Aim of the paper session

Exposes results from a research project on presumptive teachers' beliefs and classroom management practices (CMP) for students with emotional and behavioral difficulties (EBD).

Introduction of the Topic

- Current of inclusive education
  - All children in the most normal possible context (UNESCO, 1994).

- Among those pupils
  - EBD students, recognized as being challenging (Fejin, Talmor & Erlich, 2005).

- For teachers
  - Leads to stress and others negatives impacts
  - Involve a low level of preparation in initial teacher education, particularly in classroom management (Maskan, 2007; O'Neill & Stephenson, 2013).

Paper session’s

Theoretical framework (concepts)

- EBD student

- CMP
  - Thoughtful, sequenced and simultaneous acts performed by teachers in order to establish, maintain and restore the learning environment in a classroom (Gaudreau, 2017).
Paper session’s

Theoretical framework (research on PT)

• Preservice teachers (PT) and inclusive CMP
  • Skill deficit (Clunies-Ross, et al., 2008; Forlin & Chambers, 2011)
    ➔ Tend to be reactive rather than preventing/positive-based

• Variation across countries
  ➔ Suggesting effects for the way is taught or cultural differences
    (Woodcock & Reuper, 2017)

• Related to beliefs
  ➔ For inclusion practices, for all

Research aims and questions

What are their beliefs? What practices are they using? What is influencing them? What is the relations between those variables?

Theoretical Framework

Theory of Planned Behavior applied to CMP

Behavioral Beliefs
Normative Beliefs
Control Beliefs

Attitudes Toward the Behavior
Subjective Norms
Perceived Behavioral Control
Self Efficacy

Intention
Willingness

Behavior
Classroom Management Practices

Personal and Contextual Variables

Adapted from Azjen © (2006, 2012)

General method and structure for each presentation

HICE 2019 - Paper Session "What do I think and Do about Inclusive Education and Classroom Management of EBD"

Method
Procedure (Larger study/this paper session)

- Longitudinal
- Transversal, correlational and predictive design
- Quantitative Survey (30 min. questionnaire)
- Mixed methods
- Multisite
- 3 universities teaching program
- Four-year course

Participants
1499 preservice teachers (PT) enrolled in a teacher education program

Gender
- Male
- Female

Preservice Teaching Education Program
- Special
- General

Age
- M = 22.39
- SD = 2.97
- Range = 19 – 42

Year of training
- 1st
- 2nd
- 3rd
- 4th

Course content on EBD
- None
- < 10 hours
- > 10 hours, < 30 hours
- > 30 hours, < 45 hours
- > 45 hours

Days of field experience
- < 50
- > 50
- > 100
- > 150

Numerous studies closely relate attitudes of teachers to their behavior and, moreover, to their intervention choice.

Others studies in health and social psychology have also linked behavioral beliefs, attitudes toward the behavior and the adoption of a prescribed behavior (Azjen, 2012).

Attitudes toward inclusive education is reported to be influenced by the type of disability.

Including students with emotional and behavioral difficulties (EBD) is generally linked with more negative attitudes than for students with learning disabilities…

- For teachers (Cook, Cameron & Tankersley, 2007).
- For preservice teachers (PT) (Haq & Mundia, 2012; Markova, Pits Ten Cate, Krulak-Schwerdt & Glock, 2016; O’Toole & Burke, 2013).
- Behavioral difficulties are a major concern for PT (Clarke, Lodge et Shevlin, 2012).
- It is important to understand pre-service teachers’ acquired attitudes towards inclusive education and how pre-service training programs influence these attitudes (Kim, 2011).

To get a more thorough comprehension of attitudes maintained by preservice teachers toward students with EBD in the province of Quebec

To describe different dimensions of attitudes by

- Gender
- Training Program (general vs special education)
- Training received regarding behavior difficulties
- Year of training
- Hours of internship
Multidimensional Attitudes Toward Inclusive Education

- Three scales measuring different dimensions of attitudes
  - Cognitive (6 items, $\alpha = .71$)
  - Affective (6 items, $\alpha = .72$)
  - Behavioral (6 items, $\alpha = .84$)

Each dimension differed significantly from each other

Cognitive
Affective
Behavioral

Gender
- Women
- Men

Training Program
- G (Graduate)
- S (Undergraduate)

Year of training
- G (Graduate)
- S (Undergraduate)

Hours of internship
- $r = -.16$***
- $r = -.13$***
- $r = -.16$***
Discussion

- Gender
  - Results are different from Varcoe & Boyle (2014) where no difference have been observed.
  - But similar with our study on in-service teachers (Massé et al., in preparation)

- Training program
  - PT in special education have more positive affective and behavioral attitudes, they choose to work with students with special needs.
  - On the other hand, PT in special education believe less in the benefits of school inclusion of EBD students.
  - In Quebec, they are more prone to teach in special classes.

- EBD Training
  - Congruent with results of Lee, Yeung, Tracey et Barker (2015) where teacher training did not influence teachers’ support of including students with ADHD, but influenced the support for other students with difficulties.

Conclusions

- Although global attitudes of PT toward inclusion are relatively more positive than negative and that PT self-reports about behavior attitudes suggest their willingness to support EBD students’ inclusion, results on other aspects of attitudes raise some questions about PT needs for cognitive and affective supports in the process of inclusive education of students with EBD.
- It could be concluded that pre-service teachers’ attitudes are more influenced by their perceptions of matters of classroom practice, such as the availability of resources and support rather than by any biases towards including children with special needs into mainstream classrooms.
- Results suggest a need for training institutions to more explicitly address issues of inclusive setting, resourcing and support in their teacher education programs.

References


Teachers’ self-efficacy (TSE) is based on what teachers suppose they can achieve relying on their own expertise (Hoy & Spero, 2005).

It can vary according to task performed and context of specific interventions (Dellinger, Bobbett, Olivier, & Ellett, 2008).

In this context, TSE in classroom management can be described as teachers’ beliefs in their capabilities to organize and execute the courses of action required to maintain classroom order (Brouwers & Tomics, 2000).

A higher SE is associated with greater inclusive education and adoption of teaching practices supportive success of students with behavioral difficulties (Gordon, 2001).
### Aims
- To determine the preservice teachers’ self-efficacy beliefs (PTSE) regarding managing difficult behaviors.
- To determine the perception of control of PT regarding managing difficult behaviors.
- To study the PTSE and perception of control differences according to …
- To describe the links between PTSE, perception of control and …

### Method
- Teachers’ self-efficacy scale regarding classroom management (Gaudreau, Frenette, & Thibodeau, 2015)
  - One dimension of this scale:
    - Managing difficult behaviors (9 items, \( \alpha = .89 \))

#### Teachers’ self-efficacy scale regarding managing difficult behaviors

<table>
<thead>
<tr>
<th>Item</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can efficiently manage the situation when one of my students adopts provocative behaviors.</td>
<td>1 Strongly Disagree</td>
<td>6 Strongly Agree</td>
</tr>
</tbody>
</table>

### Instrument
- French adaptation of the Job Content Questionnaire (JCQ; Karasek, 1985; Fernet et al., 2012)
  - Two scales:
    - Task control
      - \( n = 6; \ \alpha = .73 \)
    - Decision latitude
      - \( n = 3; \ \alpha = .61 \)

#### Task control

<table>
<thead>
<tr>
<th>Item</th>
<th>1 Strongly Disagree</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have enough time to do these tasks.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I receive conflicting requests regarding behavior management.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavior management requires a lot of work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can make autonomous decisions about behavior management in my classroom.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have a lot of influence on how things go when I manage behaviors in my classroom.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have the freedom to decide how to interact with students with behavioral difficulties.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Decision latitude

<table>
<thead>
<tr>
<th>Item</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have enough time to do these tasks.</td>
<td>1 Strongly Disagree</td>
<td>6 Strongly Agree</td>
</tr>
<tr>
<td>I receive conflicting requests regarding behavior management.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavior management requires a lot of work.</td>
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<td></td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>I have a lot of influence on how things go when I manage behaviors in my classroom.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have the freedom to decide how to interact with students with behavioral difficulties.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Results - Descriptives

<table>
<thead>
<tr>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision latitude</td>
</tr>
<tr>
<td>3 (0.30)</td>
</tr>
<tr>
<td>Task control</td>
</tr>
<tr>
<td>2.19 (0.49)</td>
</tr>
<tr>
<td>PTSE in managing difficult behaviors</td>
</tr>
<tr>
<td>4.20 (0.73)</td>
</tr>
</tbody>
</table>

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Results - Correlations between PTSE, perception of control and others variables

• The stronger is the TSE in managing difficult behaviors, the more they perceive decision latitude \((r = 0.341^{**})\) and control task \((r = 0.238^{**})\).
• Older students have a stronger TSE to manage difficult behaviors \((r = 0.08^{**})\) and perceive greater decision latitude than the youngest \((r = 0.05^{*})\).
• The more the students have completed days of field experience, the more they perceive a decision latitude to manage difficult behaviors \((r = 0.09^{**})\) and control task to manage difficult behaviors \((r = 0.10^{***})\).

**p < .001, ***p < .01 *p < .05

Discussion

• There are numerous studies indicating notable variances in PTSE in terms of gender (e.g; Çalışkan et al. 2010; Martin et al., 2006; Özdemir, 2008).
• But many studies suggest that there are no difference between females and males (e.g. Baykara, 2011; Cerli, 2011; Üstüner et al., 2009).
• Other researchers also found higher SE scores for special education trainees (e.g., Romi & Daniel, 2001) and for practicing special education teachers (Buell et al., 1999; Freytag, 2001), compared with general educators.

Discussion

• Participating in teacher training that addresses topics such as characteristics of students with disabilities, inclusion and behavior management has been found to be associated with higher SE scores for perceived capability to work with students with special needs (e.g. Brownell & Pajares, 1999; Lancaster & Bain, 2007).
• Other studies of TSE have shown that one possible way to promote a more realistic sense of efficacy in PT is to provide them with mastery experience in the form of well planned field placement experiences and observation of teaching (e.g. Abroampa et al., 2017; Charalambous et al., 2008; Knoblauch & Hay, 2008).

Conclusion

In conclusion, in order to support the development of strong control beliefs, this study confirm the importance to offer extensive courses on intervention for EBD students and greater opportunities to experiment proposed strategies in real-life context (internships).
Multiple studies have shown that intention to teach special educational needs students depends on several factors, including:

- Positive attitudes (Sharma et al., 2017),
- Self-efficacy beliefs (Gaudreau et al., 2017),
- Field experiences during teacher training program (Rakap et al., 2017),
- Educational experiences (Castello and Boyle 2013),
- Type of initial teaching program (Cameron, 2017).

**Method Instrument**

- French adaptation of the Teachers’ Willingness to Work with Severe Disabilities Scale (TWSDL) (Rakap & Kaczmarek, 2010; MacFarlane & Woolfson, 2013)
  - This scale provides a clinical vignette about a student with EBD ($\alpha = .94$).
  - The vignette is followed by seven items that ask teachers how much they would be willing to have this student in their classroom and to learn skills to better support it.
William is a student with behavioral problems who might be included into your classroom. He is of below average in his schoolwork. There are times when he becomes engaged in this schoolwork, and works as well as other student in the class. However, at other times (at least once a day), he does not pay attention or listen. On these occasions, he usually forgets the rules and does not follow the teacher’s instructions.

Types of analysis
- Descriptive
- T tests
- ANOVA
- Post-hoc
- Correlations IV, DV

He often disturbs others by talking out loud, taking items belonging to other children, and throwing them, causing general confusion in classroom. During these outbursts, he refuses to join in-class activities, and becomes very distracted.

In the classroom and outside, he quickly gets angry and is ready to fight with other children when he does not get his own way. When other children are playing and he wants to join them, he tends to take their toys or push them. The children tend to avoid William once they experience a bad interaction with him.

\[ M = 5.43, SD = 0.50 \]
### Results t-test and ANOVAs

- No significant difference according to:
  - Year of training
  - Hours of internship

- Significant differences according to:
  - Gender (men < women)
  - Training Program (general < special education)
  - Training received regarding behavior difficulties (tendency 90 hours and more)

### Results Associations between variables

**Attitudes Toward the Behavior**

- Cognitive attitudes
  - I believe that...
  - \( r = .30^{***} \)

- Affective attitudes
  - I get irritated...
  - \( r = .26^{***} \)

- Behavioral attitudes
  - I will do...
  - \( r = .55^{***} \)

**Subjective Norms**

- University instructor
  - \( r = .15^{***} \)

- Field mentor
  - \( r = .09^{**} \)

**Perceived Behavioral Control**

- Decision latitude
  - \( r = .17^{***} \)

- Control task
  - \( r = -.10^{***} \)

Adapted from Azjen © (2006, 2012)
Results Associations between variables

- Self Efficacy
- Managing difficult behavior
- Intention
- Willingness

\[ \text{Intention} \rightarrow \text{Willingness} \]

\[ r = .26 \quad *** \]

***\(p < .001\), **\(p < .01\), *\(p < .05\)

Adapted from Azjen © (2006, 2012)

Discussion

- Results show that PT have a strong willingness to act modulated by positive beliefs to successfully include student having EBD.

- As for other studies with PT (Subban et al., 2017) or in-service teachers, intention seems to be significantly associated with positive beliefs and negatively with job strain (Hind et al., 2018).

- Unlike other studies that showed difficulties in improving attitudes (Cook, 2002) or deterioration of attitudes during initial training (Castello & Boyle, 2013), our results do not allowed to distinguish effects related to the number of years in program or the number of hours in internship, showing relatively stable beliefs and intention among our sample.

- Type of knowledges on the academic courses?
- Type of experiences, characteristics of students include during the internships?

Conclusion

- Strong intention to teach = positive role to play

- Gap with mainstream school teachers
  - They feel unprepared, ill-equipped, and report that their skills and resources do not allow them to stretch the teaching and learning environment (Avramidis, Bayliss, & Burden, 2000).

- Needs of supporting PT during their professional insertion in order to preserve this positive intention (Hind et al., 2018).

Preservice Teachers’ Classroom Management Practices For Difficult Behavior: Specific Effective Strategies and Sources of Influence

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Line Massé, PhD, Université du Québec à Trois-Rivières
Nancy Gaudreau, PhD, Université Laval
Claudia Verret, PhD, Université du Québec à Montréal
Anne Lessard, PhD, Université de Sherbrooke
Sandy Nadeau, PhD, Université de Sherbrooke

Aims

- Identify specific classroom management practices used by PT with EBD students
  - Explore the influence of variables:
    - Personal (Gender)
    - Contextual (training program; year of training; hours on EBD; days of field experience)
- Verify the contribution of the willingness to teach to EBD on specific classroom management practices

Introduction & Context

- Gap between evidence-based classroom management practices (CMP) for EBD students and those commonly used by teachers (Gable, Rothrauff, Thornburg, & Mauzy, 2010)
- Behavior and classroom management reported as a lack in preservice teacher preparation programs and in-service development (Rheing & Masters, 2006)
- Preservice teachers experience with CMP and students with EBD's not ideal (Clunies-Ross et al., 2008; Woodcock & Reupert, 2017)
- Increases the likelihood of conflict and aggravation of behavioral problems (Sutherland et al., 2016)

Theoretical framework

- Evidence-based classroom management practices for EBD
  - Generally based on behavioral principles
  - Grouped according to the context in which it appears

Theoretical Framework

Theory of Planned Behavior applied to CMP

Adapted from Ajzen © (2006, 2012)
Questions

What is the use of specific classroom management practices by PT?

- What’s the influences of variables:
  - Personal (Gender)
  - Contextual (training program; year of training; hours on EBD; days of field experience)

What is the contribution of the willingness on specific classroom management practices, over controlled variables?

Method

Instrument

Management Practices for Behavioral Difficulties Inventory (Nadeau, Massé, Verret, Gaudreau, Lemieux, Couture et al., 2018)

- Seven scales (CFA), N = 68 items; 2 dimensions: proactive & reactive

<table>
<thead>
<tr>
<th>Scale</th>
<th>Items (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-regulation</td>
<td>15 items</td>
</tr>
<tr>
<td>Planning and time management</td>
<td>15 items</td>
</tr>
<tr>
<td>Rules and instructions</td>
<td>10 items</td>
</tr>
<tr>
<td>Reinforcement</td>
<td>6 items</td>
</tr>
<tr>
<td>Behavioral functional assessment</td>
<td>3 items</td>
</tr>
<tr>
<td>Recommended mild negative practices</td>
<td>10 items</td>
</tr>
<tr>
<td>Less recommended punitive practices</td>
<td>9 items</td>
</tr>
</tbody>
</table>

- Five level Likert-type scale
  - Never (1)
  - Very often (5)

Results Frequency of Practices (M)

<table>
<thead>
<tr>
<th>Scale</th>
<th>M</th>
<th>ÉT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rules and instructions</td>
<td>4.19</td>
<td>3.37</td>
</tr>
<tr>
<td>Planning/t ime management</td>
<td>4.42</td>
<td>2.27</td>
</tr>
<tr>
<td>Positive reinforcement</td>
<td>4.27</td>
<td>2.27</td>
</tr>
<tr>
<td>Self-regulation</td>
<td>4.34</td>
<td>1.23</td>
</tr>
<tr>
<td>Behavioral functional assessment</td>
<td>3.94</td>
<td>1.34</td>
</tr>
<tr>
<td>Recommended mild negative practices</td>
<td>3.58</td>
<td>1.34</td>
</tr>
<tr>
<td>Less recommended punitive practices</td>
<td>2.31</td>
<td>1.34</td>
</tr>
</tbody>
</table>

Results Less Used Practices

<table>
<thead>
<tr>
<th>Scale</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-regulation</td>
<td>• Involving students in the planning of consequences when breaking rules (M = 3.79, ET = 1.17; 33.7% never or rarely)</td>
</tr>
<tr>
<td>Planning and time management</td>
<td>• Asking students to use the agenda or a work plan (M = 3.43, ET = 1.27; 22.1% never or rarely)</td>
</tr>
<tr>
<td>Rules and instructions</td>
<td>• Involving students in classroom management (M = 3.53, ET = 1.04; 43.4% never or rarely)</td>
</tr>
</tbody>
</table>
Results Less Used Practices

**Behavioral functional assessment**
- Observing EBD students’ behaviors and taking notes to understand what causes inappropriate behaviors
  \( M = 3.58, SD = 0.97; 13.7\% \text{ never or rarely} \)

**Positive reinforcement**
- Communication with parents to highlight student’s good behavior
  \( M = 3.04, SD = 1.21; 38.9\% \text{ never or rarely} \)

Results Frequency of Less Recommended Punitive Practices (\( M \) Items)

<table>
<thead>
<tr>
<th>Item</th>
<th>Female Mean</th>
<th>Male Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time out in class</td>
<td>3.74</td>
<td>3.49</td>
</tr>
<tr>
<td>Paraeducator for managing behaviors</td>
<td>3.49</td>
<td>3.29</td>
</tr>
<tr>
<td>Remove points, coins, rewards...</td>
<td>3.29</td>
<td>3.14</td>
</tr>
<tr>
<td>Time out of class (special room)</td>
<td>2.65</td>
<td>2.52</td>
</tr>
<tr>
<td>Internals suspension</td>
<td>2.65</td>
<td>2.52</td>
</tr>
<tr>
<td>Critics of student’s behavior</td>
<td>2.52</td>
<td>2.18</td>
</tr>
<tr>
<td>Detention</td>
<td>2.18</td>
<td>1.94</td>
</tr>
<tr>
<td>Add to normal work, copy</td>
<td>1.94</td>
<td>1.76</td>
</tr>
</tbody>
</table>

Results Frequency Recommended Mild Negative Practices (\( M \) items)

- Apply the expected consequences: 4.38
- Warning of a consequence: 4.34
- Asking for a repair: 4.34
- Communicating for inappropriate behavior: 3.99
- Changing place: 3.78
- Selective attention: 3.69
- Restriction of equipment or space: 3.21
- Behavioral card: 3.13
- Compilation of shortcomings: 2.98
- “Thinking” card: 2.98

Results Test-t - Gender

<table>
<thead>
<tr>
<th>Item</th>
<th>Female Mean</th>
<th>Male Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-regulation</td>
<td>4.14</td>
<td>3.99</td>
</tr>
<tr>
<td>Planning and time management</td>
<td>4.29</td>
<td>4.08</td>
</tr>
<tr>
<td>Rules and instructions</td>
<td>4.43</td>
<td>4.21</td>
</tr>
<tr>
<td>Re information</td>
<td>4.24</td>
<td>4.03</td>
</tr>
<tr>
<td>Behavioral functional assessment</td>
<td>3.95</td>
<td>3.86</td>
</tr>
<tr>
<td>Recommended mild practices</td>
<td>3.59</td>
<td>3.49</td>
</tr>
<tr>
<td>Less recommended punitive practices</td>
<td>2.32</td>
<td>2.26</td>
</tr>
</tbody>
</table>

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Results
Test-t - Training program

Results
ANOVA - Year of training

Results
ANOVA - Hours of EBD training

Results
ANOVA - Days of field experience

Results Correlations

Willingness

Discussion

With regard to teaching practices for EBD students:

• Results indicate that PT report using more often proactive practices related to giving rules and instructions, planning and time management and giving positive reinforcement than those related to teaching self-regulation skills of EBD student.

• Student are rarely involved in decision.

• Regarding to reactive practices, teachers use more often recommended practices than non recommended ones.

• Severity of negative behavior could explain negative practices.

• CMP varies across personal and contextual variables, suggesting a downward slope over years of training, EBD course hours and hours on field experience for the use of proactive strategies and a sometimes upward slope for the reactive strategies.

• Raised questions about methods used to prepare PT.
Conclusions

• PT reports using proactives and positives CMP recommended by litterature
• The lower frequency of self-regulation and the relatively middle frequency of mild negative practices highlights the needs to enhance the training about how to involve students and oriented them on the good behavior instead of focusing on the bad’s one (Cevik & Andre, 2013).
• A better comprehension of the context in which the behavior appears (behavioral functional assessment) is a good lead

Limits of this paper session study

• The use of a questionnaire
• The nature of data
• The nature of analysis

Future Directions

FOR THE PROGRAM
• More emphasis on interventions strategies supporting self-regulation and student participation
• Stronger support during field experience; better preparation to
• Developing methods to improve attitudes (and affective regulation of PT)

FOR THE RESEARCH
• Longitudinal analysis
  • to follow cohort about determinants of negative attitudes
• More complex analysis plan; structural equation modeling in order to understand what is influencing willingness
References


## References


## References


## References


Merci – Thank you

- Fond subventionnaire
- Les universités participantes
- Les étudiants-enseignants participants
- L’équipe de recherche
  - Sandy Nadeau, UdS
  - Catherine Gauthier, UdS
  - Julie Babin, UdS
  - Vincent Bernier, ULaval
  - Jeanne Lagagé-Leblanc, UQTR
  - Géraldine Guijarro, professionnelle de recherche
  - Annie Lemieux, statisticienne

More details:
https://www.fse.ulaval.ca/recherche-pratiques-enseignantes