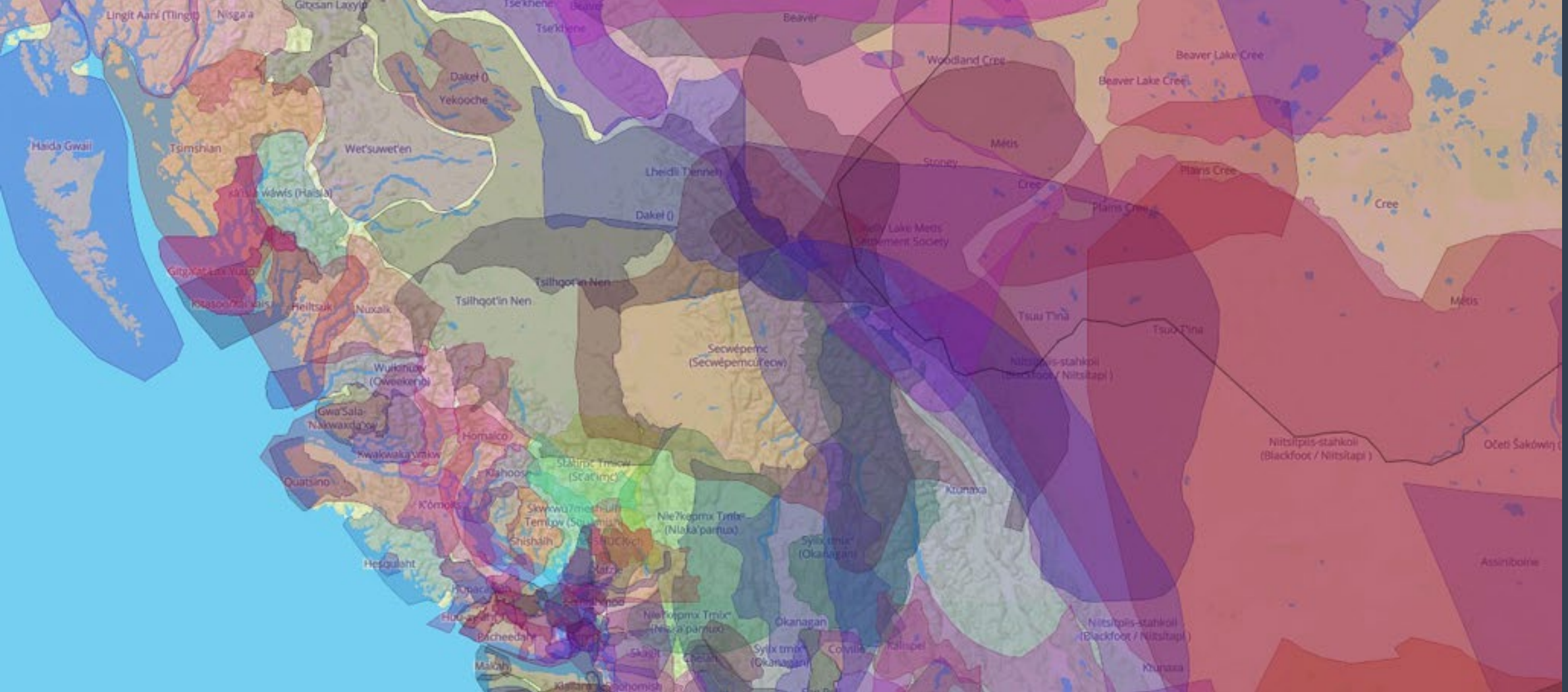


Integrated knowledge translation with children and families: from innovation to sustainable implementation

Dino Island

Sarah J. Macoun, Ph.D.





Land Acknowledgement

We acknowledge and respect to the **ləkʷəŋən peoples**, on whose traditional territory the University of Victoria stands, and the **Songhees, Esquimalt**, and **WSÁNEĆ** peoples, whose historical relationships with the land continue to this day

Acknowledgements of Partners

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 - Vice President (Child and Youth Services), The Centre for Child Development
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- Founding Partners:
 - Kimberly Kerns, PhD, R.Psych
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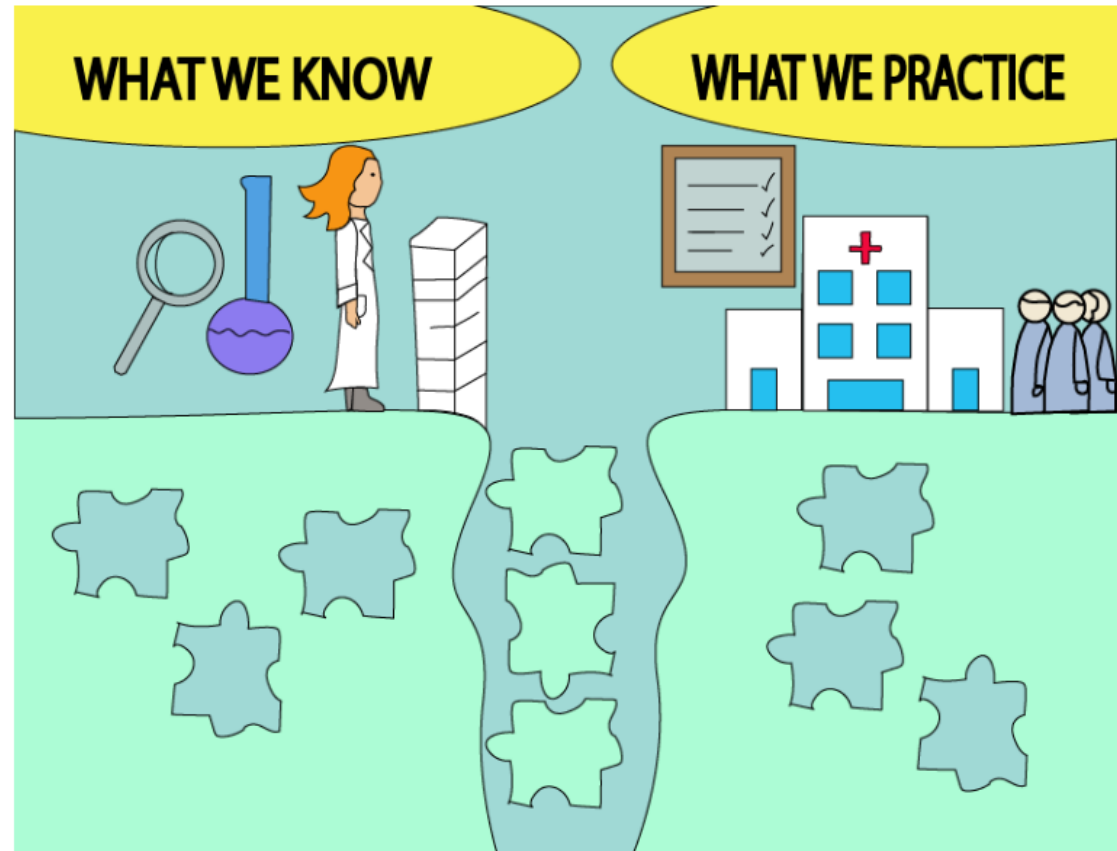
Advanced healthcare. Delivered.



Implementation Science – *What it is*

The scientific study of the methods and strategies used to facilitate the systematic uptake of evidence-based practices in real world settings

- More simply put, *Implementation Science* helps bridge the wide gap between science and practice



Implementation Science – *Why it matters*

Evidence-based treatments (EBTs) stand to improve health and social outcomes.

- However, optimal outcomes depend not just on clinical efficacy but also upon implementation efficacy

Most evidence-based innovations do not make it out of academia and effectively ‘die on the vine’

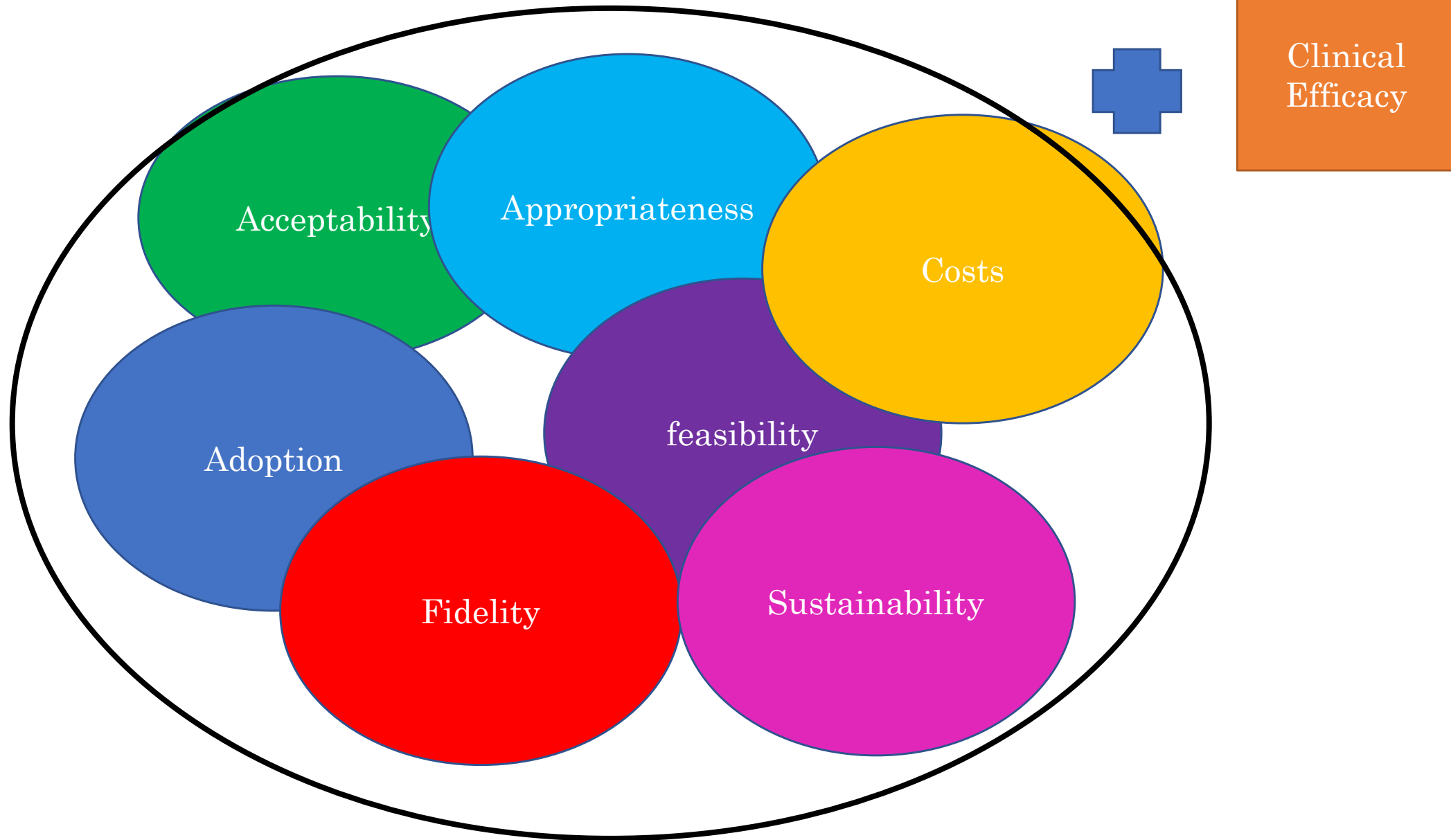
- Partially because they are neither adopted nor successfully implemented in a timely way (17 years, on avg!)



Distinguishing implementation effectiveness from treatment effectiveness is important because, if the effort fails, **we need to know if the failure occurred because the intervention was ineffective** in the new setting (*intervention failure*) **or if a good intervention was deployed incorrectly** (*implementation failure*) (Brown & Barwick, 2022)

Because an intervention or treatment will not be effective if it is not implemented well, **implementation outcomes serve as necessary preconditions for attaining subsequent desired changes in clinical or service outcomes** (Proctor et al., 2011; Barwick & Brown, 2022)

Implementation science in an IDEAL world



Integrated Knowledge Translation – *What is it?*

Knowledge translation and information sharing through engaging knowledge users and stakeholders as active participants in the research process

Knowledge User

Increased knowledge
Increased skills
Voice in generating solutions
Better health outcomes

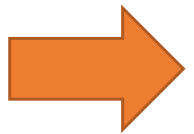
A 2 way street

Researcher

Relevance of research
Utility of Research
Community Engagement
Future collaborations

Integrated Knowledge Translation – *In an Ideal world?*

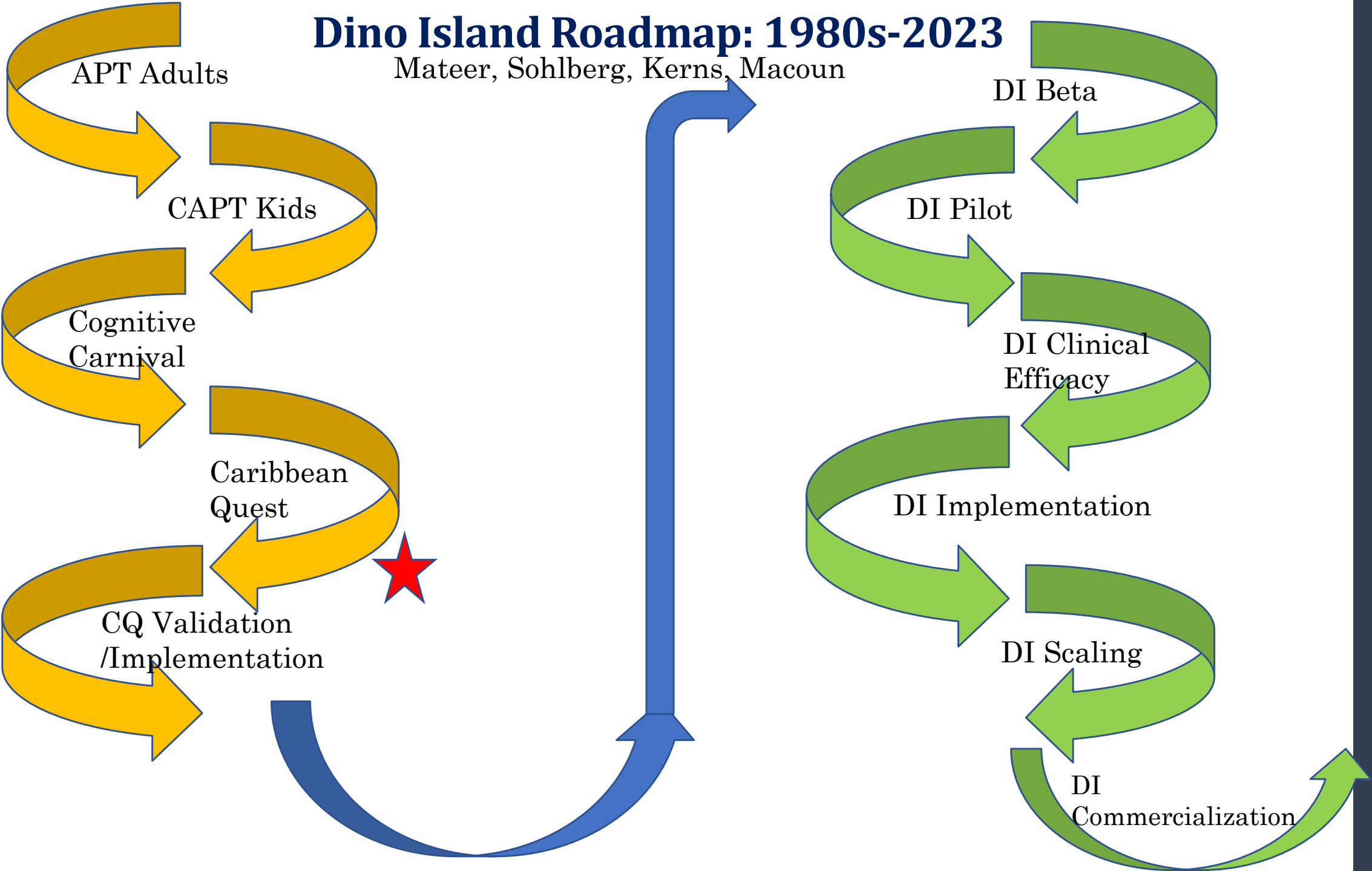
- Varied opportunities to contribute to the research
- Involvement from the inception of the project (generating rsch ?s)
- Strong and organized project leadership
- Taking time to build shared understanding
- Effective communication



Resulting in immediate practice or policy change

Dino Island Roadmap: 1980s-2023

Mateer, Sohlberg, Kerns, Macoun



Dino Island

- Tablet-based intervention for attention and executive functioning (EF)
- 5 subgames hierarchically organized and self-adjusting
- Bonus games to maximize engagement

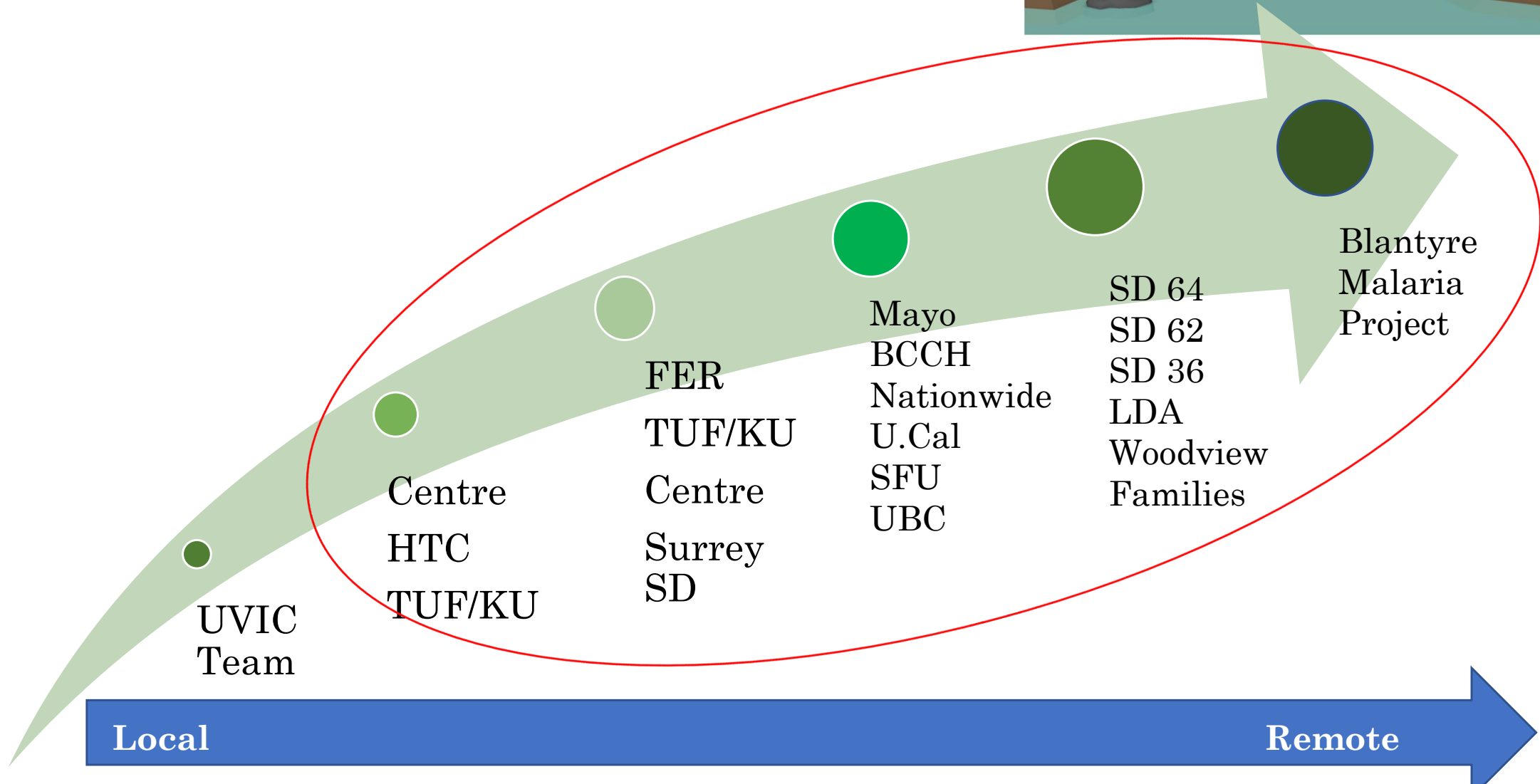


- Hybrid approach to cognitive rehabilitation/training:
 - Process-specific cognitive training
 - Compensatory metacognitive training
- Principles critical for experience-dependent neural change (e.g., repetition, duration, intensity, salience, adaptation, hierarchy) built into various aspects of intervention
- Adult within circle-of-care (e.g., parent, EA, clinician) trained & works with child during intervention sessions
 - Approx. 30-45mins, 3-4x/week for 6-8 weeks
- Designed to address challenges/gaps in the field & communities: affordable, accessible, feasible, effective

Building and Strengthening Partnerships



IKT within Partnerships and Teams



Implementation Processes : Exploration, Installation and Implementation

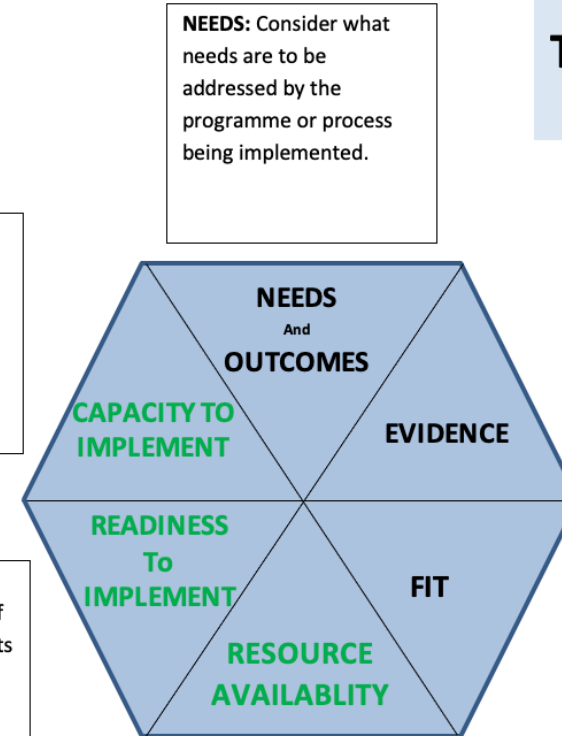
Hex Tool



CAPACITY TO IMPLEMENT:
consider what will be needed to implement and sustain the practice or programme

READINESS:
Consider the level of readiness for all parts of the system

**CAN WE DO
IT THE RIGHT
WAY?**



NEEDS: Consider what needs are to be addressed by the programme or process being implemented.

**IS IT THE RIGHT
THING TO DO?**

EVIDENCE:
Consider what programmes or processes are available that have evidence that they address these needs

FIT with current:
Consider which of the evidenced programmes fit best with your organisation

RESOURCES AVAILABLE:
Consider whether you have or can acquire the resources for the programme or practice you have chosen. (e.g. practitioners or other personnel; materials; funds; etc)

Implementation Tools: Installation

Drivers Tool

Domains to consider:

Recruitment/selection

Training

Coaching/Supervision

Data Systems to inform decisions

Administrative systems

System wide supports

Leadership

Performance Assessment

Organisation Function/ Drivers	Questions to consider		Notes
Training <input type="checkbox"/> In place <input type="checkbox"/> Partially in place	<ul style="list-style-type: none">➤ Will staff need specific training to support the implementation of Dino Island?➤ What is the organisation's role in training staff and parents?	<ul style="list-style-type: none">➤ Will parents need specific training to implement the Dino Island?➤ Have the parents selected agreed to participate in the required training?	
Coaching and Supervision <input type="checkbox"/> In place <input type="checkbox"/> Partially in place	<ul style="list-style-type: none">➤ Do the staff who are trained require coaching?<ul style="list-style-type: none">○ If so, who will provide the coaching?➤ Does the organisation have a role in providing coaching to parents?	<ul style="list-style-type: none">➤ Will parents be provided with coaching?➤ Have parents committed to participating in the required coaching?	
Data systems to inform decisions <input type="checkbox"/> In place <input type="checkbox"/> Partially in place	<ul style="list-style-type: none">➤ Does the organisation have a role in data collection for Dino Island?➤ Does the organisation have the required technology for data collection?➤ Does the organisation have the data collection, analysis and report back systems in place?	<ul style="list-style-type: none">➤ Do parents have the required technology to provide required data?➤ Do parents need training in collecting and inputting data?	

Implementation tools: Implementation

Practice Profile

What are the core critical elements of the intervention?

Can the core elements of the intervention be delivered as needed?

Dino Island Core Elements

1. Interventionist training
2. Game Play
3. Metacognitive Strategy Coaching
4. Fidelity Monitoring

Research study elements

5. Participant recruitment
6. Pre/Post Assessments

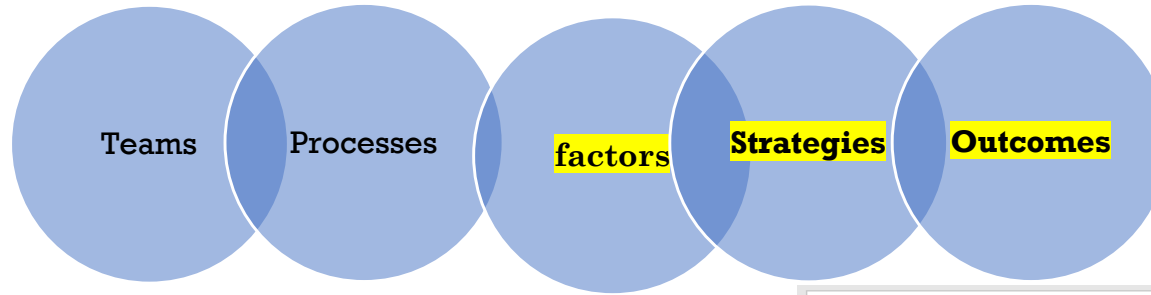
Describe the core components of the intervention and rationale. <i>NOTE: core components are non-negotiable elements of the intervention</i>	How is each component provided?	Who is involved in providing/delivering the core component and how do they do so?	How is success of this component evaluated? <i>How will you know it was delivered as intended (with fidelity)?</i>
4. Game play (on Android or iOS tablet, NOT iPhone or computer) a. 14-16 hours of game play over 6 weeks across the 5 Dino Island games or different game areas in ABCMouse/Adv. Academy 2-3 games per session 3-4 sessions per week Each session is 30-60 minutes Minimum 1.5 hrs/week to max of 4 hrs/week No breaks longer than 1 week	Child plays the game on the tablet with interventionist present 100% of the time (1:1 interventionist to child or 1 interventionist to 2 child model) Gameplay occurs in quiet setting	Trained interventionists UVIC to remind interventionists to periodically connect to internet (weekly?) so that gameplay data is pushed forward UVIC team will monitor game play fidelity?	6. Fidelity monitoring (Game Play) a. Ensuring the tablet is connected periodically to internet so game play data (game play time, range of games played, etc.) is sent to the research team

Brown J (2019). This document has been adapted from Practice Profile Activity –Working Towards Implementation Fluency ©

2011 National Implementation Research Network (NIRN) Drs. Karen Blase and Michelle A Duda

This document is part of The Implementation Game© Barwick, M. [www. Melaniebarwick.com](http://www.Melaniebarwick.com)

Dino Island Implementation in Schools



Teams

Processes

Factors

- Barriers
- Facilitators

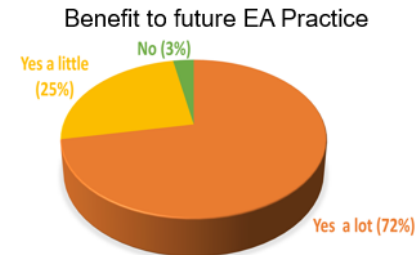
Strategies

Outcomes

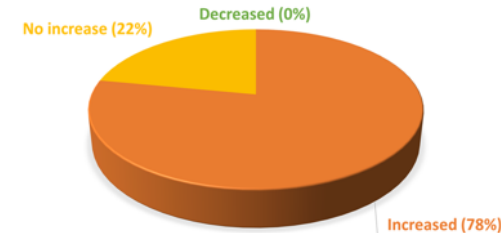
IKT

Accessibility and Engagement

Benefit to interventionists



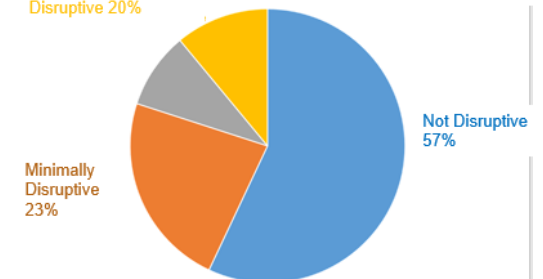
GAINS IN EA SKILLS



Accessibility

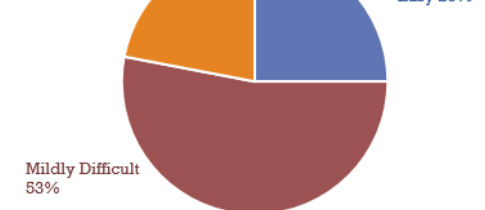
Moderately to Very Disruptive 20%

Feasibility in Schools



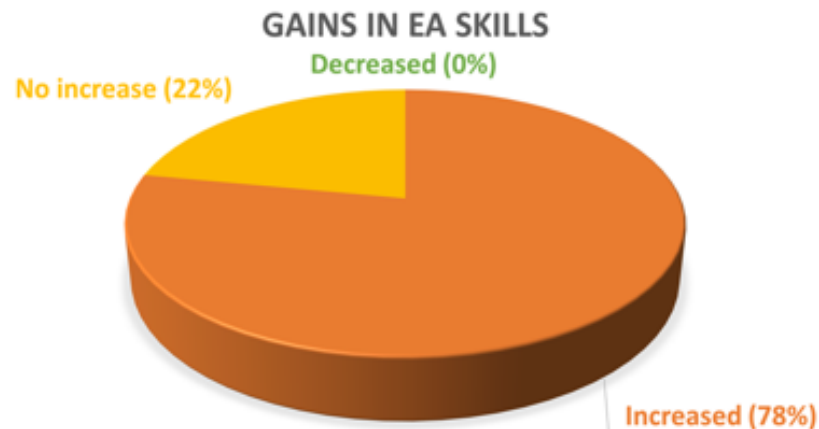
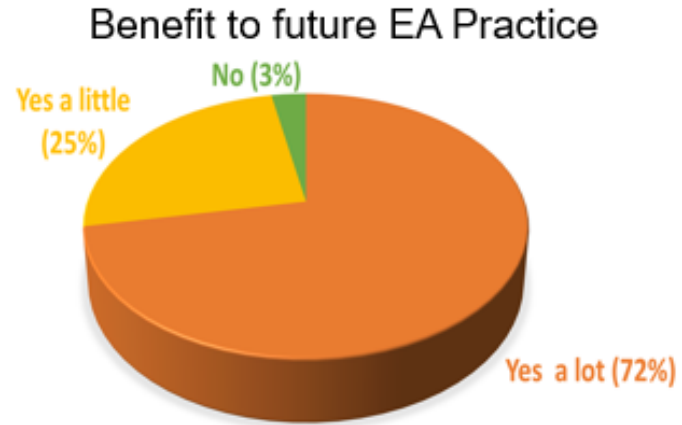
Ease of scheduling

Moderately Difficult 22%

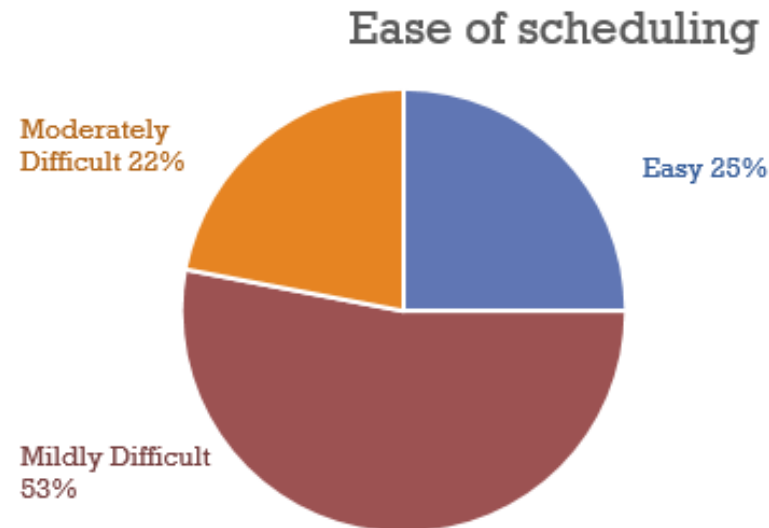
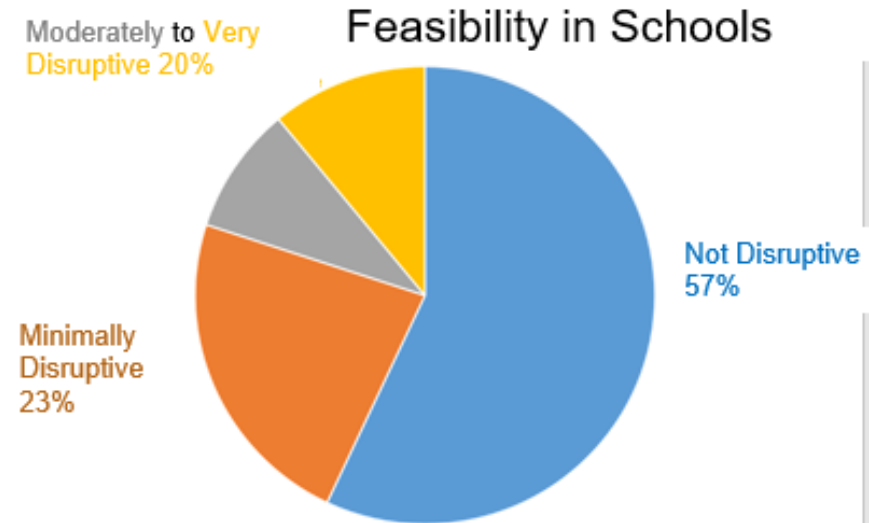


Accessibility and Engagement

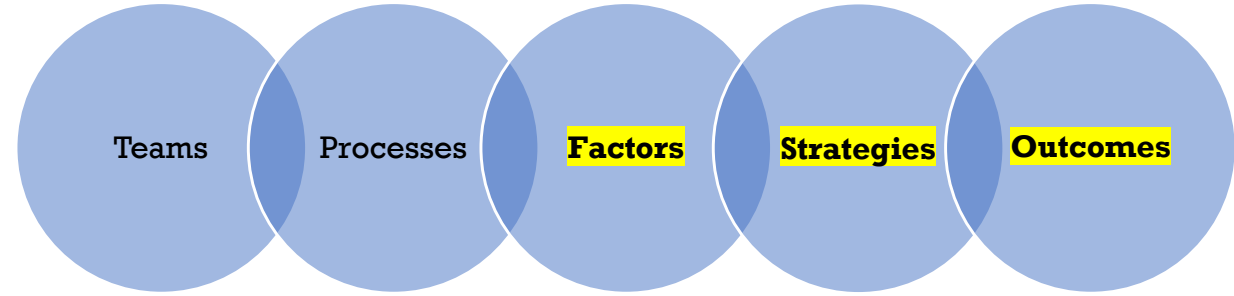
Benefit to interventionists



Accessibility



Dino Island Implementation with families



Teams

Processes

Factors

Facilitators

Barriers

Strategies

Outcomes

IKT

Dino Island Remote Implementation and IKT: Malawi Africa



Teams

Processes

Factors

Facilitators

Barriers

Strategies

Outcomes

IKT

