How Do School-Based Health Professionals Implement Universal Design for Learning?

W. Campbell, J. Kennedy, C. Missiuna, N. Pollock, S. Wu, & J. Yost
McMaster University
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A scoping review to explore how universal design for learning is described & implemented by rehabilitation health professionals in school settings

J. Kennedy, C. Missiuna, N. Pollock, S. Wu, J. Yost, & W. Campbell

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RATIONALE

- Inclusive education is a priority across Canada¹
- Children who attend inclusive schools have better outcomes²-⁴
- Educators use Universal Design for Learning (UDL) to support inclusive teaching practices⁵,⁶

¹ Inclusive Education Canada; ² Timmons & Wagner, 2009; ³ Morningstar et al., 2015; ⁴ Oh-Young & Fiker, 2015; ⁵ CAST, 2011; ⁶ Meyer et al., 2014
RATIONALE

Could UDL offer a potential area for collaboration with educators?

What is known about the use of UDL by school-based health professionals?

But before I can tell you that story, I have to tell you this story....”

George & Harold, Captain Underpants by Dav Pilkey

What is Universal Design for Learning?
UDL is “a framework to improve and optimize teaching and learning for all people ....” (www.cast.org).

UDL at a glance

**UDL Principles**

1. Provide multiple means of Engagement
2. Provide multiple means of Representation
3. Provide multiple means of Action and Expression

- Each UDL principle has 3 guidelines that suggest broad strategies for enacting the principles
- Each guideline is supported by a number of ‘checkpoints’ with concrete suggestions for implementation
Now that you know about UDL, we can get back to our original story.

RESEARCH QUESTIONS

1. How is UDL represented and described in the rehabilitation literature?
2. What UDL principles do health professionals recommend or implement in school settings?
3. What are the recommended or reported roles of health professionals with respect to implementing of UDL in school settings?
4. What are the gaps in the literature?

METHODS

- Scoping review\(^7\,8\)
  1. Identify the research questions
  2. Identify relevant studies
  3. Study selection
  4. Charting the data
  5. Collating, summarizing and reporting results
  6. Consultation

\(^7\) Arksey & O’Malley, 2005; \(^8\) Levac et al., 2010
SEARCH STRATEGY

- Developed by content experts and a medical librarian
- Searched years 1990-2016 in 7 databases

<table>
<thead>
<tr>
<th>UDL Terms</th>
<th>HP Terms</th>
<th>Education Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Words or phrases that described UDL or related ideas</td>
<td>Terms that described health professionals</td>
<td>Terms that described school settings</td>
</tr>
<tr>
<td>24 terms</td>
<td>12 terms</td>
<td>4 terms</td>
</tr>
</tbody>
</table>

We sought articles that had all 3 concepts → UDL + HP + Education

PRISMA DIAGRAM

INCLUSION CRITERIA

- Is the source in English?  
  - NO  
  - STOP: EXCLUDE
- Is the source published between 1990-2016?  
  - NO  
  - STOP: EXCLUDE
- Does the source include a description of UDL strategy?  
  - NO  
  - STOP: EXCLUDE
- Does the source discuss UDL strategy targeting school-aged children (<13), and/or educators of school-aged children?  
  - NO  
  - STOP: EXCLUDE
- Is the UDL strategy discussed and/or implemented by an OT, PT, or SLP/PS?  
  - NO  
  - STOP: EXCLUDE

INCLUDE
ANALYSIS

- Quantitative
  - Numerical summary
- Qualitative
  - Theoretical thematic analysis
  - Center for Applied Special Technology (CAST)
  - UDL Framework
  - Canadian Model of Client Centered Enablement


RESULTS

Is UDL represented in the rehabilitation literature?

<table>
<thead>
<tr>
<th>SLP</th>
<th>OT</th>
<th>PT</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>19</td>
<td>0</td>
</tr>
</tbody>
</table>

RESULTS

<table>
<thead>
<tr>
<th>Country</th>
<th>UDL Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>7</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>2</td>
</tr>
<tr>
<td>United States</td>
<td>33</td>
</tr>
<tr>
<td>South Africa</td>
<td>1</td>
</tr>
</tbody>
</table>
RESULTS

Literature Sources

- Peer reviewed journal articles: 8
- Conference proceedings: 35
- Professional newsletters: 1
- Dissertation: 1

RESULTS

How is UDL described in the rehab literature?

- Used and defined UDL: 22%
- Did not use the term UDL: 78%

RESULTS

What other terms did authors use?

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity building</td>
<td>Inclusive services/service delivery</td>
</tr>
<tr>
<td>Classroom modifications and supports</td>
<td>Instructional strategies</td>
</tr>
<tr>
<td>Classroom based intervention</td>
<td>Language in the classroom model</td>
</tr>
<tr>
<td>Classroom management system</td>
<td>Systems and classroom level supports</td>
</tr>
<tr>
<td>Collaborative model/consultation/consultation</td>
<td>Tier one response to intervention/supports/activities or instruction</td>
</tr>
<tr>
<td>approach/intervention</td>
<td></td>
</tr>
<tr>
<td>Communication friendly classrooms</td>
<td>Universal instruction/services</td>
</tr>
<tr>
<td>Co-teaching</td>
<td>Whole class instruction/teaching</td>
</tr>
</tbody>
</table>
RESULTS

What UDL principles do health professionals recommend or implement in school settings?

Universal Design for Learning Guidelines

1. Provide Multiple Means of Representation
2. Provide Multiple Means of Action and Expression
3. Provide Multiple Means of Engagement

SLP

OT

RESULTS

What are the recommended or reported roles of health professionals in implementing UDL?

Adapted from Canadian Model of Client-Centred Enablement (Townsend et al., 2007)

- ADAPT & DESIGN – flexible environments and inclusive materials
- ADVOCATE – for UDL-based services
- COLLABORATE & CONSULT – with educators
- COORDINATE – access to materials, tools, technology
- EDUCATE – students, parents, & educators
- ENGAGE – students in learning
- SPECIALIZE – adding another lens to UDL

RESULTS

What are the gaps in the literature?

- Did not locate any literature from physiotherapy
- Several studies did not provide detailed descriptions of strategies and interventions
- Terminology was inconsistent within and across different disciplines
- Only 9 evaluative studies located, mostly Level II evidence
CAVEATS

What are the limitations of our review?

- Search limited to English language literature only
- Did not search for or include literature related to pre-school settings
- Unable to access 38 full-text documents during screening process
- One author extracted and coded data from the included articles

IMPACT

What did we achieve?

- Describe the overall status of UDL in rehabilitation literature – how much, what kind, where, and who is involved
- Identify specific ways in which school-based health professionals contribute to UDL implementation
- Identified several important gaps in the evidence base that can be addressed in future research
- Provided a foundation for growth in this field

Q & A Session

Thank You!
REFERENCES


