Affinity Research Groups

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Ann Gates et al., Computing Alliance of Hispanic-Serving Institutions.
INTRODUCTIONS

Meet at least 3 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
ROLE ASSIGNMENTS

- Recorder
- Timekeeper
- Direction giver
BRAINSTORMING

• Each group member, in turn, contributes one idea, or passes.
• The recorder writes down each contribution on a sheet of paper.
• 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.
QUESTION

• What are the benefits of involving undergraduate students in research?

• What are the challenges in creating research groups that include undergraduate students with diverse backgrounds and abilities?

• Time: 10 minutes
DISCUSSION PROCEDURE

- Discuss and prioritize ideas.
- Time: 5 minutes
TURN TO YOUR PARTNERS

Thank them for their contributions.
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.
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.
- Clear Goals and Objectives
- Defined activities
- Defined Deliverables

Regular Group Meetings
- Problem solving
- Domain expertise
- Skills practice
- Accountability

Project Mgmt.
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
A. Groups have 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 and be prepared to:
   — teach material to the other members of your group
   — learn the material being taught by the other members

A. Groups of 3

B. Prepare in groups.

C. Return to original triad.
STRATEGY FOR PRESENTATION: VAM

Visual
Active
Memorable
**PREPARATION**

**Time Limit:** 30 minutes to prepare

**Note:** You will have 4 minutes to teach to your group.
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Project Mgmt.
Clear Goals and Objectives
Defined activities
Defined Deliverables
• 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

Use of the ARG model in the MSLC has benefited the center in many ways similar to use of an ARG in a research environment. It has increased student ownership. It has improved our communication, positive interdependence and individual accountability. It has helped students develop a better understanding and appreciation of the center's purpose in the larger sense - beyond what they would be aware of from only their personal context.
All of this has made it possible for the MSLC to operate more efficiently and effectively. In the broader sense, I believe that my students are also able to transfer the ARG principles they've learned here to other areas of their lives including research groups they are a part of now or in the future, i.e. - learning and putting into practice ARG principles is something that the students will benefit from far beyond the context of the MSLC.
2-day ARG Fundamentals Workshop
June 11-12, Miami Dade College

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
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.