Improving Learning in SARE and Extension Education Programs with Five Best Practices for Adult Learning

NORTHEAST SARE — Sustainable Agriculture Research & Education

SARE PROJECT

Northeast SARE Professional Development Program and New Hampshire State Program

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Objective

Northeast SARE wanted to improve the abilities of SARE state coordinators and other educators to more effectively facilitate learning for farmers and agricultural service providers.
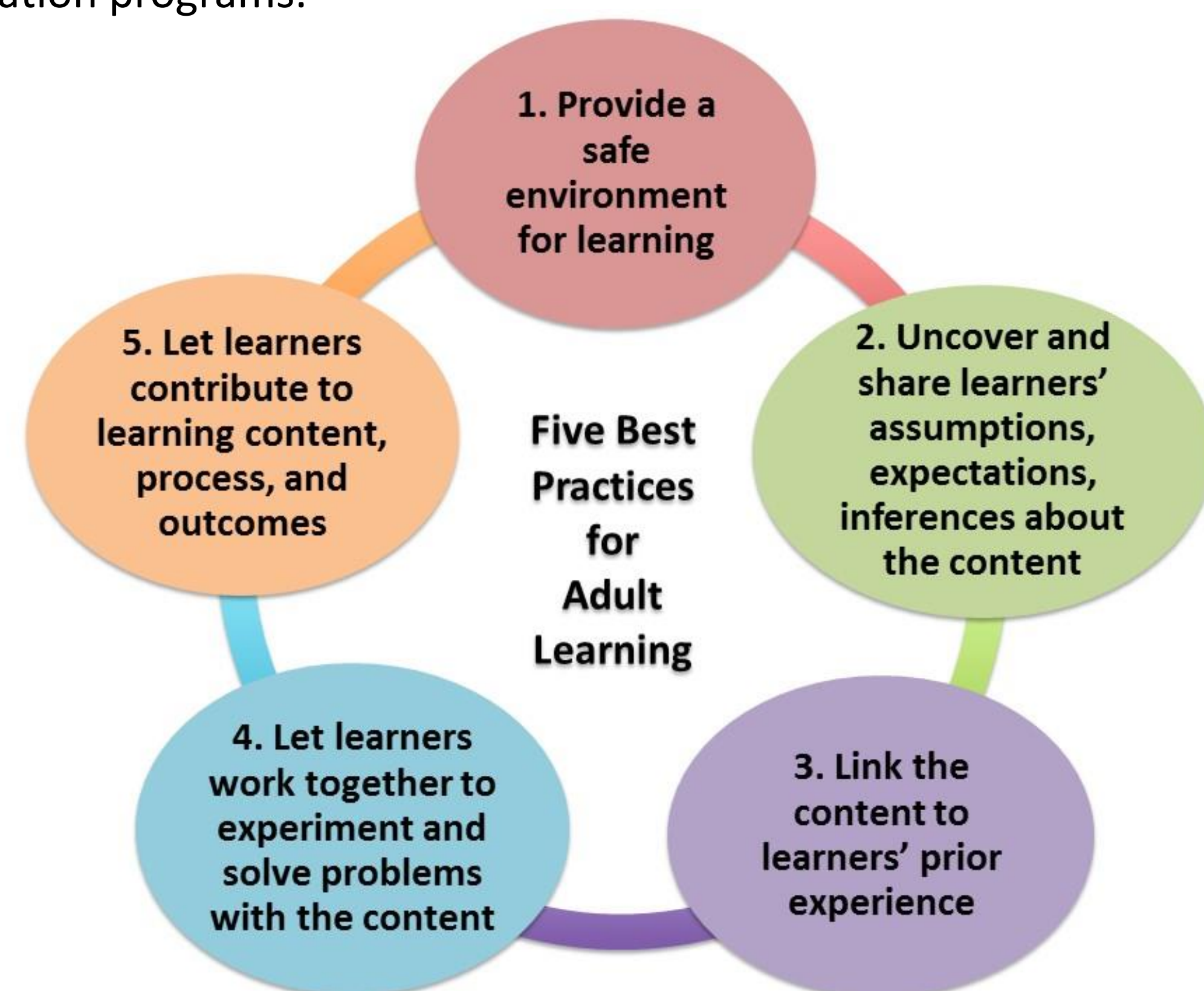
Learning is central to SARE's vision of a more sustainable agriculture. The changes on farms SARE aims to foster all result from learning new ideas.

SARE state coordinators, who conduct train-the-trainer education for agricultural service providers, are on the front lines of sustainable agriculture education, along with Extension educators and others who teach farmers. These educators typically have little or no training in effective adult education methods.

Approach

In 2012, the Northeast SARE Professional Development Program (PDP) provided training to state coordinators from adult learning specialist Dr. Sandy Bell from the University of Connecticut on 5 best practices for adult learning and strategies to apply them in sustainable agriculture education. In 2013, New Hampshire SARE state coordinator Seth Wilner provided the same training from Dr. Bell to 18 University of New Hampshire Extension educators.

Both groups have also received guidance and support, including additional workshop practice, to apply the best practices in their sustainable agriculture education programs.

Five Best Practices for Adult Learning:
- 1. Provide a safe environment for learning
- 2. Uncover and share learners' assumptions, expectations, inferences about the content
- 3. Link the content to learners' prior experience
- 4. Let learners work together to experiment and solve problems with the content
- 5. Let learners contribute to learning content, process, and outcomes

The 5 Best Practices are grounded in research from neuroscience and educational psychology.

Learning results in changes in brain neural networks. Changes happen **only** when new experiences are significantly different from prior experiences.

"Educators cannot give their ideas to adult learners like birthday presents. What we can give is new experiences" (Zull, 2006).

The 5 Best Practices

1. Provide a safe environment for learning
- Emotions and learning are biologically linked. How you feel directly influences your ability to think and solve problems.
- Aim to trigger positive emotions of joy and surprise. These create a dopamine response that primes the brain for learning.
- Avoid triggering negative emotions, especially fear. It shuts down learning.

Adults are most receptive to learning when they feel safe, both physically and emotionally.

2. Uncover and share learners' assumptions, expectations, inferences about the content
- Adults develop a set of inferences, assumptions, and expectations (aka mental models) about future experiences based on prior experiences.
- Humans are likely to reject new information that clashes with their existing mental models.
- Identify mental models as the first step for resolving clashes.

Mental models create perspectives and points of view; they guide adults in learning, problem-solving, decision-making.

3. Link the content to learners' prior experience
- The brain makes meaning of new information by making associations between new and past experiences.
- To make sense of a new experience, adults first pay attention to components that closely match past experiences. Once that occurs, adults are better able to focus on components that are completely new.

Find out how the new information links to what adults already know. Encourage learners to make associations and share prior experiences.

4. Let learners work together to experiment and solve problems with the content
- Experimentation and problem solving increase neural network complexity, which supports adaptability and creativity.
- Working together meets a basic human need to feel connected to other people and have a sense of belonging—to peer group, team, community, society.
- Encourage peer-to-peer interaction at learning events to strengthen memory and learning outcomes.

Provide opportunities to experiment, practice, and solve meaningful problems. Let learners create a plan, generate questions or lists, analyze a case scenario problem, or practice a hands-on skill.

5. Let learners contribute to learning content, process, and outcomes
- Humans have innate psychological needs for autonomy—to be self-directed, to be responsible, and to feel competent.
- Adults are intrinsically motivated for learning that is relevant to their lives and helps them do things important to them.

Give learners input and control. This improves motivation, confidence, and the likelihood that learning will be put into action.

Application Strategies

Use Best Practices to Facilitate Learning

Before > During > After

Learning Events

Northeast SARE state coordinators and the New Hampshire Extension educators have changed how they design and deliver agricultural education in diverse content areas by deliberately applying these best practices.

The best practices guide decisions at all stages of their projects, from planning and preparing participants to implementing teaching activities and providing follow-up supports to sustain learning.

Educators report more confidence and satisfaction in their teaching and greater interaction, co-learning and enjoyment among participants.

Below are examples of application strategies these educators use.

Strategies BEFORE Events:
- Collect information about participants' prior knowledge, experience, and learning goals. Involve them in planning.
- Convey clear learning objectives and how the learning may benefit participants. Be prepared to adjust if needed.
- Provide resources that help participants prepare beforehand (background reading, video demonstrations, pre-tests, data from farm to use in workshop).

Strategies DURING Events:
- Create a welcoming environment. Greet arrivals. Provide clear orientation instructions. Make the room conducive to interaction.
- Include personal introductions. Let participants share prior experiences, expectations, goals, motivations, describe a current challenge.
- Limit lecture time. Combine presentations with interaction and discussion. Use more pictures, fewer words to "tell the story".
- Include small group exercises (interpret results, solve a problem, critique a case, create a plan, checklist, or decision tool, practice a new skill.

Strategies AFTER Events
- On-line journaling, blogs, and discussion forums to increase retention, develop post-program community, increase adoption.
- Individual or group "homework" assignments that reinforce learning, provide practice opportunities, develop useful resources for the group.
- Share participant contact info, facilitate connections with assignments, check-in between events at regular intervals.

Want to learn more? Download the Adult Learning Guide: https://www.nesare.org/adultlearningguide/

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