



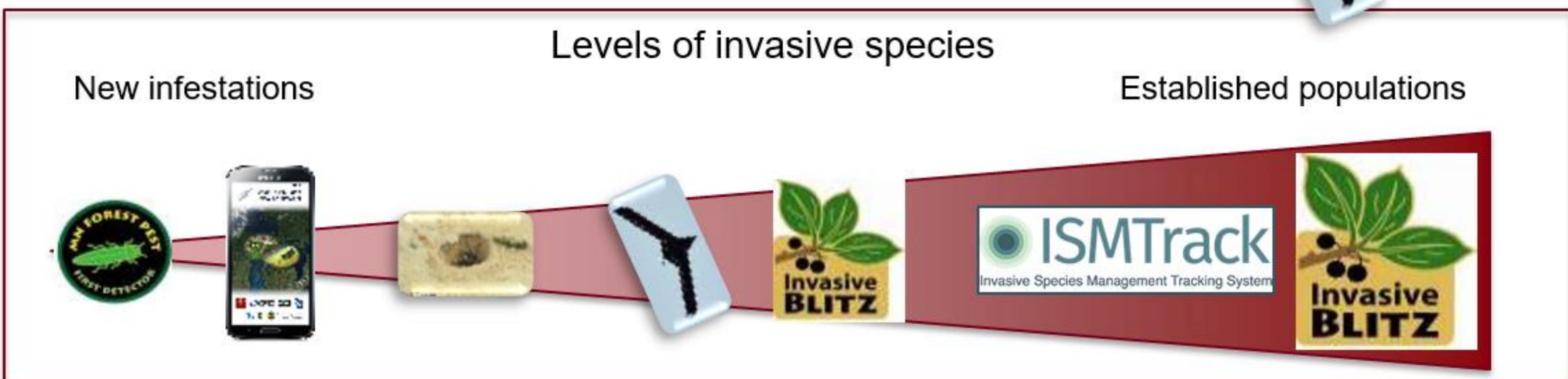
Using a Flipped Classroom for Citizen Scientists

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WITH HELP FROM MEGAN WEBER & NATE MEYER**



Invasive Species Volunteer Programs at UMN Extension

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Forest Pest First Detector (FPFD)									FPFD & AIS Detector
Emerald Ash Borer (EAB) only	EAB + insects + Oriental Bittersweet (OB)			OB	Ash survey	EAB & OB survey	Invasive Blitz		
				Wasp Watchers			ISMTrack		
				ISMTrack			UAV & 3D		

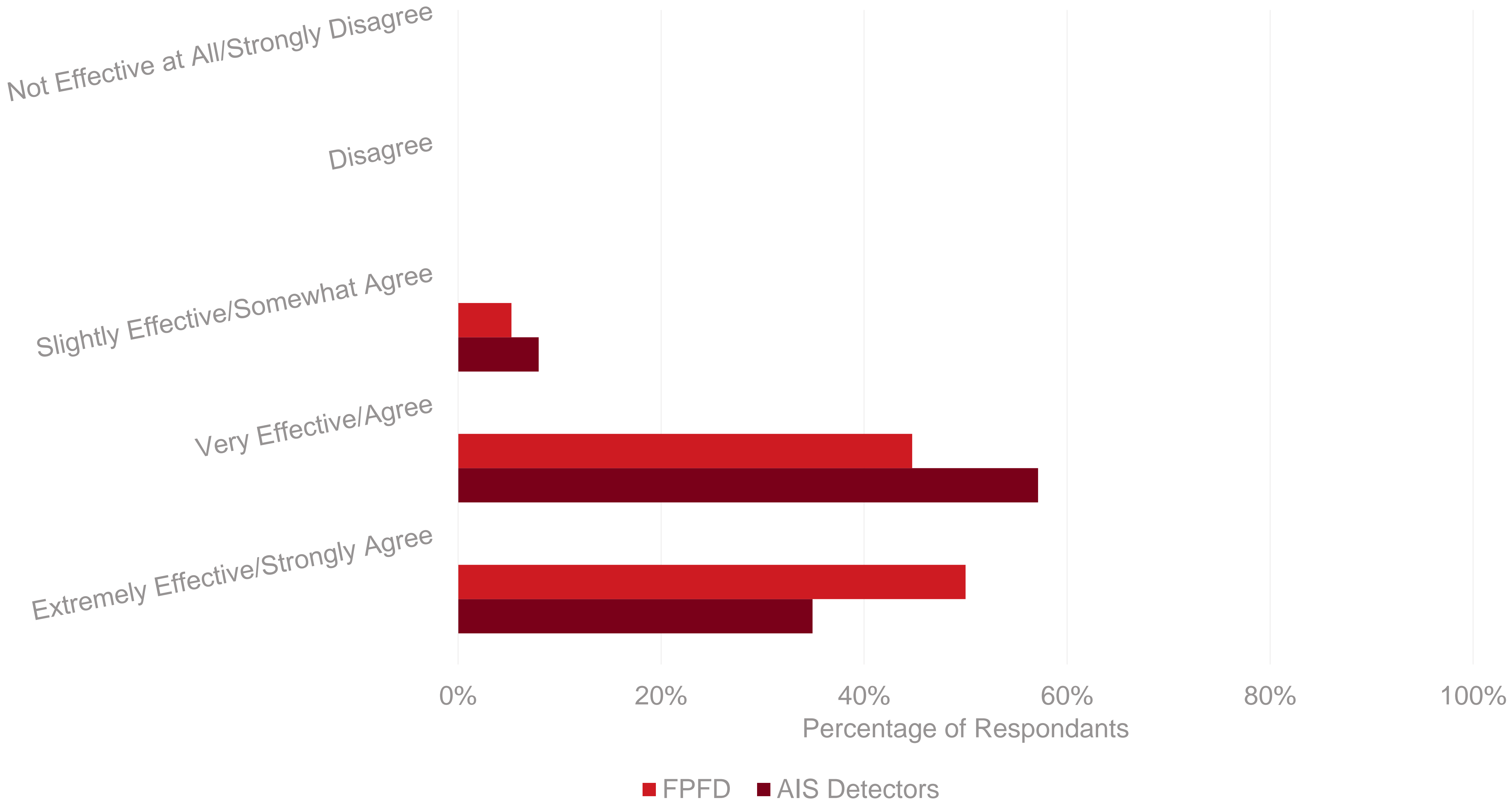


FLIPPED CLASSROOM

is an instructional strategy and a type of blended learning that reverses the traditional learning environment by delivering instructional content, often online, outside of the classroom. It moves activities, including those that may have traditionally been considered homework, into the classroom.

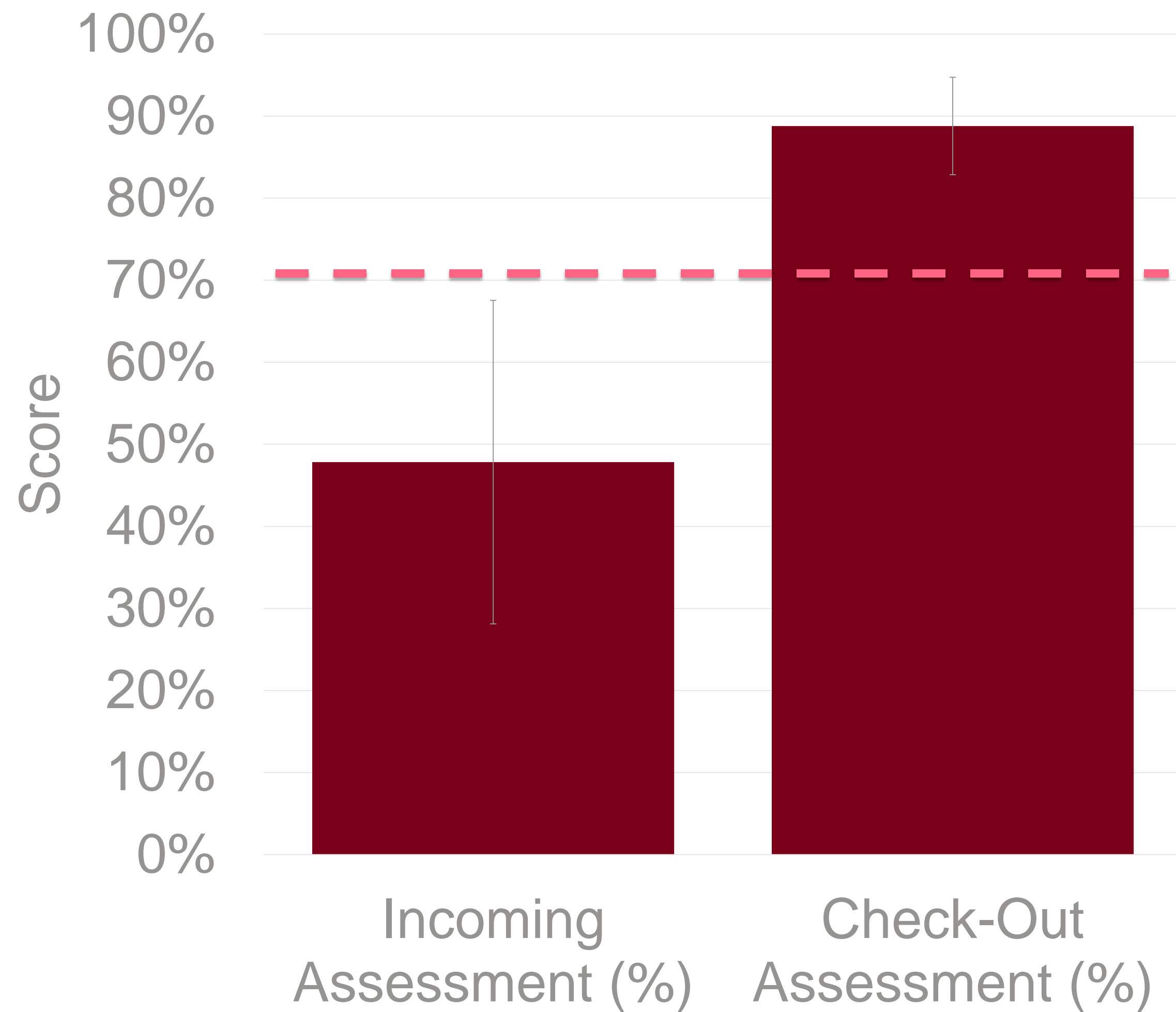


How effective was the flipped classroom?

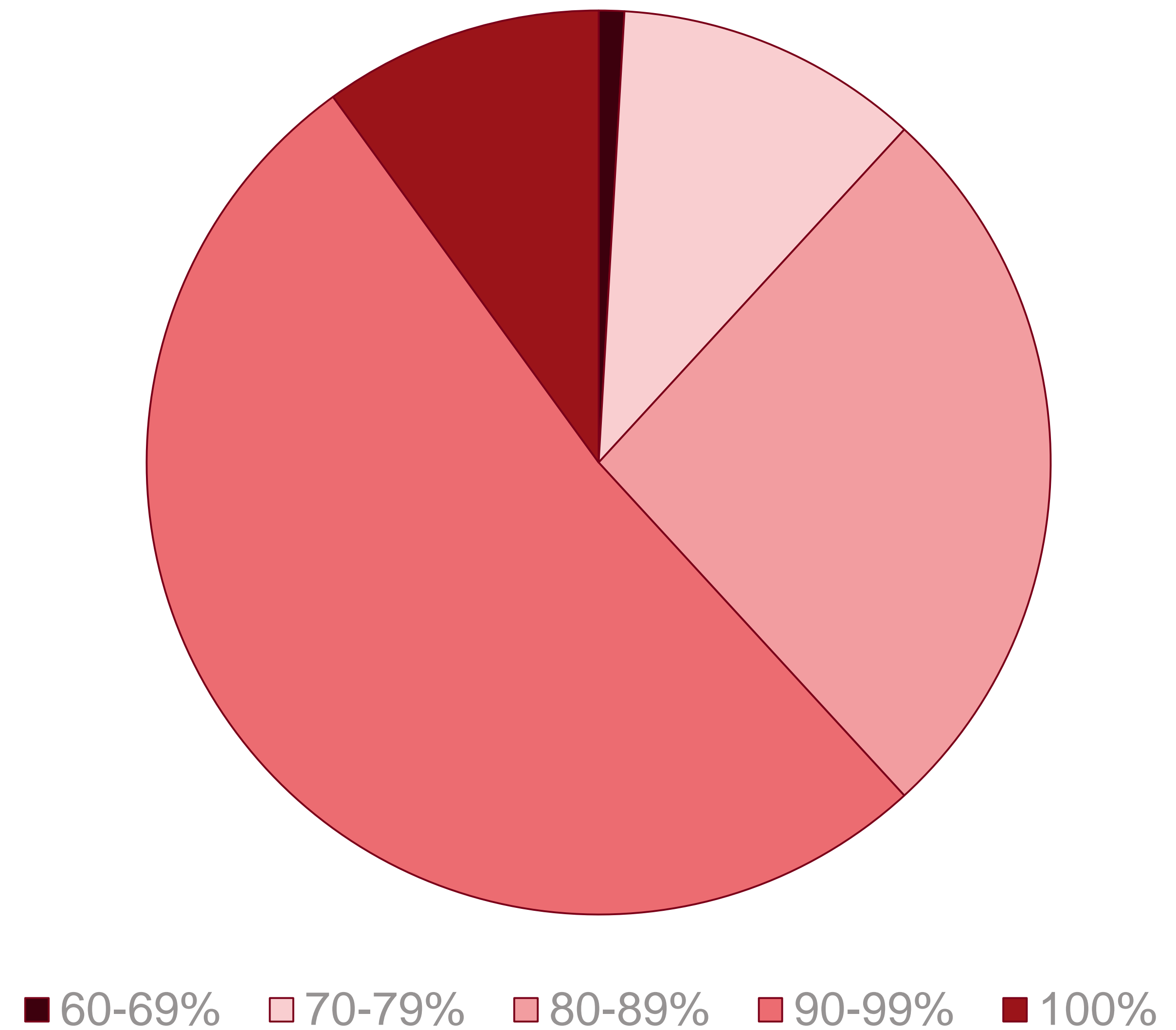


AIS Detectors Results

Online Training Scores



Workshop Scores



What participants are saying...

It was much more interactive and thus, easier to learn the material. It is hard to listen through and retain knowledge from multiple power point presentations.

It was very well done! No boredom whatsoever!

Knowing the material before class actually makes the class more productive. Not concerned as much about learning the material because you know the basics. Because of this you can ask better questions that will expand your knowledge.

What participants are saying...

I really benefited from the flipped classroom approach and enjoyed the small group sessions. Also felt the Moodle course was a great beginner course.

Loved it. Much more conducive to really learning and using the material.

I really liked this format better and enjoyed the small group discussions upstairs.



INITIAL PRACTITIONER SURVEY RESULTS

NUGGETS OF WISDOM

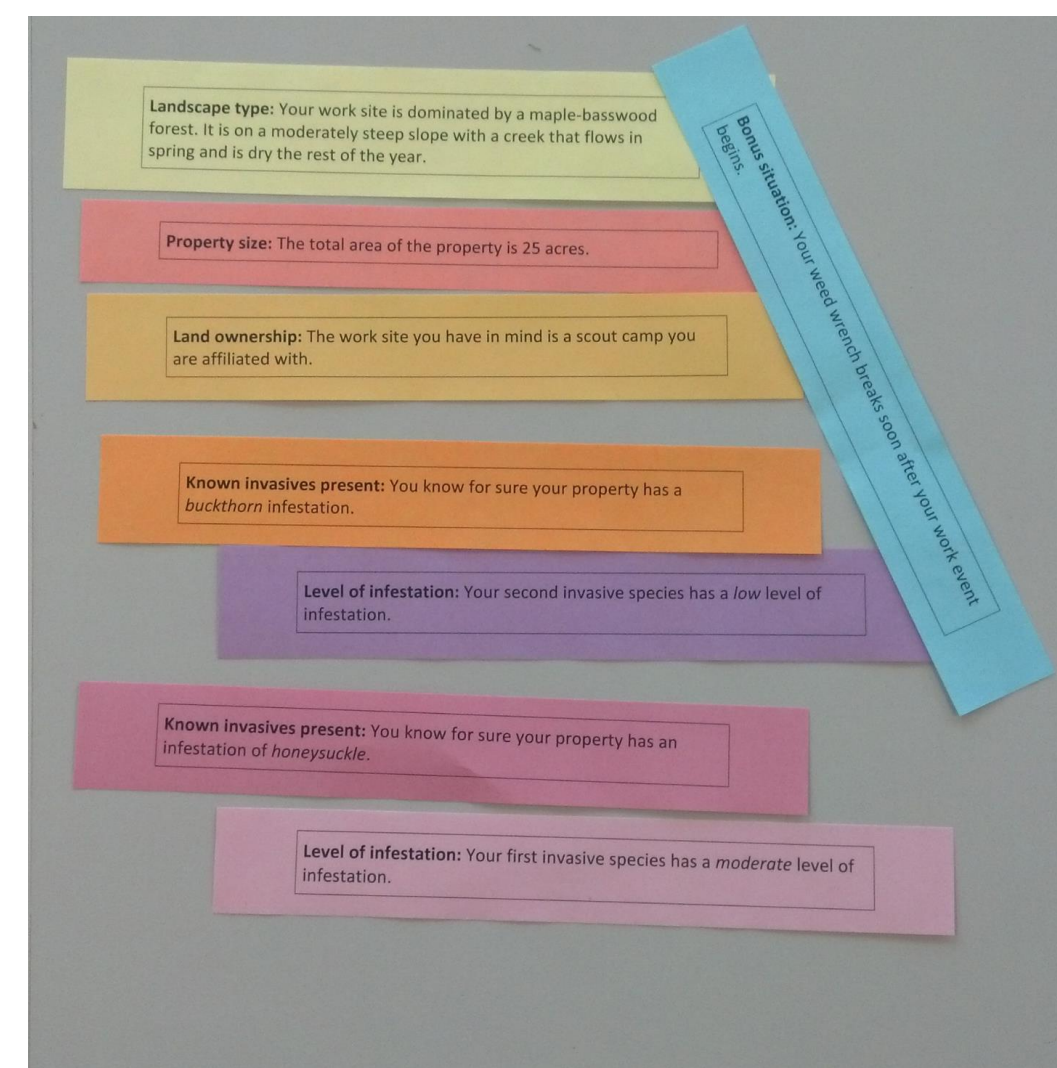


Well suited to online learning:

Readings, introductory concepts, identification characteristics, life stages, ideas that need time for reflection and knowledge assessments quizzes.

NUGGETS OF WISDOM

Photo: by Megan Weber



Well suited to in person training:

Specimen activities, discussion, scenarios, peer-learning, interacting with professionals, question & answer and practicing skills.

NUGGETS OF WISDOM



Organization & Facilitation matter

- Online learning space must be concise and well organized.
- Must remind participants to complete online activities.
- In person facilitation requires skill and careful consideration.
- Must preparing experts and facilitators.
- Need quality displays and hands-out materials.
- Cheer learning, achievements and stated reflections.



UNIVERSITY OF MINNESOTA EXTENSION

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Thank you.

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