ABSTRACT

SAS/GRAPH is being used more and more for preparing presentations, and its usage will continue to increase as lower cost output devices become more available. It is important that the presenter take advantage of SAS/GRAPH's full potential for preparing presentation material, particularly PROC GSLIDE's ability to generate briefing charts. PROC GSLIDE combines simplicity with considerable flexibility allowing the user to easily create different vugraphs. The purpose of this paper is to provide several tips and suggestions for using GSLIDE, as well as to provide some general ideas concerning the preparation of presentations.

INTRODUCTION

One might ask, "What makes a good briefing chart good?" Most people's first thought might be that a good briefing chart must be pleasing to the eye. After considering this question for some time, we have concluded that a good briefing chart is one which is able to quickly and efficiently put into the minds of the audience the single message or idea intended by the presenter. The fact that the chart is pretty or pleasing to the eye is of secondary importance.

Further, in briefings, lectures, and other occasions where briefing charts are used rarely do you find a single chart or slide displayed. A good briefing chart is one which when integrated with other briefing charts, forms a constant and even flow of ideas. These visuals combined with the proper narrative form the basis of an effective presentation.

BRIEFING CONSIDERATIONS

When beginning to prepare for a briefing you should ask yourself, "Is a briefing the most effective way to present the material?" Perhaps an alternative communication technique would be better suited to your application. Used correctly a briefing is a powerful yet flexible communication tool. Briefings are particularly effective for conveying a few ideas in a short amount of time.

Briefings are less effective for presenting very detailed information because the audience has no control over the speed of the presentation or the ability to easily refer back to material that has already been presented.

Also, briefings are a good choice for presenting material that has a strong visual potential. If graphs or diagrams are a part of your presentation briefings are often the best choice. If the briefing's message must be conveyed primarily in words, or if equations or budgets must be presented, then well-designed handouts may be more effective. Vugraphs or slides are good for large audiences; handouts may be better for briefing one or two people.

Once you have decided to prepare a briefing, you should think about what message you want to leave with the audience. Unless the process of selecting a single unified message takes place, the briefing will resemble a data dump rather than effective communication.

A single message will help unify the briefing. This central theme will give the presenter a perspective for accessing the relative importance of each idea. Anything that is not clearly related to the central theme should be deleted.

How long should a briefing be? Guidelines for determining the length of presentations will vary from person to person and depend on the speaker's speaking tempo, but some basic guidelines are listed below:

- 25-30 minutes -- for executive-level summaries
- up to 50 minutes -- for working-level briefings

It is difficult to hold the attention of any audience for more than 50 minutes regardless of how interesting you think the material is.

In preparing for a presentation, it is important to analyze the audience's needs and background. Knowledge of the background of the audience will help determine the overall scope of the briefing. Accurate judgements about the technical expertise of the audience will enable you to decide when jargon and specialized vocabulary are presentation.

BRIEFING STRUCTURE

The most important component of an effective briefing is neither a splendid individual vugraph nor the public speaking ability of the presenter. Rather the most important component is an appropriate and coherent governing structure.

Although every audience is different, there are certain characteristics that all audiences have. These characteristics are derived from the ways humans think and remember things. A briefing that conflicts with the ways humans think will be ineffective.

There is strong evidence that humans rely on hierarchical structure for comprehension and memory tasks (Kintsch and Keenan, 1982, Meyer, 1975, 1977). This should be an important consideration when structuring your
presentation. Briefly, the following three points should aid in the structuring process:

- The more marked the hierarchy, the easier it is to understand.
- Information at the top of the hierarchy should be more general.
- Hierarchy helps to decide the importance of information -- we assume higher order information is more important and we pay more attention to it and remember it easier.

In an effective presentation, the structure will be obvious to the audience. Not only does the briefing need to be properly structured, but the presenter needs to clearly indicate the structure to the audience. Audience attention will be highest at the beginning and end of your presentation, so the beginning and conclusion of the presentation will be particularly important for indicating structure.

Several different methods are normally used for opening a briefing. One typical method begins with a statement of the problem, a statement of the approach, and a summary of the findings. Whatever the approach, the audience should know immediately:

- What is it going to see
- How the material is organized
- What level of detail to expect
- How the parts fit together
- Why you are discussing this subject

Between the outline and the summary, the audience needs structural reminders. Windows or arrows are useful for marking the place in the briefing. Also, displaying the outline chart when changing major sections will serve to remind the audience of the briefing's central structure.

**VUGRAPH DESIGN**

**Structural Considerations**

The most important consideration in preparing vugraphs is to limit vugraphs to a single idea. If more than one idea appears, the audience may become confused or distracted. Think of a vugraph as a visual paragraph. Good paragraphs typically have one central idea. When the author wants to introduce another idea he starts another paragraph. The same should be true for vugraphs; use another vugraph for the next idea.

If you must display two concepts on one visual, consider using overlays to control audience attention. Taping overlays together at the edges helps maintain proper alignment during presentations. Or better yet, use a sequence of two vugraphs -- put one concept on the first, both concepts on the second.

Most briefing charts are word charts. Unfortunately, word charts do not take advantage of human's pattern recognition abilities. Whenever possible use a graphic representation instead of words. However, this will be difficult to do with SAS/GRAPH. To illustrate this concept, refer to Figures 1 and 2. Figure 1 represents a typical vugraph. The same information is seen again in Figure 2, but this time in the form of a diagram. The result is that an audience will comprehend the message more quickly in Figure 2 than in Figure 1.

Simplify charts and graphs to make only the essential point. Ruthlessly remove irrelevant data. This will help guarantee that the structure of each chart is immediately comprehensible. A common error is placing too much information or detail into a single vugraph. For example, each of the bullets in Figure 3 have been greatly shortened in Figure 4 to contain only the essential point. This enables the audience to more quickly grasp each idea and concentrate on what the presenter is saying.

Three common devices for making the structure of a vugraph apparent are:

- Helpful titles - Titles should succinctly state the message of the chart.
- Focusing Devices - Highlighting with color, boxes, or paneling are easy ways to focus the audience's attention on selected items in a larger set.
- Color - Color can be very useful for signaling structure on a chart when color appears in a meaningful pattern. Color just for the sake of color should be avoided. Use color carefully to emphasize a point or to help your audience understand the material. Be consistent in your use of color.

If possible, avoid abbreviations and formulas in titles and axis labels, and be sure abbreviations used elsewhere in your vugraphs will be familiar to your entire audience.

Limit content in word charts to 7-10 lines, with a maximum of 30 characters per line. This means selecting key words to focus on the central ideas. The number of words per line will determine the maximum character size you can use for the text which will ultimately determine the vugraph's readability.

**Lettering Considerations**

Lettering should be as large as possible. Never use characters less than a quarter inch high for vugraphs. In SAS/GRAPH, a character height of 2 (in character units) is usually the minimum that should be used. A good method for determining if a vugraph is readable, even from the back of a large room, is to put the vugraph on the floor and see if you can easily read the text while standing up. Hardware character sets should be avoided, primarily because of their small size.
Fonts that work best for presenting text are those that exhibit a heavy stroke, yet are clear and not overly ornate. In practice, the SAS/GRAPH fonts that work best are:

TRIPLEX, DUPLEX, and TITALIC

The new font in SAS 82, XSWISS, also works well for vugraphs. Due to the high degree of ornateness, the fonts:

GITALIC, OLDENG, and GERMAN

are not recommended for presentations.

Figure 5 demonstrates the readability of each of the above mentioned fonts. The body of the text in the figure was generated using the XSWISS font. Note that the three very ornate fonts, GITALIC, OLDENG, and GERMAN, are barely readable despite the large character sizes.

Composition of Tables

In general, try to avoid using tables in your presentation. Usually, the material in a table can be adapted into a chart or graph which is more appropriate for presentations (Paller, 1982). For example, Table 1 contains too much detail to be understood by the audience in a short amount of time. Figure 6 takes the critical information from Table 1 and displays it as a stacked bar chart. The chart helps focus the audience’s attention on the most important information in the table and makes the presenter’s point more effectively.

If you must use a table, try to simplify the table as much as possible; only the simplest of tables are suitable for projection. Label rows and columns completely and title all tables clearly. Use a minimum of digits (1 or 2), and avoid extraneous and useless information such as decimal points in obvious locations. Last, consider the use of two projectors if you need to display a complicated table or if you need to refer to it more than once.

Vugraph Layout

Use a horizontal (landscape) image area and don’t crowd the text or figures too close to the edges of the vugraph or slide. A good rule of thumb is to limit information on a 8 1/2 by 11 inch vugraph to a 6 by 9 inch area centered on the vugraph.

To understand the difference in impact between a vertical and horizontal image area compare Figures 7 and 8. The information in Figure 7 is presented in a horizontal format on a 6 by 9 inch image area. The same text is presented again in Figure 8, but using a 6 by 9 inch vertical image area instead. As you can see, the vertical image area allows the user more lines of text and greater distances between lines, but requires a smaller character size to accommodate the text in each line. Thus, the image in Figure 8 will be harder to read in a larger room.

Effective Use of Color

Color should be a prime consideration in vugraph design. Correctly used, color can help clarify an important point. Incorrectly used, color could distract an audience or confuse or misrepresent your data. Although color can be used extensively in SAS/GRAPH, the best advice is to use color sparingly and carefully. Avoid strong or garish colors; soft colors are more appealing to the eye (Marcus, 1982). Use color consistently throughout the presentation. A color pattern established in one vugraph should be duplicated in subsequent vugraphs having similar meaning. Order shading patterns from darkest to lightest in bar charts.

In general, the colors that work best are those that give the strongest contrast to the background. Hence, light colors are recommended against the dark background of a color terminal screen, and dark colors are best suited for light backgrounds, such as for vugraphs. For slides, red and green show up adequately when used in large patterns or geometric forms, such as the bars in a bar chart or the slices of a pie chart. They do not work as well when used for lettering, as in word charts. Blue is very difficult to see on a dark background.

As a suggestion for enhancing the appearance of transparencies, the addition of a colored acetate panel to the back of the transparencies after the transparency has been drawn, can create a useful effect.

Lettering on TRANSPARENCIES (Light Background):

<table>
<thead>
<tr>
<th>Good/Lively</th>
<th>Readable/Dull</th>
<th>Adequate</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magenta</td>
<td>Dark Brown</td>
<td>Orange</td>
<td>Yellow</td>
</tr>
<tr>
<td>Red</td>
<td>Blue</td>
<td>Black</td>
<td>Green</td>
</tr>
</tbody>
</table>

Lettering on SLIDES (Dark Background):

<table>
<thead>
<tr>
<th>Good/Lively</th>
<th>Adequate</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Red</td>
<td>Blue</td>
</tr>
<tr>
<td>Cyan</td>
<td>Green</td>
<td></td>
</tr>
<tr>
<td>Pink</td>
<td>Magenta</td>
<td></td>
</tr>
</tbody>
</table>

Background Colors:

<table>
<thead>
<tr>
<th>Acceptable</th>
<th>Too Dark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyan</td>
<td>Dark Brown</td>
</tr>
<tr>
<td>Pastel Green</td>
<td>Green</td>
</tr>
<tr>
<td>Pastel Magenta</td>
<td>Pastel Blue</td>
</tr>
<tr>
<td>Pastel Red</td>
<td>Dark Blue</td>
</tr>
<tr>
<td>Dark Orange</td>
<td>Violet</td>
</tr>
<tr>
<td>Pastel Orange</td>
<td>Yellow</td>
</tr>
</tbody>
</table>
PREPARING VUGRAPHS USING SAS/GRAPH

The development of vugraphs is inherently an iterative process. Rarely do you get the vugraph you want on the first attempt. You may want to change the position of parts of the vugraphs. You will probably wish to try different color combinations and character fonts before deciding on the final vugraph.

The key to expedient vugraph design is to minimize the number of instructions that need to be issued in each iteration. It can take up to 10 or more lines of SAS code to produce detailed vugraphs. Ideally, you would like to be able to interactively change the SAS instructions used to generate each vugraph, yet not have to completely reenter the entire set of instructions. Furthermore, at the end of the session you want the SAS code stored in a permanent data set which can later be reused. As SAS now stands (release 7.9.6) there is no simple way to change only the parts of the instructions you want and reexecute the rest. In practice we have found the following method to work fairly well.

The SAS instructions used to generate each vugraph are stored as macros in a partitioned data set. Each member in the data set consists of one or more macros.

Full-screen editors provide the easiest way to initially create the SAS code and to edit the code when changes are necessary. At the Rand Corporation the Structured Productivity Facility (SPF), an IBM product used with TSO, fulfills this role.

%INCLUDE statements are used to bring the macros into SAS. Since the code used to generate the vugraphs are stored as macros, the individual vugraphs are not generated until the specific macro names are entered in SAS.

In the early stages of vugraph design use a color terminal, such as an IBM 3279. This allows quick review of each vugraph before deciding if further changes are necessary. An important point to remember when preparing transparencies is that images, especially color combinations, appear quite different under different color backgrounds. Images on the terminal screen appear on a dark background, but the finished product will appear on a light background. Final color selection should not be made until the vugraphs are seen on a hardcopy device. This may require one or more test plots before you find the most satisfactory color scheme. If the terminal you are using supports the CBACK option (which sets background color), using CBACK=WHITE will allow you to make most of your color choices based on the image on the terminal. When using a terminal which does not support the CBACK option concentrate on proper wording and correct placement in the image area. When satisfied with the vugraphs as they appear on the terminal screen move to the hardcopy device and make your final color selections.

To change the code, use the TSO command in SAS to go directly into the editor. Make any changes to the code and store it in the partitioned data set. When the changes are completed, exit the editor and return to SAS. The modified code can then be entered into SAS again with an %INCLUDE statement.

The use of macros for specifying parameters that will change is also very useful. For example, you can use macros for specifying the color and height of text which appears in a vugraph. This allows you to change the color and height by simply respecifying the macro rather than going back to the editor to change the code. This technique can be thought of as creating pseudo-variable parameters.

The %LET statement in SAS 8.2 simplifies this even further. Using %LET statements you can create macro variables which may be changed depending on the application. For example, to specify several titles using macro variables for the height and color of the text, the coding might appear as follows:

```
%LET COLOR1=RED;
%LET COLOR2=BLUE;
%LET HT=2.5;
TITLE1 .F=TRIPLEX .C=COLOR1 .H=HT SPACE SHUTTLE MISSION PLANNING;
```

After substitution the title statements appear as:

```
TITLE1 .F=TRIPLEX .C=RED .H=2.5 SPACE SHUTTLE MISSION PLANNING;
```

The colors or height of the titles can be changed simply by respecifying the variables COLOR1, COLOR2, or HT with the %LET command. The code below demonstrates how macros were used for creating vugraphs for this tutorial.

```
/* Define macro variables for slides */
%LET FONT=XSWISS;
%LET CLR1=RED;
%LET CLR2=BLACK;
%LET CLR3=BLUE;
%LET HT1=3.0;
%LET HT2=2.25;
%LET HT3=2.0;

/* *** set goptions *** */
GOPTIONS CBACK=WHITE VPOS=36;

/* Define bullet macro */
MACRO BT . F=SPECIAL . H=HT . J=

/* Slide footnotes */
MACRO SLDFT
FOOTNOTE1 .F=SIMPLEX .C=BLUE .H=1.0;
BLUE .D=(+0.+0.5.+100.+0);
```

The following macro was used to generate Figure 9.

```sas
/* Slide 1 -- What makes a good chart */
MACRO SLDEL
   TITLE1 .F=FONT .H=HT1 .C=CLR1 ;
   PROC GSLIDE ;
   NOTE .C=CLR2 BT .H=HT2 F=
   NOTE .C=CLR2 BT .H=HT2 F=
   FONT Single idea ;
   NOTE .C=CLR2 BT .H=HT2 F=
   FONT Easy to comprehend ;
   NOTE .C=CLR2 BT .H=HT2 F=
   FONT Integrated into coherent structure ;
   NOTE .C=CLR2 BT .H=HT2 F=
   FONT Maintains flow of thought ;
   NOTE .C=CLR2 BT .H=HT2 F=
   FONT Appearance is of secondary importance ;
RUN ;
```

Once the macro has been entered into SAS (via %INCLUDE), the following macro call generates the vugraph seen in Figure 9.

```sas
SLD1 /* Generates the first vugraph */
```

The placement of the text on a vugraph is determined by a number of factors: the size of the image area (HSIZE and VSIZE), the number of character units within the image area (VPOS and HPOS), the aspect ratio of the characters (an option in SAS 82), the size of the letters specified (.H=), and by the number of title, note, and footnote statements. Some experimentation may be required before the presenter is finally satisfied with the spacing on the vugraph.

Ideally, these parameters should be set so that the text is properly centered on the image area, there is sufficient space between characters and between lines, and the text is large enough to be read by the entire audience. The HSIZE and VSIZE options work primarily on output devices other than terminal. The default number of horizontal and vertical character positions varies with the output device. This is the prime reason why images on one device look different on another device. However, the user can specify values of HPOS and VPOS which will lessen the image differences between different output devices. You may have to try several different values of HPOS and VPOS to discover what values work best.

Two more advanced features of the TITLE, NOTE, and FOOTNOTE statements are the .M and .D parameters. The .M is used for specifying an absolute move from the origin or a relative move from the last location and the .D option is useful for drawing lines, boxes, and grids on the image area. While the details of these features are beyond the scope of this paper, they can, with practice, be used to create effects normally not seen in SAS/GRAPH.

Slides or Vugraphs?

Whether you use slides or vugraphs is determined by the equipment available to you and the nature of the presentation. Slides are easier to use in a presentation than vugraphs since the speaker can remotely direct the projector. Vugraphs must be manually changed either by the speaker or an assistant. Both vugraphs and slides require projectors. Slides require a darkened room and tend to inhibit audience interaction. Vugraphs are better for small groups where audience participation is expected or encouraged.

With SAS/GRAPH, transparencies are produced on a plotter by substituting an acetate sheet for paper. When using a plotter to create vugraphs you will achieve better results if you:

- Use pens designed for writing on transparencies
- Use pens with the greatest thickness for titles, notes, and footnotes
- Use pens with a fine point for labels, legends, variable names and other text where SAS/GRAPH uses hardware character sets or the SIMPLEX font by default
- Use slower plotting speeds. Hewlett-Packard recommends 10 cm/sec for their plotters

You may have to tape down the edges of the vugraph to hold it in place on the plotter bed. A good trick is to slightly moisten the side of the vugraph which touches the plotter bed. This will cause the transparency to adhere tightly to the plotter bed.

For producing slides of your vugraphs many different output devices are available. These include the Dunn camera, Matrix camera, and FR80 film recorder to name a few. If such a device is not available, it may be possible to use a 35mm camera mounted on a tripod to photograph the terminal screen. For best results when photographing images on a terminal:

- Make the room as dark a possible
- Use a long focal length lens (105 to 135 mm) to compensate for the curvature of the screen
- Reduce the screen intensity to avoid having characters (text) appear too bright in relation to the rest of the image
- Use ASA 400 film and try to make the exposure time longer than 1/15th of a second

Some experimentation may be required to achieve adequate results. A less satisfactory slide can be made by photographing a plot made on paper. Use a copy stand and a copying lens for best results.
SUMMARY

The following points should be considered in preparing for a presentation and in generating the vugraphs for the presentation:

- Define a central theme for the presentation
- Organize material into a coherent governing structure
- Limit vugraphs to a single idea
- Minimize the detail in the vugraphs
- Use color consistently in the presentation and carefully in each vugraph
- Try several different combinations of color, fonts, and text before deciding on the final vugraphs

REFERENCES


Paller, Alan and Vinberg, Anders, Choosing the Right Chart, Integrated Software Systems Corporation, 1982


HOW CFCs ENTER THE ATMOSPHERE

Manufacturing
- CFCs used in all product areas
- Some products emit all CFCs at this stage

Normal use
- CFC vital to some products during use
- Most of CFCs 'banked'

Disposal
- Emissions may occur long after disposal

THE EMISSIONS PROCESS

Figure 1 -- Word Chart

Figure 2 -- Diagram
Some Conclusions and Implications

- U.S. fertility rates tended to move along with business cycles until the late 1950s, but they have moved counter-cyclically since.
- Our model explains both pro-cyclical and counter-cyclical fertility rates in a unified framework.
- The analysis indicates that recent U.S. fertility rates result from substantial substitution of births across years, as couples respond to changes in the time cost of children.
- If women's employment stays high and their wages and job availability continue improving, we expect declining or level fertility rates indefinitely, except during recessions.
- These predictions differ from most experts' expectations.
- Either a major economic depression or a rapid growth in use of day care facilities could upset these predictions.

Some Conclusions and Implications

- Fertility rates moved:
  - With business cycles before 1960
  - Against business cycles after 1960
- The model explains both movements
- The model predicts
  - Long term decline or leveling
  - Short term increases during recessions

Lettering Considerations

- Use letters as large as possible
- Avoid hardware character sets
- Use fonts with heavy stroke
- Recommended SAS/GRAPH fonts
  - TRIPLEX, TITALIC, DUPLEX
  - XSWISS (SAS 82)
- Avoid SAS/GRAPH fonts
  - GCHLIG, OIENG, GERDUR

Figure 3
Detailed Vugraph

Figure 4
Simplified Vugraph

Figure 5
Vugraph of Selected SAS/GRAPH Fonts
Table 1

LEVEL OF EDUCATIONAL ATTAINMENT AS OF 1976 FOR NLS RESPONDENTS BY MARITAL AND PARENTHOOD STATUS

<table>
<thead>
<tr>
<th>Parenthood Status as of October 1976</th>
<th>Voc-tech school</th>
<th>College</th>
<th>Nonparents</th>
<th>Parents</th>
<th>After 10/74</th>
<th>11/73-10/74</th>
<th>Before 10/73</th>
<th>Prob. 6/72-10/73</th>
<th>Prob. before 6/72</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No college</td>
<td>Less than 2 years or more</td>
<td>Less than 2 years or more</td>
<td>Bachelor's degree</td>
<td>Graduate degree</td>
<td>N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Per cent</td>
<td>Per cent</td>
<td>Per cent</td>
<td>Per cent</td>
<td></td>
<td>Per cent</td>
<td>Per cent</td>
<td>Per cent</td>
</tr>
<tr>
<td>Nonparents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>22.5</td>
<td>9.1</td>
<td>3.4</td>
<td>11.8</td>
<td>25.7</td>
<td>27.4</td>
<td>0.2</td>
<td>4309</td>
</tr>
<tr>
<td>Parents</td>
<td></td>
<td>48.7</td>
<td>18.1</td>
<td>3.3</td>
<td>16.0</td>
<td>10.3</td>
<td>1.6</td>
<td>0.0</td>
<td>419</td>
</tr>
<tr>
<td>After 10/74</td>
<td></td>
<td>49.4</td>
<td>18.1</td>
<td>4.8</td>
<td>11.4</td>
<td>11.4</td>
<td>4.8</td>
<td>0.0</td>
<td>165</td>
</tr>
<tr>
<td>11/73-10/74</td>
<td></td>
<td>42.0</td>
<td>18.9</td>
<td>3.5</td>
<td>18.2</td>
<td>12.6</td>
<td>4.9</td>
<td>0.0</td>
<td>143</td>
</tr>
<tr>
<td>Before 10/73</td>
<td></td>
<td>56.4</td>
<td>17.3</td>
<td>0.9</td>
<td>20.0</td>
<td>5.5</td>
<td>0.0</td>
<td>0.0</td>
<td>110</td>
</tr>
<tr>
<td>Prob. 6/72-10/73</td>
<td></td>
<td>60.0</td>
<td>13.8</td>
<td>1.5</td>
<td>15.4</td>
<td>9.2</td>
<td>0.0</td>
<td>0.0</td>
<td>65</td>
</tr>
<tr>
<td>Prob. before 6/72</td>
<td></td>
<td>51.1</td>
<td>22.2</td>
<td>0.0</td>
<td>26.7</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>52</td>
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<tr>
<td>EVER MARRIED FEMALES</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Nonparents</td>
<td></td>
<td>37.8</td>
<td>14.3</td>
<td>3.5</td>
<td>16.0</td>
<td>14.9</td>
<td>13.4</td>
<td>0.1</td>
<td>2811</td>
</tr>
<tr>
<td>Parents</td>
<td></td>
<td>66.2</td>
<td>13.5</td>
<td>2.2</td>
<td>12.0</td>
<td>4.9</td>
<td>1.2</td>
<td>0.1</td>
<td>2533</td>
</tr>
<tr>
<td>After 10/74</td>
<td></td>
<td>57.8</td>
<td>14.6</td>
<td>3.1</td>
<td>15.7</td>
<td>8.6</td>
<td>2.1</td>
<td>0.1</td>
<td>1107</td>
</tr>
<tr>
<td>11/73-10/74</td>
<td></td>
<td>68.6</td>
<td>14.5</td>
<td>2.0</td>
<td>12.0</td>
<td>2.8</td>
<td>0.3</td>
<td>0.2</td>
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Figure 6

Women's Educational Attainment by Marital Status and Timing of Parenthood

Fewer Teenage Parents Attend College

<table>
<thead>
<tr>
<th>PARENT STATUS</th>
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</thead>
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<tr>
<td>NONPARENTS</td>
</tr>
<tr>
<td>SINGLE</td>
</tr>
<tr>
<td>EVER MARRIED</td>
</tr>
<tr>
<td>PARENTS</td>
</tr>
<tr>
<td>ADULT</td>
</tr>
<tr>
<td>EARLY ADULT</td>
</tr>
<tr>
<td>LATE TEEN</td>
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</tbody>
</table>

PERCENT SUM

LEGEND: EDCAT
 wipe No College
 wipe Voe/tech
 wipe < 2 yrs Coll
 wipe 2 yrs + Coll

902
TECHNICAL CONSIDERATIONS

- Horizontal image area
- Size and proportion
- Slides versus transparencies
- Output devices
- Slides
- Transparencies

WHAT MAKES A GOOD BRIEFING CHART GOOD?

- Single idea
- Easy to comprehend
- Integrated into coherent structure
- Maintains flow of thought
- Appearance is of secondary importance

FOR FURTHER INFORMATION, CONTACT:
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