

ADHESIVE FORMATS FOR DATA COLLECTION: PRACTICE AND VALIDITY OF DOTS, STICKERS, AND LABELS

AMERICAN EVALUATION ASSOCIATION 2012

OCTOBER 25, 2012

PRESENTED BY LYN PALEO, DRPH

Learning Objectives

1. Learn how an Adhesive Format differs from traditional written questionnaires.
2. Explore 5 examples of Adhesive Formats.
3. Consider measurement and validity concerns regarding the use of Adhesive Formats.
4. Reflect on how, why and when you might effectively incorporate an Adhesive Format into your practice.

What is an Adhesive Format?

Definition: An Adhesive Format is any data collection tool formatted with stickers, dots, labels, or other adhesives for the purpose of evaluation and assessment. (I am not including the use of dots for priority voting or straw polls as a facilitation tool. My focus is use as an evaluation Adhesive Format.)

Purpose: The purpose of an Adhesive Format for data collection tools is to collect data on an individual or group level about attitudes (opinions, feelings, beliefs), self-described behaviors, and knowledge – the usual KAB measurements.

Purpose 1: Format-friendly assessment / Engaging format

Hates tests. Some participants have negative associations with anything that looks like a test. Even if the questionnaire is a measure of attitudes and there are “no wrong answers”, being asked to complete it can evoke emotions from past experiences when they failed a test or felt the questions had little relevance to their life. Manipulating adhesives instead of checking boxes can remove from the assessment the stigma of “taking a test”.

Bored with forms and questionnaires. Participants can become bored when asked to complete yet another form or questionnaire. Who among us has not looked at one more post-training questionnaire and just started checking boxes to be done with it?

Language barriers. Label (such as a sheet of mailing labels) with a word or short phrase in two languages and a simple graphic expressing a concept can reduce language/reading barriers.

Purpose 2: Format for complex questionnaires / Gain richer information

Some questions are difficult to format and respondents not understanding how to correctly mark their answer. For example, questionnaires asking respondents to first mark whether they have experienced or done something (such as “Dry manual scraping” in the example below), and then if they have, asking them to also mark the item according to a different scale (“use respirator” “not use respirator”) can be confusing to the point that validity of responses comes into question.

| Check if workers have done this task | In the past 3 months, have your workers done any of these tasks: | If they did this task, check if they usually wore a respirator |
|--------------------------------------|--|--|
| <input type="checkbox"/> | Dry manual scraping, sanding or brushing | <input type="checkbox"/> |
| <input type="checkbox"/> | Manual scraping or sanding with a water mist | <input type="checkbox"/> |
| <input type="checkbox"/> | Power sanding or grinding, <i>without</i> HEPA vacuum attachment | <input type="checkbox"/> |
| <input type="checkbox"/> | Power sanding or grinding, <i>with</i> HEPA vacuum attachment | <input type="checkbox"/> |
| <input type="checkbox"/> | Abrasive blasting | <input type="checkbox"/> |
| <input type="checkbox"/> | Heat gun | <input type="checkbox"/> |
| <input type="checkbox"/> | Power washing | <input type="checkbox"/> |
| <input type="checkbox"/> | Open flame or torch burning | <input type="checkbox"/> |

Caveats on use:

Not all assessments are suitable for an adhesive format. Using adhesives is not a good choice for collecting extensive demographic information, recording long text answers to questions, or when the evaluation tool addresses many questions on different subjects. It should not be used as the only summative tool for an intensive evaluation (nor should any one written questionnaire).

Types of Adhesive Formats

Five ways to format questionnaires using adhesives:

1. Rating Scales -- Put items on a scale, not a scale on items
2. Match up items
3. Ranking Scales -- Place one adhesive in each “slot”
4. Double scale for each item
5. Checklists -- Dots on each item

Each of these is described below.

1. Rating Scale -- Put items on a scale, not a scale on items

Look at the example of a traditional format below. Conceptually, we know that it uses just one metric, an ordinal 4-point scale from “Very worried” to “Not at all worried”. Some experts in adult literacy recommend that we put the response categories after each question, to enable readers to focus on each question and response, one at a time. (Also, the use of superscripts for coding are discouraged.)

Example A: Child Safety Concerns – Traditional Written Format

| | | | |
|---|--|--|--|
| 1. How worried are you about the risk of your child being kidnapped? | | | |
| Very worried <input type="checkbox"/> | Somewhat worried <input type="checkbox"/> | A little worried <input type="checkbox"/> | Not at all worried <input type="checkbox"/> |
| 2. How worried are you about your child finding needles in the park? | | | |
| Very worried <input type="checkbox"/> | Somewhat worried <input type="checkbox"/> | A little worried <input type="checkbox"/> | Not at all worried <input type="checkbox"/> |
| 3. How worried are you about your child receiving shocks from electrical outlets? | | | |
| Very worried <input type="checkbox"/> | Somewhat worried <input type="checkbox"/> | A little worried <input type="checkbox"/> | Not at all worried <input type="checkbox"/> |
| 4. How worried are you about your child falling down stairs? | | | |
| Very worried <input type="checkbox"/> | Somewhat worried <input type="checkbox"/> | A little worried <input type="checkbox"/> | Not at all worried <input type="checkbox"/> |

For groups with more proficient literacy skills, evaluators often combine the items and response categories (scale) into one grid, both to save space and to ease the burden of re-reading the response scale’s response categories for each question. However, notice that there still is a scale replicated for each item (albeit the same one for each).

Example A: Child Safety Concerns – Traditional Written Format

| 1. How worried are you about each of the following items in terms of safety risks to your child: | Very worried | Somewhat worried | A little worried | Not at all worried |
|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| a. Kidnapping | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ | <input type="checkbox"/> ⁴ |
| b. Needles in park | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ | <input type="checkbox"/> ⁴ |
| c. Shocks from electrical outlets | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ | <input type="checkbox"/> ⁴ |
| d. Falling down stairs | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ | <input type="checkbox"/> ⁴ |

The Adhesive Format uses a set of labels (question items) that include a word or short phrase, in two languages if needed, and one simple graphic element along with a page to place them on (the response scale).

Note that the rating scale Adhesive Format uses one metric with anchor response categories, such as “Strongly Agree to Strongly Disagree” or “Very Important to Not at all important” or “Frequently to Rarely”. This format is best used when there is one main question or question-stem with many sub-items that need to be ordered on the metric.

Example A: Child Safety Concerns – Adhesive Format

(Note: When used, this assessment had 14 items.)

Very worried ↑

How worried are you about these safety risks for your child?

Place each dot on this page higher if you are worried and lower if you are not very worried.

↓
Not worried at all

Illustrative example

How worried about safety risks to your child

Kidnapping

Needles in the park

Falling down stairs

Shocks from electrical outlets

Look at the example of a traditional format below. It uses just one metric; an ordinal 3-point scale from “Strong Support” to “Not a Support”. It assesses 20 types of formal and informal social and service supports and is intended for use at baseline and discharge from home visiting services. Its challenge is obvious: who would want to fill it out?

Example B: Supports for at-risk mothers of newborns – Traditional Format

| Who supports you while raising your baby? | | | |
|---|---------------------------------------|---------------------------------------|---------------------------------------|
| For each of the types of supports listed below, please check (✓) whether it is a strong support in your life, a mild support, or no support at all. | Strong support | Mild support | Don't have this support |
| a. Mother, grandmother | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| b. Father of children | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| c. Other family members | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| d. Friends and neighbors | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| e. People from church or temple | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| f. Home visiting services | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| g. Neighborhood House of N. Richmond | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| h. Building Blocks for Kids | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| i. Lao Family Services | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| j. Bay Area Community Resources | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |

| Who supports you while raising your baby? | | | |
|---|---------------------------------------|---------------------------------------|---------------------------------------|
| For each of the types of supports listed below, please check (✓) whether it is a strong support in your life, a mild support, or no support at all. | Strong support | Mild support | Don't have this support |
| k. Cal WORKS | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| l. Domestic violence services / shelter | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| m. Regional Center (services for children with special needs) | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| n. West County First 5 Center | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| o. Hospital, medical clinic, doctor | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| p. Child mental health services or counseling | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| q. Adult mental health services or counseling | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| r. Child care center or preschool | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| s. AA, NA, Al-Anon | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |
| t. Other (please list): | <input type="checkbox"/> ¹ | <input type="checkbox"/> ² | <input type="checkbox"/> ³ |

The Adhesive Format, shown below, asks respondents to place items (types of formal and informal supports) on one scale rather than having a scale printed for each item.

In this example, the scale is the distance away from the figure. In the previous example (Child Safety Concerns) the scale's measurement could be divided into quartiles from top to bottom (ignoring any differences in horizontal placement). For this instrument the primary measurement should be whether or not a balloon was placed on the form. A secondary measurement, based on pilot responses, uses a curve (printed on a transparency) to code on a scale of "strong" or "mild"; however, caution should be used in interpreting *mild* versus *strong*.

A principle reason why the Balloon scale cannot be divided into quartiles, let alone inches, is that the balloons are larger, proportionately, to the page, so there is restricted freedom about how close or far they can be placed.

Example B:
Supports for at-risk mothers of newborns –
Adhesive Format

Support for Raising Children
Who helps you and your baby?

Please look at the balloons and peel off those that help you now. Place them on the page. If you rely on the balloon regularly, put it close to the mother. If you can only sometimes get help from the balloon, place it farther away. You do not need to use all the balloons.



| | | | |
|--|--|-------------------------------------|--|
| Mother or Grandmother | Father of Children | Other Family Members | People from Church or Temple |
| Childcare Center or Preschool | Friends and Neighbors | AA, NA, Al-Anon | Home Visiting Services |
| Neighborhood House of North Richmond | Bay Area Community Resources | Lao Family Services | West County First 5 Center |
| Building Blocks for Kids | Domestic Violence Services / Shelter | Cal WORKS | Regional Center / Services for Children with Special Needs |
| Adult Mental Health Services or Counseling | Child Mental Health Services or Counseling | Hospital, Medical Clinic, or Doctor | |

contact evaluation@firstfivecc.org for permission to use rev 9/2010 7

©First 5 Contra Costa contact evaluation@firstfivecc.org for permission to use rev 9/2010 8

Real life example: Assessing Support Systems for New Mothers

Home visitors in West Contra Costa County, California, wanted to assess the strength of their clients' formal and informal support system during the first visit and again when they last met. Their intended service population included a high proportion of women who distrust "the system", were reluctant to accept home visiting services, and did not want to fill out any forms that were not absolutely necessary. The evaluation specialist worked with a task force of home visitors and supervisors to develop an Adhesive Format that was likely to be acceptable to the clients and useful to the home visitors. At the first or second visit, home visitors gave women the "balloon system" (aka Connectedness Scale) and invited them to place the balloons, according to the instructions. Upon completion, the home visitors use the placed and unplaced balloons to introduce to clients supports that might be of help. The clients enjoyed completing this assessment, and the home visitors found it to be a great way to begin the service on the spot. Home visitors were also supplied with 4"X4" label forms to write the date, client id, and other "for office use only" information; they completed this mini-form and stuck it to the back of the balloon system form. The evaluation specialist built an Excel file for data entry and automatic print-ready reports.

Hand to Hand Home Visiting Program is operated by Aspiranet and funded by First 5 Contra Costa

2. Match Up Items

This Adhesive Format can be useful to assess knowledge.

Example C: Testing knowledge of concepts, indicators, and measurements — Traditional Format

| To the left of each item, write a “c” if it is a concept, “i” if it is an indicator, and “m” if it is a measurement | | | | | |
|---|--|-----|--|-----|--|
| ___ | Organizes demonstrations | ___ | About how many friends do you have (people you know more than just casually)? Number: _____ | ___ | Quality of Life |
| ___ | Returning fallen birds to nest | ___ | Find a compromise | ___ | Leadership |
| ___ | I feel that people really like me. <input type="checkbox"/> Strongly Agree; <input type="checkbox"/> Agree; <input type="checkbox"/> Disagree; <input type="checkbox"/> Strongly Disagree | ___ | Number of heart beat skips per minute, _____ skips | ___ | Consistent condom use |
| ___ | Have you ever: <input type="checkbox"/> participated in a demonstration? <input type="checkbox"/> helped to organize a demonstration? | ___ | Conflict Resolution Skills | ___ | Safer Sex |
| ___ | Please check the box that best matches your annual family income: <input type="checkbox"/> 80,000+; <input type="checkbox"/> 25,000-79,999; <input type="checkbox"/> <25,000 | ___ | Makes several alternative plans | ___ | When you have seen a baby bird fallen from the nest, how often did you return it to the nest? <input type="checkbox"/> every time; <input type="checkbox"/> half the time; <input type="checkbox"/> never; <input type="checkbox"/> I've not seen this |
| ___ | Has close friends | ___ | In the past month how often have you used a condom during intercourse: <input type="checkbox"/> always; <input type="checkbox"/> mostly ; <input type="checkbox"/> sometimes; <input type="checkbox"/> never | ___ | Problem Solving Skills |
| ___ | Annual Income | ___ | Steady heart rate | ___ | Self-Esteem |
| ___ | One is liked by people | ___ | Compassion | ___ | Good Health |
| ___ | How likely are you to make several alternate plans for handling a problem? <input type="checkbox"/> Unlikely; <input type="checkbox"/> Somewhat Likely; <input type="checkbox"/> Very Likely | ___ | Socio-economic Status | ___ | I try to find a compromise when a conflict occurs. <input type="checkbox"/> Describes me well; <input type="checkbox"/> Describes me somewhat; <input type="checkbox"/> Does not describe me |

There are many ways to test graduate students' knowledge of concepts, indicators, and measurements. One way is shown above. Students are asked to mark 'c', 'i', or 'm' for each of the 30 items.

When an Adhesive Format is used, students can arrange the 30 labels on a sheet to not only identify which are concepts, indicators and measurements, but also to match the measurement and indicator to each concept.

**Example C: Testing knowledge of concepts, indicators, and measurements—
Adhesive Format**

**Real life example:
Assessing knowledge of
concepts, indicators, and
measurements:**

For seven years, this assessment was used in the Evaluation course at UC Berkeley's School of Public Health. The items are taken from either their required reading of Babie's Methods for Social Research, or the case studies used throughout the semester.

Observation, year after year, showed that students put more time into completing this quiz than traditionally formatted quizzes, gave more thoughtful consideration to it, and were unwilling to quit before they finished (even as the next class came pouring in). Adhesive Formats can be suitable to use with groups of all educational / literacy levels.

| Please place each Concepts: | 'tag' in the Indicators: | proper column. Measures: |
|--|--|---|
| Organizes Demonstrations | About how many friends do you have, people you know more than just casually? Number: _____ | Quality of Life |
| Returning fallen birds to nest | Find a compromise | Leadership |
| I feel that people really like me. <input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree | Number of heart beats skipped per minute _____ Skips | Consistent condom use |
| Have you ever: <input type="checkbox"/> Participated in a demonstration? <input type="checkbox"/> Helped to organize a demonstration? | Conflict Resolution Skills | Safer Sex |
| Please check the box that best matches your annual family income: <input type="checkbox"/> \$80,000+ <input type="checkbox"/> \$25,000 - \$79,999 <input type="checkbox"/> <\$25,000 | Makes several alternative plans | When you have seen a baby bird fallen from the nest, how often did you return it to the nest? <input type="checkbox"/> Every time <input type="checkbox"/> Half the time <input type="checkbox"/> Never <input type="checkbox"/> I've not seen this |
| Has close friends | In the past month how often have you used a condom during anal or vaginal intercourse: <input type="checkbox"/> Always <input type="checkbox"/> Mostly <input type="checkbox"/> Sometimes <input type="checkbox"/> Never | Problem Solving Skills |
| Annual Income | Steady heart rate | Self-Esteem |
| How likely are you to make several alternate plans for handling a problem? <input type="checkbox"/> Unlikely <input type="checkbox"/> Somewhat Likely <input type="checkbox"/> Very Likely | Compassion | Good Health |
| One is liked by people | Socio-economic Status | I try to find a compromise when a conflict occurs: <input type="checkbox"/> Describes me well <input type="checkbox"/> Describes me somewhat <input type="checkbox"/> Does not describe me |

3. Ranking Scale – Place one adhesive in each “slot”

The traditional format for a ranking scale requires respondents to place in order items 1 through nth. This format is notoriously difficult to execute especially if the list is longer than 7 items. (Most people find it difficult to hold more than 7 concepts in working memory.) Choosing to use an Adhesive Format allows participants to peel off the labels and organize them without dedicated ranking until they are satisfied with their choice of order.

That being said, even when using an Adhesive Format, rank order is a difficult question type, so the information needed must justify the choice of this question type.

Example D: Quality of Life Values Assessment – Traditional Written Format

(I don't recall where I found this assessment, but it was one in use.)

What makes for a “Good Life”? Please rank each item below with “1” indicating what you consider the most important quality of a good life and “18” meaning the quality least important.

| Qualities of a Good Life | Write a number between 1 and 18 |
|---|------------------------------------|
| A COMFORTABLE LIFE (A prosperous life) | |
| AN EXCITING LIFE (A stimulating, active life) | |
| A SENSE OF ACCOMPLISHMENT (Lasting contribution) | |
| A WORLD AT PEACE (Free of war and conflict) | |
| A WORLD OF BEAUTY (Beauty of nature and the arts) | |
| EQUALITY (brotherhood, equal opportunity for all) | |
| FAMILY SECURITY (Taking care of loved ones) | |
| FREEDOM (Independence, free choice) | |
| HAPPINESS (Contentedness) | |
| INNER HARMONY (Freedom from inner conflict) | |
| MATURE LOVE (Sexual and spiritual intimacy) | |
| NATIONAL SECURITY (Protection from attack) | |
| PLEASURE (An enjoyable, leisurely life) | |
| SALVATION (Saved, eternal life) | |
| SELF-RESPECT (Self-esteem) | |
| SOCIAL RECOGNITION (Respect, admiration) | |
| TRUE FRIENDSHIP (Close companionship) | |
| WISDOM (A mature understanding of life) | |

Example D: Quality of Life Values Assessment – Adhesive Format

Print the items on peel-off labels with the labels on the right and a blank column on the left. Add these instructions on the label sheet: What makes for a “Good Life”? In the right column is a list of personal values on peel-off labels. Please peel off the labels and arrange them in the left column in descending order of importance to you. (not shown)

4. Double Scale for Each Item

Previously, an example was shown with two questions asked for each item: “Did your workers do this task?” and “If so, did they wear a respirator?” (Shown again below.)

Example E: Lead Safety for Maintenance Personnel – Traditional Format

| Two scales for one item. | | |
|--------------------------------------|---|--|
| Check if workers have done this task | In the past 3 months, have your workers have done any of these tasks: | If they did this task, check if they usually wore a respirator |
| <input type="checkbox"/> | Dry manual scraping, sanding or brushing | <input type="checkbox"/> |
| <input type="checkbox"/> | Manual scraping or sanding with a water mist | <input type="checkbox"/> |
| <input type="checkbox"/> | Power sanding or grinding, <i>without</i> HEPA vacuum attachment | <input type="checkbox"/> |
| <input type="checkbox"/> | Power sanding or grinding, <i>with</i> HEPA vacuum attachment | <input type="checkbox"/> |
| <input type="checkbox"/> | Abrasive blasting | <input type="checkbox"/> |
| <input type="checkbox"/> | Heat gun | <input type="checkbox"/> |
| <input type="checkbox"/> | Power washing | <input type="checkbox"/> |
| <input type="checkbox"/> | Open flame or torch burning | <input type="checkbox"/> |

This format almost always produces a substantial level of measurement error because respondents do not see it as two questions per item. Electronic surveys (such as Survey Monkey or Zoomarang) can reduce measurement error by using a skip pattern so that respondents see the second question only if their answer to the first one was a specific value.

If an electronic survey is not practical, this instrument can be formatted with adhesives, as illustrated in the schema below.

Peel off the labels for those tasks that your workers have done.
Place each in one of the boxes below.

They wore a respirator most of the time.

They wore a respirator sometimes.

They did not wear a respirator.

Example E: Lead Safety – Adhesive Format

a) *Peel off the labels for those tasks that your workers have done (past 3 months)*

b) *Place each label in one of the “Respirator boxes”.*

| | |
|---|-----------------------------|
| Dry manual scraping, sanding or brushing | Abrasive blasting |
| Manual scraping or sanding with a water mist | Heat gun |
| Power sanding or grinding, without HEPA vacuum attachment | Power washing |
| Power sanding or grinding, with HEPA vacuum attachment | Open flame or torch burning |

5. Checklists -- Dots on each item

Compared to the examples above, using Adhesive Formats for closed response checklists adds less value and uses more resources (time to format the instrument and the cost of a set of adhesives for each respondent). There is one feature though, that can make an Adhesive Format worth the extra effort and cost.

The instruction “*Please check (✓) one*” or “*Please check (✓) all that apply*”, can return accurate responses, but not complex ones.

Example F: Traditional Written Format Assessment—Teen Support

| <i>With whom are you most likely to talk over your problems?</i> (Please check one.) | |
|--|--|
| <input type="checkbox"/> | My best friend |
| <input type="checkbox"/> | My mother |
| <input type="checkbox"/> | My father |
| <input type="checkbox"/> | Another adult in my family |
| <input type="checkbox"/> | A teacher or school counselor |
| <input type="checkbox"/> | A youth worker or staff member at a youth center |
| <input type="checkbox"/> | My boyfriend/girlfriend |

An Adhesive Format offers more flexibility by allowing respondents to place a set number of dots on one or more of the categories.

Example F: Adhesive Format—Teen Support

| <i>With whom are you likely to talk over your problems?</i> (Place all 10 dots on one or more of the categories below. More dots indicate that you are more likely to talk over your problems with people in that category.) | |
|--|--|
| My best friend |  |
| My mother |  |
| My father | |
| Another adult in my family | |
| A teacher or school counselor | |
| A youth worker or staff member at a youth center |  |
| My boyfriend/girlfriend |  |

The Adhesive Format in this example turns a closed response question type into an intensity metric. Rather than just knowing which person a teen is most likely to talk to, this format informs us that the teen is much more likely to talk with “My best friend” and “My mother” than

other choices. When aggregated and analyzed, the information is much richer than that from a traditional format. This is especially true when different sub-groups of interest are given different colors of dots, such as colors for grade level, school, gender, or neighborhood.

Quality of Measurement with Adhesive Formats

The preceding examples have made a case for the use of Adhesive Formats to engage respondents, to format complex questions, and to obtain richer information compared to traditional written assessments. Adhesive formats can produce reliable and valid measures.

Higher response rates

For Questionnaire: In many situations, the response rate for an Adhesive Format is higher than for a traditional format. I have used Adhesive Formats for migrant worker tailgate trainings (brief sessions conducted as part of morning assignments), low-income new mothers, family therapy clients, community advocates, individuals at shopping centers located in central Los Angeles, as well as graduate, high school and middle school students. Very different groups of people will engage with this format as long as the questions make sense, the scale and instructions are understandable, the items are well-displayed, and the survey is relevant to something in their lives.

For Individual Items: All of us have constructed a scale from 1 to 4, only to get back some questionnaires with an item marked between two boxes – the 3 ½ syndrome, or “I don’t fit into a box” sentiment. Many studies throw out these “in between” responses, thus lowering item response rate. When “shades of grey” responses are not only allowed, but built into the format, fewer responses have to be tossed out. (Of course, this raises the question of how to analyze questionnaires with Adhesive Formats, but that is an analysis question.)

Validity due to more thoughtful responses

The motion of peeling off labels or dots gives respondents a bit more time to consider their responses. In some sense, holding the item (question or sub-stem) enables them to “own” it and better place it where it belongs, according to their perspective. The act of handling the items and manipulating the questions physically makes the questions “theirs”—as opposed to a traditional format where they merely place a mark on the evaluator’s list of questions and scales.

Reduced measurement error due to language barriers

A picture speaks a thousand words, especially when coupled with a short phrase in two languages. An Adhesive Format enables a two-language survey, as opposed to a survey in each language. For English-speakers who are not proficient readers, the coupling of a graphic and a phrase enhances comprehension of the question.

Finer grade scale

Questionnaires using an Adhesive Format can sometimes (but not always) be analyzed using a finer scale than with a traditional format. Examples A (Child Safety Concerns) and F (Teen Supports) illustrate this ability. In example A, the respondent places labels on a vertical scale which can then be analyzed in two ways. Measurement (e.g., inches) of the placement shows the variation among respondents according to a fixed scale.

Relative ordering (which item is highest on the page, next highest and so forth) enables us to see which items are more important than other items – regardless of scale. For example, suppose one type of respondent generally worries less than another type. We can analyze the relative ordering, so that the highest concern of both groups, the second highest, and so forth can be summarized.

Example F illustrates the ability to analyze at a finer gradation because instead of having a checklist (either “check only one” or “check all that apply”), the respondent has 10 dots, or marks, to use among any combination of choices. This enables a finer distinction between items (in the case of checklists, response categories) that would otherwise be merely checked or not checked. Checking alone cannot indicate level of intensity.

Many Adhesive Formats place more responsibility upon the analyst to decide how fine a gradation to use and where to split the continuous scale for reporting. Many evaluators are more comfortable using response categories 1 to 4 (e.g., Very, Mostly, Somewhat, Rarely). If a respondent marked “3”, then we know it is a “Mostly” for a 3 is a 3. But as shown in Example B (Balloon system), there isn’t a “3”. In this instance, we can, with the usual level of certainty, use a binary scale (placed on paper, not placed on paper). We also can, with less certainty, get a slightly finer gradation of “near” and “far”.

Use of Adhesive Formats on a Group Level

There are occasions when obtaining responses for a Team unit or Group unit is desirable. A group-level Adhesive Format is a particularly good fit for participatory research projects or participatory evaluations, if the effects of social desirability bias can be reduced. The question, “How well is the group doing”, is more commonly asked in participatory approaches. Conventional approaches are often more centered on the individual measurement of KAB.

If the level of intervention is on the group level, such as group advocacy projects, again a group level of assessment may offer benefits that the compilation of individual assessments cannot.

| Principles of Participatory Evaluation Methods Conducive to Adhesive Formats |
|--|
| <ol style="list-style-type: none">1) The process of collecting evaluation data is not a distinct process, separate from the intervention.2) Results transparent to the group, although further analysis may be useful.3) Participants are able to use results in “real time” for decisions.4) The results can be summarized in ways that can be shared with others.5) Participants can partner with evaluators to interpret results. |

Real-World Example: Needs Assessment of Child Safety Concerns

As part of a needs assessment, a community team needed to narrow their focus. The evaluation specialist recommended that one way of narrowing a focus was to consider risks outside the home versus risks inside the home. Another way was to consider risks that are rare and very high risk (such as stranger kidnapping) versus frequent and lower in risk (such as falling down stairs). A sheet of labels was produced for every team member, with outdoor risks bordered in blue and in-home risks bordered in green.

After members placed their labels, the group collectively reflected on the results. The evaluation specialist helped by pointing to the position of labels bordered in blue versus green, then pointed out labels in the second and third quartile because these could be areas of contention. After discussion, the community team decided on its strategy for intervention. Because a team would be carrying out the strategy, it was important that this part of the needs assessment be done as a team.

Example G: Tool to assess Fidelity of a Wraparound Evidence-Based Model

The Fidelity Tool for Wraparound has been used for nearly two years because it provides meaningful results to both the Wraparound Team and the evaluators.

It is used to collect information about how well a group of social workers and family members adhere to a specific Wraparound model¹. Each member of the group places ten dots next to one or more of the 20 Wraparound process steps. The group reflects on the results, and the facilitator uses the results to refine the group process to best meet the needs of the family.

The tool is collected and tallied for process evaluation purposes (fidelity to the model), and an aggregate report is released. In the future, when a sufficient number of forms have been collected, we hope to be able to tie these results to child outcomes measured through a different method.

To be used effectively, a team/group adhesive format questionnaire should be:

- Presented positively and facilitated skillfully;
- Sufficiently complex to avoid the “one right answer” problem.

¹ The Wraparound Program is operated by We Care Services in Concord, California and funded in part by First 5 Contra Costa.

Real-World Example: Wraparound Fidelity Tool

An early childhood mental health program implemented an evidence-based model called Wraparound that brings together family members, all service providers involved in their lives, a professional mental health therapist, and a “family partner” (a paid staff person who had previously experienced problems similar to the family’s).

The group forms a team as they work together for six months to a year to identify the family’s goals, make a plan to achieve those goals, and implements that plan as a team. The family-centered program’s motto is “Nothing about us without us.”

Because this was an evidence-based program, a way to assess fidelity to the model was needed. Fidelity was defined as following a series of steps as a team. The evaluation specialist developed a team-level fidelity tool that asks the team each quarter to take a few minutes to review what stage they on and how well they were following the model. Each team member was given 10 dots, color-coded for service provider/therapist and family/friends. They may place the dots in one or more steps, with more dots indicating their perception of better adherence to that step’s principle. After reflecting on the results, the forms are sent each quarter for aggregate analysis by the evaluators.

The use, utility and use of this tool has been reviewed twice in group discussion with the Wraparound model’s developer, all the therapists and family partners, and the evaluators. Consensus is that the results for both family members and providers are genuine, varied, and useful.

The image shows two side-by-side copies of a Fidelity Tool form. The left form is in Spanish, titled "¿CÓMO LO ESTAMOS HACIENDO COMO EQUIPO?" and the right form is in English, titled "HOW ARE WE DOING AS A TEAM?". Both forms are divided into four phases, each with sub-steps and a grid of colored dots representing adherence. The left form has a legend at the bottom: "Fidelity = ● Apoyar naturales = ● Familia = ●". The right form has a legend at the bottom: "Please place dots here to show your legend: Fidelity = ● Natural Supports = ● Family = ●".

Left Form (Spanish):

- FASE I. Participación y Preparación del Equipo**
 - A. La familia cuenta toda su historia de una manera que sea útil para ella y para que otros miembros del equipo la entiendan.
 - B. Continuamente identificamos los fortalezas y los talentos de cada miembro del equipo con el fin de asistencia a lograr nuestro vision.
 - C. Buscamos y damos la bienvenida a otros miembros incluyendo apoyos naturales, si nuestro trabajo en equipo.
 - D. Usamos comunicación oral y escrita para fomentar una comprensión mutua, planear, desarrollar estrategias, tomar decisiones, y lograr metas.
- FASE II. Desarrollo social del Plan**
 - A. Encuentramos, evaluamos y priorizamos la perspectiva y la voz de cada miembro del equipo.
 - B. Desarrollamos y seguimos una "Declaración de misión" que guía nuestro trabajo con el fin de realizar nuestra vision para el futuro de la familia.
 - C. Damos prioridad a las necesidades de acuerdo a la perspectiva de la familia.
 - D. Cada miembro tiene oportunidades de contribuir sus talentos y actitudes para apoyar las habilidades de la familia y lograr nuestra vision.
- FASE III. Implementación y Refinación del Plan**
 - A. Regularmente revisamos juntos nuestros planes de acción.
 - B. Modificamos regularmente nuestro plan para mejor lograr la descripción de vision establecida por el equipo.
 - C. Asistimos regularmente nuestros avances con el plan de acción.
 - D. Cada uno de nosotros hace su parte para realizar el plan de acción entre cada reunión del equipo.
- FASE IV. Transición**
 - A. Tenemos un acuerdo en cuanto a cuándo y cómo terminar el proceso de Asistencia Integral (Wraparound).
 - B. Hemos desarrollado planes/estrategias sobre que hacer si surgen problemas o crisis en el futuro.
 - C. Identificamos recursos para apoyar a la familia en los pasos a seguir en el futuro.
 - D. Celebramos el trabajo que hicimos juntos.

Right Form (English):

- PHASE I. Engagement and Team Preparation**
 - A. The family tells their story in a manner that is most comfortable to them and other team members understand the family's story.
 - B. We continuously identify each team member's strengths to help us accomplish our vision.
 - C. We seek and welcome other members, including natural supports, to our teamwork.
 - D. We use verbal and written communication to develop mutual understanding, to plan, to strategize, to make decisions, to achieve goals.
- PHASE II. Initial Plan Development**
 - A. We listen, value, and encourage each team member's perspective/voice.
 - B. We developed and follow a "Mission Statement" that guides our work to achieve our vision for the family's future.
 - C. We prioritize needs according to the family's perspective.
 - D. Each member has opportunities to match her or his capabilities to support the family's strengths to achieve our mission.
- PHASE III. Plan Implementation & Refinement**
 - A. We regularly review our action plans together.
 - B. We regularly adjust our plan to better achieve the stated team mission statement.
 - C. We regularly write down our progress on the action plan.
 - D. Each of us does our part on the action plan between team meetings.
- PHASE IV. Transition**
 - A. We have an agreement about when and how to end the Wraparound process.
 - B. We have developed plans/strategies of what to do if problems or crises arise in the future.
 - C. We identified resources to support the family's next steps for the future.
 - D. We celebrated the work we did together.

To the left are photos of two completed Fidelity Tools. The one on the left shows an instance where service providers and family members have very different perspectives, while the one on the right shows an alignment of perspectives.

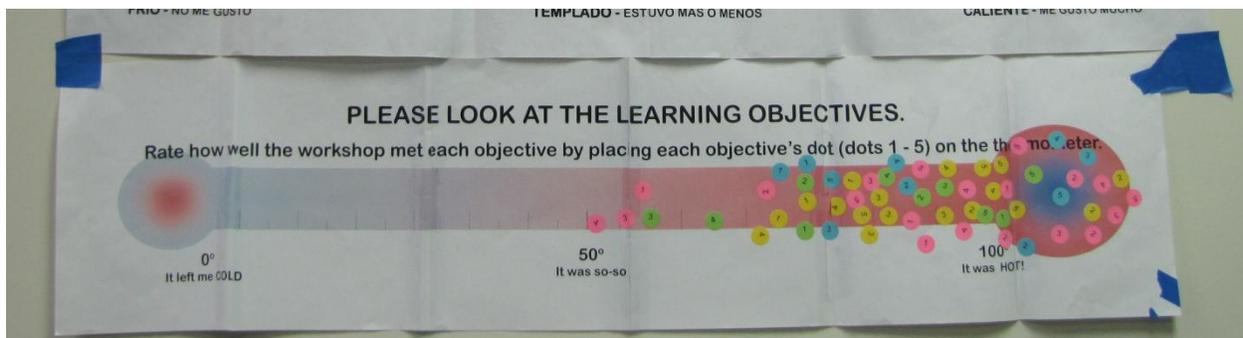
Learning and Workshop Outcomes

A group-level Adhesive Format can be used to assess short-term outcomes, such as achievement of learning or workshop objectives. Measuring learning objectives as a “low-stakes” assessments, compared to “high-stakes” assessments such as state-wide student testing the results of which affect schools’ budgets. As a “low-stakes” assessment, it puts less pressure (bias) on participants to “give the right answer”.

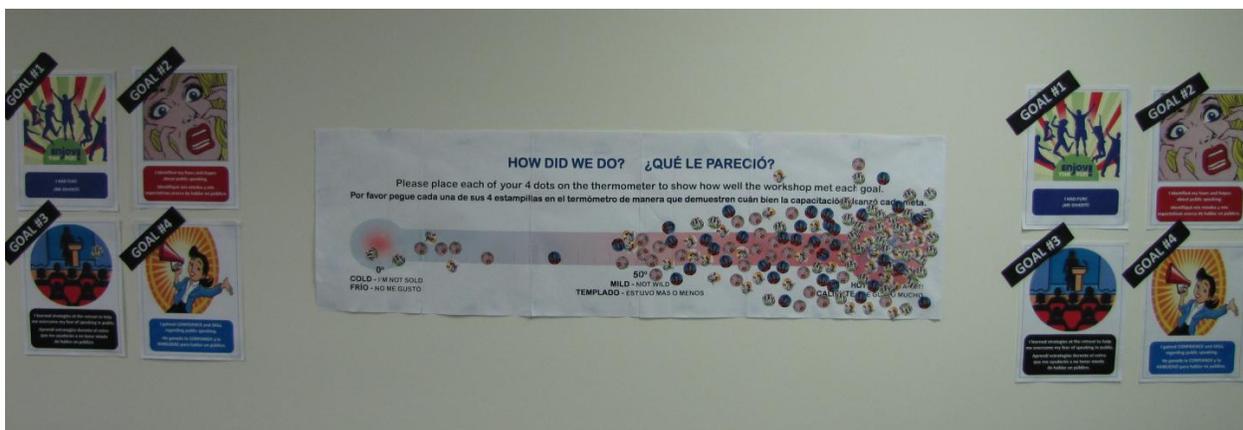
To reduce the “peer pressure” social response bias, it is critical to use a complex measurement system – but not too complex, of course. If each person is given one dot and asked to rate a workshop, we are essentially asking, “Do you love me?”

If they are given one dot for each objective, the respondents have more freedom to place some dots lower than others. With a fairly successful workshop, three-quarters of the dots may lay in the upper half of the scale, but analysis of their relative placement (which objectives are rated lower than others) can be informative.

Example H: Group-level assessment of AEA 2011 workshop on Adhesive Formats



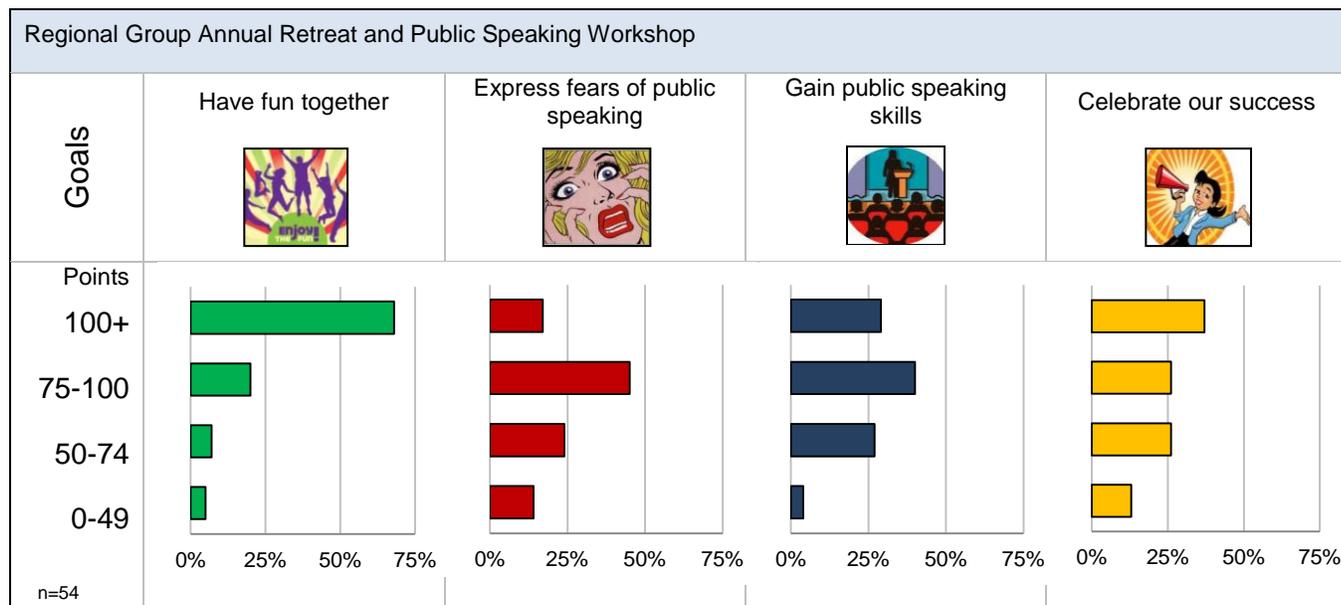
Example I: Group-level assessment of annual retreat for community advocates for children²



² First 5 Contra Costa (California) supports and develops Regional Groups of mostly low-income parents of young children. This project has been funded for 12 years, with approximately 150 active members who over years become community leaders and often go on to serve on other community collaborations or group.

Displaying Results

Results of data collected from instruments formatted with adhesives can be displayed in tables or charts. The chart below displays the results of Example I: Annual Retreat for Community Activists.



To the right is a sample report for Example G Fidelity Tool. It shows, for example, that of all the dots placed by all family members across all Wrap teams, 48% of them were placed in Phase I Step A. Only 7% of all dots placed by formal supports (service providers) were placed on this step.

The analysis involves entering the number of dots on each step from the forms completed, the calculating percentages of all dots placed by step.

This report is easy to complete each quarter, since the Excel sheet is formulated to automatically produce these percentages. The Wraparound staff very much appreciate receiving these reports quarterly, and together discuss the results.



WRAPAROUND FIDELITY TOOL REPORT DATE: JANUARY 31, 2012

| # OF FORMS: | | | PHASES | | | |
|---|---|------|-------------------|--------|--------|-------|
| CENTRAL | EAST | WEST | PH I | PH II | PH III | PH IV |
| 31 | 20 | 18 | 4 | 10 | 46 | 9 |
| OF THE FORMS IN PHASE III N=66 FORMS | | | AVERAGE % OF DOTS | | | |
| PHASE I. Engagement and Team Preparation | | | FAMILY | FORMAL | | |
| A | The family fully tells their story in a manner that is most comfortable to them and other team members understand the family's story. | | 48% | 7% | | |
| B | We continuously identify each team member's skills/talents to help us accomplish our vision. | | 6% | 4% | | |
| C | We seek and welcome other members, including natural supports, to our teamwork. | | | 7% | | |
| D | We use verbal and written communication to develop mutual understanding, to plan, to strategize, to make decisions, to achieve goals. | | 7% | 9% | | |
| PHASE II. Initial Plan Development | | | FAMILY | FORMAL | | |
| A | We listen, value, and encourage each team member's perspective/voice. | | 9% | 15% | | |
| B | We developed and follow a "Mission Statement" that guides our work to achieve our vision for their future. | | 2% | 4% | | |
| C | We prioritize needs according to the family's prospective. | | 4% | 17% | | |
| D | Each member has opportunities to match her or his talents/skills to support the family's strengths to achieve our mission. | | 10% | 6% | | |
| PHASE III. Plan Implementation & Refinement | | | FAMILY | FORMAL | | |
| A | We regularly review our action plans together. | | 3% | 11% | | |
| B | We regularly adjust our plan to better achieve the stated team mission statement. | | 5% | 9% | | |
| C | We regularly write down our progress on the action plan. | | 7% | 7% | | |
| D | Each of us does our part on the action plan between team meetings. | | | 3% | | |
| PHASE IV. Transition | | | FAMILY | FORMAL | | |
| A | We have an agreement about when and how to end the Wraparound process. | | | 2% | | |
| B | We have developed plans/strategies of what to do if problems or crises arise in the future. | | | | | |
| C | The team has developed plans for the family's continuing success when the wrap team ends. | | | | | |
| D | We celebrated the work we did together. | | | | | |
| E | We wrote an ending letter that stated the family's goal, the work we did, the strengths of the family, and the family's next steps. | | | | | |

03/16/2011

Summary

An Adhesive Format is any data collection tool formatted with stickers, dots, labels, or other adhesives for the purpose of evaluation and assessment. It can be used as a format-friendly, engaging tool and/or as a way to format complex questions and gather rich data. Benefits of Adhesive Formats include:

- Higher response rates
- Validity due to more thoughtful responses
- Reduced measurement error due to language barriers
- Finer grade scale

Several adhesive formats are illustrated below.

Rating Scale: Put items on a scale, not a scale on items

Match up items

Ranking Scale: Place one adhesive in each "slot"

Checklists Measure finer gradations

A group-level Adhesive Format is a particularly good fit for participatory research projects or participatory evaluations, because:

- The process of collecting evaluation data is not a distinct process, separate from the intervention
- Results transparent to the group, although further analysis may be useful
- Participants are able to use results in “real time” for decisions
- The results can be summarized in ways that can be shared with others
- Participants can be partners in interpreting the results

“Adhesive Formats for Data Collection: Practice and Validity of Dots, Stickers, and Labels” by Lyn Paleo, DrPH American Evaluation Association, October 25, 2012.