AFFINITY RESEARCH GROUPS

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INTRODUCTIONS

Meet at least people in the next 5 minutes and share your research interest.

WORKSHOP GOALS

- Teach the basic components of ARG

- Explain the differences between an ARG and traditional research groups

- Create an awareness of how ARG activities are implemented

BRAINSTORMING

- Each group member, in turn, contributes or passes.

- The recorder writes down each contribution on a flip chart.

- Brainstorming ends when each person passes.

- Generate as many ideas as possible.

Guidelines
No discussion during brainstorming.
Every idea is a good idea.
Scaffolding is encouraged.

ROLE ASSIGNMENTS

- Recorder
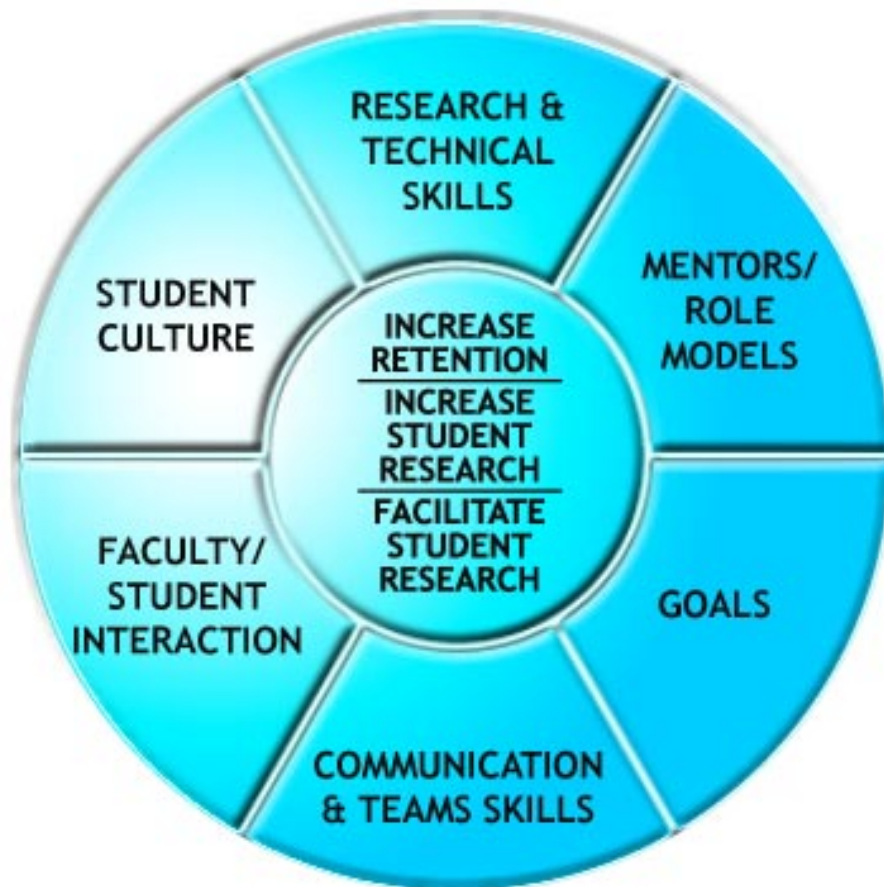
- Timekeeper

- Direction giver

QUESTION

- What challenges do you face when running a research group or being in a research group?

- Time: 10 minutes

REPORT OUT

GOAL OF AN ARG

Develop students' skills and engage students in experiences that will provide them the ability to be successful in their current and advanced studies, research, and the workforce.

OVERVIEW

An ARG is a non-hierarchical model that promotes:

- Collection of best practices
- Cooperative group interaction
- Deliberate and intentional development and practice of skills
- Support structures

Expand participation by recruiting students who may not normally be involved in research

ESSENTIAL ARG ELEMENTS

Core Purpose/Values

Student Connectedness

Deliberate Practice of Skills

CORE VALUES OF AN ARG

Student Success: An ARG values the deliberate development of skills in each student to ensure success.

Cooperation: An ARG values cooperation in all interactions, including mutual respect of opinions and ideas of all members, promotive interaction, positive interdependence, and individual accountability.

Excellence: An ARG values excellence and strives to achieve it in all its actions.

STUDENT CONNECTEDNESS

- Students build connections among members of the group.

- Students support other students in their development as a researcher.

- ARG practices build student connectedness.

DELIBERATE PRACTICE OF SKILLS

Do not assume that students join a research group with the necessary skills to be successful.

- Teach skills.

- Practice skills in an intentional and deliberate manner.

- Promote establishment of cooperative teams.

SKILLS DEVELOPMENT

- Cooperative team skills
  - o Ability to ask probing questions
  - o Active listening/participation
  - o Summarizing discussion
  - o Resolving conflict

- Research skills
  - o Setting goals and objectives
  - o Research plan development
  - o Literature survey
  - o Poster presentation

- Team management skills
  - o Defining tasks and activities
  - o Defining timelines
  - o Setting meeting agenda
  - o Documenting meeting minutes

- Communication skills
  - o Oral
  - o Written
  - o Constructive critique

AFFINITY RESEARCH GROUP CORE ACTIVITIES

Annual Orientation

ARG Philosophy
Team building
Basic group and research skills

Workshops

Deliberate Development of Skills

Core Purpose Connectedness Skills Develop.

Regular Group Meetings

Problem solving
Domain expertise
Skills practice
Accountability

Project Mgmt.

Clear Goals and Objectives
Defined activities
Defined Deliverables

Affinity Research Groups

2012

COOPERATIVE TEAM SKILLS

IMPORTANCE OF TEAM SKILLS

Why do we teach team skills?

(Doesn't everyone already know how to work in teams?)

Why do we practice team skills?

(Doesn't everyone already do this?)

COOPERATIVE TEAM SKILLS

Basic Elements

- Positive interdependence
- Face-to-face promotive interaction
- Professional skills
- Individual accountability
- Group processing

TASK (JIGSAW)

A. Break into groups of three. Assign a number 1-3.

B. Group individuals assigned the same number. Tasks:
   —learn the assigned material
   —plan how to teach the material to the other members of your group

C. Come back to your group prepared to:
   — teach material to the other members of your group
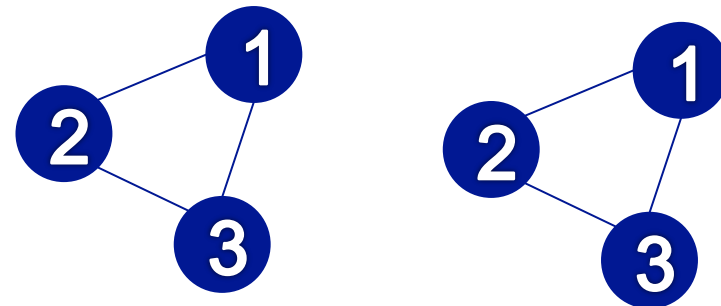   — learn the material being taught by the other members

A. Create triads
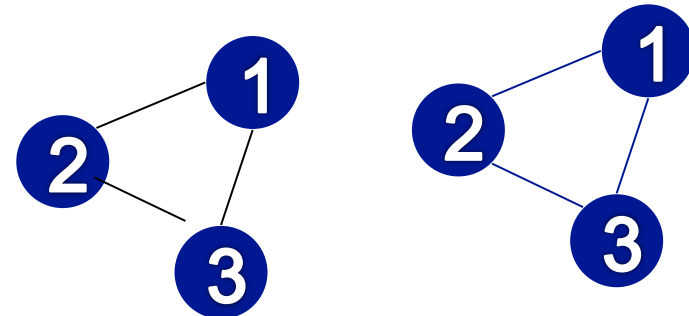
B. Prepare in groups.
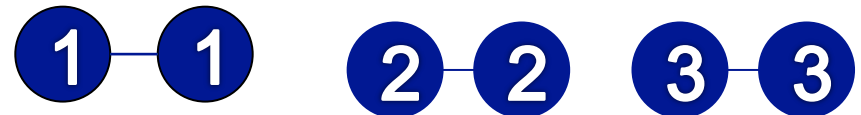
C. Return to original triad.

STRATEGY FOR PRESENTATION: VAM

Visual

Active

Memorable

Time Limit: 15 minutes

PREPARATION

Time Limit: 15 minutes to prepare

Note: You will have 2 minutes to teach to your
group.

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VIDEO CLIP OF AN ARG IN ACTION

- Look for examples of how elements of cooperative learning are incorporated.

ARG IN DIFFERENT VENUES

- General courses

- Research course

- Project class

- Tutoring and learning

- Student organization

Roach, S. and A. Q. Gates, "Teaching Software Engineering in a Computer Science Program Using the Affinity Research Group Philosophy," in *Software Engineering: Effective Teaching and Learning Approaches and Practices* (H. Ellis, S. Demurjian, and F. Naveda, eds.), New York: Information Science Reference, 2008, pp. 136-156.

DISCUSSION & WRAP UP

CONTACT INFORMATION

WEBSITE: HTTP://CAHSI.ORG

HANDBOOK: CREATING AND MAINTAINING
                       PRODUCTIVE RESEARCH

TEAMS
                       AMAZON BOOKS

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CHALLENGES

- Getting everyone to work together
- Time Management
- Finding everyone's strength
- Organization (project planning)
- Communication skills (different styles)
- Building community
- Time commitment

- Student professionalism
- Dealing w/ varying skill levels
- Mutual respect
- Balance b/w independent and collaborative research
- Finding good resources
- Generational conflict
- Optimizing knowledge distribution

EVALUATION-1

Design:

- Mixed methods design incorporating interviews, surveys, participant observation, and document analysis.

Analysis of interviews explicate how:

- Students become members of ARGs
- Group identity and cohesiveness are formed
- Members participate in larger professional communities
- Participants identities are transformed.

EVALUATION-2

- 72% of ARG students felt that their research experience had influenced their intentions to pursue graduate school.

- ARG students have also authored or co-authored journal articles *at twice the rate (13%)* of a large, diverse national sample of REU students (n = 500)

- ARG students have presented a paper or poster at a national conference *at three times the national rate (51%).*

Note: Differences are statistically significant at the 0.05 level.