

**THE APPLICATION OF PRINT SHOP
AND RELATED SOFTWARE
IN THE PRODUCTION OF
INSTRUCTIONAL TRANSPARENCIES:
AN INSTRUCTIONAL PACKAGE**

WILMAR E. WIKJORD

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ABSTRACT

The purpose of this study was twofold: 1. To investigate how Computer Manuals are designed. 2. To prepare an Instructional Package that would be helpful to teachers in preparing overhead transparencies.

Computer Manual Design was researched to help determine the components that should be included in the Instructional Package and to help determine how this package should be evaluated. The major emphasis was a review of the literature on computer manuals and how manual design could be improved.

The Instructional Package produced contains the Print Shop Users' Club Software, directions on how to produce transparencies, and specific directions on how to use the various Print Shop and Print Shop Companion Menus to print graphics and text for use in the transparency making process.

The Instructional Package was evaluated by teachers in the field who used a questionnaire that was developed to determine the strengths and weaknesses of the package. The results of the questionnaire were used to revise the Instructional Package into its final form. (See Appendix E: the Instructional Package which accompanies this paper).

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Chapter ONE

1.1 Introduction

The main goal of teachers is to provide effective instruction to their students. As a school principal the writer strives to facilitate teachers' preparation for effective instruction of students. A response to the need for administrators to involve themselves in evaluation and the design of learning materials to foster improved quality in instruction became the basis for this project.

The aim of the project was to design an instructional package that would enable classroom teachers to improve their instruction through the proper use of the overhead projector. The package allows teachers to easily and effectively produce their own overhead transparencies easily using existing computer technology.

In order to produce the instructional package, planning and research was undertaken which took three main directions. The first direction was to explore readily available computer technology in Alberta

schools. Such an exploration was needed in order to make a decision on what computer hardware and software could best serve the needs and abilities of the teachers and the schools in which they were employed. The second direction was to explore the area of **overhead projection.** Questions addressed in this area included the following: How should transparencies be designed? How can transparencies be easily and effectively produced? How can transparencies be used effectively? The third direction was to research the area of **computer manual design.** Such research was undertaken so as to facilitate the development of the instructional package so that it could easily and effectively be used by classroom teachers. Questions addressed on this topic included those listed below: What should be included in a manual? How should the manual be organized? What kind of language is most appropriate?

1.2 Rationale

The three directions for research and planning mentioned above provided the information that led to the production of an instructional package that could be used by classroom teachers for the production and use of overhead transparencies. The following discussion gives the rationale of why these directions

emerged and what decisions were made as a result of the research.

a) Computer Technology

The computer hardware and software that could be available to teachers today is very impressive. The hardware is being designed and produced by a large number of companies. Some computer operating systems are compatible with others; however, the majority are not. The assortment and number of software packages is even more numerous. Through research on a small sample of what is on the market today, a decision was made to use the Apple IIe computer system and the Print Shop software as the basis for the instructional package.

i) The Apple II Computer System

There may be computers on the market today that are better suited to the production of overhead transparencies. However, the Apple IIe was prevalent in Alberta, supported additional graphics capabilities, and therefore was selected as the hardware for the instructional package.

Cost is one of the most important factors that was considered. Other computers, such as the Macintosh are relatively more expensive to purchase than the Apple IIe, so there are not many

of them in the schools today, and the probability of their being purchased is limited.

According to Alberta Education (1986), as of January 1, 1986 there were an estimated 22,752 computers in Alberta schools with 69.3% being Apple IIe or AppleII Plus type, 1.0% being Macintosh type and the other 29.7% other brands such as IBM, Commodore, Vic 20, and Radio Shack. Andrew Barbour (1987) reported on the rate at which schools were replacing computer equipment as of 1986. He said, "In 1986 public schools discarded an average of only 0.7 computers each and traded in only 0.3 micros." (p. 11). Some of the non-Apple computers may have additional capabilities useful to transparency production. However, with the unlikelihood of such computers being available in many of the schools in the immediate future, the Apple IIe has remained the schools' most prevalent computer.

The number of commercial and public domain graphics available for use with the Apple IIe is extensive and comprehensive. These include: the commercial Print Shop and Print Shop Companion software, the Print Shop User's Club public domain software, and the software of other similar organizations.

Another factor that was considered in the choice of the Apple IIe was its compatibility with a number of other computers. There are still many other Apple type computers in the schools, such as the Apple II Plus, the many Apple clones like the Santos and the Unitron, the Apple IIc, and the newest addition, the Apple GS. The GS is one of the most popular and fastest selling models of the day and many schools are including them in their decisions to buy new and/or replace old equipment.

The total instructional package can be used with all of these computers. This makes its use a very viable one today and also for the immediate future.

ii) The Choice of Print Shop and its related software

The choice to include Print Shop and its related software as part of the instructional package was based on a number of considerations, such as: a "user friendly" design, a widespread penetration into the schools, the moderate cost of the Print Shop User's Clubs graphics, the numbers of graphics the User's Club provides, and the apparent adaptability of the programs to be used for the design and production of transparencies.

Print Shop has received very favorable acceptance by computer users across North America since its introduction in 1984 both in the schools and in the private sector. The ease of its use has been one of Print Shop's greatest assets. The program guides the user through each step using on-screen menus. The user can make mistakes without needing to do much extra work to correct them. Thus the anxiety level of the user is reduced.

Print Shop software has been a "best seller" for a number of years. McGinty, Reed, & Sauter (1987 p.21) looked at the trends of software development of their time. Their article identifies the results of a questionnaire that was sent to the twenty top software publishers which asked them to name a competitor's program that they wished was theirs. Print Shop was the leading choice. What this shows is that Print Shop is an excellent, useful, and popular program. For these reasons Print Shop has been purchased and is readily available in many schools.

Print Shop User's Club graphics are not protected by copyright laws. This is important because copies can be made and used without worrying about the copyright laws. The numbers

and variety of graphics produced and classified by the Print Shop User's Club is made useful by the way that they have been organized. Disks of approximately one hundred graphics each have been prepared according to broad general themes. Such disk titles include "Animals", "Household Items", "Computers, Signs, and Logos", and "People". This systemization allows for ease of use.

Print Shop programs can be adapted to making overhead transparencies. The programs produce text, fonts and graphics in a number of different sizes. One limitation may be that the sizes of text or graphics are not varied enough to suit all needs. However, there is enough variety to meet most transparency needs and if special circumstances arise, photocopiers have enlarging and reducing capabilities which can readily overcome most problems. The length of each individual line of text is a limitation but even that is not serious when considered in light of the guidelines for simplicity and the recommendations for limited use of text in preparing transparencies.

Print Shop and its related software can provide the necessary text and graphics to produce good transparencies. The ease of use, the variety of

graphics, reasonable costs and a widespread availability help to make it a very viable part of a transparency making package.

b) The Overhead Projector and Transparencies

The teachers today are faced with the ever present problem of "too much to do in too little time". However, educational research into learning and a vast array of technological advances are supposed to aid teachers in carrying out the many tasks of teaching.

The instructional package developed as part of this project was designed to take into consideration those factors mentioned above. Transparencies have been proven to be an effective and a versatile means of presenting information to students. Teacher-developed overhead transparencies are inexpensive and often more suitable to the teacher's needs. Computer technology can and does provide a time saving method of producing overhead transparencies.

Overhead projection has been a valuable and versatile audiovisual tool since its introduction in the early 1940's. The armed forces were the first to realize its effectiveness in presenting information. Educators began to use overhead

projection shortly after WW II and to realize some of its potential.

"New equipment, materials, transparencies, and accessories for overhead projection are flooding educational conventions and markets...Overhead projection is very much in the American educational scene, and is here to stay." Ring & Shelley (1969 p 1.)

This statement appears in a guide on overhead projection published seventeen years ago. The quote is still appropriate today. Overhead projection is recognized as being an effective way to enhance instruction. It adds variety to teaching and provides a means of presenting information in an orderly manner. The old saying that "one picture is worth a thousand words" can be applied to overhead projection.

The production of effective instructional overhead transparencies has posed problems for teachers in the past. Their production was limited because of the time it took to prepare the text, the unavailability of suitable graphics, and the often times low quality of the finished product which resulted from manual techniques. With today's technology there are better means available to prepare good overhead transparencies. The Print Shop program is one of those means.

The instructional package designed by the writer is intended to simplify transparency production and

provide information needed for planning and preparing transparencies. The "layout" and technical features of an overhead transparency are important considerations. Also, the advantages of their use and the methods of presentation are important.

c) Manual Design

An important part of the instructional package is its manual. The manual that accompanies this package incorporates features that the research suggests are important to ensure its usefulness and effectiveness.

Potential users are at various levels of computer expertise and knowledge about transparency making. For this reason a manual must accommodate individual differences. The manual must also allow the users to use the software in an efficient and effective manner. As Sohr (1983 p. 286) states, "Many software manuals are patchwork affairs thrown together at the last minute either by programmers or technical writers who write too technical."

The design of the manual is critical to its proper use. Therefore, factors that enhance manual design and use were studied and incorporated in its writing.

1.3 Research Questions

The creation of an instructional package for the production of overhead transparencies and the accompanying manual were the major focus of this project. The following research questions were addressed:

1. What components must be included in an instructional package to make it useful to classroom teachers? The study focused on determining what features are required in a good instructional package.
2. How can a computer manual be evaluated? This study attempted to provide for such evaluation and to incorporate the results in writing a second draft of the manual.

1.4 Other Questions

The instructional package has one main goal - to help the user produce good educational transparencies. Therefore, the user needs access to information that explains the features of good transparency design and also describes the advantages of using transparencies in instruction. Although the information that was found in the review of the literature was not part of the research design of this project it is included in

the manual. The specific questions which were addressed are the following:

1. What are the design features that make for educationally effective overhead transparencies?
2. What are some educational advantages of using good overhead transparencies?
3. What are some techniques which make the use of overhead transparencies more effective?

1.5 Limitations of the Study

The study undertaken as part of this project has three limitations. They are as follows:

1. Limited Literature:

The main purpose of this study was to produce an instructional package that would enhance the production of overhead transparencies by the classroom teacher using computer technology. The available research dealing with computer manual design variables is very limited or very difficult to find. However, the writer felt that research into computer manual design could be very appropriate and applicable to this project.

2. Dated Literature:

The second focus of this project deals with features of the layout and design of a good transparency? Much of the literature on the design

of transparencies is old. The bulk of the reviews had to come from studies and observations made from fifteen to twenty years ago. While the main features of a good transparency have not changed, today's technology affects to some extent some of the factors that were important such as the size of type and methods of production.

3. Limited Survey:

The method of evaluation of the instructional package was limited by the number of users who were involved in field-testing it and the number of field tests conducted. However, the product was field-tested by computer users (approximately fourteen) and "nonusers" (approximately five). Four of the participants were secondary educators and fifteen were elementary educators. The participants were encouraged to complete questionnaires accurately and honestly.

Chapter Two: LITERATURE REVIEW

2.1 Introduction

The review of literature included in this chapter includes a description of computer manual design, the important features of transparency production, and a brief overview of the advantages and limitations of overhead transparencies.

2.2 Manual Design

A computer manual's design is important both in terms of the usefulness of the manual to the user and its acceptance as a well-thought-out document. Users and researchers describe manuals that range from good to poor. To date, unfortunately, there are too many manuals that are not well designed.

a) Consideration of the Audience

One major criticism that arises in the literature is that many existing manuals have not been designed with the audience in mind. Jensen & Osguthorpe (1985) describe this as a mismatch between the writer and the user. Olson, (1983 p. 20) although commenting on curriculum design, emphasized that a guide can only "be written effectively if the author has considerable knowledge of the practices of those he/she wishes

to influence." This idea was also supported by Anderson (1983) when he pointed out the need for an awareness of the working context of the practitioner. The writer of a useful computer manual must carefully consider the audience the manual is intended for as well as the circumstances under which those people work. Sohr (1983) stressed that the writer needs to painstakingly define his audience. Jensen & Osguthorpe (1985) went even further by emphasizing the need to incorporate a definition of the user(s) directly in the manual.

b) Manual Language

A second criticism that often surfaces is associated with the style of writing. Jensen's & Osguthorpe's (1985) complaints included vocabulary and acronyms, the use of and the level of "computer language", and the unclear presentation of information. Olson (1983) agreed with these findings when he presented the notion that what is lacking is the use of language and conventions that are familiar to the user. When the language of the user is incorporated into the writing of a manual, communication is enhanced. 'What is meant' can be understood clearly and not misinterpreted or understood as something else.

c) Manual Requisites and Evaluation

How can a person create and produce a good computer manual? This was the question addressed in articles written by Sohr (1983) and the research reported by Jensen & Osguthorpe (1985). Their findings are discussed in greater detail because of the importance of these issues to the design and production of an effective instructional package.

Dana Sohr is a freelance technical writer for a national trade magazine and a consultant on the use of office computers for the newspaper industry. His article about software manual design was prepared as part of a research project done in conjunction with The University of Maryland's Computer Science Department. In his article he advocates that the writer of a good computer manual must:

1. Create the right tone.
2. Define the audience and write the manual at the level of that audience.
3. Organize the manual by the major task involved.
4. Make sure that the manual contains organizers such as brief introductions to chapters and chapter summaries.
5. Have the tasks developed so that they move from the 'whole' to the 'part'.
6. Repeat directions as often as possible at appropriate junctures.
7. Write actively, logically, relevantly, and simply.
8. Plan for a user evaluation of the manual to help collect objective information. (Sohr, 1983, suggests the use of a rating scale.)

The major drawback of the article is that it does not indicate where and how the information was gathered and evaluated. However, it does present ideas that are in agreement with those advocated by Jensen and Osguthorpe (1985) in their study.

Randall Jensen, an instructional specialist for a school system in Gilbert, Arizona and Russell Osguthorpe, an associate professor at Brigham Young University in Provo, Utah, saw a need to research computer manual design. They state that "In no cases have researchers attempted to find and identify systematically the characteristics of effective microcomputer manuals"(p. 42). The purpose of their study was to identify potential principles of effective design and test these principles. As a result of their work they produced a "Computer Manual Checklist" which contains a total of 36 questions. Each question rates desirable aspects of a manual on a seven point scale. Appendix A contains a list of the questions they used. Two computer manuals that were rated positively and two that were rated negatively were selected by taking a poll of computer users. The "inter-rater" reliability was checked using the Coefficient of Concordance test and the Chi-square rating for each of the manuals.

It was significant at the "p <.0001" level. They also made a comparison of the overall scores on each manual and concluded that their Computer Manual Checklist was able to easily discriminate between "good" and "poor" manuals. In checking the ratings between "good" and "poor" manuals, the "good" manuals received significantly higher ratings than the "poor" manuals (p <.001). Jensen and Osguthorpe then used the "checklist" to revise a manual identified as "difficult to use". A group of selected participants were randomly assigned to two groups and then instructed as to how to the manuals should be used. After using the manuals the subjects were given performance and attitude tests. Figure 2.1 shows the results of the performance tests. (Jensen & Osguthorpe p. 45) The results of the tests show a very significant improvement in performance on the part of the participants who used manuals which had been revised in terms of the features of good manual design, (t (27) = 12.55, p <.001). The attitude test showed significantly higher test results as well. (t (27) = 4.34, p <.001).

MAJOR PERFORMANCE TASKS

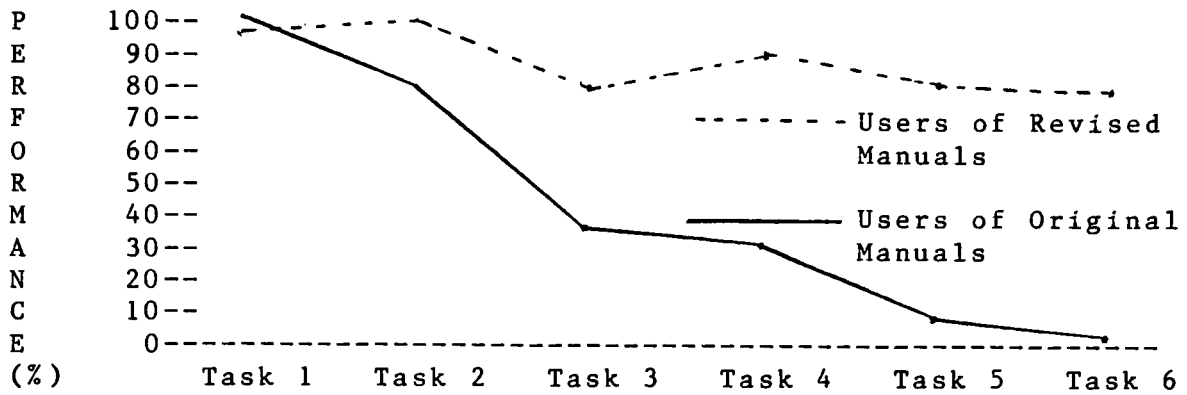


Figure 2.1

The Jensen and Osguthorpe study achieved two major results that are significant to the project described in this paper. One, is that manual design has a bearing on the user's attitude toward the materials being used. Two, the study identified user background, manual components, presentation strategies, sequencing, and ease of use as being general design features which should be addressed in preparing a well-designed computer manual.

Jensen and Osguthorpe concluded that any manual should be developed with a clear picture of the user in mind and the intended user should be defined in the manual. Also, the design should be

formatted in such a way that it helps the user readily access information. This can be accommodated by explaining how best to use the manual, including definitions of quick-reference features such as tabs, indexes, and specific reference sheets. And finally, the manual should be written from the perspective of a learner sitting in front of the keyboard. The manual should be sequenced so that the learning proceeds from the simple to the complex, includes examples, repeats important steps, and allows for the user to get started on the computer quickly. To provide for ease of use, the manual must be designed so that it is easy to read, contains appropriate information, and allows for completion of tasks in a short period of time. If the manual cannot be used in an easy, straight forward, non-threatening manner, it will simply not be used.

2.3 Transparency Design

The design of an overhead transparency influences its use and effectiveness. Information on the overhead transparency must be organized to carry a message that is easy to see and read, is clear, and is readily understood by the intended audience. Research has identified important factors related to communicating with overhead transparencies and the arrangement of

different elements on the transparency. The following information covers such topics as transparency effectiveness, transparency advantages, and the organization of visuals and lettering on a transparency.

a) Overhead Transparency Effectiveness

For many years visuals have been used as an aid to teaching. Educators realize the importance of providing meaning to their teaching by the inclusion of concrete or life-like experiences. Educators try to relate the abstract to the concrete and the specific learning to its application in the real world. Transparencies are a good means to introduce lessons, stimulate discussions, present added or supplementary information, review lessons, and provide summaries of lessons. By means of a visual component, they also provide motivation and contribute to student achievement.

Transparencies are a specific form of visual. The literature on the use of visuals is quite extensive, and although it does not always address transparencies specifically, it does consistently support the use of transparencies in the classroom. Deutsch (1970 p 309) called overhead transparencies "one of the most popular teaching tools in the

classroom" and described them as a "tool for classroom communication."

i) Motivation and Creativity

The motivation of students greatly affects their attitudes and thus their learning. If they are interested in a concept they will "attend" to it with greater effort and care. McKeachie, (1963 p. 1119) states that,

We know that student learning and memory are closely tied to motivation. Students usually learn what they want to learn but have great difficulty learning materials which do not interest them.

This view was also expressed by Fuller (1969 p. 207) when he states that "The motivation of the learner is generally conceded to influence his learning." Ray (1966) described visuals as a self motivating tool. The child may get involved with the materials at a deeper level because a stimuli may invoke a relationship to something with which the child can relate. Visuals are more than just information giving. They are information giving on a different level from that of the printed text alone. Ray also found some evidence that visuals stimulate creativity and aid visual motor skill development necessary in learning numbers and the written language.

ii) Student Achievement

Student achievement is also a factor in considering the use of visuals. Achievement is a primary concern of teachers. Crosby (1966) found that by changing his mode of instruction from a "handout" and "blackboard" approach to one that used the overhead transparency as the sole medium of presentation and discussion, he increased learning and improved motivation. Francis Dwyer (1968) conducted a fairly extensive research project on the types of visual illustrations which are most effective in promoting educational objectives. Dwyer was concerned with the factors of realism, color, and the amount of detail used in the visuals and how these factors related to achievement. He found that although color was not critically important, the amount of detail and realism were. Too much detail became distracting and thus hindered achievement. He concluded that "visual illustrations used to complement oral instruction significantly increased student achievement" (p 5). These findings were reaffirmed in another study he conducted. (Dwyer, 1969).

iii) Students Learning Patterns

Another aspect to be considered in the use of visuals is "how students learn". This concept has

received a great deal of attention in the past few years. Teachers consider learning differences before making important decisions about their methods of instruction. Some students learn best with a tactile approach. Others learn more effectively through the printed mode. Still others learn more effectively when visuals are a part of the instructional process.

The use of transparencies should be considered when decisions are made about instructional strategies in conjunction with student learning styles. Transparencies can help bring the real world to the classroom. They can provide concrete support for an abstract idea. As Bandwein (1958) put it, they help students organize and associate facts, which in turn may help build concepts.

b) Transparency Advantages

In a practical sense, overhead transparencies are one of the most effective mediums of instructional support available to teachers. Ellington (1985, p. 20) stated that "they are probably the most versatile visual aid that can be used to support mass instruction in the modern classroom." He further stated that a transparency is "the most useful single display aid available to anyone who wishes to carry out exposition instruction of virtually any type." (p. 94). Ellington also

indicated that in addition to being useful for mass instruction, the transparency could also be used for small group instruction and in individualized learning environments or situations. He did caution, however, that in the individualized situation care must be used in transparency design so as to control the instructional process as well as to provide the content.

Practical considerations related to the use of overhead transparencies are derived from research studies. The following is a list of such advantages that were noted by Deutsch (1970) and Ellington (1985).

1. Reduces teaching time. Materials can be prepared before class and therefore far more examples can be presented within a short period of time.
2. Cost saving in duplication. Only one copy is needed as compared to class sets.
3. Teacher can face the class at all times. This can be a factor in classroom control and in monitoring the student participation and understanding.
4. Materials can be retained for repeated use.
5. No chalk dust.
6. Control student attention. By simply turning the projector on or off at the appropriate times the teacher can focus the students' attention.
7. Simplicity of operation for use. It does not require hours of practice to learn how to use it.
8. Relatively inexpensive hardware costs. The projector is the only major cost as the picture can be projected on to any flat, light colored surface. Also, most schools have overhead projectors in their inventory.
9. Little maintenance.

10. Easy to prepare own materials. This advantage is facilitated with today's photocopiers and microcomputers.
 11. There is little need to change the classroom lighting. Unlike filmstrips and slide presentations the overhead projects images that can be seen without dimming the classroom lighting.
- c) Transparency layout and design

Transparencies must be carefully designed to provide the greatest benefits. This includes the consideration of the location, the amount, and the size of the printed content and the way the individual components are organized on the transparency's surface.

i) The Format

The most widely accepted transparency format is a horizontal one. There are a number of reasons why this is so. First of all, it is the way we are used to seeing things. The natural eye motion is across the page rather than up and down. Movies and slides are presented in horizontal format. If one is watching a slide presentation and a picture is presented in the vertical format it stands out as being unusual and more difficult to comprehend. Commonly accepted media such as motion picture films and television are made in a horizontal format - not a vertical format.

ii) The Location

The location of the information on an overhead transparency is related to both the technology and the way that we look at things. As was mentioned previously, most overhead projectors distort the information near the outside edges. For this reason, important information should not be located there. Books on transparency production suggest that one should allow at least three quarters of an inch margin from the inside of an 8 1/2" by 11" or letter size page.

The way we look at pictures is also important. Harrison, (1967) in summarizing research on this subject stated that when one looks at a transparency illustration the first point of focus and the position with the greatest time devoted to it is a position just to the left and just above the center of the image. Therefore, the most important content of the transparency should be located there. Harrison also stated that from this point, the typical eye movement is first upward and to the left, and then in a general clockwise motion around the page (see fig 2.2). This is important to consider when planning the layout of the information.

EYE MOVEMENT ON AN OVERHEAD TRANSPARENCY

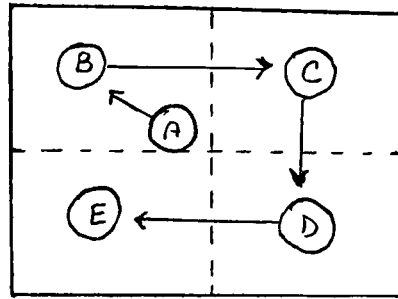


Figure 2.2

iii) The Information

The information placed on a transparency should be considered in terms of its appropriateness to the concept being presented and the availability of visuals. Also, one should consider whether or not the concept will be appropriate to the use of overhead transparencies. If long lists of written text are to be presented, probably the best method is to use printed "handout" sheets. The best use of a transparency is in presenting a single concept or idea. Rowatt (1980) suggests that simplicity is the key to effective transparency use and it is almost impossible to make a transparency which is too simple. If a concept requires more information

it should be reduced into smaller units for presentation on several transparencies.

A second factor to consider is the amount of text to use. Transparencies are used to focus attention. For this reason the text should be short and succinct. Only the key words should be included on the transparency. Phrases or single words are appropriate units of communication. The rest of the information is presented orally while the concept is being developed in the lesson.

iv) Sizing and Spacing

The information presented must be large and clear enough for all to see. In the past, the quality of the text was a problem because of the limited capabilities of the technology. The thickness of the letters was important because they had to be wide enough to allow for some loss of clarity at the edges. Because today's duplicating technology is much better this is not as great a problem. The use of "primary" type size or type no smaller than 1/4" is recommended. Also, the spacing of the letters can affect legibility. Not all forms of type are recommended. "Pica", rather than an "elite" type is easier to read and thus more effective. Elite has the letters spaced too closely together. It is important to select a proper type

size and spacing to produce good quality transparencies.

The technical quality of the finished transparency depends upon the design considerations described above. Care must be taken to limit the concept, select the key information and determine the layout to be used. When these suggestions are incorporated, the production of effective overhead transparencies will result.

2.4 Summary

The literature dealing with the writing and evaluation of computer manuals has been incorporated into this project. To be useful and effective an instructional guide must be produced with the following ideas as the focus:

1. The purpose of the instructional guide must be meaningful for the user. To be effective the purpose and the user must be identified.
2. The package must be designed and developed to allow for easy access and use. Care must be taken to organize the package and write it in a way that the user is able to understand.
3. The package should be subjected to an evaluation and the results should be incorporated in a revised version. This process will help insure

that its purpose is more easily understood,
accepted, and accomplished.

The literature on the design of overhead transparencies, although dated for the most part, is still relevant today. The overhead projector is still considered one of the most effective educational tools. It provides assistance to the user and allows for learning and motivation on the part of the audience. The producer of an overhead transparency should be cognizant of its intended purpose and audience and should carefully plan the transparency in terms of its content and layout. Finally, if the proper hardware is used in the production processes, the transparency can be pleasing to the audience and thus effective in its use.

Chapter Three: METHODOLOGY

3.1 Introduction

The concept of using the commercially produced Print Shop along with additional graphics from the Print Shop Users' Club as resources that could be used in the production of overhead transparencies was the initial basis for this study. A limited exploration of the software was undertaken to discover some of its capabilities. Along with this came the writing of a guide to assist in the use of the software and the production of transparencies. This original instructional package was used as part of the Professional Semester One (PS I) Media Module at The University of Lethbridge.

A questionnaire was given to the students to provide some "feed-back" as to the concept and as to the written instructions handed out to the students. The concept proved viable. (APPENDIX B) Written instructions were useful but it was felt they were incomplete. This information helped to justify the production of a researched-based instructional package that could be used with relative ease by a classroom teacher.

3.2 Research Procedure

Following the use of the initial instructional package by the Professional Semester One students, a decision was made to produce a more comprehensive package.

An extensive review of the literature on computer manual design was undertaken to facilitate the production of this instructional package because the writer believed there would be a positive relationship between computer manuals and instructional packages and because no literature could be found specifically relating to the design of instructional packages. As the main purpose of the package was to facilitate the production of overhead transparencies, research was also undertaken on the features of good overhead transparency design.

Following the literature review, the information that was gathered was used to plan, write, and produce a transparency making instructional package and to design an evaluation instrument. The instructional package was then field tested.

Ten copies of the instructional package were produced and compiled in binders for the field testing. A letter (APPENDIX C) was sent to teachers in the Medicine Hat School District #76, the Cypress School Division #4, and the Medicine Hat Catholic Board of

Education. The letter requested the assistance of teachers who were willing to field test and evaluate the instructional package. The instructional packages along with a questionnaire were delivered to all the teachers who volunteered. The instructions given at the time of delivery were:

1. The Print Shop and the Print Shop Companion disks were set up for use on an Apple IIe with two disk drives and for use with a Star Gemini printer. Evaluators were told to use the manual to change the setup if it was necessary.
2. The questionnaire was to be accurately and honestly completed after the package was used.
3. The evaluators had about two weeks to use the package, complete the evaluation and return the materials to the writer. (The original letter stated one week.)

When the first set of ten evaluators completed and returned the instructional packages and evaluation forms, the package was redistributed to the second set of volunteers. These evaluators were given the same instructions as the first group.

The results obtained from the questionnaires were tabulated and collated. The results are presented in APPENDIX D. These results were used to evaluate the concept of using Print Shop as a tool for the

production of overhead transparencies, to evaluate the instructional package, and to help in the revision of the package to its present form.

3.3 Data Analysis Procedure

The research data collected for this study was obtained from the questionnaires completed by the Professional Semester One (PS I) students at The University of Lethbridge and the questionnaires completed by the two sets of evaluators. The first questionnaire was basically used to help confirm the usefulness of the concept of using Print Shop for the production of overhead transparencies.

The questionnaire completed by the teachers who field tested the instructional package was used to find information related to the following areas:

1. evaluate the concept,
2. evaluate the instructional package,
3. evaluate the use of the Print Shop software in the production of overhead transparencies,
4. refine the package to its present state, and
5. provide the basis for the discussion and recommendations that are included in Chapter Four of this paper.

A summary of the questionnaire's results are included in Chapter Four. They are discussed in terms of their major findings.

Chapter Four: RESULTS

4.1 Introduction

This chapter will present results of the questionnaire completed by the PS I students and the Instructional Package evaluation completed by teachers who field tested the package. It will also discuss the the findings pertaining to the research questions posed in Chapter One.

4.2 PS I Questionnaire Results

To help the PS I students produce overhead transparencies using Print Shop to develop the text and the graphics two documents were prepared. First, a manual showing the available graphics, fonts and borders was produced. Second, a student worksheet that outlined the steps involved in producing transparencies from the initial idea to the final product was printed. This worksheet included step-by-step descriptions of the various menus available with the Print Shop and the Print Shop Companion computer software as well as description on how to lay out the transparency, prepare the master, and produce the final product.

A survey type questionnaire was presented to the PS I students who used the manual and worksheet as part of the Media Module in which they were enrolled. The

survey results were positive in that they indicated that the concept was a good one. The responses also gave the writer some ideas as to what should be included in a more complete instructional package.

As a result of the initial questionnaire to the PS I students a decision was made to produce an Instructional Package that could be used by the classroom teacher easily and effectively.

4.3 Instructional Package Questionnaire Results

A questionnaire was completed by the 19 teachers who field-tested the Instructional Package. They were asked to use the the package and complete the questionnaire. A complete record of the ratings and comments can be found in APPENDIX D on page 71.

The ratings of the Instructional package by the 19 teachers who were involved in the field test indicate that the overall design was suitable. (See Table 4.1)

The 17 questions in the questionnaire were designed to indicate how the classroom teacher felt about the various components and features that were incorporated into the design of the package. Better than 58 percent of the responses (182 out of 313) were recorded in the strongest or most positive category and better than 32 percent of the responses (102 out of 313) were recorded in the next strongest category.

Only six responses out of 313 were recorded in the negative category.

TABLE 4.1
QUESTIONNAIRE RESULTS

Question Number	Ratings					Mean
	low 1	2	normal 3	4	high 5	
1			7	3	9	4.1
2				8	11	4.5
3				7	12	4.6
4			1	5	13	4.6
5				7	12	4.6
6				10	9	4.5
7			1	8	10	4.5
8			1	7	10	4.5
9				9	8	4.5
10			1	8	10	4.5
11		1		7	11	4.6
12		2	4	5	5	3.8
13	1		1	5	9	4.3
14		1		1	17	4.7
15				3	16	4.8
16		1	5	4	8	4.1
17			2	5	12	4.5
TOTAL	1	5	23	102	182	4.45

Table 4.1 contains data that indicates that there was some concern on the part of the respondents as to the "concept" of using Print Shop, the "graphics editor" and the "glossary". Time was expressed as the major concern with regard to using Print Shop in the production of transparencies. This concern was related to the inflexible nature of the software. The user could not produce more than one graphic at a time. Also, the fonts were limited as to the size and the

number of lines per page that could be produced. For these reasons, time was needed both for printing the text and the graphics and for the cutting and pasting needed to prepare the transparency master.

The Graphics Editor was a second area that caused some concern. Although one evaluator felt that this component was one of the most valuable sections, the majority of the negative comments were related to time. The writer also believes that mastery and the proper use of this component requires a great deal of time. However, the Graphics Editor was included in the Instructional Package for those who wanted to use it. The Graphics Editor's greatest use is probably in making minor changes in the existing available graphics.

The third area in which there were some concerns raised is in the Glossary (see Table 4.1). The majority of the negative comments suggested that it was not a useful component. Four respondents suggested that the Glossary was important to those individuals who were not familiar with computers.

Overall, the users indicated that the technical aspects of a good instructional guide were addressed in the Instructional Package. The package was presented with a language level appropriate to most of those who field-tested it. The necessary help and directions

Education. The letter requested the assistance of teachers who were willing to field test and evaluate the instructional package. The instructional packages along with a questionnaire were delivered to all the teachers who volunteered. The instructions given at the time of delivery were:

1. The Print Shop and the Print Shop Companion disks were set up for use on an Apple IIe with two disk drives and for use with a Star Gemini printer. Evaluators were told to use the manual to change the setup if it was necessary.
2. The questionnaire was to be accurately and honestly completed after the package was used.
3. The evaluators had about two weeks to use the package, complete the evaluation and return the materials to the writer. (The original letter stated one week.)

When the first set of ten evaluators completed and returned the instructional packages and evaluation forms, the package was redistributed to the second set of volunteers. These evaluators were given the same instructions as the first group.

The results obtained from the questionnaires were tabulated and collated. The results are presented in APPENDIX D. These results were used to evaluate the concept of using Print Shop as a tool for the

3. An "Executive Summary" for individuals already familiar with the various tasks and for those who only need a simple guide.
4. "Step-by-step" descriptions which outlined in detail how to use the Print Shop software while at the computer. These descriptions also suggest how to overcome some of the limitations of the software as a transparency making tool. The main purpose of these "Menu" components was to enable users who were not familiar with Print Shop to use the various functions with ease.
5. A "Transparency Making" section which provided information that was pertinent for the production of good educational transparencies. This section also included information on how to use transparencies, how to store transparencies, the technical aspects of transparencies, the use of the overhead projector, advantages and disadvantages of using transparencies, and how to use the Thermofax and/or photocopiers to produce the final product. This information was included to provide for a variety of users levels of expertise.
6. A "Graphics Picture File" and a graphics "Quick File" designed for ease of reference. The picture file included actual examples of each of

the available graphics and was organized on disks. The "Quick File" was designed like a catalogue which enabled the user to locate what was available according the various categories.

7. A summary "Reference" page outlined the capabilities and limitations of the Print Shop software.
8. A "Glossary of Terms" enabled the less expert user access to more detailed information.
9. The Print Shop Users' Club graphics disks provided a large variety of graphic pictures.
10. Other features of the manual included color coded paper for the various sections, diagrams of the on-screen menus, graphics to draw the users attention to important information, and helpful hints and suggestions.

4.5 Research Question Two

How can a computer manual or instructional package be evaluated?

This project supported the idea that one effective means to evaluate a computer manual is to field test it. Jensen and Osguthorpe (1985) stated that two major results were indicators of a well designed manual: 1) the user's attitude and 2) the manual's ease of use. If the user's attitude was positive it indicated that

the manual was easy to follow and appropriate to the user's needs and expertise. If the manual was easy to use it indicated that the manual's language was appropriate and the the directions and/or explanations were at a suitable level.

The field testing conducted on the Instructional Package supported these findings. Field test results allowed the writer to modify the final package. Field testing feedback indicated that certain components such as the Table of Contents, the Executive Summary, the section on Transparency Making, the Detailed Descriptions, and the Graphics Quick File were not only useful but also necessary. It also showed that language was an important factor and that the manual needed to be organized for ease of use.

The user must feel good about the manual. Therefore, it is the user that can best identify the strengths and limitations of a computer manual. The writer believes that a publisher would be very remiss if he assumed that a manual could be written without input by potential users.

Chapter 5: DISCUSSION AND CONCLUSIONS

5.1 Introduction

An Instructional Package that allows teachers to use the Print Shop software in the production of overhead transparencies was produced for this study (See accompanying Appendix E). The manual included in this package was developed following research into computer manual design, computer manual evaluation, and overhead transparency use, design, and production. This package was evaluated by in-the-field users and revisions were made based upon the evaluation results. This chapter presents some conclusions based on the steps undertaken in this study.

5.2 Manual Design

Today's technology has entered the field of education in a great variety of ways and will have a great impact on education as we know it. The computer is one phase of such technology and it has a tremendous potential to serve both the students and the teachers. What computer technology needs are computer manuals that are written so that they can be used easily and effectively.

The findings of this study did not show any universal conclusions as to how computer manuals should

be written and organized. However, this author believes that the methods used in producing the Instructional Package (Appendix E) were effective.

What are the significant steps that helped to produce an effective Instructional Package? The first one was to **identify an need**. As an educator this author saw transparencies as an effective instructional tool and realized that in some cases locally prepared transparencies could be more useful and effective than commercial ones. The initial PS I project and its evaluation was also a significant factor in pointing to the need and potential of such an instructional package.

The second step was to **produce the Instructional Package** by investigating computers and computer software as to their strengths, weaknesses, and capabilities , reviewing the literature on transparency production and design and on computer manual design. The information gathered from the literature was incorporated into the design of the package, both in terms of the significant features of a computer manual and in terms of how such a production could be evaluated effectively.

The third step was to **create an effective evaluation instrument**. The questionnaire developed was used to investigate the concept of using Print Shop for

transparency production as well as to provide feedback about features that were included or should have been included in the Instructional Package.

The fourth step was to **create an effective approach to evaluation**. As the package was intended to be a user effective one, it was decided that the most valuable source of feedback would come from users in the field. For this reason, on-the-job educators were used as evaluators. This author believes that this was an important factor in obtaining valuable feedback.

The final step was to revise the initial version by **using the feed-back** obtained from the field test results. The final revision of the Instructional Package involved minor changes because of pre-writing investigation and planning. Also, the author's first-hand experience in the educational environment was used in the design and writing of the package.

It can thus be concluded that there are certain criteria that are important in the writing of a computer manual and/or instructional package. These are:

1. A potential or need must be recognized.
2. The writer should have an understanding of the intended audience.

3. The language used must suit the needs of the user and must be at the level of computer expertise the user is at.
4. The manual or package must be comprehensive enough to accomplish its purpose.
5. Careful planning and preparation must be undertaken to identify the features of design that should be incorporated.
6. There must be field testing and evaluation by potential users.

This author believes that many of the computer manuals today are lacking because a number of these criteria were not addressed in writing them. These shortcomings have only added to the frustrations and apprehensions of today's educators and other potential computer users.

5.3 Conclusions

The creation of this Instructional Package was a very useful project. First, it fulfilled a need in that it provided a complete package that is useful for teachers in the preparation of overhead transparencies. Second, the package was prepared in such a way that it can be useful to both computer experts and those not familiar with computers. In fact, one of the evaluators stated that the package would be valuable

for a person to use as an introduction to Apple computers and/or the Print Shop software.

Another important aspect of the project was its investigation into the writing and evaluation of computer manuals. Very little research has been conducted in this area. This author believes that the methods used in the planning, writing, and evaluation of the Instructional Package would be very appropriate in the publishing of computer manuals. The questionnaire used in this study may need to be refined.

A guide to the questionnaire is needed to provide consistency in the evaluation. Also, questionnaires need to be field tested it before they are used. Both of these procedures are needed help insure the results are valid and helpful.

5.4 Future Research

A research based project always seems to produce almost as many questions as it answers. This project was no exception. The following questions could provide the basis for future research.

1. What would more recent research relating student achievement to the use of overhead transparencies find?

2. What ways are available today that would eliminate the production of overhead transparencies and the use of the overhead projector by utilizing the computer's capabilities with regard to producing, storing, and retrieving text and graphics?
3. Should computer manuals be written like most reading series; ie, should they be written at two or three different levels to allow for the different levels of computer expertise on the part of the users? Would this eliminate some of the problems of language that appear to be relevent in many computer manuals today?
4. Should computer manuals be computer specific, i.e., does the inclusion of the procedures and commands for various computers produce too much confusion and misunderstanding?
5. Would the writing of computer manuals by "non-technical" authors help to eliminate some of the problems associated with computer manuals today?
6. How can the evaluation of computer manuals be improved?

A study such as this has its problems. The major problem encountered in this study was the lack of previous research about computer manual design.

The process of involving users in the evaluation procedure of a computer manual is a much needed step in their improvement. This paper can provide a focus, a source of literature, and potential questions for a more indepth study into the area of computer manual and instructional package design. Refinements in this area are needed to ensure that computers receive their proper acceptance and achieve their full potential.

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APPENDIX A

A Summary of Main Categories and Questions from the Computer Manual Checklist

Part I: User Background

1. Does the manual describe the intended user?
2. Is the manual appropriate for the intended user?
3. Are prerequisite terms defined?
4. Are outside resources required in order to use the manual?

Part II: Components in the Manual

5. Are users told what they will be able to know/do when they are done with the manual?
6. Are users told how to use the manual?
7. How helpful is the table of contents?
8. How comfortable is it to read?
9. How clearly is the information presented?
10. How fast can you scan the pages?
11. Are typographical cues used to highlight information?
12. How effectively are typographical cues used?
13. How much are illustrations used?
14. How effective are illustrations?
15. Do illustrations show what is on the screen?
16. How easy is it to locate information?
17. How helpful is the quick-reference section?
18. How helpful is it in solving problems?
19. How easy is it to use in solving problems?
20. How easy is it used while at the terminal?

Part III: Teaching Strategies and Sequence

21. How often is information given from simple to complex?
22. How easily can users skip over what they know?
23. Does it tell users what they will be able to do when each task is done?
24. Does it tell how much time is required?
25. How much does it use examples?
26. How effective are the examples used?
27. How much practice does it provide the user?
28. How appropriate are the practice opportunities?
29. How quickly does the user get "on" the system?

30. How much does it use repetition?
31. How effective are the reviews?

Part IV: Ease of Use

32. How appropriate is the amount of information?
33. How fast can users complete tasks?
34. How easy is it to read?
35. Overall, how interested does it keep the user?
36. Overall, how should it be rated?

From Jensen and Osguthorpe (page 43.)

APPENDIX B

PS I QUESTIONNAIRE RESULTS

Print Shop Transparency Production Evaluation - PS I
Session I

Note: This evaluation was done by the first session of PS I students. The graphics disks included all of the Print Shop commercial disks.

14 questionnaires returned

MANUAL

Was the MANUAL helpful in helping you prepare your initial transparency plan? YES - 11 NO - 1

HOW? -Step by step instructions easy to follow & understand

-I can't say really. I was already familiar with the Print Shop so I didn't need the manual. But as I glanced through it looked like procedures were explained well.

-It gave me information as to exactly what was available to me. It saved me time because I didn't have to preview everything before deciding.

-Yes - can use the book to help. Find a graphic by no. or picture.

-no comment made

-It helped to create ideas.

-There was not a graphic for my original idea so I went through the manual & looked at the various graphics to come up with a new idea.

-I was already familiar with "Print Master" so had an idea of what could be done.

-no comment made

-It gave me ideas. I wasn't of the many graphics available.

-I could pick out the graphics I wanted from the manual as well as the print size and type.

-gave several interesting ideas.

-gave picture ideas and sample of font.

-Provided excellent samples of fonts and graphics.

What part of the MANUAL was not helpful or was unclear?

-The sizes available of graphics on the disks other than Print Shop.

-no comment made

PS I QUESTIONNAIRE RESULTS

-I didn't really spend alot of time with the manual because I had already done some work with this program on a computer.

-no comment made

-Never really looked in the manual as didn't really have a problem with the computer - it was very explanatory.

-no comment made

-I feel the manual was clearly laid out and easy to follow. I have used Print Shop extensively in a previous computer course so - I really did not need to use the manual that much.

-no comment made

-no comment made

-the manual was very helpful. It is organized well. I perhaps would have problems if it was all laid out on the master disc.

-Letter size.

-nothing - everything was clear.

-nothing.

-nothing, found it quite easy to use.

How could it be improved?

-Show the sizes available of each graphic on each disk.

-no comment made

-I really don't see where it could be improved.

-no comment made

-no comment made

-no comment made

-no comment made

-no comment made

-no comment made

-I have no idea. It seemed very straight forward and extensive.

-More detail on how to make the letters larger.

-Even more selections.

-no comment made

-no comment made

STUDENT WORKSHEET

Were the directions and procedures easy to follow?

YES - 11 NO - 0

PS I QUESTIONNAIRE RESULTS

Do you think that the WORKSHEET will be helpful to you at a later time if you decide to use the procedure?

YES - 12 POSSIBLY - 1

How? -If the proper procedure is followed on this worksheet then there will be no problems or confusion.

-no comment made

-It was a reference to me when I went back to do it.

-To demonstrate how easy computers are to use.

-It gives a brief overview of what needs to be done - so if I forgot, it would be a quick ready reference.

-It will provide a detailed guide to follow through on making the transparency.

-The worksheet is easy to follow and clearly laid out.

-no comment made

-no comment made

-It would give me a place to start when I decide to do this again. It would give me direction.

-no comment made

-If I forget the procedure I can simply refer to the manual.

-Refresh my memory. Reinforces information on the Master Disk.

-Leads you through the process clearly and simply.

How could the directions on the WORKSHEET be improved?

-no comment made

-no comment made

-I really don't see where it could be improved.

-no comment made

-no comment made

-They are clear but the initial demonstration is still essential. Observing the process makes following the work sheet easier.

-no comment made

-no comment made

-no comment made

-They couldn't. They tell you what to do for everything! eg. sign, greeting card. They are very simplistic, thus easy to follow.

-It would be good to have more detail on how to make your letters larger or smaller.

-I didn't use the directions on the worksheet because I was able to remember the verbal instructions.

PS I QUESTIONNAIRE RESULTS

- no comment made
- no

THE CONCEPT

How do you feel about using the CONCEPT of Print Shop to help you prepare overhead transparencies?

- Great idea. Transparencies look much neater & professional. It was also a good intro. for people who have never used the computer.
- I think the concept is very useful and one I will use again. I believe it will be useful with other graphics programs such as Disney Card & Party Shop that I have.
- I like it. It gives variety to your overheads.
- Good Idea.
- It was slow printing but a good source otherwise.
- It is very useful.
- I think it involves too much time and effort in relation to the finished product. Given a teachers schedule I would think there would be faster ways to produce transparencies. However, being proficient with the computer helps immensely with the time component.
- Has a lot of potential. Lettering can always be improvised. Graphics cannot easily be done as most of us are not artists. Programs like "Print Shop" could really add to transparencies.
- Presentation well done! - encourages me to tap these resources in the future.
- I love it! It's great. It sure would save a lot of time & trouble.
- I think it is great!!
- I think it is great and very creative.
- Very good. Simple to use and very fast.
- I like the idea, especially since computers are being used in the school & I want to be able to use them.

PS I QUESTIONNAIRE RESULTS

Print Shop Transparency Production Evaluation - PS I
Session II

Note: This evaluation was done by the first session of PS I students. The graphics disks included all of the Print Shop commercial disks and the Print Shop User's Club disks.

17 questionnaires returned.

MANUAL

Was the MANUAL helpful in helping you prepare your initial transparency plan? YES - 17 NO - 1

HOW? -gave ideas of what designs were available.
-no comment made
-I found exactly what I wanted to use on my transparency.
-For knowing what the pictures are.
-It saved time from having to spend hours on the computer.
-clear pictures and lettering.
-I have never done it before & it showed many things & it explained.
-It gave me ideas for graphics and showed me where to find the particular font I wanted.
-Gave excellent ideas on topics that might be useful. Good for brainstorming.
-Gave me -ideas
-sizes of figures and letters
-It was nice to be able to look in the manual and see the wide selection of material that was available. Furthermore, by doing it that way it was less time consuming than going through all of the computer disks.
-absolutely everything in it was helpful as it was concise and straight-forward.
-Helped give me ideas.
-Helped me decide on my theme, what pictures I could use.
-Gave directions on how to use the program.
-It gave me ideas of the different pictures that were available. I then made a central theme from the pictures.
-seeing the pictures helped generate ideas and was easier to see in minds eye what was it would look like.

PS I QUESTIONNAIRE RESULTS

What part of the MANUAL was not helpful or was unclear?

- no comment made
- None I've used Print Shop before
- I felt it was easy enough to use.
- None but I knew most of it before.
- The part about the letter size. I didn't know how to get larger or smaller print.
- no comment made
- some items were not organized together.
- When I saw a font in a particular size, I didn't know how to get that size.
- no comment made
- "Graphic" page - what were the different sizes?
- The amount of letters available and different styles was unclear. I found there were fonts available that weren't listed.
- no comment made
- Graphics; The rest seemed to be explained as you walked through the software.
- no comment made
- on the more complex parts of the program
- The manual didn't give examples of size and I had problems with making my border.
- What all the printing types. It seemed to have the types of print then more pages with same type. Size did not need to be shown.

How could it be improved?

- increase number of designs
- no comment made
- OK.
- Put index of types of pictures then where to find them.
- The only way it could have been improved was to have more of them available.
- no
- keep things in order. ie. graphics, letters, etc.
- no comment made
- Disk sides and numbers could be printed more clearly and made more noticeable for each page.
- no comment made
- no comment made
- Keep it up - let it grow!
- no comment made
- I think it will be difficult to improve the manual.
- no comment made

PS I QUESTIONNAIRE RESULTS

- A supplement handout on Print Shop could be made available including all functions of the computer.
- Throw them out (print sizes). Don't really need to see the size.

STUDENT WORKSHEET

Were the directions and procedures easy to follow?

YES - 15 NO - 0

Do you think that the WORKSHEET will be helpful to you at a later time if you decide to use the procedure?

YES - 15 NO - 1

How? -no comment made

- Step by step instructions are given.
- If I forget something I can refer back to the worksheet.
- It will help me to remember everything that has to be done. Also serve as a checklist to make sure that I have done everything.
- I would need something to go back to, for people probably wouldn't be around to help me.
- for reference.
- I followed other students & we helped each other
- It will be a reminder of how to proceed thru each step. Also gives ideas for arrangement and size and how to get certain lettering sizes.
- In guiding me to correct areas of items I will want to utilize.
- It is well layed out - gives specific procedures.
- I can follow through the step by step procedure.
- no comment made
- refresh my memory
- no comment made
- You can go back & see how to create different layouts.
- It will serve as a reference guide.
- Directions are there to refer to if I need to refresh my memory.

How could the directions on the WORKSHEET be improved?

- no comment made
- no comment made
- OK
- I found them adequate so I don't feel that it needs to be improved.

PS I QUESTIONNAIRE RESULTS

- To tell you the truth I haven't looked at it all that closely.
- none - it was informative.
- It was fine.
- no comment made
- They were quite clear and easy to follow.
- no comment made
- no comment made
- no comment made
- no comment made
- no comment made
- more sequential
- Generally okay
- Unsure.

THE CONCEPT

How do you feel about using the CONCEPT of Print Shop to help you prepare overhead transparencies?

- Many of the designs are hard to adapt to educational themes.
- no comment made
- It is an excellent program that can be used effectively when teaching. I feel Students would really enjoy seeing the excellent graphics that Print Shop displays.
- Excellent because it gives us a chance to use Print Shop because computers didn't necessarily need it. Also it showed us other sources to make transparencies & other uses of the computer Print Shop.
- It is a good way to produce a professional looking piece of media.
- Good idea. I am not artistic & this will help create pictures on a transparency. The first transparency was time consuming, the next time I use Print Shop transparencies - it won't take as long.
- Great!
- I think it's great. The Print Shop program has some good graphics and will be great for preparing transparencies and classroom posters.
- A good idea but quite time-consuming. Good in the sense that it makes it easy to have creative & artistic visuals.

PS I QUESTIONNAIRE RESULTS

-It was good to have hand-on experience with the Print Shop. Gave me good ideas for future teaching endeavors!

-I really enjoyed this project and feel it is very beneficial.

-Its great! Very professional and fun to do!

-Yes, it is an easy, quick way to make professional-like looking transparencies.

-I think it is a great idea. It makes it a lot easier to produce a good transparency - it has a lot of variety, which is probably the best aspect of Print Shop.

-It was interesting however I did not like to cut and paste the graphics.

-It is a very good idea.

-Love it. I've already planned more for my next round.

APPENDIX C

QUESTIONNAIRE LETTER

To: All Principals

From: Wil Wikjord
Earl Kitchener School
Medicine Hat S. D. # 76

Re: A Computer Project

Dear Colleagues:

I have produced an "Instructional Package" to be used in the production of overhead transparencies using Print Shop and its related software. The package includes a manual and seven public domain graphics disks containing about 1200 prepared graphics.

What I need is 20 teachers who are willing to try the "package" and complete a questionnaire evaluating it. These people do not have to be computer "experts".

Once the "package" has been evaluated and revised it will be made available to schools for a nominal cost. (materials & production)

Please help by making sure your staff are aware of this request.

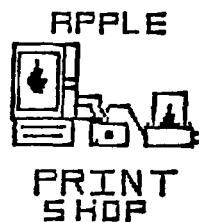
Enclosed is a memo that outlines the request.

Thank you.

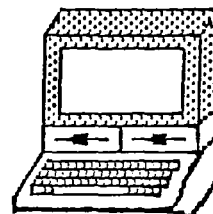
Sincerely,

Wil Wikjord

TRANSPARENCY MAKING



WITH PRINT SHOP



Would you like help in making overhead transparencies?

I have compiled an "Instructional Package" that presents information and instruction on how to use Print Shop and a computer to help you produce overhead transparencies. The package includes a manual and over 1200 graphics (pictures) on seven computer disks.

You do not need to be a computer "expert" or have any experience using Print Shop or a computer to use it. You will not need to purchase any special programs to participate.

What I Need

I need 20 teachers who are willing to try this package and are willing to complete an evaluation on it. (On a "first come" basis)

What You Will Get

1. A chance to use Print Shop, and
2. A copy of the manual (when it is revised as a result of the evaluation) and/or
3. Copies of the seven graphics disks (4 disks on both sides) of over 1200 graphics for the cost of 4 disks.

Note: Total cost to you is your time and, if you want the complete package, about \$7.00. (cost of disks and disk holders)

Why I Need Your Help

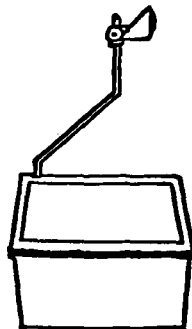
I am completing this project as part of my M.Ed. program and need your honest opinions and comments as part of a research project.

If you wish to participate please contact me at Earl Kitchener School (526-3420) or at home (527-7867). I will deliver the package and the Evaluation Form to you.

You will have about one (1) week to use the package and complete the evaluation as I have to pass the "packages on to a 2nd group of evaluators.

Sincerely,

Wil Wikjard



APPENDIX D

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

A. GENERAL INFORMATION

1. How do you feel about the concept of using such a package for the production of overhead transparencies?

WEAK			7	3	9	STRONG
(negative)	1	2	3	4	5	(positive)

Comments

- a) Helpful for individuals that have had little experience developing these.
- b) The fact that you could make the transparencies much more colorful would be very beneficial. Also, there is a lot of excellent material stored on disk that can be used.
- c) I had not considered using computer graphics for transparencies before. Good Idea!
- d) I used Print Shop for many things and have felt that I was very creative but I had not considered making transparencies.
- e) It seems to take a bit of time to make a transparency. My need is mainly text not graphics. I can do a quicker job using a Word Processor with Expanded Print.
- f) The concept of using such a package is good providing that you have the time and access to a computer.
- g) No comments made.
- h) In mainstream classrooms overhead transparencies are very beneficial. In special education settings their effective use is slightly lessened. Effective unit and lesson plans can only be enhanced by production and use of good transparencies.
- i) No comment made
- j) The idea of neat, "professional-looking" transparencies is appealing. The general inflexibility of Print Shop makes it less than ideal. Maybe a similar instructional program for a more powerful (Macintosh-based) program would be of more value.
- k) Would save time and make the finished product more eye-catching for the viewer.
- l) I think people who are "computer literate" might use this method. People who aren't probably

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

would continue to make transparencies by "hand" as it is easier than learning something new.

m) I make a lot of transparencies but have stayed away from using the computer as an aid because I didn't see that many advantages in using the computer.

n) Takes alot of searching out of producing transparencies

o) No comment made

p) It is useful to have, but quite time consuming. (Due to the nature of the software.)

q) Overheads will be greatly improved with the added graphics, but alot of cutting and pasting will be required since quantity of text is limited.

r) for a beginner, yes.

s) In many cases I am teaching different subjects each year, the time and effort to make transparencies would not be worth it - I could write it out by hand more quickly.

2. How do you rate the overall layout and design of this Instructional Package?

WEAK (negative)				8	11		STRONG (positive)
	1	2	3	4	5		

Comments

a) Specific directions made following the screen easy.

b) I found it to be very easy to follow. I really felt the diagrams were very effective.

c) Fairly easy to use - sectionalizing helps.

d) Package is easy to use. It is easy to find specific items - eg. Size of font - graphic for each mode (sign, card, etc.).

e) If the appendices were numbered & shown to be an appendix it would be helpful. eg. on p. 6 it refers to an appendix - which one? where?

f) The overall layout and design is very good with consideration for every aspect including a glossary.

g) No comments made.

h) There is a lot of material on the market in general for Print Shop. This is an excellent format to keep all of the materials together and available for individual computers and students.

i) No comment made

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

j) Hard for me to evaluate, since I am familiar with Print Shop, but I tried to approach the package as a novice and found it reassuringly clear and concise.

k) Much easier to locate the area you want to work on.

l) No comments made.

m) I liked the divisions. It was a good idea for me to go through everything once. As I use the material in the future I will turn to those segments only that will meet my needs. Dividers with labels might be a bonus.

n) Good - draws things together in a package which is easily used.

o) No comment made

p) Very Good. The materials are separated into logical parts and do not present any difficulty in locating sections or topics.

q) A beginner will have no problem finding their way through the package

r) very well done.

s) Good the directions were clear - the format was orderly

3. How well do you rate the level of the language used in this Instructional Package. (ie. Is it appropriate for the level of its intended audience?)

WEAK				7	12	STRONG
(negative)	1	2	3	4	5	(positive)

Comments

a) Very simplistic but this may have been the intent.

b) The level of language was excellent. Although I have had alot. of experience with computers a person who has not would find this to be very easy to follow.

c) No comments made.

d) Aside from a few spelling mistakes the language is quite acceptable.

e) No comments made.

f) The level of language is appropriate because being even an amateur at a computer, I could still understand the directions.

g) No comments made.

h) It is very difficult to master a program when you are just starting a computer. The package outlines

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

the processes of Print Shop very well in a language format structured for beginners.

i) In the setting up section terms referring to the of printers and disks etc. I didn't understand. Didn't know how to make the printer work with program when it didn't on the first try used a different computer.

j) Wonderfully free of computerese.

k) No comments made.

l) No comments made.

m) It is so clear that any novice should be able to pick up the material and use it.

n) No problems.

o) No comment made

p) Very easy to understand

q) You do not find yourself lost in "jargonese". Everything is easily understood.

r) quite simple to understand.

s) No comment made

4. How do you rate the **directions** as to their ease of reading and ease to follow?

WEAK			1	5	13	STRONG
(negative)	1	2	3	4	5	(positive)

Comments

a) Well organized.

b) Anyone could use this program, even if you haven't taken a computer class.

c) Should be clear as to fact graphics can't be saved to disk - from Print Shop! or Users Disks.

d) Directions are easy to follow. They also go down to a very basic level so a person unfamiliar with computers or Print Shop should be able to follow.

e) Perhaps because of my background I find them too long & cumbersome on occasion. An abbreviated summary page may be helpful - A one page quick reference.

f) As I do not work with computers extensively, I feel it is easy to read and follow directions and understand the language used.

g) They must be easy to follow if I can use them without help.

h) Again, the simplified language format allows the reader to follow easily from step to step as they progress through the manual in the process of learning

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

the program. The simple direction allow the beginner to have some confidence with positive results.

i) I have very little background needed to have help on set-up and how to use the device for making new graphics.

j) No comment made

k) Sometimes in some areas it is assumed that you know more than you do about working this area.

l) As a frequent user of Print Shop I find most of the directions on how to use the various programs redundant. However, they seem quite clear & would be useful for new users of the program.

m) Personally I found the directions to be very specific, orderly yet concise. Very easy to follow.

n) No comment made

o) No comment made

p) Very easy to understand

q) Directions are clear and simple. They parallel the disk layout nicely.

r) very good.

s) Those that are unfamiliar with Print Shop may have some difficulties in understanding the procedure used.

5. How do you rate the use of **graphic pictures and diagrams** in this Instructional Package? (ie. menu pictures, "note", "remember", etc.)

WEAK				7	12	STRONG
(negative)	1	2	3	4	5	(positive)

Comments

a) No comments made.

b) This is important if you are unfamiliar with the disk itself.

c) Good idea to show sizes, alphabetical listings/disk featuring specific graphics.

d) I especially like the presentation of fonts at near actual size, it makes planning the use of fonts and selection much easier.

e) Well Done.

f) The little graphics & notes help to remind you of a minute little step that may have been forgotten or overlooked.

g) The "notes" are excellent for those who do not us a computer regularly.

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

- h) Extra clues to look for problems are always helpful. People using the program can make the same mistake over and over if the general problem areas are not brought to their attention. The clues of problems help to simplify the instruction even further.
- i) Diagrams and pictures clear and used to clarify concepts.
- j) I especially appreciate the clean layout and amount of white space.
- k) Very helpful.
- l) No comments made.
- m) I always think a few graphics are useful as attention getters or as a ready reference. I feel this document was tastefully treated with these.
- n) No comment made
- o) No comment made
- p) Some of the materials appeared cluttered
- q) Pictures and diagrams are both very helpful and easily understood. No problem.
- r) good for beginner.
- s) No comment made

6. How do you rate the use of colored paper to divide the sections of the manual?

WEAK			10	9	STRONG	
(negative)	1	2	3	4	5	(positive)

Comments

- a) Was there a color code index somewhere?
- b) It makes things easier to find.
- c) Easy to use/find info.
- d) I will insert dividers as well. Use of colored paper will be excellent for a bound paper.
- e) May be better if tabs also used with title.
- f) The colors are very helpful for quick reference. I would like to see the Table of Contents include a color breakdown to assist further. I used plastic tabs to glue onto the graphics for Print Shop & Users Graphics and Quick file to assist in quick retrieval.
- g) No comments made.
- h) The colored paper helps to quick reference to any desired area or topic.
- i) Makes for quick referencing
- j) How about a tab page at the front.

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

k) Your eye automatically picks up the different sections this way.

l) It's useful for finding each section without looking up page numbers but a tab system would compliment this system.

m) I think the colored sections are excellent. In addition to the colored sections I still think a handy "tabbed" divider makes reference hunting that much faster. (especially once you are familiar with the entire document.

n) No comment made

o) No comment made

p) I think all materials should be color coded

q) Loaded question. Dividers would also add to its practicality.

r) like tabs better.

s) Makes for easy reference

B. PARTS OF THE GUIDE

I. Introduction

7. After reading the **Introduction** how do you rate its effectiveness in preparing you to use the Instructional Package?

WEAK			1	8	10	STRONG
(negative)	1	2	3	4	5	(positive)

Comments

a) No comments made.

b) No comments made.

c) No comments made.

d) Under the "Executive Summary" item 1 states, "Read the section on Transparency Making." I jumped to that point thinking it to be a prerequisite to the use of the manual. Since this summary is merely explanation perhaps the first line should be changed to reflect that point.

e) No comments made.

f) No comments made.

g) No comments made.

h) This is a good general layout of the materials in the program. The readers definitely knows what they will be doing.

i) No comment made

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

- j) No comment made
- k) A good overview of what is in the package.
- l) No comments made.
- m) I felt the introduction is well done. It is brief yet complete and meets the needs of a beginner. I felt prepared for each section as I arrived there.
- n) No comment made
- o) No comment made
- p) No comment made
- q) The reader does not feel overwhelmed.
- r) not labelled as introduction.
- s) No comment made

II. Transparency Design

8. How do you rate the information given in the section on **TRANSPARENCY DESIGN**?

WEAK			1	7	10	STRONG
(negative)	1	2	3	4	5	(positive)

Comments

- a) Suggestions and information would be very helpful in developing effective transparencies.
- b) I have to admit that some of the information you mentioned was new to me, I found it really interesting to learn about effects of computers. Listing advantages was important.
- c) No comments made.
- d) Individuals not familiar with the overhead projector require instructions on effective use of the projector. Those familiar can skip this section. Even for those familiar with the projector there is some interesting research included (ie. eye movement).
- e) Too detailed (if anything)
- f) It is very short and precise and covers any questions you might have.
- g) No comments made.
- h) Possible more examples eg. of boldness and how this can effect children in the classroom. Sp. error pg. 19 "abovece". The viewers' eye movement was very good. Maybe an example to work through would be helpful. This could indicate fonts, designs, and presentations.

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

i) Very clear but for the notes I give in science the limit of seven words for seven lines is limiting. Can do text on another program however and add graphics I desire follow the methods outlined.

j) The user probably doesn't need to be convinced of the virtues of overheads, so pages 12 - 15 are irrelevant. Sections 4 + 5 are key. Mounting is unnecessary for single transparencies - storage in a 3-ring binder works fine

k) Some hints given here that I had not thought of and some that I had not known.

l) Title is slightly misleading as most of the chapter seems to deal with the advantages of using transparencies, how to use them, etc. & not much with how to actually design and set them up.

m) Again, as I mentioned before, I make alot of transparencies as I do not have a blackboard in my classroom. I thought I knew just about everything there was to know but I learned a few "neat" tips and had a brush up lesson on the proper "How To's". Very well presented.

n) Mylar tape is better than masking tape - Staedtler has a good overhead projection manual. - (No Rating)

o) No comment made

p) No comment made

q) Very similar to instructions given in CI university courses on transparency production.

r) for teachers this should be a real repeat but maybe necessary.

s) This is good information, although the traditional use of the transparency has been for notes - The ideas under "Rules for Transparency Making" p. 23 are interesting - I usually break most of these rules

III. Executive Summary

9. How do you rate the EXECUTIVE SUMMARY as to its usefulness?

WEAK				9	8	STRONG
(negative)	1	2	3	4	5	(positive)

Comments

a) An optional section. Confident users would not likely refer to such a section.

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

- b) No comments made.
- c) Helpful to user.
- d) see comment in # 7 re need for a statement. Introduction is good.
- e) As mentioned a one page summary would also be useful.
- f) No comments made. - (No Rating)
- g) Check PRINTER SET-UP. No reference was made to p.29 #3 where further information was given (I still had problems). Why was SCREEN MAGIC not used as one of the menus? I found it more useful as far as size than "SIGN" for printing text. - (No Rating)
- h) Simple and to the point this action assists in preparing the user mentally for all the steps put together. Not everyone starting a project knows exactly what they want this could assist in deciding final approaches.
- i) Was useful when going back to use a package a second time.
- j) Good summary
- k) No comments made.
- l) I am not sure why this chapter is called "Executive Summary". Would "Sequence of Operation" not be a more appropriate title?
- m) The Executive Summary also is brief yet complete and thus effective. Excellent review for anyone familiar with this material.
- n) No comment made
- o) No comment made
- p) No comment made
- q) Does not miss a thing.
- r) No comment made.
- s) This is good for anyone unfamiliar with the Print Shop

IV. Menus

10. How do you rate the **CAPABILITIES AND LIMITATIONS** sections of the **MENUS** as to their usefulness?

WEAK (negative)			1	8	10		STRONG (positive)
	1	2	3	4	5		

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

Comments

- a) Somewhat difficult to follow. At times a trial and error approach works as well.
- b) No comments made.
- c) Could include inability to save to disk.
- d) Outlines very specifically what each mode is capable of accomplishing, very valuable in the planning process. Particularly liked the size of fonts and graphics.
- e) I find this section too long for myself. I looked at it but did not & would not use it. On pp. 34 # 3.c) --you say you will indicate the no. of letters per line. Where is it?
- f) This helped in the overall planning of the transparency in knowing what font, graphic, and the amount of letters that will fit.
- g) I would like to use Appendix II at the beginning of Menus for quick overview.
- h) Very well done. These materials are more explanatory than the actual Print Shop material.
- i) Very complete
- j) Excellent - especially for a multiple section program like this.
- k) If you make a mistake in typing your message, there is no indication how you can correct this without starting over.
- l) Good summary of what program will do. I especially like examples of the size of the graphics & font styles.
- m) I particularly appreciated this section as I have often wondered about the drawbacks or benefits of some of these programs. Thus without taking alot of time to find out or going on someone else's advice I have a quick handy reference through this the "Capabilities and Limitations" section.
- n) No comment made
- o) No comment made
- p) No comment made
- q) These sections usually answer any questions or concerns that may have come up.
- r) No comment made.
- s) This section illustrates many points that I learned on my own by trial and error

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

11. How do you rate the STEP-BY-STEP sections as to their usefulness?

WEAK		1		7	11	STRONG
(negative)	1	2	3	4	5	(positive)

Comments

- a) Good for individuals not familiar with computers or the Print Shop programs.
- b) Very clear and easy to follow.
- c) No comments made.
- d) Some repetition occurs but it is really quite difficult to avoid that problem.
- e) I have no need for it.
- f) This is very essential for anyone not having any information or use of the Print Shops.
- g) No comments made.
- h) Well done easily followed. This was one of the most useful sections of the manual to a beginner. Often we forget how terms can be confusing.
- i) I needed them on several occasions.
- j) No comment made
- k) See above comment - probably should have gone here.
- l) I would not use these sections as I am very familiar with Print Shop but they seem very detailed & useful to a non-user.
- m) The "Step-by-Step" sections were also very well presented. They are both simple and quick to follow...and it seems every possible required procedure is included. I have actually learned alot and feel much more comfortable about getting back to the computer again. This binder serves a number of purposes: 1. Helps to develop transparencies. 2. Provides a set of lessons on how to use the computer.
- n) No comment made
- o) No comment made
- p) No comment made
- q) A beginner would feel confident.
- r) For the items I worked through before it was clear but for items I had not it was difficult to follow.
- s) No comments made

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

V. Graphic Editor

12. How do you rate the GRAPHICS EDITOR MENU as to its usefulness?

WEAK (negative)		2	4	5	5	STRONG (positive)
	1	2	3	4	5	

Comments

- a) No comments made. - (No Rating)
- b) No comments made.
- c) Good, saves looking back to disk
- d) The instrument identifies uses for the Graphics Editor.
- e) The command keys are useful.
- f) This is good information but too time consuming to use.
- g) It may be fine for people who know what they are doing on a computer. I found it time consuming; I bogged down and finally gave up on section producing new graphics. I think it could be very useful for transparencies - seeing what my son can do with it. Scope for graphics much wider than if just using pictures. - (No Rating)
- h) This fully outlines the procedures available in this section. Some of the words may not be understood but the glossary helps here. "Lock" - to be added to the glossary
- i) Problems figuring out how to use the "mouse" work with the computer and printer. Needed someone else to set it up. Not very good at drawing with it yet.
- j) I suspect that most people will use the canned graphics - those who want to go further can probable handle the Print Shop manual's instruction which aren't that bad.
- k) If you have time to work out some of your own pictures it would be useful in Science and Social Studies in particular.
- l) This part of the program is very time consuming & frustrating to use. I have found, therefore I would be loathed to use it for making transparencies preferring the graphics which are already created.
- m) I'm not sure if I would ever use this section. I would rather draw my own or get a clipping or Xeroxed picture in a hurry to create my transparencies.

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

Perhaps it is because as a beginner I took an awful long time creating one simple maze.

- n) No comment made
- o) This was the most valuable section as I was not familiar with this aspect of the program.
- p) No comment made
- q) It almost gives a "novel" touch to the program. It allows you to change and deviate from a "canned" or limited product.
- r) One would have to be patient to work on this.
- s) I did not use this

13. How do you rate the GRAPHICS EDITOR MENU as to the directions it gives?

WEAK (negative)	1		1	5	9	STRONG (positive)
	1	2	3	4	5	

Comments

- a) No comments made. - (No Rating)
 - b) I really found your directions very easy to follow. You seemed to cover all areas that could cause problems. ex. page 89 | | or "___" "J" - some people might not know this.
 - c) Can be used in first or second run-through then as quick reference while working with programs.
 - d) Explanation and instructions are more specific and easier to read than in original programs.
 - e) No comments made.
 - f) No comments made. - (No Rating)
 - g) The directions are fine. It is just that there are so many commands you need a greater amount of time to practice using them easily.
 - h) It is important to note when an additional disk will be necessary. The most difficult part for me is to edit an existing graphic. This was well done.
 - i) No comment made
 - j) No comment made
 - k) I did not make a graphic on a separate disk so it could be kept. Some of this you need 2 disk drives set up.
 - l) No comments made.
 - m) Initially I had trouble. It turned out to be a computer problem. On second try I found some areas that seemed incomplete to me. See binder for comments.
- P.S. Some questions and comments may not apply.

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

- n) No comment made
- o) No comment made
- p) No comment made
- q) The "on-screen" menu is great.
- r) The directions are not clear to me at all. If you make a mistake or "Error" appears not clear on recourse.
- s) It was not used, but I am certainly aware of its potential, and it would be extremely useful with the extra disks

VI. Graphics "Quick File"

14. How do you rate the GRAPHICS QUICK FILE as to its usefulness?

WEAK		1		1	17	STRONG
(negative)	1	2	3	4	5	(positive)

Comments

- a) Good indexing.
- b) This is really important to include. I like the idea of being able to select a graphic without having to check through all the disks. Very important. A little introduction to the "Quick File" could have been helpful.
- c) Quick reference as to what is available.
- d) Saves looking through all the sheets to try and find the appropriate graphic.
- e) As you used "Birds" p. 96 to start 2nd col. you could also use category headings to start new pages.
- f) This is very essential as it is easier to look up a graphic rather than go through all the disks.
- g) No comments made.
- h) Excellent idea when doing a subject content area. The user does not have to flip through all the graphics to find appropriate ones. This is also a great tool when children are using the program for index usage.
- i) Material is much easier to find than on the utility disk.
- j) Wonderful!
- k) Printed sheets helpful.
- l) Made finding the available graphics very easy & fast.

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

m) I think it is so handy to have a quick reference handy like this to choose from within a package. I know it will be useful to myself. There are numerous pictures or graphics I will be using. In fact I want to make up a bunch ahead of time and have them ready in the back of a "transparency binder".

n) No comment made

o) No comment made

p) No comment made

q) Confusing! eg. It over-covers its tracks. Why list every animal as a category just to refer back to the category of animals.

r) very helpful.

s) This is very handy for quick location

VII. Graphics (Pictures) File

15. How do you rate the selection of graphics (pictures) as to their usefulness?

WEAK				3	16	STRONG
(negative)	1	2	3	4	5	(positive)

Comments

a) Very helpful

b) This, I feel was very important to include. I was impressed with the various graphics you can choose from. It really impressed me to see all the areas it covered.

c) Good - I like to see examples without having to try them first.

d) The number of graphics which this package adds to the Print Shop Library is outstanding. However, some of them are not useable because they are developer specific. Some must be modified (using graphics editor) before they may be used.

e) No comments made.

f) It is a very extensive collection and would be very useful in printing primary books.

g) Good variety. Some of the animal pictures I was using were not particularly good pictures.

h) This is a good backup to the graphics quick file. There area many times you need to see a picture of the graphic to see if it is appropriate.

i) Quick and easy way to see what is available.

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

- j) More extensive than anything I've seen before.
- k) Printed sheets helpful.
- l) It gives an excellent & quick idea of what each graphic would look like when printed. It is easy to find desired graphics.
- m) The usefulness of the pictures will depend upon the needs of the user. Having a file facilitates the user tremendously. In fact, I think the picture file is a motivator for one to be creative (Maybe even just to get started).
- n) No comment made
- o) No comment made
- p) The large number of graphics make it difficult to present them. Possibly, more graphics of like objects would help.
- q) You cannot help finding something useful. You're almost overwhelmed by the selection.
- r) No comment made.
- s) There are a number of graphics that are poor, but overall there is a good, wide selection

VIII. Appendices Section

16. How do you rate the GLOSSARY as to its usefulness?

WEAK		1	5	4	8	STRONG	
(negative)		1	2	3	4	5	(positive)

Comments

- a) Unused.
- b) This is useful if you don't understand some of the words used in the instructions.
- c) No comments made.
- d) Valuable to individuals not familiar with computers.
- e) It is needed but many won't need to use it.
- f) No comments made. - (No Rating)
- g) I knew the terms so did not have to make use of this section.
- h) This is excellent for the beginning computer user. It is there as a constant reference to keep you on the right track.
- i) No comment made
- j) No comment made
- k) No comments made.

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

- l) Good clear definitions.
- m) For a beginner I think it is necessary to have a glossary section. I did not find the need for one myself as I was familiar with the terms within the binder.
- n) Good for person unfamiliar with computer
- o) No comment made
- p) No comment made
- q) A true beginner may find some terms difficult but most people (teachers) would not find an unassistable urge to turn there. As long as they get their picture they are happy.
- r) Some may find it useful.
- s) This is useful for those unfamiliar with computers

17. How do you rate the PRINT SHOP SUMMARY page as to its usefulness?

WEAK			2	5	12	STRONG
(negative)	1	2	3	4	5	(positive)

Comments

- a) Repetitive
- b) This is also useful in the sense that it tells certain limitations of particular menu's.
- c) Again - show that most can't be saved to disk.
- d) Valuable in planning transparencies, especially letters per line and lines per page.
- e) This type of info on 1 page can be used advantageously throughout the package.
- f) This is very useful for a novice to a computer and the program. It is nice to have a summary because then you do not have to read through the entire manual once you know the steps.
- g) But would like to see it near the beginning rather than at the end.
- h) Once a user is fairly competent with the use of Print Shop the summary page is a good quick reference.
- i) No comment made
- j) Put it at the front of the package (on the inside cover?) for ease of reference.
- k) No comments made.
- l) Excellent summary but the print is a bit small for easy reading.

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

m) Is this Appendix II? For anyone not a frequent user of these disks or files a quick summary like this is excellent. One tends to forget about the useful aspects of each disk, yet going through each section in the beginning of the book would take up too much time when it isn't necessary. An excellent summary on one page.

n) No comment made

o) No comment made

p) No comment made

q) I think most people would still go by "trial and error" when it came down to final production. Most would not carefully tabulate sizes and areas.

r) Nice but too technical for my use.

s) This is an excellent quick reference tool

IX. COMMENTS

Please give your comments on any aspect of the "concept" or "package" that you feel needs commenting on. They will be most useful in making improvements to this Instructional Package.

a) The package was well-organized, easily understood and workable. It's basic nature would make it useable for virtually all teachers (or other individuals).

The package was somewhat repetitive and as a result lengthy. Any person who has used Print Shop, to any extent would find the directions redundant. However, for a new-comer, the detailing would be an asset.

Personally, transparencies are useful and the section directed to them is beneficial. Graphics available are extensive and with the use of the Graphics Editor more could be added (even though I did not use that portion yet).

If possible, two instructional packages should be developed: one for an "advanced" Print Shop use and the other for a "beginner". The concept could be identical merely changing (omitting) some of the step-by-step portion of the program, limitations, etc.

A worthwhile package for most teachers.

b) Overall I feel that this is an excellent package. It really opened my eyes to the importance of

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

transparencies. I have used them in class but feel that this could greatly improve the quality of the transparency itself. The package was very neat and organized. The instructions were very easy to follow. What I found impressive was the fact that you could use this for various projects in school. ex. intramurals, special holidays, or activities. One other important fact is that most people with little training would be able to follow the program because of the clear instructions and directions. Good work.

- c) Print shop disk doesn't work on 64K machine. Is there any way of saving a program so that it can be run again? If so, this should be in the table of contents and appropriate other areas of package. Generally a useful package, especially for one who has not used Print Shop or Companion much - or not at all. I like printed info. to supplement disk info. - saves time. Good format - using sections so one can flip to the appropriate part.

Computer novice may still find that he/she has to sit down and work through each Print Shop disk to master the program/computer but this package should help if referred to often during initial trials.

- d) The instructional package is a very valuable tool for preparing overhead transparencies especially for those teachers who did not take Instructional media courses at the university. But the program goes beyond that in providing good ideas and data for using the Print Shop program by the more experienced computerist. The additional graphics alone make this package an excellent educational investment.

- e) Pages should be identified as to the section & page numbered. eg. Appendix A - 1. Appendix C - p. 121 etc.

A smaller print style - to allow more text on screen

Superscript ability a real asset for math

If all possible print styles were placed on one page with pertinent information. ie. "disk" - no. of characters/ line in each type of mode. etc.

Page color great - pages of greater contrast would be appreciated (especially in IV. Detailed Description)

Tab with headings printed - also would be helpful.

A nice piece of work!

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

- f) The overall package is very useful. Not being an artist, the graphics file would be very useful. In working with a primary class the idea of transparencies are not widely used in presenting materials to the class but the transparency and the pictures would be great in enlarging a graphic and making posters for the classroom.
- The program or package has possibilities in creating individualized books with pictures or personal dictionaries.
- I found the information in running the program very useful but the idea of making transparencies did not seem to fit with the style of teaching that is needed for this type of a classroom.
- g) I think the directions are excellent. I found them easy to follow. I found my frustrations lay in the computer. Perhaps the computer and I are not compatible (my family says many machines and I are not compatible). There were times when the printer would not print; on printing out a sign I got extra little black lines the first time - worked fine the next; T was almost at the end of my calendar when 1/3 of my screen went black and I could not go forward or back. It would work fine the next time. I could not get "News" font to work. I enjoyed using the package. I am not sure how many transparencies I would make at my grade level but I certainly hope to try more when I have a package of my own.
- h) The Print Shop materials can be an involved and cumbersome program. The package puts all of the various program aspects together in an easily arranged form. It can easily be transferred for student usage. As the Print Shop concept expands so can the package as it suits the individual teachers purpose.
- The turning back of paper in the printer to acquire more than one graphic was well explained maybe it should stated that you cannot get more than 1 graphic from more than 1 disk at the same printing.
- Great Job.
- i) I very much enjoyed working through the package. The programs were both entirely new to me and I can see how useful parts of them will be.
- To make the transparencies I need for junior high science notes or social studied I need more flexibility in the text size (more words/page).

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I can see using another program to produce the text and combining it with the graphics produced in this package.

Thank - you for letting me work through the package and I am looking forward to seeing the completed package.

- j) Could you reduce the Graphics Editor section to a summary page of commands (one side of the page, like the Print Shop summary page) - that would be more useful than having to flip between pages of this section.

I really think that this is the way that program manuals should be made - but I'm not sure Print Shop is worth such an investment of time, energy, and skill for the purpose of transparency making.

- k) The package is a good idea. It has cleared up some areas that I wasn't too confident about. Overall I can't really find any area that could be improved. I had not used Print Shop or the Companion before this. Most of what you do on these just takes practice until you gain confidence in working with them. The only area I found to be a problem was when you typed in a message and made a mistake in a word there wasn't any directions as to changing. Perhaps I missed this direction when I was working on the Greeting Card.

- l) Perhaps the chapter "transparencies" could come before the "Executive Summary" Chapter as this chapter suggests reading the Transparency Chapter first anyway.
or Put tabs on each chapter so information can be readily accessed.

- m) Why not include a few samples at the back of the binder of teacher made transparencies from each subject area from Math, French, to P. Ed. It may spark an renewed interest in the usefulness of transparencies. I think all grade levels can use transparencies in a multitude of ways. I use them for games, tests, for classification activities, etc.
Actually I am glad to see this binder being put together as I do think it is time to renew the art of making and using transparencies to enhance the classroom experience.

The section called "Graphic Pictures Quick File" is a super idea. It is so well referenced that one certainly does not need to waste much time in

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

developing the printed material for making effective transparencies.

I'm not so sure how informed the beginner is on such terms as "Open Format," "Closed Format," "3-D format" - should that be included in the glossary?

P. # 48b - 55 are very helpful. Just knowing ahead of time just how many letters one can use due to space available is a real time saver.

This book should be in every classroom or in every computer room for sure.

Good luck.

- n) I feel an inclusion of something you could put more printing on transparency would be useful ie. Greeting card size which could be used on a full page. As it is with the sign menu you are only allowed 21 letters across. Sometimes you would like to put more information. I found the most useful aspect is to have all the Print Shop disks and some user disks were excellent.

A lot of work went into this. I hope my comments help you.

- o) This package has value to us in the office for its graphics capabilities. The extra graphics disks make it valuable in our production of newsletters and invitations. Since we are using Print Shop on a regular basis the instructions on how to use the program were not needed except for the graphics editor which proved to be enlightening.

The concept of using the package for overhead is valid and we shall explore this avenue in greater depth as time goes on. Thank you for your time and effort, Wil, in preparing such a comprehensive package.

- p) Very good package!

The concept of a transparency production package is a good idea. I would like to see the memory capabilities of the 3 1/2" disc used for such a package to limit the disc manipulation.

The instructions are easy to follow and anyone who is familiar with "Print Shop" should find the package very useful.

I would like to see any more recent research on the actual construction of images on the overhead re: placement of object, effects of overlays, most efficient designs, etc.

INSTRUCTIONAL PACKAGE QUESTIONNAIRE RESULTS

- q) Simplify your categories in your graphic pict.
"Quickfile" - its like getting the runaround by an encyclopedia.
The Graphic Picture File section is very useful. Who wants to type in a number of different graphic pictures just to be disappointed. Here you can see what is offered.
The package contains a great deal of information on the "how to" of transparency making. It also gives the beginner an indepth version of the Print Shop Manual.
Not due to your fault, the program is quite limited for an "advanced" computer user. If only the graphics library could be crossed with the MAC WRITE or MAC PAINT. Creativity is limited to the Graphics Editor Menu.
Overall for a beginner or someone not looking to keep up with the latest, the program is indeed a useful one. The overall package is useful especially with such a large picture file.
- r) There is no explanation of what to do if the program doesn't work and believe me when you are starting out it is frustrating.
I am very unclear about the Print Shop User's . Utility disk and how it is supposed to work. Do you need it to view the graphics because that is what I used it for but what is the rest for? Where did I miss the information?
We do not have two disk drives hooked to the same machine. Would be nice. So I was unable to use the package as intended.
I would like more information on how to save.
- s) This is an interesting package. It is interesting to note what the proper use of a transparency is and how I can use them. If you needed an attention getting device this package is excellent. The area I have difficulty with is the time involved - in many cases it would be faster for me to write out the transparency. This, however, would be an excellent package for support staff who are involved in the preparation of materials to be familiar with. Maybe a workshop on the use of this package could be presented to secretaries and teachers during teachers convention
Overall, a clear well laid out package.
If there is anything further you would like to discuss please contact me. Thanks.