual perceives that they act voluntarily and have control over events), competence (they perceive that they interact effectively with their environment and that their actions generate desired consequences), and relatedness (they perceive that they are meaningfully connected to others, and that they have warm, reciprocal relationships with people they deem important). Many studies have documented the benefits of meeting these needs in a variety of professional fields, including teaching (Fernet et al., 2008; Reeve et al., 2003). In general, practicing teachers who perceive that their BPNs are met are more self-motivated (teaching is enjoyable and important), more engaged and more likely to exhibit behaviors that support their students' motivation and engagement (e.g., Pelletier et al., 2002). Fulfillment of BPNs, however, appears to depend on three factors found in the environment: autonomy support (the person feels that their perspective is recognized and that they are provided with opportunities to make their own choices), structure (they perceive that their environment is predictable, that expectations are clear and that they receive feedback that helps them meet expectations) and involvement (they perceive that they are cared about, given time and encouraged; Ryan et al., 2008). The purpose of our research is to validate an observation grid of the practices employed by pre-service teachers in the classroom in order to identify those that support their students' psychological needs. High school pre-service teachers (mathematics, French, social sciences) shared with the researchers a video of themselves filmed during a complete teaching period. Three researchers coded each video according to a grid developed from the work of Reeve et al. (2003), and this cross-coding allowed for the triangulation of data (Hussein, 2009). The observation grid will be presented along with the potential support it could provide to trainee trainers (associate teachers and university supervisors).

Perspectives

Internship
Essential element of the training program for pre-service teachers : 700 hours over four years. Research shows a tendency to study associate professors and supervisors, while pre-service teachers have so far been given less attention (Coppe et al., 2022). Nonetheless, internships, notably the last one, are a **source of stress and worry** (Eksi et al., 2016; Leroux et al., 2021).

Classroom management:
Competence for which pre-service teachers seem less prepared and for which future teachers are the most worried (Boutet et al., 2016; Greenberg et al., 2014; Martin et al., 2001) and also the most complex to mobilize for teachers in professional integration (Dicke, et al., 2015; Mukamurera et al., 2019)

Main challenge:
classroom
management

Theoretical framework

Involve students in tasks

Students' involvement in the various given tasks **influences their learning** as well as their **development** and reveal an **underlying motivation** (Deci & Ryan, 2020)

Teachers can engage in **behaviors, attitudes and practices** that **foster this involvement**:

Need for competence

Need for autonomy

Need for relatedness

interact effectively with their environment and perceive their actions as having consequences

act voluntarily and exercise control over events

be significantly connected to others and have warm relationships with people who are considered important

Practices

BPNs' **satisfaction** or **frustration** could **depend on four different practices** found in the classroom environment (Deci & Ryan, 2020)

Structure

Autonomy Support

Involvement

Control

Making the environment predictable for students:

- expectations
- frequent feedback on behavior
- explain the consequences

Taking into account the person's perspective and feelings:

- clarify the reasons for expectations
- possibility of choice
- decision-making
- take on responsibilities
- problem-solving

Providing emotional and material resources:

- show interest
- devote time
- encourage
- help out

In contrast, psychological control behaviors are:

- make the other feel guilty
- use of threats
- contingent rewards
- authoritarian way of giving orders
- overevaluation

Study Goal

- To present an **observation grid of pre-service teachers' practices** in class (based on a grid by Reeve et al. 2004).
- To demonstrate how it can be used and what are the **stakes for teachers' training** and the support of pre-service teachers.

Method

Unsupportive practices of BPNs	Continuum				Supporting practices of BPNs		
Task-related rules and procedures - Rules/procedures are absent - Rules/procedures are unclear	1	2	3	4	5	6	7
Leadership - No learning goals - Inconsistency between the task and the learning goal	1	2	3	4	5	6	7
Planned/required Workload - Slow pace - Consideration of ZPD - Little to no challenge - Requires partial capacity	1	2	3	4	5	6	7
Scaffolding - Few/no answers to students' questions - Few/no visual or material resources - No feedback or feedback poorly related to learning	1	2	3	4	5	6	7

Unsupportive practices of BPNs	Continuum				Supporting practices of BPNs
Attention - Dispersed attention	1 2 3	4	5 6 7	Attention - Task-centered - Focused attention	
Participation - Passive participation - Minimal effort - Few discussions or questions	1 2 3	4	5 6 7	Participation - Active participation - Intense effort - Discussions and questions (asking and answering)	
Perseverance - Gives up quickly - Decreases effort over time	1 2 3	4	5 6 7	Perseverance - Increases effort over time	
Emotion - Weariness - Displeasure	1 2 3	4	5 6 7	Emotion - Interest - Positive attitude - Enjoyment	

Unsupportive practices of BPNs	Continuum				Supporting practices of BPNs
Personal involvement - Business-like	1 2 3	4	5 6 7	Personal involvement - Shares personal experiences - Time	
Physical proximity - Stays up front during class - Keeps distance	1 2 3	4	5 6 7	Physical proximity - Walks over to students - Stands at students' level - Gestures to manifest presence	
Relationship - Little use of what is known about students - Little reference to the students' experiences in learning activities	1 2 3	4	5 6 7	Relationship - Knows students (academic record, interests, personal histories...) - Reference to students' experiences - Expresses concern	

Unsupportive practices of BPNs	Continuum						Supporting practices of BPNs
Relies on Extrinsic							Relies on Intrinsic
Motivational resources							Motivational resources
- Incentives, consequences - Conformity (uniformity) of tasks - Deadlines	1	2	3	4	5	6	7
							- Consideration of students' interests and enjoyment related to the task - Choice-making - Appropriate challenge
Language							Language
- Controlling - Rigid - « You must/you have to »/...	1	2	3	4	5	6	7
							- Flexible - Informational
Value of task							Value of task
- No presentation of the goal - Concealment of the task's meaning	1	2	3	4	5	6	7
							- Presentation of the task's goal - Identification of the task's benefits - Task's authenticity
Consideration of students' reactions							Consideration of students' reactions
- Limited consideration of students' reactions (emotions) - Tries to compensate or change students' reactions	1	2	3	4	5	6	7
							- Listens - Readjusts - Accepts and validates the students' reactions/feelings

Results

Video analysis	Belgium	Louise	Marion	Thiméon	Alexandre	Charly	Elisabeth	No explanation of the reasons for expectations No opportunity to make choices No opportunity to make decisions No opportunity to solve problems Constructive and learning-oriented feedback "I am super happy with your work, you understood what was taught. Your commitment shows. Good job everyone » (Élisabeth) "Who's got everything right? Who has nothing good" (Louise) "There are several for whom it was not good" (Alexander) "Did you understand or is it an injustice?" (Marion)
	Structure							
	Teacher's Involvement							
	Autonomy Support							
	Student's Engagement							
Self-confrontation	Québec	Victor	Karl	Zoé	Nathan	Rosalie	Charlérick	Reactions that can discourage No communication of expectations, no explanation of consequences
	Structure							
	Teacher's Involvement							
	Autonomy Support							
	Student's Engagement							

Participants

12 final year students doing their last internship:

Belgium	BLOCK 1 (2 weeks)	BLOCK 2 (4 weeks)	BLOCK 3 (10 weeks)	
Québec	BLOCK 1 (10 days)	BLOCK 2 (1 week)	BLOCK 3 (5 weeks)	

Belgium

Charly

Thiméon

Elisabeth

Louise

Marion

Alexandre

Use of the grid to analyze teaching videos

Québec

Zoé

Rosalie

Nathan

Charlérick

Karl

Victor

Use of the grid with the student - self-confrontation

Use of the grid to analyze teaching videos

Data collection and analysis

Videos collection: each participant sent a **teaching activity in which they felt "good"**. Each video lasts between 30 and 60 minutes.

Self-confrontation (mid-internship) during which the pre-service teacher present a video filmed in class
Each video : 30 to 50 minutes

Use of the grid to analyze teaching videos d'enseignement

Use of the grid with the student - self-confrontation

Analysis of teaching videos

Data collection and analysis

- 1) Coding of each video by **two independent researchers**
- 2) Discussion Discussion among researchers and **consensus**
- 3) Re-watching to find **emblematic** excerpts of the grid's items (content analysis - a priori categories)

Procedure (results reliability, Creswell, 2007)

Discussion

- Our observations show **that mobilizing these practices does not come easy for pre-service teachers**. They may also have a **misperception regarding their practices** (e.g. They think their practices are supportive, but they are controlling).
- Greater emphasis on **practices that promote student engagement** (meeting BPNs) within BOTH academic courses and internships.
- A tool that can be used by the associate professors and by the pre-service teachers themselves: awareness of reality and possible improvements of the different practices: structure, involvement, autonomy, control.
- The grid could be used up front as a point of vigilance, a planning tool and then as a (self-)evaluation tool in a training perspective.
- What help could be given to the many profiles of pre-service teachers in training and support?