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ABSTRACT

This is a compilation of materials from a workshop for librarians on cooperative learning and bibliographic instruction. Included in these materials are the workshop agenda and goals and instructions for a game, "Petals Around A Rose," that has both a competitive and a cooperative learning version. Other workshop materials include three bibliographic instruction scenarios, a cooperative learning information packet, and bibliographies on the following themes: "Collaborative Learning"; "Critical Thinking"; "CD-ROM End-User Instruction"; "Bibliographic Instruction"; "Ideas for Library Assignments and Teaching"; and "Cooperative/Collaborative Learning: Research and Practice (Primarily) at the Collegiate Level." Also provided is the workshop evaluation sheet and photocopies of the overheads used during the workshop. (MAB)

Cooperative Learning and Bibliographic Instruction: A Workshop for Librarians

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October 1991

COOPERATIVE LEARNING AND BIBLIOGRAPHIC INSTRUCTION

Luther College

May 28 and 29, 1991

Mary Jane Petrowski and Betsy Wilson

WORKSHOP GOALS

Workshop participants will:

* Experience a variety of cooperative learning techniques, ranging from the simple to the complex;

* Reflect on the nature and value of cooperative learning;

* Gain an overview of cooperative learning, including its rationale and its research base;

* Begin to discover ways to use cooperative learning techniques in bibliographic instruction;

* Focus on practical implementation of cooperative learning.

Rationale: Cooperative learning techniques provide an effective means of structuring learning in small groups. These cooperative approaches have well-documented positive effects on student achievement and thinking, development of communication skills, intergroup relations, and learner self-esteem. They are particularly effective in classes promoting respect for cultural diversity.

Research Strategies: Cooperative Learning and Bibliographic Instruction

Luther College
Decorah, Iowa
Wednesday, May 29, 1991

Workshop Leaders:
Mary Jane Petrowski
Betsy Wilson

AGENDA - Day 2

Introduction
Goals and Objectives
Logistics

Resetting the Stage

Scenarios
Read and Reflect

Learner Issues
Talking Chips (#6)

Instructional Goals
Simultaneous Roundtable (#7)

Video Vignettes

Reflections on Non-Cooperative Learning
Circle of Knowledge (#8)

BREAK

Applying Cooperative Learning to Scenarios
Group Reports

Applications of Cooperative Learning to Your Library Corners (#9)

Wrap-Up

Librarians Workshop - Day 1
1-5 p.m.

1-2:45 (105 min.)

I. Introduction to the Workshop — 15 min.
   A. Goals & objectives
   B. Agenda/Logistics
   C. Ground rules
   D. Cooperative learning techniques throughout
   E. Group processing & feedback
   F. MJP/BW introduce each other

II. Form Cooperative Groups — 10 min.
   A. Random grouping by famous pairs and card color (OH1)
   B. Group introductions (OH1.1) — 15 min.
      Three-Step Interview

III. Cooperative Learning Experience — 15 min.
   A. Think-pair-share (OH2)
      1. What is your definition of cooperative learning?
      2. How have you used or been involved in CL?
      3. Pose questions; 2 min. to write; 3:3 to pair; 3:3 to share (OH2.1)

IV. Cooperative vs. Competitive Learning
   A. Petals Around A Rose — 10 min.
      1. Groups, leader, recorder
   B. Game Playing — 15 min.
   C. Group processing — 15 min.
      1. Leader shares directive
      2. Reporters share observations
      3. Groups share feelings
   D. Debriefing — 5 min.

105 min.

Break 2:45-3:10
(OH3)

3:10-5:00 (110 min.)

V. Cooperative Learning (OH4) — 10 min.
   A. Mini-lecture/overheads
   B. Historical overview
   C. Definition
   D. Critical attributes

VI. Benefits of CL (OH6) — 15 min.
   A. Roundtable (OH6.1)

VII.	Group Process	10 min.
VIII.	What Research Shows About CL A. Mini-lecture/overheads B. Annotated bibliography	10 min.
IX.	Resistance to Cooperative Learning (OH7) A. Group Brainstorming with Recorder (OH7.1)	15 min.
X.	Group Process	10 min.
XI.	Overcoming Resistance (OH5) A. Pass a Problem (OH8) 1. Take one idea identified in IX; tick off; write on tablet; two ideas and pass.	15 min.
XII.	Group Process	10 min.
XIII.	Closure A. Summary B. Preview of Wednesday C. Cartoon (OH9) D. 3 x 5 cards 1. Group evaluation 2. Application	15 min.
		110 min.

Librarians Workshop - Day 2
8 a.m. - 12 noon

8-9:45 (105 min.)

I. Introduction (OH9.1) A. Goals and Objectives B. Building the repertoire C. Application to BI	10 min.
II. Resetting the Stage A. Form cooperative groups again B. Activity to rewarm?	5 min.
III. Scenarios (read & reflect) (OH10) A. Up-to-Date Info B. Going Online C. Using the Library	5 min.
IV. Identify Learner Issues (OH11) A. Talking Chips (OH11.1) B. Group recorder	15 min.
V. Identify & agree upon goals (OH12) A. Simultaneous Roundtable (OH12.1) B. Agree on top three goals C. Group recorder	15 min.
VI. Video Vignettes A. Each group views B. Scripts provided	25 min.
VII. Reflections on Non-Cooperative Videos A. Circle of Knowledge (OH12.2)	15 min.
VIII. Group Process	10 min. 100 min.

Break 9:45-10:10
(OH3)

10:10-12 noon (110 min.)

IX. Applying Cooperative Learning to Scenarios (OH13) A. Work using learner issues and three top goals B. Prepare group reports	30 min.
X. Group Processing (OH13.1) A. Summarize vignette & issues B. Present CL fix	30 min.

XI. Applying CL to Your Own Library (OH14)	15 min.
A. Corners (OH14.1)	
B. Write out	
XII. Group Process (if time)	10 min.
XIII. Conclusion	10 min.
A. Summary	
B. Cartoon (OH9)	
C. Evaluation form	
D. Thanks	
	105 min.

PETALS AROUND A ROSE

Competitive Learning
(Instructions)

"Petals Around A Rose" is a dice game. There is one clue to the game: the name of the game tells you, more or less, how the game is played. There is one rule to the game: the game is played against yourself and not other people. Therefore, you never reveal the solution to anyone else. Once you have solved the problem, you let the coordinator know by simply giving the correct answer several times.

Divide the group into groups of 4 or 5 persons. Select a recorder. Select a coordinator for each subgroup. The coordinators leave the room and are given the following instructions and 6 dice each.

To Coordinator: Throw the dice and, depending on the roll, say out loud:

> "There are (blank) petals around the rose." Do this a couple of times giving the right answer. Then start going around the circle, throwing the dice and asking each player in turn "How many petals are there around the rose?" Tell the player either, "No, there are no (blank) petals around the rose; or "Yes, there are (blank) petals around the rose." Continue until time is called.
>
> Petals are determined visually. If a die has a center dot and has dots around it, each surrounding dot is counted as a petal. Dice rolls are counted as such:
>
> 1 : no petals
> 2 : no petals
> 3 : 2 petals
> 4 : no petals
> 5 : 4 petals
> 6 : no petals
>
> So if six dice are thrown and the roll results in two 2's, one 6, two 5's, and one 3, there would be 10 petals around the rose.

To Recorder: Observe the action and make written notes of behaviors.

PETALS AROUND A ROSE

Cooperative Learning
(Instructions)

"Petals Around A Rose" is a dice game. There is one clue to the game: the name of the game tells you, more or less, how the game is played. There is one rule to the game: the game is over when everyone understands how it is played. You may reveal the solution to others in the group. Once the group has solved the problem, let the coordinator know by simply giving the correct answer several times.

Divide the group into groups of 4 or 5 persons. Select a recorder. Select a coordinator for each subgroup. The coordinators leave the room and are given the following instructions and 6 dice each.

To Coordinator: Throw the dice and, depending on the roll, say out loud:

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> So if six dice are thrown and the roll results in two 2's, one 6, two 5's, and one 3, there would be 10 petals around the rose.

To Recorder: Observe the action and make written notes of behavior.

SCENARIOS

Description of the Environment:

A. **Institutional setting:** Independent, liberal arts college affiliated with Evangelical Lutheran Church in America. Founded 1861 by Norwegian immigrants. Began admitting women in 1936. Most students live on campus. Offers stimulating cultural and education atmosphere.

B. **Library facilities and personnel:** Offers over 282,000 volumes, 870 periodical subscriptions, seven CD-ROM products, audio tapes, slides, microforms, and maps. Employs 5 librarians, 9 staff, and over 50 student assistants. Strong collections in Norwegian Americana, American popular music, and oral history. State documents depository. Uses OCLC and CARL.

C. **Student population:** 930 men and 1300 women. 89% of students come from immediate states. 38 states and 26 nations represented in student body. 70% of student body graduated in top quarter of high school class.

D. **Faculty:** 148 full-time and 41 part-time faculty. 64% hold a Ph.D or other terminal degree. Ratio of students to faculty is 14:1.

SCENARIO 1: TEACHING CONTEMPORARY MATERIALS

You are a librarian in a college library and a professor of English has asked you to teach his students how to find magazine and journal articles for their research papers. He is not restricting their topics - they can research anything they want as long as it is of a current contemporary nature. He is concerned they learn the difference between magazines and journals. Your library offers the standard print indexes and abstracts and has recently added CD-ROM versions of Reader's Guide, Business Periodical Index, Social Sciences Index, and Newsbank. The professor offers one class period and his total support and confidence. Have fun!

SCENARIO 2: GOING ONLINE

You are the coordinator of instruction in the college library. Each fall, new students descend on campus and eventually make their way to the library. Once there, they ask "Where's the card catalog? I need to find books." Your library has automated its holdings and no longer uses a card catalog. Perplexed and often intimidated freshmen approach the online catalog terminals displaying emotions ranging from hesitancy to impatience to awe. You are determined to develop online catalog instruction which will make both the computer phobic and the technical whiz successful and critical searchers. Good luck!

COOPERATIVE LEARNING

Information Packet

* Forming Groups
* Techniques
* Suggestions

Workshop Leaders:

Mary Jane Petrowski
Betsy Wilson

Suggestions for Group Discussion

1. **After you ask a question allow wait-time:** *"No one may raise a hand until I give a signal." (Under no conditions let hands be raised until after all have thought and you have given a cue.)*

2. **When possible allow learners to respond first in pairs:** *"Tell your partner."*

3. **Build in alternate response modes:** *"Raise your yes or no cards." "Pick a shape and Think-Link your answer." "Thumbs up, thumbs down."*

4. **Use deadlines:** *"You have 20 seconds."*

5. **Use transition cues:** *"When you hear the bell, you have 10 seconds to finish talking to your partner."*

6. **Reduce sharing time:** *Instead of allowing eight children to answer in the large group, allow three.*

7. **Provide alternative structures for pairing:** *"This time you will tell the group what your partner said." "This time try to come to agreement with your partner."*

8. **Use prearranged pairings:** *"Today sit with your 'blue' partner." (Cue on the wall.)*

9. **Use wall-cues to provide common frames of reference:** *"Choose a story from the wall list and compare its setting to that of our book." "Pick an idea and give examples from some stones." "Choose a Think Link shape and diagram your answer."*

10. **Make it clear when or if you are looking for one answer:** *"I have no idea what the best answers to this question are." "There are many possible answers to this question."*

11. **Encourage response from one learner to another:** *"Do you agree? Why?"*

12. **Use cues appropriate to the learner:** *Cubes, wheels, charts, hand signals for K-8; verbal or hand signals for high school.*

13. **Be clear on your objective:** *"That wasp flying around has nothing to do with gravity."*

14. **Flow from one thinking type to another:** *"What does that remind you of? Why do you think they did it? Should they have done it? Why?"*

15. **Allow students to make up their own questions:** *"Use the thinking type cues and make up a question for the class."*

By Frank Lyman
Published by the Howard County Public Schools Staff Development Center
1986

TEACHING BRAINSTORMING

Since brainstorming is a structured process involving specific rules, it is necessary to provide explicit instruction for its use. Many teachers have found it beneficial to introduce the brainstorming process to students by using "problems" of the type listed below:

What would be all the possible consequences if....

* people needed only two hours sleep each night?
* all home telephones had video screens?
* newspapers smelled like hamburgers?
* all the world's oil would be used up in one year at present consumption rates?
* the average daily temperature was 80 degrees?
* everyone in the world suddenly became six inches tall?
* all television stations stopped broadcasting for a year?
* students were only required to attend school until age 12?
* the average life expectancy increased to 120 years?

How many new ways can you think of to.....

* improve a bathtub?
* use a wire coat hanger?
* prevent a dog and cat from fighting?
* modify a popular game?
* use discarded automobile tires?
* improve a calendar?
* advertise a new breakfast cereal?
* improve a local recreation area?

Once students demonstrate an understanding of the D.O.V.E rule and appear comfortable working in groups, the Brainstorming Process may be applied to a variety of subject-related and "real life" problems.

BRAINSTORMING

Brainstorming is a highly effective method of generating ideas. It is especially powerful when utilized by groups, although the process may be used by individuals as well. Unfortunately, the term, brainstorming, is often misused by many people who think of it as any open-ended discussion. Brainstorming is, in fact, a structured process with specific guidelines. Its effectiveness as an idea generating method is related to the degree to which groups understand and apply these guidelines.

The D.O.V.E. Rule

The guidelines for brainstorming can be summarized by the acronym, D.O.V.E., as follows:

DEFER JUDGMENT	The judging or evaluation of ideas inhibits the flow of brainstorming and should be avoided. Ideas can be evaluated later. Participants in a brainstorming group should make a conscious effort to avoid judging their own ideas as well as those of others.
ORIGINALITY	Brainstorming is designed to stimulate original ideas. Brainstormers should strive for the unique. Even "wild and crazy" ideas are encouraged since these often lead to new insights.
VASTNESS	Brainstorming groups should try to come up with as many ideas as possible. The more ideas available, the greater the probability of really good ideas emerging. Quantity breeds quality.
ELABORATE	In brainstorming sessions, one idea will frequently spark another. Participants should seek to build, or "hitchhike", on the ideas of others.

CORNERS

Corners can be used to gather data in a quick and visual way and to involve participants. It can be used as the basis for forming either homogeneous or heterogeneous groups around some theme. It provides for movement, and can be used for metaphorical problem solving.

Corners is designed to allow participants to more easily know and accept themselves and others. Any individual difference dimension can be the focus, such as favorite teaching strategies, favorite leisure activities, or favorite type of praise. Participants can also be grouped by favorite metaphors; for example, when you think of yourself as a teacher, are you most like an owl, a tiger, a dolphin, or a kangaroo?

Typical Sequence

1. Announce the corners; post a visual in each corner (or area in the room)
2. Provide think time for participants to choose a corner; ask them not to be swayed by others choices
3. Participants go to corners
4. Brainstorm as a group:

   - Reasons for selecting that corner, or
   - Why that corner is best, or
   - Answers for some other question you put to them

5. Reach consensus on the best ideas
6. Select a spokesperson to share with the rest of the group

The leader or other members of the group can process the results.

For more information about Corners, see
Spencer Kagan's *Cooperative Learning: Resources for Teachers*, published by
Resources for Teachers, San Juan Capistrano, CA (714)248-7757.

SEND-A-PROBLEM

Original Review Version

1. **Participants Create Review Questions** Each participant on a group makes up a review problem and writes it down on a flash card. Encourage high-consensus problems which might have a right or wrong answer, verifiable by the text.

The author of each question asks it of those in his or her group. If there is total consensus, the author writes the answer on the back of the card. If not, the question is revised so that it produces consensus. The side of the card with the question is marked Q and the side with the answer is marked A.

2. **Groups Send-A-Problem** Each group passes its stack of review questions to another group.

3. **Groups Respond** Each participant takes one question from the stack it receives. Participant 1 reads the first question. The group attempts to answer it. If they have consensus they turn the card over, to see if they agreed with the sending group. If not, they write their answer as an alternative. Participant 2 reads the next one, and the procedure is repeated. The stacks of cards can be sent to a third and fourth group, etc.

4. **Senders Clarify** Stacks of cards are returned to the senders. Senders have an opportunity to discuss and clarify any questions indicated on the back of the cards.

From: Spencer Kagan, *Cooperative Learning: Resources for Teachers*, published by Resources for Teachers, 27134 Paseo Espada #202, San Juan Capistrano, CA 92675

Variation: Send-A-Problem Problem-Solving

Each group reaches consensus on a real problem the group would like to have solved (e.g., what to do about people who arrive late for meetings or leave early). The problem is written on a piece of paper and attached to the outside of a folder or envelope. Problems are then sent clockwise to the next group. Each group brainstorms for 3 minutes on solutions to the problem they receive, and then spends 2 minutes reaching consensus on their best 2-3 ideas. All work is put into the folder or envelope. Problems are then rotated to the next group, which also brainstorms and identifies best ideas without reading the previous group's work. This process may continue to one or more additional groups. The last group has 7 minutes to read all of the previous group's ideas and develop a prioritized list of possible solutions, which is written on chart paper and presented publicly.

Alternative: The leader can present a list of typical or previously generated problems and groups each each select a different problem to begin work on. The number of problems should exceed the number of groups to permit choice. The class can also brainstorm a number of problems from which to select. Work proceeds as above.

Idea generated by the Howard County Staff Development Center. 1989

ROUNDTABLE

Purpose
Roundtable is a technique that can be used for brainstorming, reviewing, or practicing a skill. Used in a contest fashion, it can also be an excellent teambuilding technique. Roundtable ensures that all members of a group are involved.

Preparation
Roundtable requires groups of 3 or more seated around a common writing surface. Participants need a pencil or pen, and one piece of paper to be shared by the group. The leader should announce the question or problem. Groups should be told that their job is to brainstorm as many answers as they can to the question or problem. They must follow certain rules in answering:

- Group members must take turns writing answers on the piece of paper, passing the paper around the circle clockwise.
- Members must not skip a turn. (You may decide if helping is allowed. If participants become stuck too often or too quickly, the problem was too hard.)
- Groups must stop when time is called (about 1 minute, depending on the task).

The key to Roundtable is the question or problem. It must be one with multiple answers and one which offers a high probability of success to all participants. You should relate the question to the purpose of the meeting or workshop, but keep it very simple so that all participants can contribute and experience working productively as a group.

When time is called, results will be handled according to your objective. If the objective was *teambuilding*, each team should score its own answer sheet and count the number of correct answers. The leader should reward the groups with the most answers and ask them to describe their methods. (Alternatively you can reward the most unusual or creative answers.)

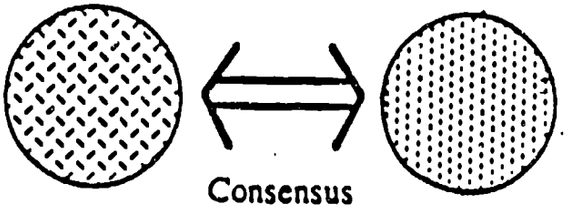
If your objective was simple to *brainstorm* a variety of answers, a simultaneous sharing technique such as "Stand and Share" would be appropriate.

All groups should have an opportunity to reflect on what made them successful as a group, and how they might do better the next time.

SIMULTANEOUS ROUNDTABLE
When the answers are long, groups are larger, or production of ideas is more important, send more pieces of paper around at the same time. **Example 1:** Have each participant begin to brainstorm answers to a question. Then have each pass his/her sheet to the left. Participants read and respond to the sheets they receive, then pass them on. Work continues until the papers have been passed completely around the table. **Example 2:** Give each participant in a group a different category for a response. For instance, if working on a school climate plan, categories might be speakers, topics, sources of funds, and incentives for participating. Participants write one idea on their sheets, and then pass them to the left. They will have a new category to respond to as they receive each new sheet. Work continues until the papers have been passed around the group several times.

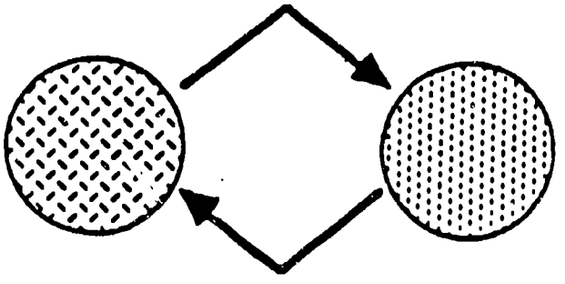
ROUND ROBIN
Have participants answer orally rather than in writing. You may use a recorder.

Think - Pair - Share Structures

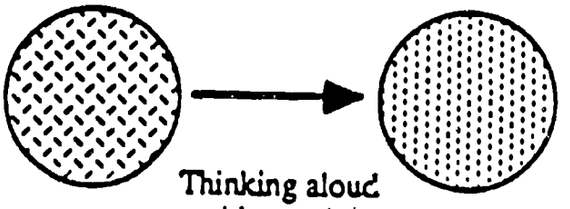


Consensus Seeking

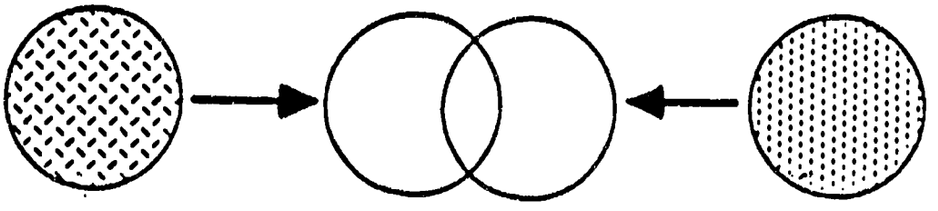
Devil's Advocate



Reciprocal Teaching



Thinking aloud problem solving



Pair Problem Solving

THINK-PAIR-SHARE:

A Cooperative Learning Strategy

WHY THINK-PAIR-SHARE?

Many teachers run their classrooms in the "share" mode. Basically this recitation model means that one student talks at a time. Though not fatal for the teacher who is proficient at this "uni-mode" strategy, it is not conducive to a high degree of pupil response, and for beginning teachers especially it can be a major source of control problems.

Think-Pair-Share is a "multi-mode" strategy developed to encourage student participation in the classroom. Students are taught to use a new response cycle in answering questions. The technique is simple to learn and is applicable across all grade levels, disciplines and group sizes. In some cases (K-12) students can facilitate the process themselves.

WHAT ARE THE COMPONENTS OF THINK-PAIR-SHARE?

- Students listen while the teacher poses a question.
- Students are given time in which to think of a response.
- Students are then sometimes cued to pair with a neighbor and discuss their responses.
- Finally, students are invited to share their responses with the whole group.

A time limit is set for each step in the process. Many teachers use cueing devices such as bells, pointers, hand signals, or cubes to move students through the cycle. Students may be asked to write or web (diagram) their responses while in the think and/or pair mode(s).

WHAT ARE THE BENEFITS TO STUDENTS?

Students have time to at least think through their own answers to questions before the questions are answered and the discussion moves on. They rehearse responses mentally, and sometimes verbally with another student, before being asked to share publicly. All students have an opportunity to share their thinking with at least one other student, thereby increasing their sense of involvement.

Think-Pair-Share is a Cooperative Learning strategy, and as such has advantages for students in the areas of acceptance, peer support, achievement, self-esteem, liking of other students, and liking of school. Cooperative Learning also has positive effects on mainstreaming and relation- ships between handicapped and nonhandicapped students.

WHAT ARE THE BENEFITS TO TEACHERS?

Students have been found to spend more time on task and to listen to each other more when engaged in Think-Pair-Share activities. Many more students raise their hands to respond after rehearsing in pairs. Students may have better recall due to increased "wait time," and the quality of responses may be better.

Like students, teachers also have more time to think when using Think-Pair-Share. They can concentrate on asking higher-order questions, observing student reactions, and listening to student responses. Class discussion can be a much more relaxing experience for teachers and students. Finally, Think-Pair-Share is easy to learn and easy to use!

* Developed by Dr. Frank Lyman, Howard County Public Schools and the Southern Teacher Education Center, University of Maryland

THREE-STEP INTERVIEW

FORM PAIRS
Use existing pair partners, or use cards or matched shapes to form participants into pairs, or tell participants to find someone they do not know.

A INTERVIEWS B
In each pair, one participant interviews the other on a topic previously announced. Participant A should be reminded to use active listening skills. Give a time limit.

B INTERVIEWS A
After the announced time has elapsed, participants reverse roles and participant B interviews participant A. Again, remind participant B to use active listening skills.

PAIRS PAIR TO FORM GROUPS OF FOUR
You may continue your theme from forming pairs in the first step. For instance, if you used UNO cards to form your pairs, now the two pairs holding 3's would get together. If you asked participants to find someone they did not know to pair with, pairs should now find other pairs they do not know.

SHARE-AROUND
Now participants take turns introducing their pair partners and sharing what they learned. They might use a formula sentence such as, "I'd like you to meet Saul. Something unusual about him is that ..."

SOME HINTS

The topic: It is important to select a topic in such a way that each participant has a unique contribution (that is, so that the first participant does not give "the answer"). Opinion/evaluation questions work well. Examples:

- Something about yourself others may not know (and you'd be willing to share)
- A favorite book, and why
- A current event
- One thing I liked about best about ...

Another possibility is to have participants interview each other in roles, that is, assign each participant in established groups of four a different identity to research, and then do the interviews in those roles.

Time limits and clear transitions from one step to the next help the process run more smoothly.

Interview skills: This is an excellent opportunity to practice listening skills. Participants can brainstorm skills, or you can introduce them a few at a time. Examples:

- Take notes on what your partner is saying
- If you are the interviewer, resist the temptation to talk. Use non-verbal encouragers (eye contact, nods, smiles, "um hm", etc.)

Rehearsal: After the second interview and before participants move into groups of four, it sometimes helps to give participants a few seconds to mentally rehearse what they will say about their partner, and to check their recollections for accuracy with their partner.

From: Spencer Kagan, *Cooperative Learning: Resources for Teachers*, published by Resources for Teachers, 27134 Paseo Espada #202, San Juan Capistrano, CA 92675

SOME COOPERATIVE LEARNING STRATEGIES THAT WORK WELL ON THE UNIVERSITY LEVEL

Think-Pair-Share: The instructor poses a question, preferably one demanding analysis, evaluation, or synthesis, and gives students about a minute to think through an appropriate response. This "think time" can be spent writing, also. Students then turn to a partner and share their responses. During the third step, student responses can be shared within a four-person learning team, within a larger group, or with an entire class during a follow-up discussion. The caliber of discussion is enhanced by this technique, and all students have an opportunity to learn by reflection and by verbalization.

Corners: Students divide into four large groups, based on a teacher-determined criteria, where they can discuss specific issues or join a partner and then form a new learning team.

Three-Step Interview: Common as an ice-breaker or a team-building exercise, this structure can be used also to share information such as hypotheses or reactions to a film or article. Students interview one another in pairs, alternating roles. They then share in a four-member learning team the information or insights gleaned from the paired interview.

Numbered Heads Together: Members of learning teams, usually composed of four individuals, count off: 1, 2, 3, or 4. The instructor poses a question, usually factual in nature, but requiring some higher order thinking skills. Students discuss the question, making certain that every group member knows the answer. The instructor calls a specific number and the designated team members respond as group spokespersons. Again, students benefit from the verbalization, and the peer coaching helps both the high and the low achievers. Class time is usually better spent because less time is wasted on inappropriate responses and because all students become actively involved with the material. Because no one knows which number the teacher will call, all team members have a vested interest in understanding the appropriate response.

Roundtable: A brainstorming technique, students write in turn on a single pad of paper, stating their ideas aloud as they write. As the tablet circulates, more and more information is added until various aspects of a topic are explored.

Talking Chips: To structure discussion and encourage full participation, each team member shares information/contributes to the discussion after placing a talking chip (a pen, checker, index card, etc.) in the center of the group. After all students have contributed in random order, they retrieve their chips to begin another round.

Co-op Cards: Useful for memorization and review, students coach each other using flashcards.

Simple Jigsaw: The faculty member divides an assignment or topic into four parts with all students from each learning team volunteering to become "experts" on one of the parts. Expert teams then work together to master their fourth of the material and also to discover the best way to help others learn it. All experts then reassemble in their home learning teams where they teach the other group members.

Structured Controversy: Team members assume different positions on controversial issues, discussing, researching, and sharing with the group their findings. This technique allows students to explore topics in depth and promotes higher order thinking skills.

Group Investigation: Based on six successive stages, cooperative groups investigate topics of mutual interest, planning what they will study, how they will divide the research responsibilities, and how they will synthesize and summarize their findings for the class.

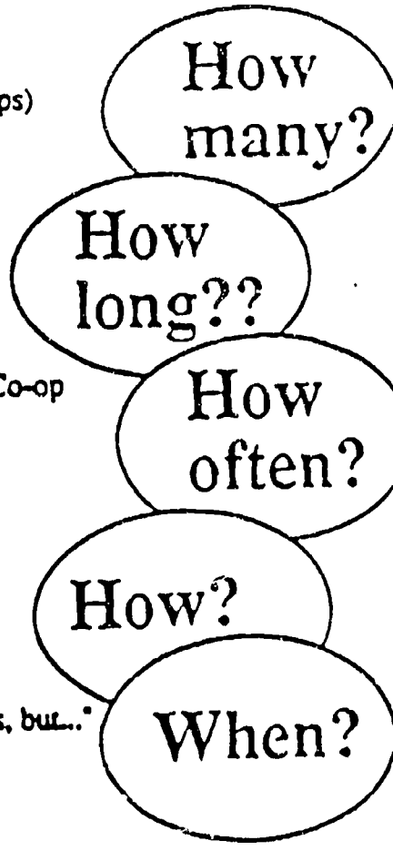
CONSIDERATIONS IN FORMING GROUPS

SIZE

The smallest group is 2. The largest recommended is 6. The following are some generalizations which may or may not be true for your specific situation.

Advantages of smaller groups

Each member participates more
Fewer social skills required
Require less time to form and reform (movement of people and chairs; selecting groups)
Best for dealing with simple tasks and reaching consensus
Can work quickly



Advantages of larger groups

More ideas generated
Can deal better with complex ideas
Fewer group reports for large group to hear
Work well with complex strategies such as Jigsaw, Group Investigation, and Co-op Co-op

Advantages of specific numbers in groups:

•• **Two**

It's hard to get left out of a pair!
Pairs are easiest to form: "Turn to a neighbor" may do it.

••• **Three**

Pairs can only interact 1 way. Triads can interact 3 ways.
Triads tend to surface issues. Two will reach consensus, then the third will say, "Yes, but..."
Triads are good for process observing: one observes two others.

•• **Four**

•• Groups can easily form two pairs for Think-Pair-Share, interviewing, or tutoring.
Foursomes can interact 6 ways.

••• **Six:**

••• Six-somes can form two triads or three pairs for intra-group work.
There are fewer groups reports to the class.

HOW TO FORM TEAMS

Heterogeneous or homogeneous

Unless there is an overwhelming reason to use homogeneous groups, research favors making groups as heterogeneous as possible with regard to academic achievement, gender, ethnicity, task orientation, learning style, ability/disAbility, and learning style. Heterogeneous groups promote more elaborate thinking and explanations, and provide opportunities for students to develop feelings of mutual concern.

Random, self-selected, or assigned

Student self-selection of groups is generally not successful, although there are ways for students to provide some input for teachers to consider in assigning groups.

Random selection or assigned groups are more likely to be heterogeneous. Whether to use random groups or assigned groups depends to a great extent on the duration of the task and the frequency with which groups are used.

If groups are used frequently or if the task is of short duration, then any difficulties arising from "unbalanced" teams will not be important over the long run...they will balance out.

If, on the other hand, groups are used infrequently or the task is of some duration, it will become more

DURATION OF GROUPS

Groups may work for as short a period of time as 5 minutes, or they may work together several times a week for an entire semester.

- **Short duration advantages**
  Students have opportunities to get to know more classmates
  Group formation skills are practiced

- **Long duration advantages**
  Students have practice with more complex collaborative skills
  Stronger bonds can form between students
  More complex tasks can be tackled
  Note: Groups of long duration should work together at least once a week.

A rule of thumb is to allow groups to remain together long enough to feel successful, but not so long that bonds become counter-productive in the class. It is a usually a mistake to break groups up because they are having trouble functioning, because members will then feel unsuccessful as group members and take that feeling with them to the next group situation. Try to find some measure of success!

FORMING TEAMS RANDOMLY

Line up by some criterion and count off
Students can line up by first name, last name, middle name, height, birthday, age, length of hair, color of eyes, or how much they like math.
Colored shapes method (e.g. use 5 kinds of shapes each in 5 different colors; group by color or shape)
Deuces Wild (uses a deck of cards)
Hum into groups (prepare index cards with the names of different songs)
Famous pairs (prepare index cards each with one name of a famous pair)
Puzzle pieces (students whose puzzle pieces go together form a pair or larger group)
Use your imagination!

FORMING HETEROGENEOUS TEAMS

Especially for STAD, TGT, and Jigsaw

1. Rank students by academic achievement in the subject
2. Determine the number of teams. Divide the number of students by 4 to get the number of teams. The remainder, if any, tells you the number of 5-member teams.
3. If there was a remainder, reserve that many students from the middle of your list to be assigned to teams as 5th members.
4. Assign the highest student, lowest student, and two students closest to the middle of your list to the first team. Cross them off the list.
5. Assign from the remaining students the (now) highest, lowest, and two students closest to the middle to the next team. Cross them off.
6. Continue assigning teams until all students have been assigned except for those remaining from step 3.
7. Check your teams for heterogeneity by gender, ethnicity, or other criterion. Balance them to the extent possible by adding 5th members or by swapping students who are of about the same ability academically.
8. Assign any remaining students that were not assigned in step 7. Consider adding a 5th member to a team in which one member is frequently absent.

Example:
If you have 30 students, you will have 7 teams. Two teams will have 5 members.
On your ranked list of students, make a note to reserve the 15th and 16th students until last.

Team #1 (tentatively):	1st, 30th, 14th, and 17th students.
Team #2 (tentatively):	2nd, 29th, 13th, and 18th students, etc.

COLLABORATIVE LEARNING -- A BIBLIOGRAPHIC ESSAY

Collaborative learning is an alternative teaching method that is gaining popularity all over the country. Since the 1970's, scholars have been researching this new teaching method and documenting successful trials that have occurred in their classrooms. The idea of collaborative learning involves students learning in small groups, usually of four to five people. This is a radical departure from traditional teaching methods which discourage group work and emphasize individual learning and competition between students.

Collaborative learning has other names including active learning, cooperative learning, and group learning. All of these terms imply a teaching style in which students are encouraged to actively participate in the learning process and learn to think critically. Collaborative learning has been used across the curriculum including writing and biology courses. It has also been popular as a way of teaching students how to use the library.

The materials identified as a result of this literature search are divided into several categories. First, a number of articles are highly relevant to collaborative learning (active learning, cooperative learning, group learning, etc.), but they do not directly address the issue in library education. Nevertheless, they provide excellent background information which can be applied in all areas of education, including bibliographic instruction.

The second group of articles focuses on collaborative learning in libraries. These articles target those whose interest is in bibliographic instruction.

Finally, a few books and five ERIC documents are included as additional sources of information.

I. Materials relating to collaborative learning in general education.

Many scholars have involved themselves in the research on collaborative learning, but one name is repeatedly cited as a forerunner in the study of collaborative learning. Kenneth Bruffee is most associated with the beginning of serious research on collaborative learning. Bruffee is an English professor at Brooklyn College, and since the early 1970's, he has been a forerunner in research on this teaching method. It is important to be familiar with his name and his works, which provide useful definitions and perspectives on the subject.

In "The Structure of Knowledge and the Future of Liberal Education," Bruffee philosophizes on the trends in education, and how they do not parallel the changes in society. He expounds on the idea that as society becomes more social and less hierarchical, education should do the same. In other articles, Bruffee describes the role of the teacher, gives examples of collaborative learning in writing classes, and addresses other issues.

1. Bruffee, Kenneth A. 1987. "The Art of Collaborative Learning: Making the Most of Knowledgeable Peers." Change 19 (March/April): 42-47.

2. Bruffee, Kenneth. 1981. "Collaborative Learning." College English 43(7): 745-747.

3. Bruffee, Kenneth A. 1973. "Collaborative Learning: Some Practical Models." College English 34(5): 634-643.

4. Bruffee, Kenneth A. 1984. "Collaborative Learning and the 'Conversation of Mankind,'" College English 46(7): 635-652.

5. Bruffee, Kenneth A. 1981. "The Structure of Knowledge and the Future of Liberal Education." Liberal Education 67: 177-186.

The other materials cited in this section also address collaborative learning. First, Cooperative Learning and College Teaching is a new newsletter devoted entirely to the subject. The authors give definitions, specific teaching examples, and discuss the advantages of adopting cooperative teaching methods. The newsletter is also a resource guide to articles and materials related to collaborative teaching.

Next, "Building Learning Through Cooperative Small Groups" is a paper that was presented at the American Association of Higher Education (AAHE) 1991 National Conference on Higher Education. It is a good guide for educators who wish to design a collaborative learning workshop. It includes exercises to do with the participants who wish to understand cooperative/collaborative learning through experience. Roles of the educator are also stressed. A bibliography is included.

The last three articles include information on why learning in groups is beneficial to students and teachers; the different types of groups that the teacher can form; ways to break away from traditional teaching methods, and more.

6. Cooperative Learning and Teaching. (Volume 1 Number 1 appeared December 1990)

7. Millis, Barbara J.; and Davidson, Neil. "Building Learning Communities Through Cooperative Small Groups." Presented at the AAHE 1991 National Conference on Higher Education, Sunday, March 24, 1991.

8. Natasi, Bonnie K.; and Clements, Douglas H. 1991. "Research on Cooperative Learning: Implications for Practice." School Psychology Review 20(1): 110-131.

9. Bizzell, Patricia; and Herzberg, Bruce. 1987. "Research as a Social Act." The Clearing House 60(7): 303-306.

10. Jones, Noragh. "Learning in Groups: Strategies for Effective Group Work in Education and Training for Library Management." Education for Information 4(1986): 27-45.

II. Materials relating to collaborative learning and library education/bibliographic instruction.

Jean Sheridan is a prominent author on the subject of collaborative learning. Her professional interests involve adult education, but her articles usually include useful information for library instruction. In "The What, Why and How of Collaborative Learning..." Sheridan introduces the terms that are "collaborative learning's" counterparts in adult education and psychology. They are: andragogy and small group participation. In each of her articles, Sheridan gives very specific examples, many directly concerning library instruction, that can be used as models for collaborative learning.

Barbara Fister's article provides a highly relevant discussion of this teaching method. She explains the advantages of collaborative learning and includes specific examples from her bibliographic instruction classes. Additionally, "Library Scavenger Hunts: A

Way Out" by Randall McCutcheon is an interesting account of an English teacher's attempt to use active learning to teach his students how to use the library. He provides his students with clues to the answers of questions that can be found in various reference sources in the library. The students work in groups as they do the scavenger hunt. Finally, "Active Methods in the One-Hour Bibliographic Instruction Lecture" summarizes examples of different techniques for teaching students to use the library in an outline format that is easy to read and understand.

11. Fister, Barbara. 1990. "Teaching Research as a Social Act: Collaborative Learning and the Library." RQ 29(4): 505-509.

12. McCutcheon, Randall. "Library Scavenger Hunts: A Way Out of the Bewilderness." Wilson Library Bulletin 64(January 1990): 38-40.

13. Ridgeway, Trish. "Active Learning Methods in the One-Hour Bibliographic Instruction Lecture." In Fifteenth Library Instruction Conference (1987: Ohio State University) Defining and Applying Effective Teaching Strategies for Library Instruction. Ann Arbor, Michigan: Pierian Press, 1989, pp. 61-63.

14. Sheridan, Jean; Byrne, Ann C.; and Quina, Kathryn. "Collaborative Learning Notes From the Field." College Teaching 37(2): 49-53.

15. Sheridan, Jean. 1990. "The Reflective Librarian: Some Observations on Bibliographic Instruction in the Academic Library." The Journal of Academic Librarianship 16(1): 22-26.

16. Sheridan, Jean. "The What, Why and How of Collaborative Learning: And its Importance for the Off-Campus Student." In Off Campus Library Services Conference (1988: Charleston, S.C.) The Off Campus Library Services Conference Proceedings. Central Michigan University 1989, pp. 410-418.

III. Books relating to collaborative learning and alternative teaching styles.

The following materials relate to alternative teaching methods, and they are interesting sources. They are not as concerned with collaborative learning as the articles above, and none of them touch on the subject of bibliographic instruction. Nevertheless, they contain useful discussions of group learning and alternative teaching styles in general.

Active Learning: A Trainer's Guide is completely devoted to the subject of active learning. Baldwin and Williams write specifically for professionals who train other professionals, but this book can be helpful for educators at other levels as well. Improving Teaching Styles is a compilation of essays by experienced educators who have experimented with different styles of teaching. Two particularly relevant articles are "The Teacher as Leader" by Edward Glassman and "Teaching as an Interactive Process" by Mary Lynn Crow. Both address group learning at length. Finally, Collaborative Learning by Edwin Mason is the least relevant of these three books. Mason provides a lively discussion of secondary education today and why it is so disturbing. Although Chapters Three and Four deal most directly with collaborative learning. It is included because it offers an interesting commentary on the rigidity of education today.

17. Baldwin, Jill; and Williams, Hank. Active Learning: A Trainer's Guide. Oxford: Basil Blackwell Ltd., 1988.

18. Eble, Kenneth E., ed. New Directions for Teaching and Learning. San Francisco: Jossey-Bass Inc., 1980.

19. Mason, Edwin. Collaborative Learning. London: Ward Lock Educational, 1970.

IV. ERIC documents dealing with collaborative learning.

Several ERIC documents provide a useful understanding of the concept of collaborative learning. Dickerson's article is especially relevant to librarians because she describes how she divides her students into learning groups who then write collaborative papers on different areas of the library. She includes comments from students, who seem to have excellent knowledge of the library as a result of this method of instruction. Golub's compilation of twenty-three essays all involve learning in groups, but they are not directly related to the library. Simmons-O'Neill and Tebo-Messian each provide interesting accounts, and they include feedback from the students on collaborative learning. Specifically, Tebo-Messian describes a case study where she observed and interviewed students involved in collaborative learning. Davenport looks at the results of studies that question the relationship bwtween education orientation and age, sex, or academic achievement.

20. Davenport, Joseph III; and Davenport, Judith A. "Andragogical-Pedagogical Orientation and Its Relationship to Selected Variables Among University Students." October 5, 1984, 23 p. ED 254 498.

21. Dickerson, Mary Jane. "The Implications of Collaborative Writing: A Dialogue." March 1989, 16 p. ED 305 644.

22. Golub, Jeff; and others (National Council of Teachers of English, Urbana, IL). "Focus on Collaborative Learning. Classroom Practices in Teaching English, 1988." 1988, 152 p. ED 297 338.

23. Simmons-O'Neill, Elizabeth. "Evaluating Sources: Strategies for Faculty-Librarian-Student Collaboration." March 1990, 39 p. ED 321 259.

24. Tebo-Messina, Margaret. "Fictions Juxtaposed: A Tale of Three Groups." March 1989, 12 p. ED 309 405.

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CRITICAL THINKING
Suggested Reading Bibliography

Beyer, Barry K. "Critical Thinking: What Is It?" SOCIAL EDUCATION 49 (April 1985): 270-276.

Bodi, Sonia. "Critical Thinking and Bibliographic Instruction: The Relationship." JOURNAL OF ACADEMIC LIBRARIANSHIP 14 (July 1988): 150-153.

Engeldinger, Eugene A. "Bibliographic Instruction and Critical Thinking: The Contribution of the Annotated Bibliography." RQ 28 (Winter 1988): 195-202.

Fink, Deborah. "Information Technology and Library Research" in CONCEPTUAL FRAMEWORKS FOR BIBLIOGRAPHIC EDUCATION. Libraries Unlimited, 1987.

_____. "What You Ask for is What You Get: Some Do's and Don'ts for Assigning Research Projects." RESEARCH STRATEGIES 4 (Spring 1986): 91-93.

Frick, Elizabeth. "Information Structure and Bibliographic Instruction." JOURNAL OF ACADEMIC LIBRARIANSHIP 1 (September 1975): 12-14.

Heiman, Marcia and Joshua Slomianko. CRITICAL THINKING SKILLS Washington, D.C.: National Education Association, 1985.

Keeley, Stuart and M. Neil Browne. "Assignments that Encourage Critical Thinking." JOURNAL OF PROFESSIONAL STUDIES 12 (Winter 1988): 2-11.

Krapp, JoAnn Vergona. "Teaching Research Skills: A Critical Thinking Approach." SCHOOL LIBRARY JOURNAL 34 (January 1988): 32-35.

Kuhlthau, Carol Collier. "Cognitive Development and Students' Research." SCHOOL LIBRARY JOURNAL 33 (August 1987): 46.

_____. "Developing a Model of the Library Search Process: Cognitive and Affective Aspects," RQ (Winter 1988): 232-242.

_____. "Information Search Process: A Summary of Research and Implications for School Library Media Programs." SCHOOL LIBRARY MEDIA QUARTERLY 18 (Fall 1989): 19-25.

_____. "Perceptions of the Information Research Process in Libraries: A Study of Changes from High School through College." INFORMATION PROCESSING AND MANAGEMENT 24, no. 4 (1988): 419-427.

_____. TEACHING THE LIBRARY RESEARCH PROCESS. West Nyack, NY: The Center for Applied Research in Education, 1985.

Meyers, Chet. TEACHING STUDENTS to THINK CRITICALLY: A GUIDE FOR FACULTY IN ALL DISCIPLINES. San Francisco: Jossey-Bass, 1986.

Plum, Stephen H. "Library Use and the Development of Critical Thought." In Kirk, Thomas G., ed. INCREASING THE TEACHING ROLE OF ACADEMIC LIBRARIES. (NEW DIRECTIONS FOR TEACHING AND LEARNING, no. 18) San Francisco: Jossey-Bass, 1984.

Ruggiero, Vincent R. TEACHING THINKING ACROSS THE CURRICULUM. New York: Harper & Row, 1988.

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CD-ROM End-User Instruction
Selected References

BASIC TEXTS

Eaton, Nancy. Linda Brew MacDonald and Mara Saule. CD-ROM and Other Optical Information Systems: Implementation Issues for Libraries (Phoenix: Oryx Press, 1989).

Lambert, Steve and Suzanne Ropiequet, eds. CD-ROM: The New Papyrus: The Current and Future State of the Art (Bellevue, WA: Microsoft Press, 1986).

DIRECTORIES AND GUIDES

Gale, John. State of the CD-ROM Industry: Applications, Players and Products (Alexandria, VA: Information Workstation Group, 1987-).

Nelson, Nancy Melin. CD-ROMS in Print (Westport, CT: Meckler, 1987-).

GENERAL DISCUSSIONS

Baumbach, Donna J. "CD-ROM: Information at Your Fingertips!" School Library Media Quarterly 18 (3) (Spring 1990):142-149.

Borgman, Christine L. "Information Retrieval from CD-ROM: Status Quo or a Revolution in End-User Access?" Canadian Journal of Information Science 12 no. 3/4 (1987):43-53.

"CD-ROM Sepcial Report." PC World 5 (4) (April 1987):220-259.

"CD-ROM vs Online: Can Both Exist?" Special Section in Bulletin of the American Society for Information Science 14 (1) (October/November 1987):14-27.

Crane, Nancy and Tamara Durfee. "Entering Uncharted Territory: Putting CD-ROM in Place." Wilson Library Bulletin 62 (4) (December 1987):28-30.

Downing, Jeff. "Planning for CD-ROM Technology: Or, How to Stop Worrying and Embrace the CD-ROM." Reference Services Review (3) (1988):21-26.

Duggan, Mary Kay. CD-ROM in the Library: Today and Tomorrow (Boston: Hall, 1990).

LePoer, Peter M. and Carol A. Mularski. "CD-ROM's Impact on Libraries and Users." Laserdisk Professional 2 July 1989):39-45.

Motley, Susan A. "CD-ROM: 1988 in Review." Computers in Libraries 9 (July/August 1989):17-19.

Nicholls, Paul Travis. "CD-ROM in the Library: Implications, Issues, and Sources." Laserdisk Professional 3 (March 1990):100-103.

Stewart, Linda; Katharine S. Chiang, and Bill Coons, ed. Public Access CD-ROMs in Libraries: Case Studies (Westport, Conn.: Meckler, 1990).

Stewart, Linda and Jan Olsen. "Compact Disk Databases: Are They Good for Users?" Online 12 (3) (May 1988):48-52.

FINANCING COSTS

Eaton, Nancy L. and Nancy B. Crane. "Integrating Electronic Information Systems into the Reference Services Budget." The Reference Librarian 19 (1987):28-30.

Miller, David C. "Evaluating CD-ROMS: To Buy or What to Buy?" DATABASE 10 (3) (June 1987):36-42.

Tenopir, Carol. "Costs and Benefits of CD-ROM." Library Journal 112 (14) (September 1, 1987):156-157.

Watson, Paula D. "Costs to Libraries of the Optical Information Revolution." ONLINE 12 (1) (January 1988):45-50.

REFERENCE SERVICE IMPLICATIONS

Forrest, Charles, Karen Chapman and Joyce Wright. "Periodical Indexing On Disc: A Comparative Analysis of InfoTrac Use in Three Illinois Libraries." Reference Services Review (Spring 1989):85-92.

Graves, Gail T., Laura Harper and Beth King. "Planning for CD-ROM in the Reference Department." College and Research Libraries News 48 (7) (July/August 1987):393-400.

Planning for End-User Searching: A Checklist of Questions. Prepared by the RASD MARS Direct Patron Access to Computer-Based Reference Systems Committee of the American Library Association. RASD MARS Occasional Papers no. 1, 1987.

Reese, Jean. "CD-ROM Technology at Vanderbilt University: Impact on Library Staff and the Educational Community." Optical Information System 9 (January/February 1989):38-43.

Sabelhaus, Linda. "CD-ROM Use in an Association Special Library: A Case Study." Special Libraries 79 (2) (Spring 1988):148-151.

Silver, Howard. "Managing a CD-ROM Installation: A Case Study at Hahnemann University." ONLINE 12 (2) (March 1988):61-66.

Whitaker, Cathy Seitz. "Pile-up at the Reference Desk: Teaching Users to use CD-ROMs." Laserdisk Professional 3 (March 1990):30-40.

USER EDUCATION

Allen, Gillian. "Database Selection by Patrons Using CD-ROM." College and Research Libraries 51 (1) (January 1990): 69-75.

Allen, Gillian. "Patron Response to Bibliographic Databases on CD-ROM." RQ (Fall 1989):103-110.

Barlow, Diane, Brenda Karnes and Gary Marchionini. "CD-ROM in a High School Library Media Center: A Research Project." School Library Journal 34 (3) (November 1987):LC66-LC72.

Belanger, Anne-Marie and Sandra Hoffman. "Factors Related to Frequency of Use of CD-ROM: A Study of ERIC in an Academic Library." College & Research Libraries 51 (March 1990):153-162.

Bostian, Rebecca and Anne Robbins. "Effective Instruction for Searching CD-ROM Indexes." Laserdisk Professional 3 (January 1990):14-17.

Gratch, Bonnie G. "Rethinking Instructional Assumptions in an Age of Computerized Information Access." Research Strategies 6 (Winter 1988):4-7.

Johnson, Mary E. and Barbara S. Rosen. "CD-ROM End-User Instruction: A Planning Model." Laserdisk Professional 3 (March 1990):35-40.

Mullan, N. A. and A. R. Blick. "Initial Experiences of Untrained End-Users with a Life Sciences CD-ROM Database: A Salutary Experience." Journal of Information Science. 13 (3) (1987):139-141.

Pearce, Karla J. "CD-ROM: Caveat Emptor." Library Journal 113 (2) (February 1, 1988):37-38.

Steffey, Ramona J. and Nikki Meyer. "Evaluating User Success and Satisfaction with CD-ROM." Laserdisk Professional 2 (September 1989):35-45.

CD-ROM NETWORKING

Thompson, M. Keith and Kimberly Maxwell. "Networking CD-ROMS." PC Magazine 9 (4) (February 27, 1990):237-260.

CURRENT AWARENESS

CD-ROM Librarian (formerly Optical Information Systems Update). 1987- . (Meckler Publishing).

CD-ROM Professional. (Formerly The Laserdisk Professional). 1988- . (Pemberton)

CD-ROM Review. 1986- . (CW Communications).

Computers in Libraries (formerly Small Computers in Libraries). 1987- . (Meckler Publishing).

Electronic and Optical Publishing Review. 1981- . (Learned Information).

Electronic Library. 1987- . (Learned Information).

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BIBLIOGRAPHIC INSTRUCTION: A SELECTIVE BIBLIOGRAPHY

Bibliographies/Literature Reviews

- Kirkendall, Carolyn A. and Carla J. Stoffle. "Instruction." in The Service Imperative for Libraries: Essays in Honor of Margaret E. Monroe, edited by Gail A. Schlachter, Littleton, CO: Libraries Unlimited, 1982, pp. 42-93.

  Excellent, comprehensive overview of bibliographic instruction including history, major developments, and current issues: Faculty support, educational theory in instruction and administrative support. Examines user education in college and university, school, special, and public libraries. Includes a useful classified bibliography. Now somewhat dated, but still useful.

- Rader, Hannelore B. "Library Orientation and Instruction--(year)." Annually in Reference Services Review. Ann Arbor, MI: Pierian Press, 1976- .

  Annual, annotated bibliography covering publications for a given year.

Periodicals/Columns Devoted to Bibliographic Instruction

ACRL-BIS Newsletter. Chicago: American Library Association. Association of College and Research Libraries. Bibliographic Instruction Section, 1984- .

Reichel, Mary, ed. "Library Literacy." RQ. Chicago: American Library Association. Reference and Adult Services Division, 1980- .

LIRT Newsletter. Chicago: American Library Association. Library Instruction Round Table, 1978- .

LOEX News: The Quarterly Newsletter of the Library Orientation-Instruction Exchange. Ypsilanti, MI. LOEX Clearinghouse. Division of Educational Resources. Eastern Michigan University, 1974- .

Research Strategies: A Journal of Library Concepts and Instruction. Ann Arbor, MI: Mountainside Publishing, 1983- .

Handbooks and Texts

American Association of School Librarians and Association for Educational Communications and Technology. Information Power: Guidelines for School Library Media Programs. Chicago: American Library Association, 1988.

This is an especially valuable handbook for school librarians engaged in the development of school library media programs. Reflective of the leadership school librarians have taken in instruction, the book addresses missions and challenges of school libraries, the roles and responsibilities of school library media specialists, leadership, planning, management, personnel, resources, and association support.

American Library Association. Association of College and Research Libraries. Bibliographic Instruction Section. Policy and Planning Committee. Bibliographic Instruction Handbook. Chicago: American Library Association, 1979.

Contains the "Guidelines for Bibliographic Instruction in Academic Libraries," and an outline of basic considerations in starting up a bibliographic program: Needs assessment checklist, administrative considerations, a timetable, model statement of objectives, and pros and cons of different modes of instruction. A glossary and pathfinder on BI conclude the handbook. Some portions sorely dated. BIS is currently authoring a BI sourcebook to replace this work.

American Library Association. Association of College and Research Libraries. Bibliographic Instruction Section. Research Committee Subcommittee on Evaluation. Evaluating Bibliographic Instruction: A Handbook. Chicago: American Library Association, 1983.

Intended as an introduction to evaluation, this handbook offers direction for the instruction librarian. Includes: Rationale for evaluation: goals and objectives in evaluation; research designs; data-gathering instruments; and data management and statistical analysis. Concludes with an annotated chapter on significant works.

American Library Association. Association of College and Research Libraries. Bibliographic Instruction Section. Continuing Education Committee. Organizing and Managing a Library Instruction Program: Checklists. Chicago: American Library Association, 1980.

This publication consists of twelve checklists librarians can use for initiating or improving an instruction program: Elements of a model instruction program; assessing student needs; assessing instructor interest; administration of a program; developing objectives; instructional modes and materials; teaching librarians to teach; evaluation; collegial and administrative support.

Mellon, Constance A. Bibliographic Instruction: The Second Generation. Littleton, CO: Libraries Unlimited, 1987.

This book presents the writings of many practitioners whose ideas and research were responsible for transforming BI from a haphazard grassroots activity to an accepted, integrated area of librarianship. The authors intended for the book to be a forum for first generation instruction librarians to discuss the issues, concerns, and challenges of instruction and subsequently establish an agenda for the second generation.

Renford, Beverly and Linnea Hendrickson. Bibliographic Instruction: A Handbook. New York: Neal-Schuman, 1980.

Practical, comprehensive handbook. Explains in detail how to plan for a BI program; how to develop an orientation program, course-related instruction, credit instruction, and computer-assisted instruction programs; how to develop workbooks; and how to use audiovisual materials and equipment.

Roberts, Anne F. and Susan G. Blandy. Library Instruction for Librarians. Englewood, CO: Libraries Unlimited, 1989.

This textbook provides both the mature instruction librarian and the library school student with a concise theoretical, practical, and historical guide to instruction. Written by practitioners, this "how-to" book is based on proven practices, and provides examples of curricular aids, a selective bibliography, and advice to the beginner.

Svinicki, Marilla and Barbara A. Schwartz. Designing Instruction for Library Users. New York: Marcel Dekker, 1987.

Directed primarily at the academic librarian, this text can be used by those involved in user education in any setting. The authors provide a readily usable guide to the instruction design process including a practical system for categorizing instructional methods, a planning continuum, designing and sequencing instruction, learning theory applied to BI, and assessing the effectiveness of instruction.

Theory, General Discussion, and Case Studies

Frick, Elizabeth. "Information Structure and Bibliographic Instruction." Journal of Academic Librarianship 1 (September, 1975): 12-14.

Examines four levels of bibliographic awareness: Particular reference sources; types of sources; ways in which reference sources reflect the nature of the disciplines they serve; and information structure in the society.

Marshall, Albert P., ed. "Current Library Use Instruction." Special issue of Library Trends 29 (Summer 1980).

Reviews the history and current trends in BI, elements of a successful BI program, competency-based education and library instruction, research strategies, modes of instruction for the individual, reference service as a teaching function, training and education of library instruction librarians, involvement of the librarian in the total educational process, the computer and user education, and evaluation of bibliographic instruction. The Winter 1991 issue of Library Trends will also be devoted to BI.

McDonald, Frances Beck. The Emerging School Library Media Program. Englewood, CO: Libraries Unlimited, 1988.

With articles contributed by major figures in school librarianship, this collection illustrates the instructional role of library media specialists. The authors reiterate the contributions librarians make to the educational process.

Oberman, Cerise and Katina Strauch, eds. Theories of Bibliographic Education: Designs for Teaching. New York: Bowker, 1982.

This book represents the theoretical foundation for bibliographic instruction as a discipline and is intended as a companion volume to the more practical Learning the Library: Concepts and Methods for Effective Bibliographic Instruction (1982). The essays focus on the theory of information structure and education principles. Emphasizing concept-based learning, the text encourages a shift away from tool-based learning.

Pastine, Maureen and Bill Katz. Integrating Library Use Skills in the General Education Curriculum. New York: Haworth Press, 1989.

This work (published simultaneously as The Reference Librarian, number 24) discusses some of the major ideas underlying integration of library use skills and research methods into general education programs. Book sections are titled: 1) Bridging the Gap Between High School and College; 2) Library Skills in a Community College; 3) Library Skills in Colleges and Universities; 4) Library Use Skills for Off-Campus Programs; 5) Issues Related to Microcomputers and End-User Online Searching; 6) Future of BI.

Tuckett, Harold W. and Carla J. Stoffle. "Learning Theory and the Self-Reliant Library User." RQ 24 (Fall 1984): 58-66.

This article reviews the pedagogical models applied by instruction librarians over time and proposes that a new model which attempts to incorporate cognitive learning theory is emerging.

Prepared by Betsy Wilson for LIS 450AC
August 1990

Dickerso Mary Ja. . "The Implications of Collaborative Writing: A Dialogue." March 1989), 16 p. ED 305 644

Engeldinger, Eugene E. "Teaching Only the Essentials - The Thirty-Minute Stand." Reference Services Review 16(4) (1988): 47-50+.

Farber, Evan. "Alternatives to the Term Paper." In T. Kirk (ed.), Increasing the Teaching Role of Academic Libraries (San Francisco: Jossey-Bass, 1984).

Fister, Barbara. "Teaching Research as a Social Art: Collaborative Learning and the Library." RQ 29(4) (Summer 1990): 505-509.

Gibson, Craig. "Alternatives to the Term Paper: An Aid to Critical Thinking." The Reference Librarian 24 (1989): 297-309.

Greene, Mark A. "Using College and University Archives as Instructional Materials: A Case Study and an Exhortation." Midwestern Archivist 14(1) (1989): 32-38.

McCutcheon, Randall. "Library Scavenger Hunts: A Way Out of the Bewilderness." Wilson Library Bulletin 64(5) (January 1990): 38-40.

Schaus, Margaret. "Hands-on History." College & Research Libraries News 51(9) (October 1990): 825-831.

Sheridan, Jean. "The Reflective Librarian: Some Observations on Bibliographic Instruction in the Academic Library." Journal of Academic Librarianship 16(1) (March 1990): 22-26.

_____. "The What, Why and How of Collaborative Learning: And Its Importance for the Off-Campus Student." In Off Campus Library Services Conference (1988: Charleston, S.C.) The Off Campus Library Services Conference Proceedings (Central Michigan University, 1989): 410-418.

Cooperative Learning and Bibliographic Instruction

Luther College
May 28 and 29, 1991

WORKSHOP EVALUATION

Please rank your opinion of the following workshop features:

1. OVERALL EVALUATION OF WORKSHOP

Excellent	Very Good	Average	Fair	Poor
5	4	3	2	1

2. PRESENTATION STYLE

Excellent	Very Good	Average	Fair	Poor
5	4	3	2	1

3. INSTRUCTORS' KNOWLEDGE OF THE SUBJECT

Excellent	Very Good	Average	Fair	Poor
5	4	3	2	1

4. HANDOUTS AND PACKETS

Excellent	Very Good	Average	Fair	Poor
5	4	3	2	1

5. USEFULNESS OF CONTENT

Very	Somewhat	Not Very	Useless	Don't Know
5	4	3	2	1

6. MY EXPECTATIONS WERE MET

Fully	Mostly	Somewhat	Not At All	Don't Know
5	4	3	2	1

7. What I liked best about this workshop was...

8. What I liked least about this workshop was...

Comments?

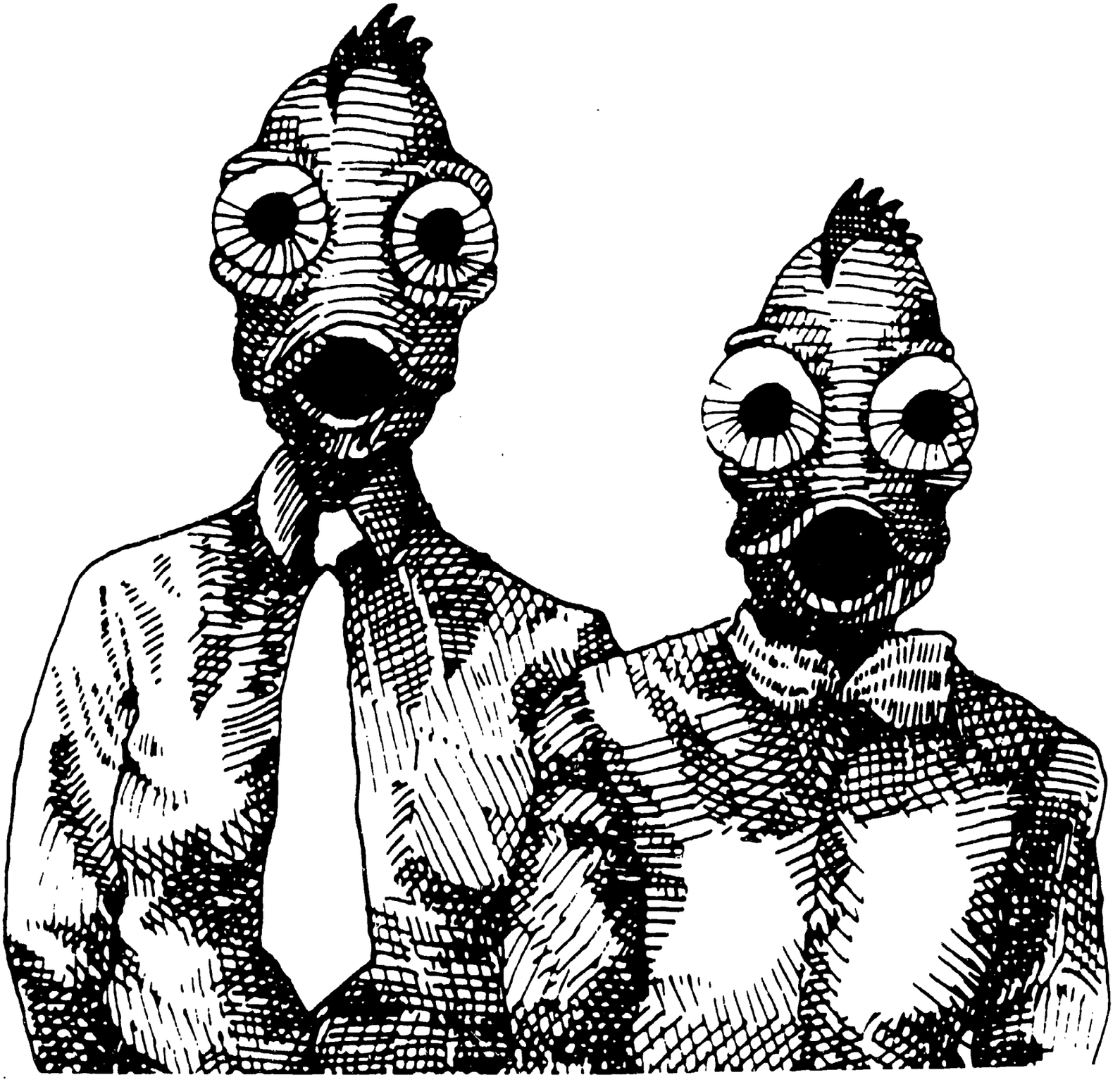
Thank you!

OVERHEADS

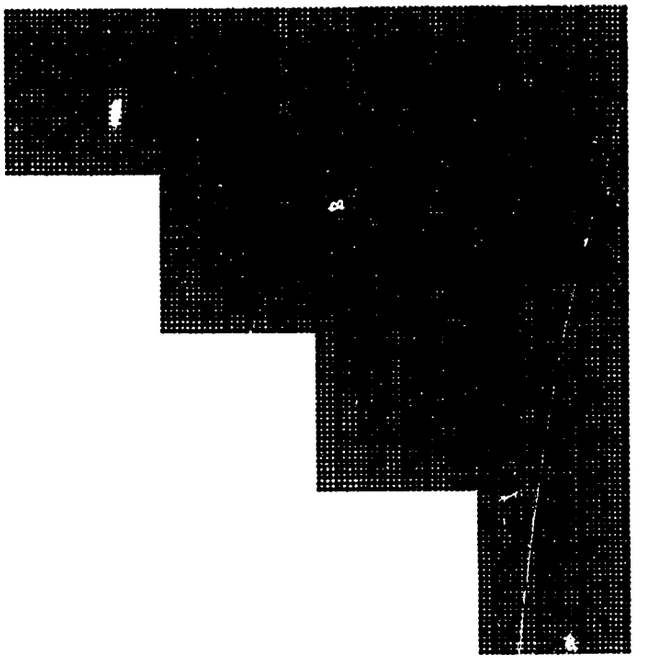
* In Order of Use

* See Workshop Outline

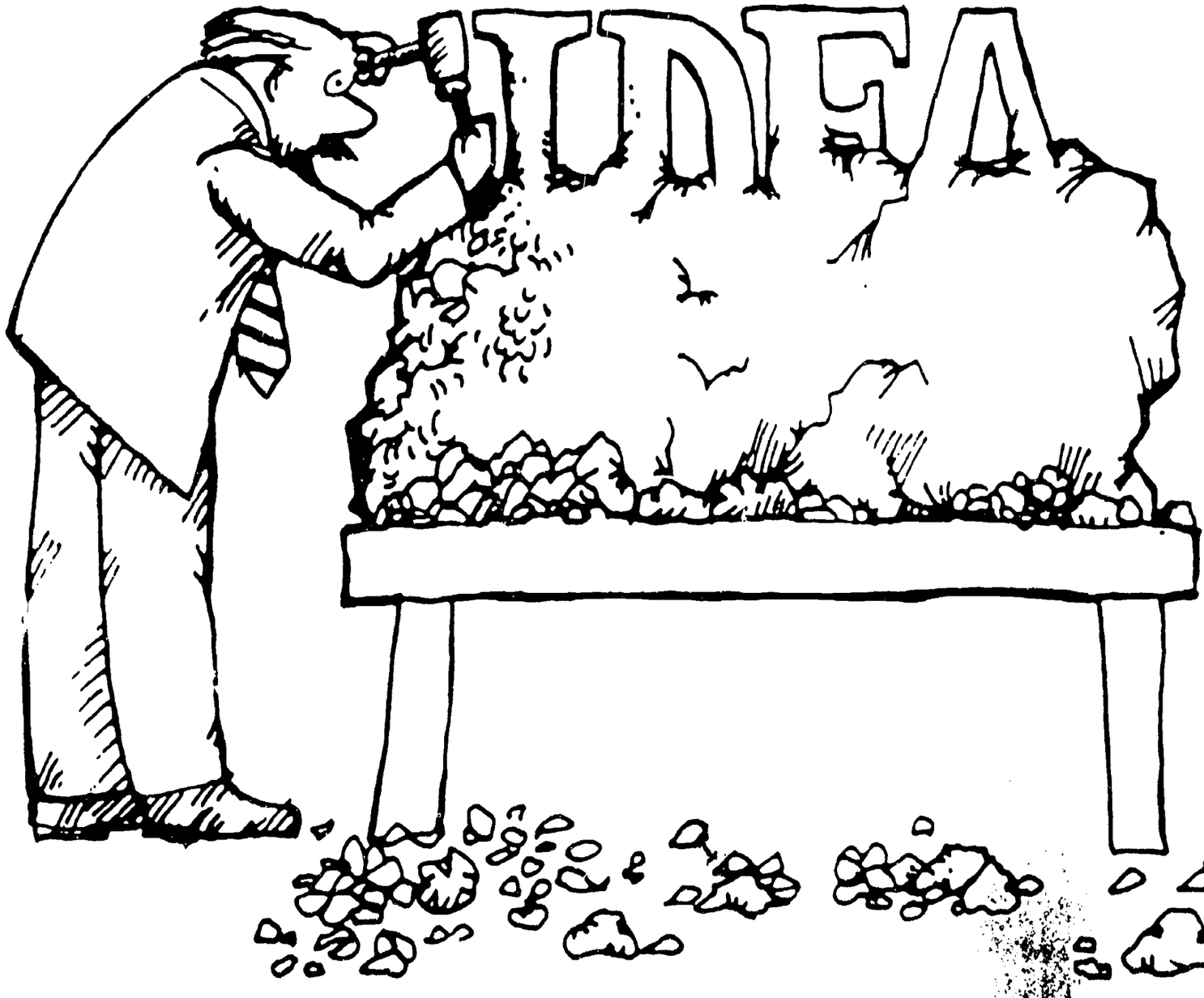
* Designated by OH on Outline



3-Step Interview



- Form pairs.
- A interviews B (3.5 minutes).
- B interviews A (3.5 minutes).
- Review/rehearse.
- Pairs form groups of 4 with same color dots.
- Share introductions: "I'd like you to meet Karen. Something unusual about her is . . .."



Think - Pair - Share

- What is your definition of cooperative learning?
- How have you used or been involved with cooperative learning?
- Think and write response (2 minutes)
- Pair and discuss responses (3 minutes each)
- Each one shares response within small group (1 minute each)

Pause for a Bit

Trust Yourself

47 Much of our educational system is an elaborate game of "guess what the teacher is thinking." Thus, many of us have been taught to think that the best ideas are in someone else's head. What the world really needs to know is what kind of ideas are in your head. What ideas do you have waiting for expression?

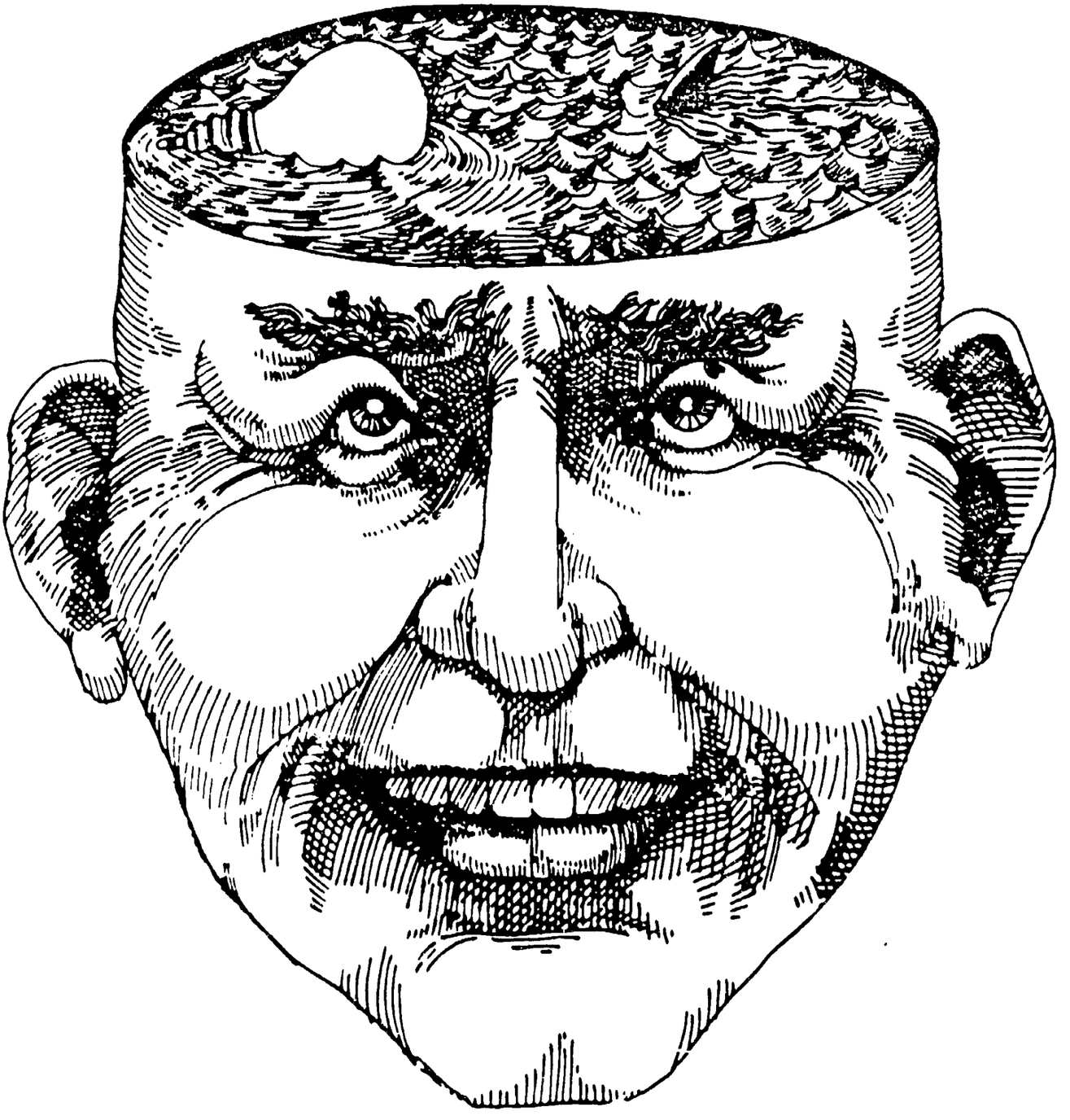
See the Positive

34 "The human mind," notes scientist W.I. Beveridge, "likes a strange idea as little as the body likes a strange protein and resists it with a similar energy." When you judge new ideas, focus initially on their positive and interesting features. This will counteract a natural negative bias, and enable you to develop more ideas. What's positive about the idea?

oundtable

- Purpose: To identify benefits of cooperative learning
- One person writes task at top of pad.
- Next person writes 1 idea, reads aloud, passes pad to left.
- Brainstorm until time is called.

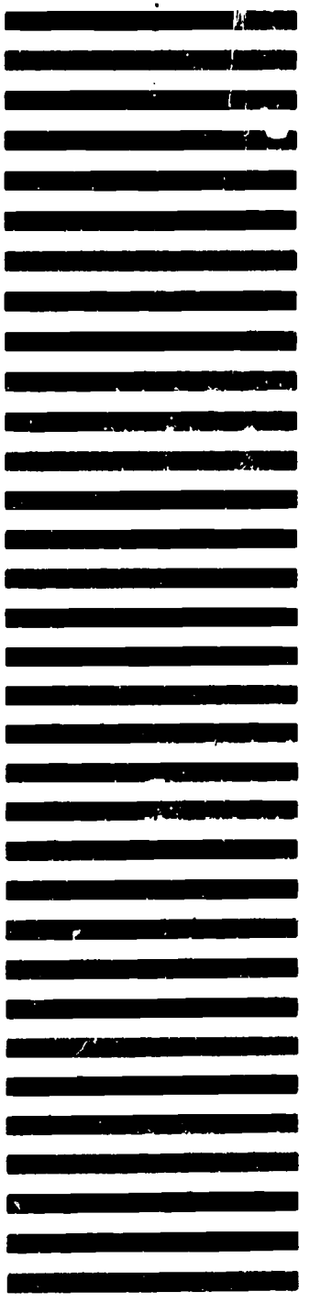
Expect Resistance



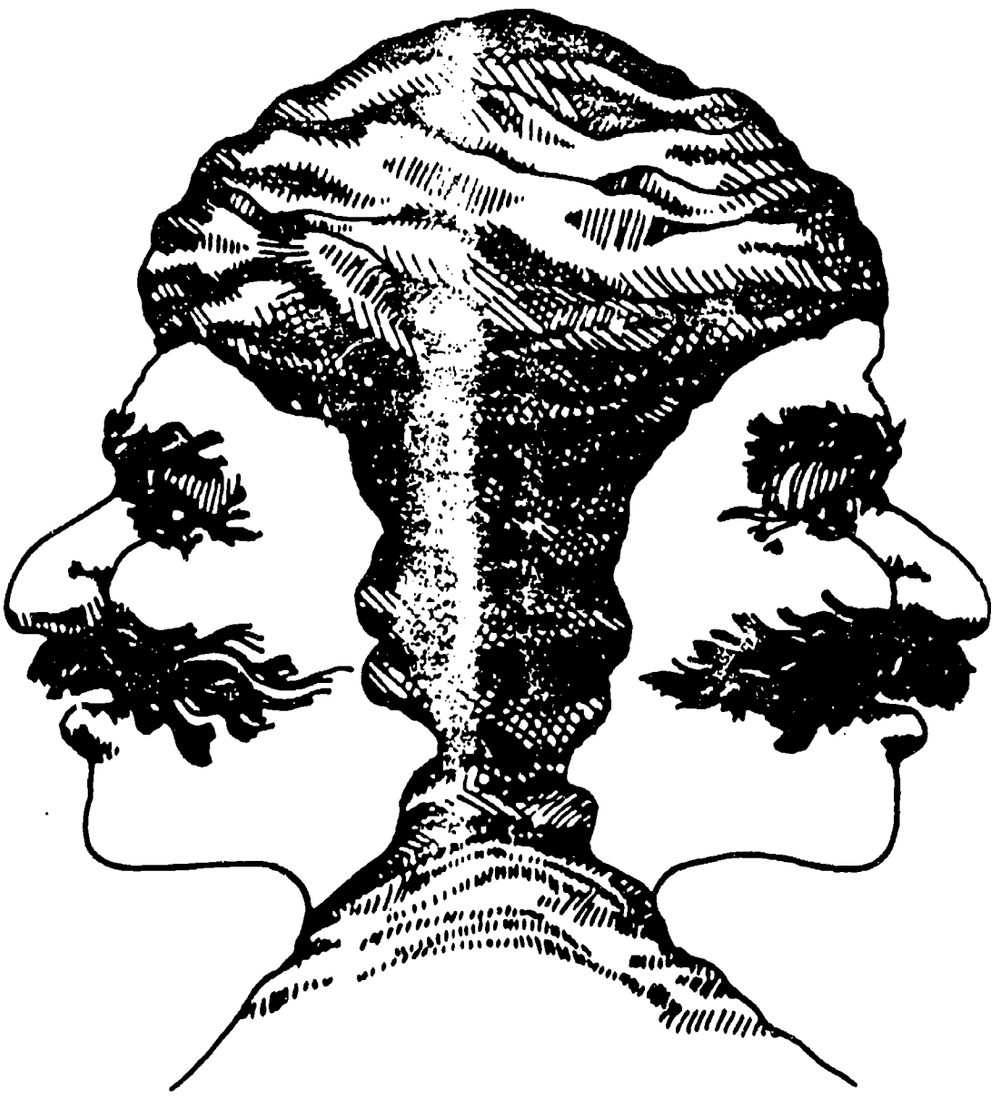
59 "The only person who likes change is a wet baby," observes educator Roy Blitzer. Two basic rules of life are: 1) change is inevitable; and, 2) everybody resists change. **What resistance do you expect to your idea? How can you overcome it?**

Group Brainstorming With Recorder

- Select a recorder.
- Group members generate many wild and crazy ideas about problems students have with critical thinking vis-a-vis research model
- Recorder captures responses.
- Remember: defer judgement.



Focus on the Real Truth

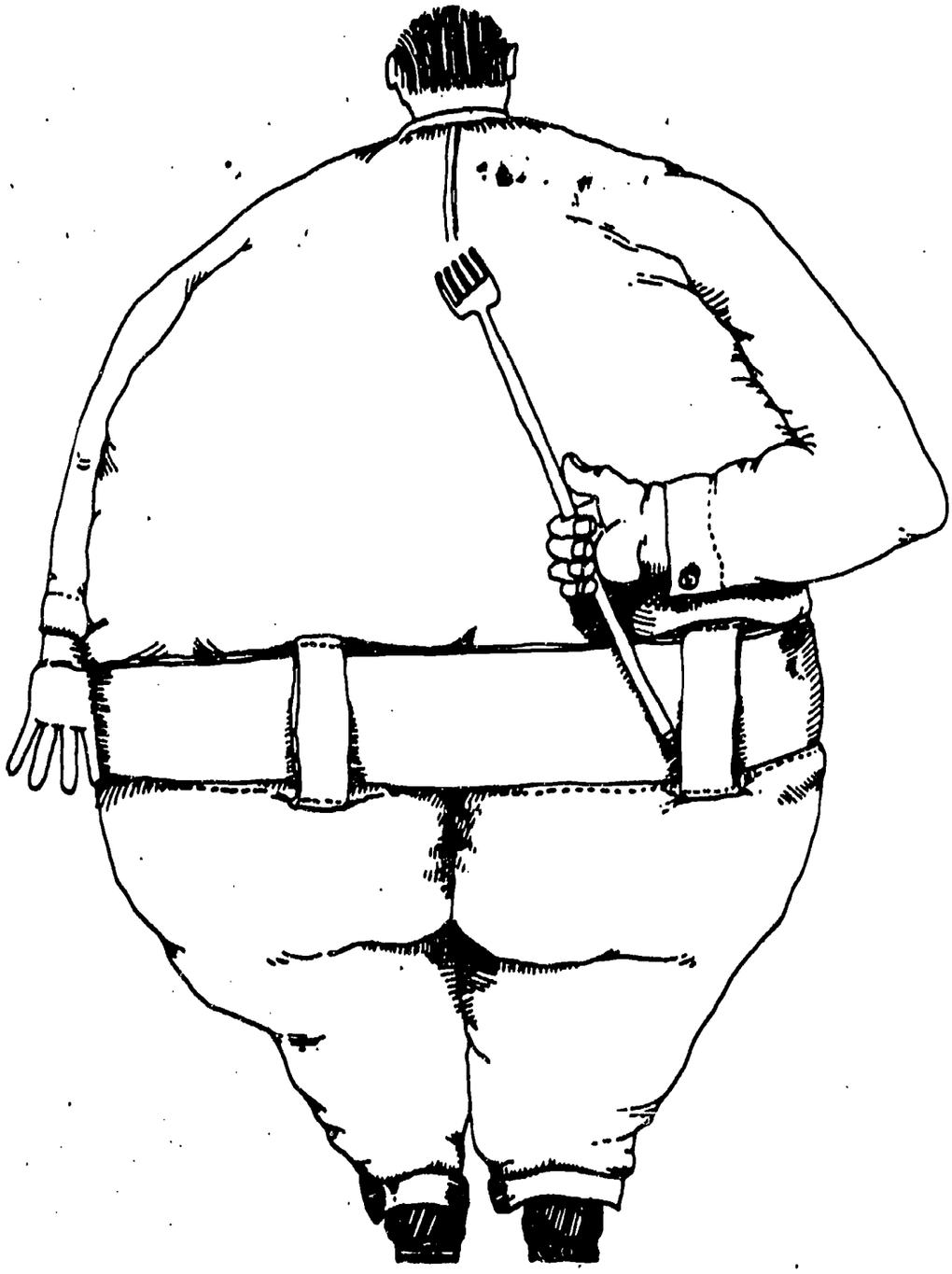


38 Two men went to a Sufi court to settle a dispute. After the plaintiff made his case, the judge said, "That's right." Then the defendant made his case, and again the judge said, "That's right." At this, the clerk of court exclaimed, "They both can't be right!" The judge replied, "That's right." Moral: truth is all around us. What matters is where you put your focus. Where should your focus be?

Pass a Problem

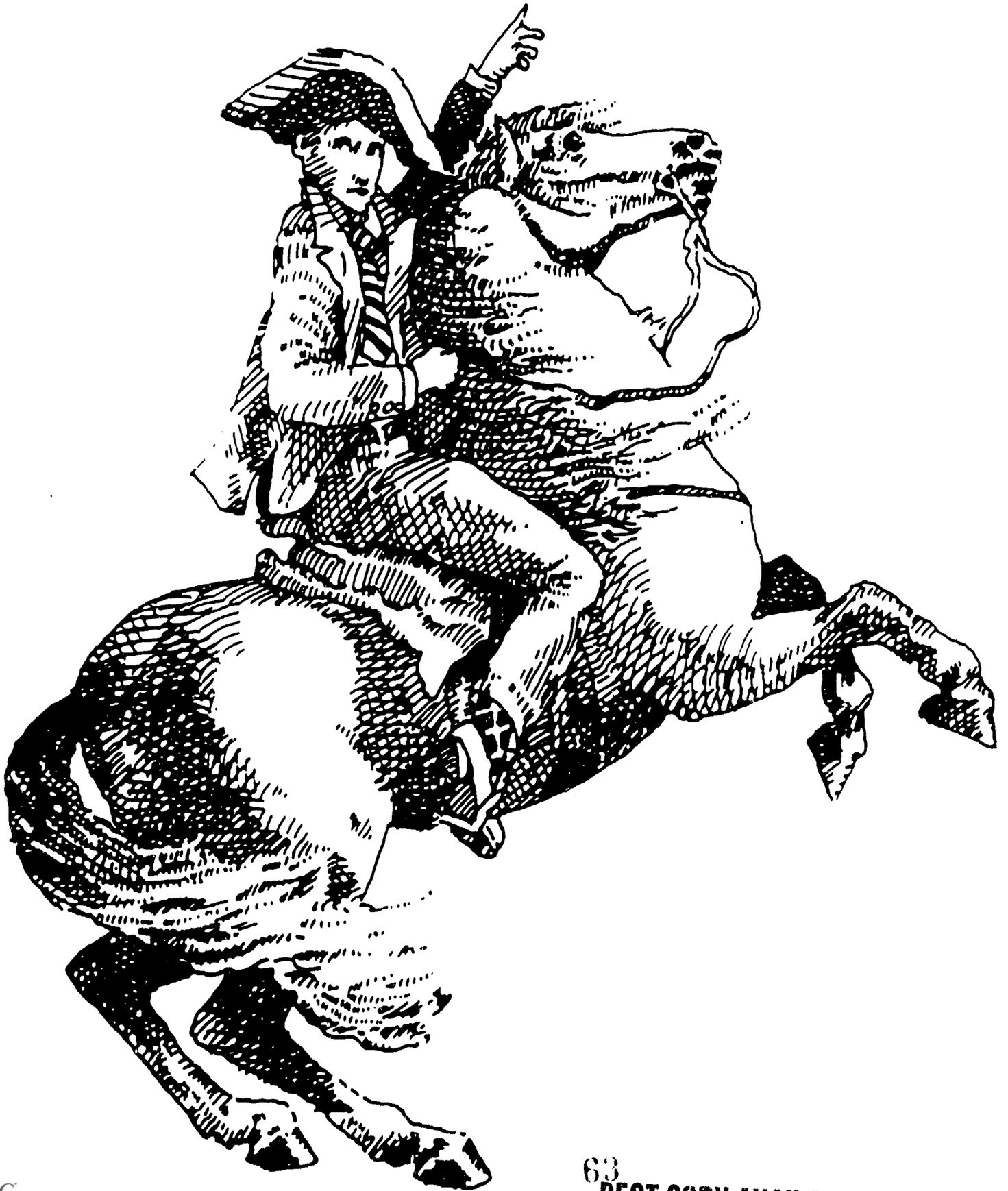
- Write group choice on envelope.
- Brainstorm and find concensus solution.
- Put idea in envelope.
- Pass to next group.
- Repeat process until envelopes rotate back to home group.
- Read and prioritize solutions.

Give Yourself a Pat on the Back

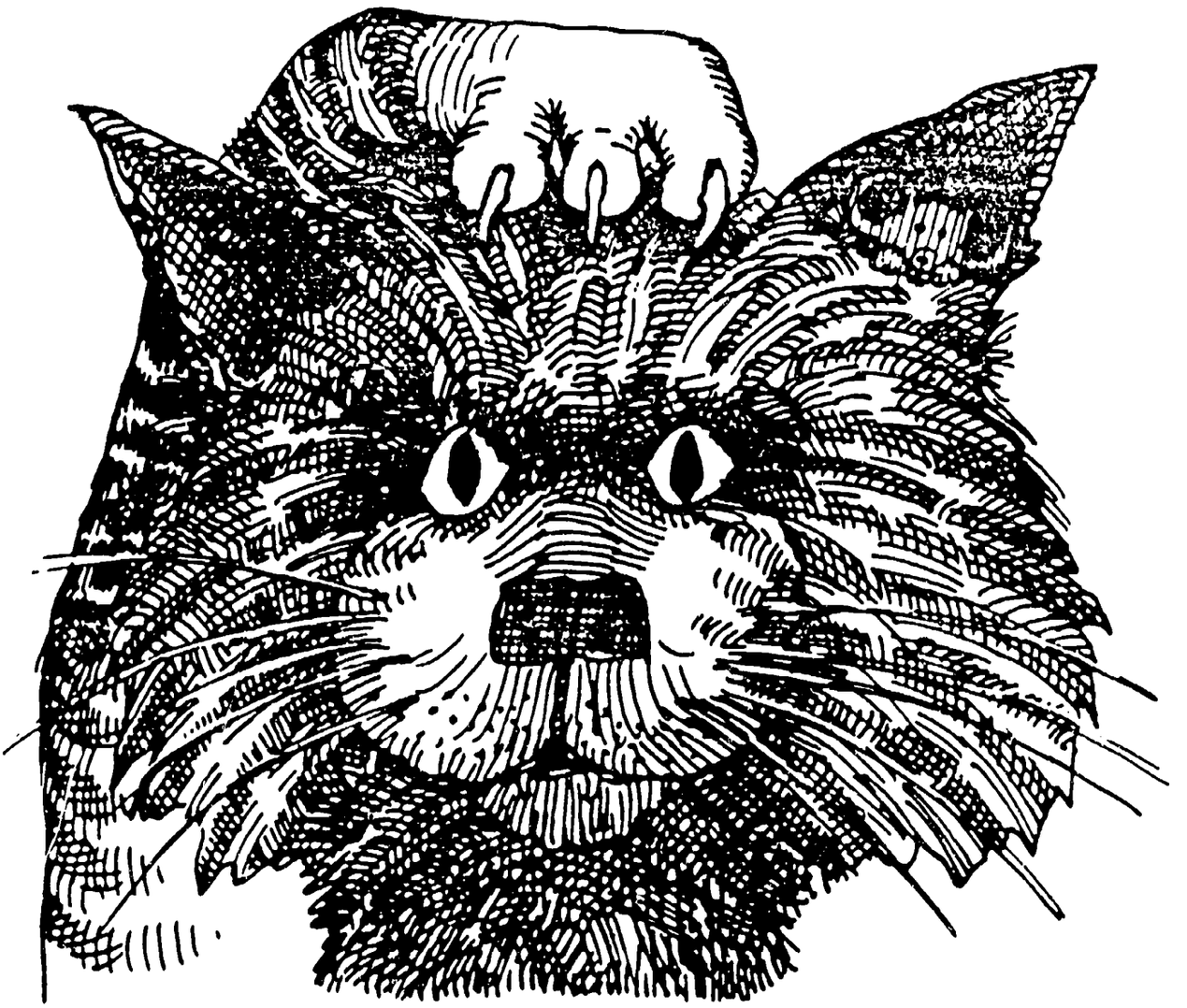


64 What have you done well lately? Where have you made progress? What have you accomplished? What obstacles have you overcome? Congratulations! **Give yourself a pat on the back. Now go out and earn another one.**

Look to the Past

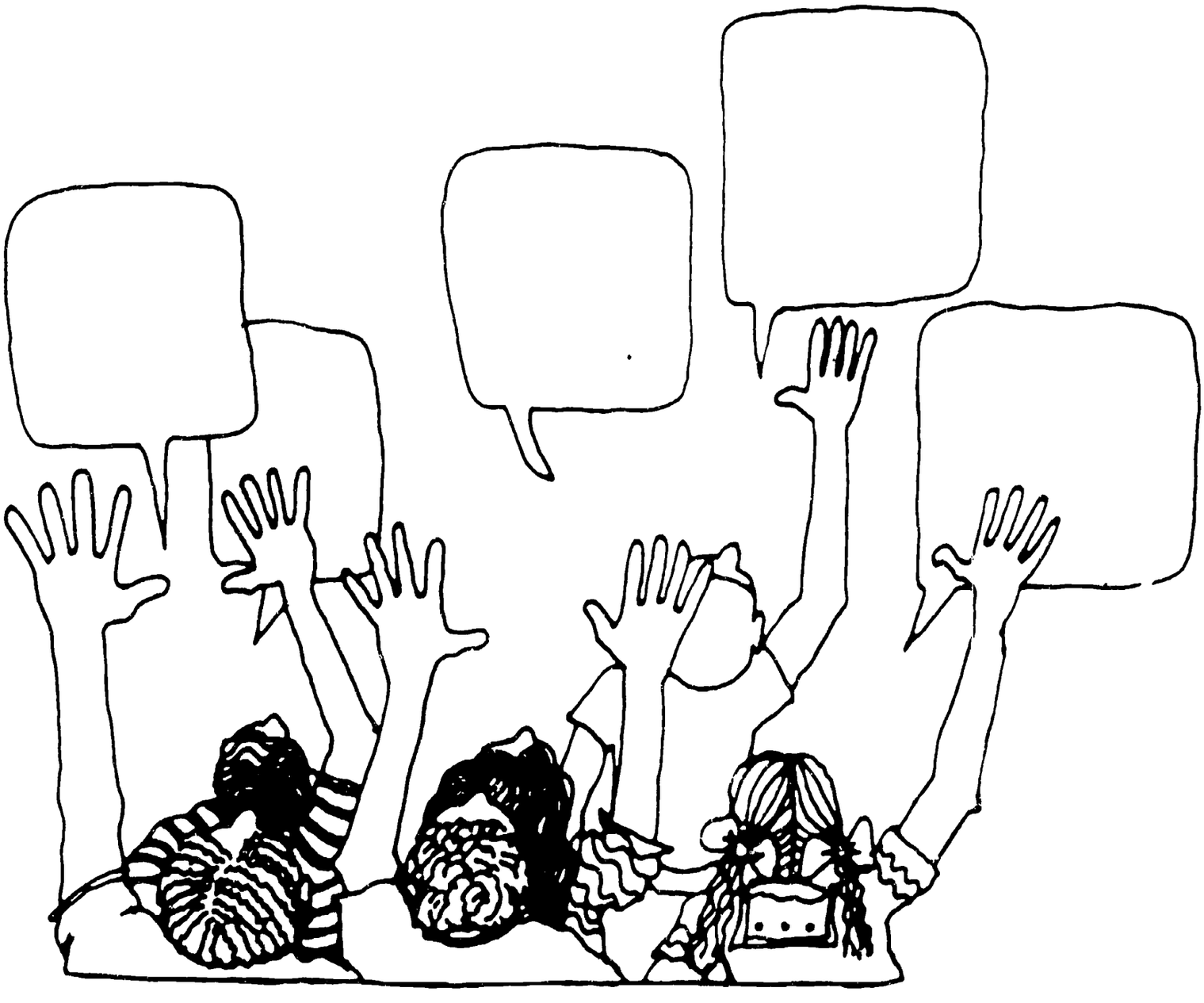


See the Obvious



16 "Only the most foolish of mice would hide in a cat's ear," says designer Scott Love, "but only the wisest of cats would think to look there." Don't miss the obvious. What are you overlooking? What's the most obvious thing you can do? **What resources and solutions are right in front of you?**

Think Like A Kid



Talking Chips

- Choose a recorder.
- Each shares issue after placing a pen in the center.
- After everyone speaks, retrieve pens and begin again.
- Recorder lists issues.
- Continue until time called.

Map Out Your Plans

51 What's your objective? What are you trying to accomplish? Can you state it in a single sentence or two? Can you draw a picture of it? Can you make a map of where you need to go and the things you'll need to do? What planning do you need to do? Can you visualize yourself reaching your objective?

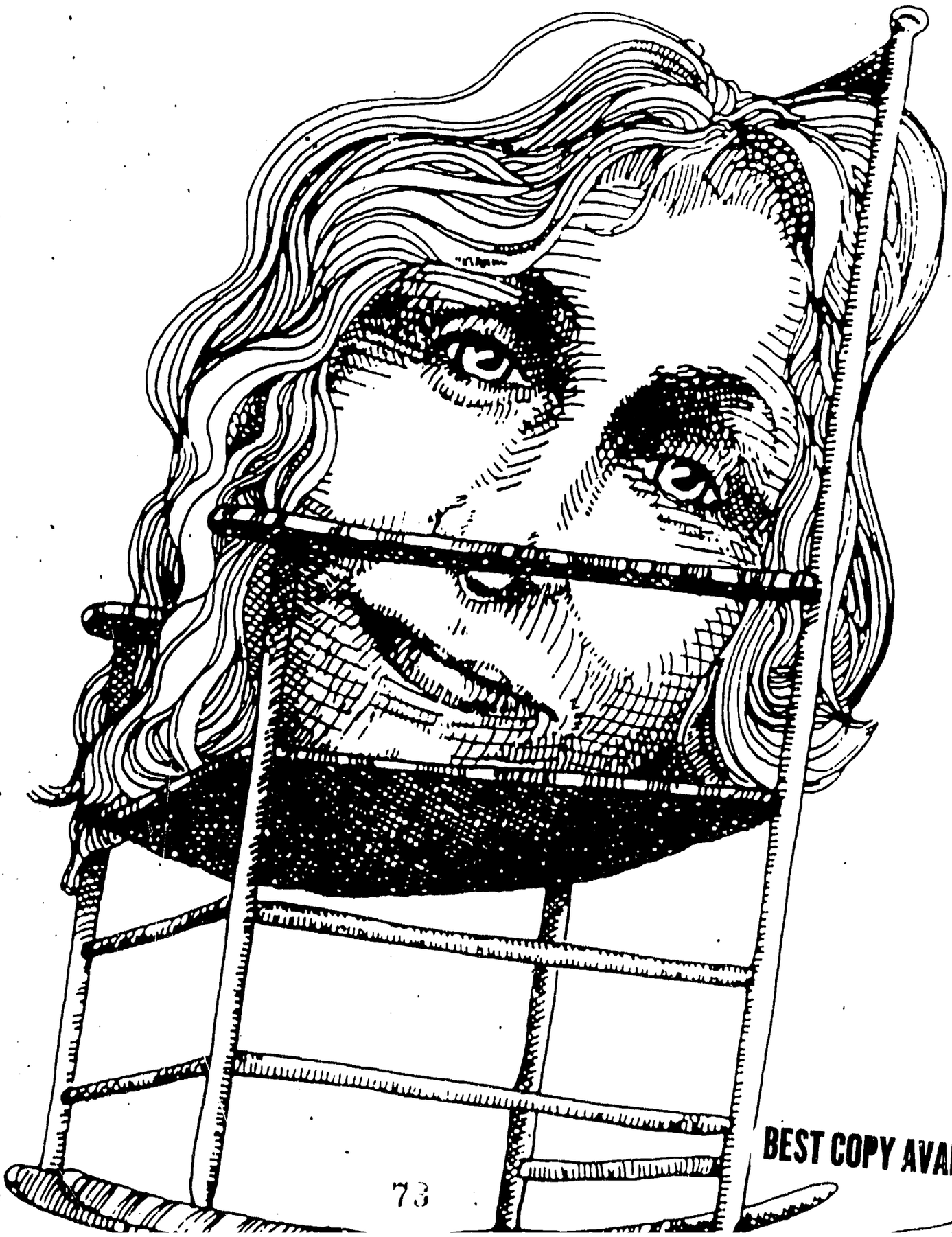
Simultaneous Roundtable

- Everyone writes one goal.
- Pass your pad to left.
- Read and respond.
- Continue until all pads have rotated.
- Decide on top 3 goals and record.

Circle of Knowledge

- Choose a recorder.
- Take turns giving one reaction.
- Continue until time is called.
- Group with most responses wins.

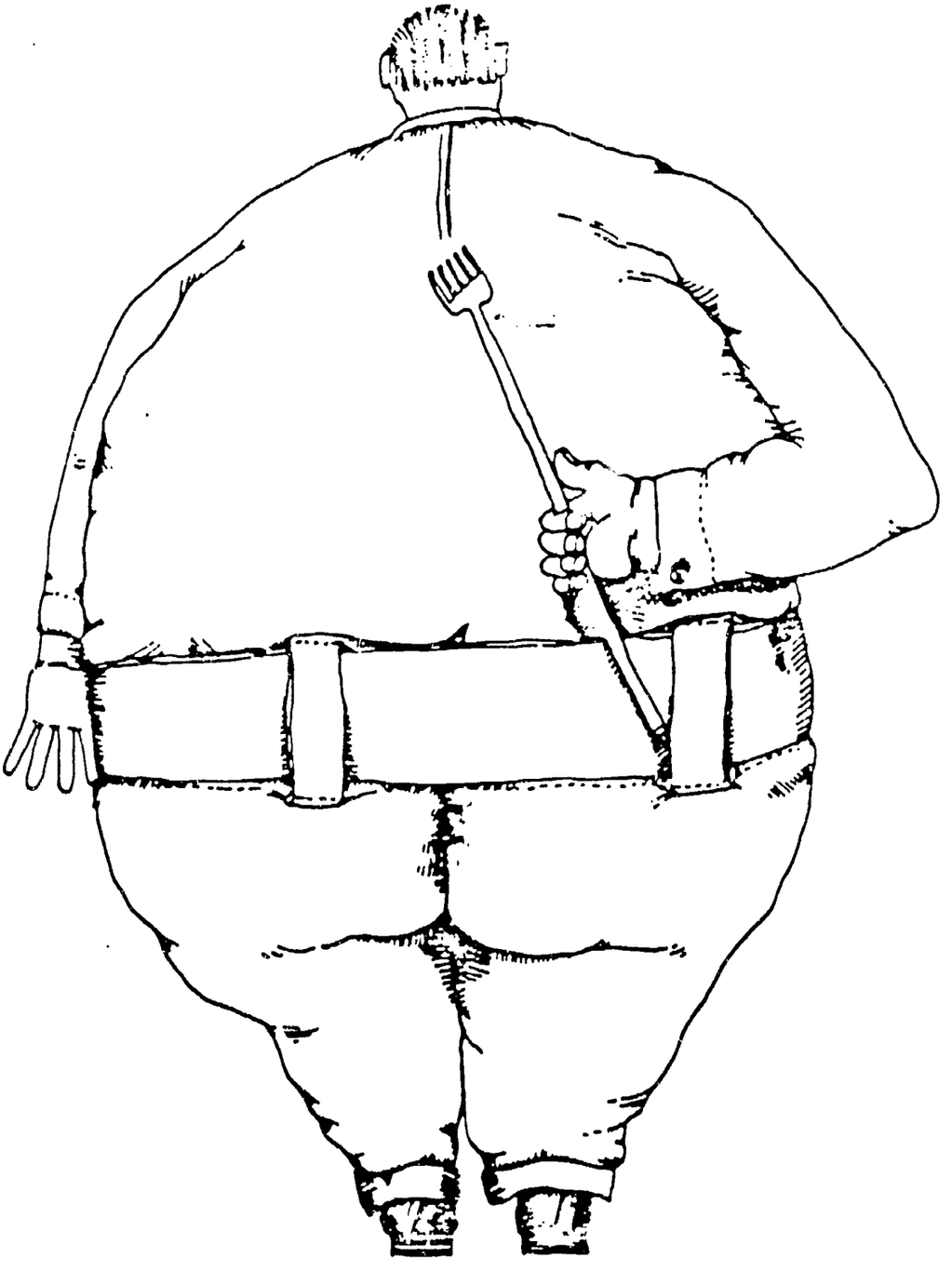
Pause for a Bit



Find the Second Right Answer

5 The best way to get a good idea is to get lots of ideas. Don't stop with the first right answer you find, look for others. How do you keep a fish from smelling? Cook it as soon as you catch it. Keep a cat around. Burn incense. Cut its nose off. As Emilé Chartier put it, "Nothing is more dangerous than an idea when it's the only one you have." What's the second right answer?

Give Yourself a Pat on the Back



64 What have you done well lately? Where have you made progress? What have you accomplished? What obstacles have you overcome? Congratulations! Give yourself a pat on the back. Now go out and earn another one.

Think Something Different

18 Scientist Albert Szent-Györgyi said that creative thinking consists in "looking at the same thing as everyone else and thinking something different." The first person who looked at "waste sawdust" and thought "compressed fire log" did this. So did the first person who looked at "packaged baking soda" and thought "refrigerator deodorant." So did the first person who looked at an "oyster" and thought "food." What different ways can you think about your idea?

Corners

- Everyone chooses a corner.
- Brainstorm as a group.
- Reach consenus on best application.
- Select spokesperson.