

Photography/Graphics Training

National Agricultural Research Center
Islamabad

Advanced Agricultural Photography, May 05-10, 1990
Advanced Video Production and Editing, May 12, 17, 1990
Introduction to Computer Graphics Production, May 19-31, 1990

David L. Hansen
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PARC • USAID • MART • WINROCK

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The MART (Management of Agricultural Research and Technology) Project is funded by the United States Agency for International Development (USAID). The MART Project's chief link to the Government of Pakistan is through the Pakistan Agricultural Research Council (PARC). A MART Project Coordination Committee composed of federal, provincial, and university representatives coordinates and guides project activities. Its purpose is to assist the Pakistani agricultural research system to strengthen its research management capabilities, and to improve communications, training, farming systems research, arid zone research, and research in the rural social sciences. Winrock International, through a contract with USAID, has responsibilities to assist with the first four of these tasks. Two international agricultural research centers, the international maize and wheat improvement center (CIMMYT) and the International Center for Agricultural Research in Dry Areas (ICARDA), are responsible for the other two tasks.

The mission of Winrock International Institute for Agricultural Development is to help reduce poverty and hunger in the world through sustainable agricultural and rural development. Winrock International assists people of developing areas - in Asia, Africa and the Middle East, Latin America and the Caribbean, and the United States - to strengthen their agricultural institutions, develop their human resources, design sustainable agricultural systems and strategies, and improve policies for agricultural and rural development. As an autonomous, nonprofit organization, Winrock International provides services independently as well as in partnership with other public and private organizations. The institute is recognized as a private voluntary organization.

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1. SUMMARIES

1.1

Course Title:	Advanced Agricultural Photography
Organizer:	1. Dr. Muhammad Anwar Hassan Director, AVC, NARC 2. NARC Training Institute
Instructors:	i. Karen Lilley ii. David Hansen iii. K.A. Khan
Venue:	NARC Training Institute, Park Road, Islamabad
Duration:	One week (May 5 - 10, 1990)
Participants:	35 (Thirty Five)

Objectives

1. Develop a quality B&W print for publication,
2. Short close-up photographs of agricultural subjects,
3. Control light to produce pleasing photographs of the people, and
4. Use of copy stand to photograph flat art.

Contents

Introduction to the course, 35 mm Camera operations, view video program, lighting, film types and uses, environmental "portrait" demonstration, shooting, research in laboratory settings, shooting meeting, conferences, close-up, photography, depth of field limitation, close focusing equipment, Macro/Micro photography, view video program, professional scientific and agricultural photography, copying flat art and formal portrait.

Despite this enough time was provided to practice theory and practicals.

Evaluation

35 participants attended this course, 16 were from Punjab, 7 from NWFP, 5 from Federal, 4 from Sind, 2 from Balochistan and 1 from AJK Institutes. Qualifications-wise 10

were matriculate, 4 DAB, 5 FA, 6 BA and 10 M.Sc's. Age of the group ranged was 9 years with a standard deviation 7-8 years.

All the trainees agreed that the course was beneficial and improved their knowledge and skill in professional photography. The contents were balanced in terms of theory and practicals. 75% agreed that enough time was provided for assignments. However, other 25% desired more time for practical work and assignments. All the trainees said that they got latest knowledge of the subject.

Teaching Methodology

80% participants stated that lectures were very informative. While out of the remaining participants some could not get full benefit of lectures because they were unable to understand the English due to educational background. The practical field visits helped them to develop skills in the field of photography. Participants admitted that after this training they could produce much better photographs. All trainees viewed that group discussions, consultations with instructors and use of audiovisual aids were very helpful. Participants were fully satisfied with the teaching methodology of the course. 75% said that course duration was about right while the 25% desired increase in course duration of at least two weeks.

Instructor's Performance

Trainees were rated by the students in terms of subject knowledge, presentation of subject matter nicely, ability to relate subject matter, and cooperative attitude of the trainer. 90% participants rated that the overall performance of David L. Hansen and Karen Lilley was good. The performance of Mr. Khalil Ahmed and Mr. Shafiq was also rated excellent.

Logistic Facilities

Trainees were provided boarding, lodging and transport facilities. These facilities were up to the standard. However, 50% trainees desired improvement in transport facility.

Suggestions

Keeping in view the results of this evaluation, following suggestions are given:

- i. Time for practicals and assignments be increased.
- ii. Course duration be increased from 1 week to 2 weeks.
- iii. transport arrangements be made better.

1.2

Course Title:	Advanced Videography
Organizer:	1. Dr. Mohammad Anwar Khan Director (AVC), NARC 2. NARC Training Institute
Instructors:	i. David Hansen ii. Karen Lilley iii. Humayun Musaddiq iv. M. Raqeeb
Venue	NARC Training Institute
Duration	One Week (May 12-17, 1990)
Participants:	38 (Thirty Eight)

Objectives

1. Plan an education video program including outline, script and short list/story board.
2. Plan realistic deadlines for video production.
3. Operate a video camera to produce shots that communicate technical information.
4. Edit a video program to improve the message.

Contents

Introduction to the course, "Eye Vs TV" limitation of video, video program design, video equipment, camera handling and care, video production planning shooting for a script, outdoor and indoor lighting, location video shooting, close-ups, complete editing video programs.

In addition to this enough time for assignment was given to the participants.

Evaluation

38 trainees attended this training program. 13 participants were from Punjab, 5 from Sind, 5 from Balochistan, 1 from AJK, 5 from NWFP and 9 from Federal Institutes. Educationwise, 7 were Matric 6, DAE, 6 FA, 5 BA, 2 BVSE, 1 M.Phil and 1 Ph.D. 2 trainees did not answer this question. The age range of the group was between 21 and 50 years. Average experience of the group was 9.17 years with a S.D. of 7.8 years.

80% trainees against 12% viewed that this course was relevant to their professional responsibilities. They got benefit from this course. Participants (75%) achieved the objectives of the course. they also stated that course contents were balanced in terms of theory and practicals. All trainees agreed that enough time was provided for lectures. However, 46% desired increase in time for assignments and practicals. Trainees also agreed that problems and issues usually encountered during their professional duties were discussed.

Teaching Methodology

78% trainees agreed that lectures were very informative. Trainees stated that group discussions and consultations with instructors were very helpful. 65% stated that group discussions were more effective than lectures. Trainees also said that the overall teaching methodology was effective. 95% participants agreed that course duration was about right.

Instructors' Performance

Rating the performance of the teachers, 85% trainees stated that the subject knowledge, presentation of subject matter nicely and ability to relate subject matter with existing problems of Mr. David L. Hansen were good. 75% rated Mr. Humayun as a good teacher.

Logistic Facilities

70% trainees agreed that accommodation provided in the hostel was comfortable. 78% stated that catering was good. While 50% trainees pointed out that transport arrangements needed improvements.

1.3

1.3

Computer Graphics

Organizer:

- i. Mr. Shahid Afzal, Technical Consultant, MART
- ii. NARC Training Institute

Instructor:

Karen Lilley

Venue:

NARC Training Institute

Duration:

Two Weekly (May 19-31, 1990)

Participants

20 (Twenty)

Objectives

- i. Improve agricultural research information transfer through computer generated Graphics.
- ii. Become skilled in the use of Harvard Graphics and PC Paintbrush.
- iii. Develop a short presentation with minimum of 10 teaching visuals and matching handouts using the above software and the available output devices and WordPerfect.
- iv. Develop a plan for introducing and implementing computer Graphics back home.

Contents

Introduction to graphics, use, teaching and demonstration of Harvard Graphics and PC Paintbrush were offered during the course. The hands-on training provided an opportunity to use the softwares for preparation of presentation materials including tests graphic, clip art and symbols. The compatibility of both packages with each other and Lotus 1-2-3 and WP 5.0 was also discussed and demonstrated. Trainees conceived and incorporated the different options provided by the packages to prepare their presentation including slide shows. Scanning demonstration facilities the users for capturing new ideas and translating them into realities, as well as editing them.

Evaluation

20 participants attended graphics course. 16 trainees filled in the evaluation questionnaire. Therefore, the interpretation is based on the analysis of information provided by the sixteen trainees. 8 trainees were from Punjab, 2 from NWFP, 2 from Sind, 1 from

Balochistan and 7 from Federal Institutes. Education wise, 3 were B.Sc., 11 M.Sc. and 2 Ph.D. The age range of the participants was between 25 and 50 years. Average experience of the group was 11 years with a standard deviation of 9.2 years. 93% trainees stated that course was relevant to their professional responsibilities. Trainees improved their knowledge of presentation and quality of graphics. All participants said that the objectives of the training were balanced in terms of theory and practicals. 69% against 14% agreed that enough time was allocated to practice the theory, while 17% did not answer this question. Trainees agreed that problems and issues which they usually encounter during professional duties were discussed.

Teaching Methodology

All trainees strongly agreed that lectures delivered during the course were informative. Practical and presentations provided them excellent opportunity to practice theory and develop skills. Participants responded that group discussions, consultations with instructors, provision of written material were very helpful to them in learning the subject. 69% trainees agreed that time allocated for practicals was about right. While 31% desired an increase in practice time. However, all the trainees admitted that the overall teaching methodology was very affective.

Teachers Performance

Ms. Karen Lilley was the instructor of the course. Participants rated her performance in terms of subject knowledge, ability to relate subject nicely, cooperative attitude to the answer of the trainees and overall performance. All participants rated her "excellent". The performance of Mr. Shahid Afzal co-instructor was also rated "excellent".

Logistic Facilities

65% agreed that hostel accommodation was comfortable while the rest desired improvements. 80% said catering was good. 95% viewed that the staff of training institute was cooperative and helpful. 62% stated transport arrangements was not adequate and 25% gave no answer in this regard.

Suggestions

Participants made some suggestions/comments which are given:

- i. Statistical graphics be included in such courses.
- ii. Practical time be increased.

2. DESCRIPTION

2.1 ADVANCED AGRICULTURAL PHOTOGRAPHY COURSE

May 5 - 10, 1990

This week long course received a very favorable response from the 35 participants. The only suggestion for change to the course was that it should have been longer because the participants put in more hours than they expected. In fact, the course was designed to use the week to full advantage.

The course objectives (see 5.1) were fully met. Participants carried out five assignments and about a third of the class (advanced students) did an optional project of photomicroscopy, which was not originally scheduled.

From the trainer's point of view, several observations can be made. First, the technical support from the Scientific Information Unit (SIU), specially Khalil Ahmad Khan and Shafiq Ahmad, was most appreciated. Both provided help with darkroom activities and the copy stand assignments. It would have been impossible to carry out these two labor intensive activities without their assistance. While neither is trained or equipped to teach a class, they worked well in small group settings for how-to demonstrations. They often had to be reminded by participants not to be too technical, but to cover the basic steps first. The tendency toward extremely detailed technical explanations also came out in two lectures by Khalil. He is an extremely skilled technical and scientific photographer, but is not a skilled educator. Again, the technical assistance of both individuals cannot be overemphasized.

Second, the class was too large. It is difficult to give hands-on training to more than 20 people, maximum. thirty-five participants were way too many. Also, only two-thirds of the individuals had received the beginning course offered a year earlier. Completion of the earlier course should have been mandatory. The beginners brought down the level of training and some adjustments had to be made to avoid leaving them behind.

Third, the participants were themselves limited by their equipment. While all came with 35mm cameras and one lens, less than a quarter were equipped to do close-up photography. Also, none brought a tripod and the only tripod in the AV unit was not functioning. As a result, video tripods were commissioned and the macro photography equipment of SIU and this consultant were shared with the participants.

Hopefully, the interest in close-up photography during the training will lead to the purchase of basic close-up equipment by the participants. Owing a \$15 set of close-up "filters" would expand their macrophotography capabilities by 100 percent. The equipment recommendations (see 4) specify two macro lenses and tripods for SIU as well as a camera, macro lens, and tripod for each of the four provinces equipped under the MART Project.

Film Processing by the commercial laboratory and SIU was handled well. Participants shot a total of more than 50 rolls of film, usually working in groups of three. Advanced members of the course shared their skills with the beginners, which was helpful to the trainer of such a large group.

The darkroom demonstrations and assignments were handled as efficiently as possible given the location and layout of the facilities. The darkroom areas required moving the class to another building, which meant an interruption and a time lag until everyone assembled again. The generally unkempt darkroom areas caused some damage (spots, scratches, dust) on the film processed in-house. Completion of the new AV building and the purchase of a film dryer will hopefully overcome some of these drawbacks. It is desirable to handle film processing in a separate area from printing/enlarging. This separate area does not have to be large, but it must be kept immaculately clean.

A final suggestion was voiced by participants and seconded by the trainer at the closing function. There must be adequate transport available for students to carry out their assignments. They were limited in their shooting because of the distances involved in getting to their subjects. No one was able to photograph any livestock because the area is at the other end of the Center. too often, because of the heat and distance, they would select a convenient subject to complete the assignment. Their real interest may have been with something a kilometer away but they had no way to get there and back. The mood and motivation would have improved with the availability of two or three vehicles. One assigned to the instructor would have, in hindsight, allowed helping more people in a shorter time.

A recommendation of this trainer is that a yearly course be offered in agricultural photography. The six day format is sufficient, and long hours are part of what is expected of the participants. The course should include some of the basics, and have full support of SIU so that advanced students (in groups of four to six) may study macrophotography, photomicroscopy, advanced copying techniques, or specialized darkroom procedures. all of these require equipment not available in the provinces. Advanced students should be able to develop their skills in these areas with less supervision than the beginner or intermediate struggling with simpler techniques. What often limits the advanced student is simple access to the hardware and an expert to call upon when there is a specific question. The SIU photographers would work well with these smaller groups focusing on specific techniques.

In conclusion, the participants, trainer, and in-house support were all enthusiastic about the results of the workshop. There were no major problems or changes and the evaluations were very positive. With completion of the new AV building and provision of basic photo equipment there and in the provinces, the level of technical photography should improve significantly.

2.2 ADVANCED VIDEO PRODUCTION AND EDITING COURSE

May 12 - 17, 1990

This course was a follow-up to a beginners' video workshop held a year earlier. Though 34 participants were in this year's class, less than half had attended the previous one. The course was received well, the participants completed their projects, and there were no equipment failures. The objectives of the course (see 5.2) were fully met. They fell into two general areas, video production and the planning of educational video programs.

The regular course hours were evenly divided between lectures and demonstrations. Participants were grouped into six teams, each team scripting, shooting and editing an educational video program. The topics selected were:

- Better Livestock with Improved Feed
- Honeybee Management
- Canola
- Dairy Health
- Maize Production
- Soil Fertility

Five of the six were good quality productions, while one group suffered from a lack of teamwork, a weak team leader, and less than adequate support from the AV unit. The 34 participants learned that video requires careful planning, adherence to professional standards, and plenty of time.

One point raised during the evaluation was that the course should have been two weeks long. One week is adequate for an advanced workshop if all the participants come with basic skills. It was not the case with this group where half were experienced and half were beginners. The advanced students were mixed with the beginners of each team and helped bring them along during the week. In the future, careful screening must be carried out to ensure that students meet the requirements specified in the course description.

Three speakers from Pakistan TV made presentations during the week. These were in Urdu, so relying on feedback from participants it is suggested that in future training sessions only one individual be scheduled. Preferably this should be a producer. The complaints were that the cameraman and the engineer were too much technical for this level of training and that the techniques and equipment discussed were way beyond the reach of educational institutions.

A tour of the Allama Iqbal Open University video production facility was very well received. The group was addressed by a producer and the department head, and received a tour of the studio. A discussion followed in which the differences between TV news/documentary productions and educational/training videos were spelled out. The participants were thankful for this information, since it is a genre that is little understood by commercial video producers.

Only two of the participants came with video cameras, though the course announcement specified that a camcorder and other equipment should be brought. The communication system within institutions deserve some of the blame for this, coupled with an actual lack of equipment at some sites. The result was the group size of five to seven people, whereas two or three would have given everyone a chance for hands-on each step of the production process. The four provinces that have been equipped with a video production package must ensure that its equipment is available for any such training session.

Also, the class size was too much large for a workshop setting. For video production, fifteen is a manageable size group. Editing time must be restricted in any event, with an arbitrary allocation determined by the number of machines and hours available. In this course, the editing system was used for almost sixty hours straight, beginning Tuesday morning and not ending until Thursday afternoon.

Completion of the new AV building will provide greater flexibility in training as well as production. Having a studio will make a great difference in itself. A suggestion from this trainer is that advanced video people from the provinces should be brought to the NARC AV center on an individual basis for a month apprenticeship. For advanced video producers, this training format would be more useful than w workshop setting. They could be assigned to a specific production and work on it from beginning to end. Having an ending date would also motivate the video group to complete the production.

Another recommendation for future training is that a week-long beginners video workshop be held once a year, with enrollment limited to about fifteen. The NARC AV staff is not yet ready to do training itself, but - as with this course - would need an outside trainer.

While the AV unit has most of the hardware it needs to produce professional programs, a character generator or graphics station in PAL format is necessary. It is difficult to produce technical productions using only mechanical (paper) graphics and characters.

Finally, as with the photography workshop, better arrangements must be made for transporting the participants to their locations for shooting. The AV unit's vehicle was used constantly but was not enough to handle six groups going to different locations. A van was requested each day but it appeared only once.

Despite minor handicaps, the week of training went as scheduled and with the desired results. Judging by the quality of the completed productions. The individuals will be able to produce programs that have a useful, educational message.

2.3 INTRODUCTORY COMPUTER GRAPHICS COURSES

May 19 - 31, 1990

The students in this class were the hardest working, most enthusiastic students I have ever had the pleasure to teach. Although the class was scheduled from 8:30 a.m. to 5 p.m. six days a week, most students stayed until 7:30 p.m. Many returned after dinner to work late most nights, not on assignments which could have been completed during the day, but digging into every corner of the programs to become thoroughly familiar and expert.

The extensive time spent at the computers was a reflection of the students' interest in the subject and a sincere desire to learn. These students were nominated because they were the top computer users at their institutions, and with a few exceptions, they were very skilled. Such skill usually comes from a willingness to spend long hours with the computer.

The Course

The two weeks were divided equally between two graphics programs: Harvard Graphics which was covered the first week, and PC Paintbrush Plus, the second week. No tests were given, but the students were to prepare teaching visuals for a presentation on the last day of the class. Each student gave a practice presentation at the end of the first week and received a critique from their peers and instructors. Students were the designers and producers of the materials, but also the presenters, and the audience. Feedback from the audience reinforced the trainer on legibility, simplicity, and brevity in successful visuals.

In addition to the two graphics programs, the students spent some time creating graphics in Lotus, importing Lotus graphs and data into Harvard Graphics, and importing Lotus graphs, Harvard graphics, PC Paintbrush art, and clip art into WordPerfect documents. The final presentation was to include a one to two page WordPerfect handout to go along with the presentation, incorporating some of the graphics in the visuals.

Although the students were experienced in Lotus and WordPerfect, they had limited experience with their graphics capabilities. Several students were hindered by a weak understanding of some basic DOS and PC concepts, such as directories, the path command in autoexec.bat, and organization of hard disks for efficiency. This was surprising for advanced computer users, but not unusual. Many people use the computer for years, and have no idea where their files are located or how to trouble-shoot.

The Harvard Graphics part of the course was the most successful, in my estimation. Harvard is a very orderly program that is easy and logical to learn and use, and always does what it's supposed to do. Some of the students found that it had limitations since it is not a scientific program. It's really a business package, but works well in educational settings, especially for extentionists, where the material is not too technical. The students pushed it to

its limits, and some were quite creative in getting it to do what they wanted it to do. Several students even taught themselves some features that I had not planned for them to learn, such as organizational charts.

PC Paintbrush, on the other hand, is really an artists' tool, and no one in the course was a trained artist. The program is more difficult to learn, has more idiosyncracies, and a few bugs. Its extensive use of the mouse requires a dexterity and eye-hand coordination that students must first acquire before mastering the program. However, Paintbrush can do many things that Harvard graphics cannot, including using scanners and a variety of commercial clip art. The two programs complement each other well.

Unfortunately, the two are incompatible, in that neither one can import the other's files. Art created in one can only be used in conjunction with the other through cutting and pasting, literally. The students were quite creative in how they used PaintBrush, and although they did not achieve the same level of skill with it as they did with Harvard, they were able to use it to create some art to support their presentations.

Future Computer Graphics Courses

The same course is scheduled to be offered at least three times again in 2-week periods for students with decreasing skill levels each subsequent session. The next course, Level III, may be able to follow the same outline as this one (Level IV), but I recommend modifying it some. The later ones with beginners (Levels II and I) should be modified even more.

The most difficult part of teaching a course like this is working with students of different skill levels. A few students in this session had no computer background, and they had a very difficult time. Students should be required to pre-register, and they should be screened to assure that everyone in the class is at the correct level. Advanced students in beginning level courses will be as much a problem as the beginning students were in my course.

In the middle of the first week students should spend some time learning about their hard disks, how they are organized, how to move from directory to directory, find files, and set them up to be well organized and efficient. This material should be covered before the students start importing and exporting and moving files from one program to another and from one directory to another. Much confusion could be eliminated with a more solid background in DOS.

The next computer graphics classes will need to spend more time on importing and exporting since they will be less skilled in the other programs in the first place. They will need more than a couple of hands-on exercises to become comfortable with moving graphics between programs. This first class would probably have benefitted from more time here as well. (If students do not already know WordPerfect or Lotus, they shouldn't even try to do the importing/exporting exercises. The graphics course is not the place to teach word processing or spreadsheets).

The classes for beginners may be better off not learning PC Paintbrush at all. Harvard Graphics, and possibly its use with Lotus and Wordperfect, would probably be all they should tackle.

I also recommend eliminating the videos from the course. They are geared to a different audience, and although I tried to show how they related to designing educational materials, I don't think they really contributed much to the students' understanding of the concepts. The videos would be more useful to a group of artists than they were to scientists.

Methodology

Teaching the programs by demonstrating with the N-View LCD Projecting my screen worked very well. The students would sit at their computers and do an activity, along with me, asking questions as we went along. Then they'd do it on their own. If they asked questions about a specific problem, I could demonstrate the solution to all of them. This method worked much better than having the students follow a written exercise. After the first written exercise, I switched to going through the remaining exercises with them and that worked much better.

Requiring the students to actually produce a series of teaching visuals forced them to use the program as they would in a practical situation. They were faced with realistic programs that I could show them how to solve, or they solved with their own creativity and shared their solutions with each other.

Results

By the end of the course, the class had gone beyond all the objectives. They created a series of high quality teaching materials in their own areas of expertise, and were able to use them effectively in a presentation. They know 90% of Harvard Graphics' features and the basics of PC Paintbrush, as well as scanning graphics into Paintbrush, and importing and exporting between several programs. They successfully created WordPerfect documents that contained graphics from both programs. Throughout the course we discussed and planned how these programs could be effectively used with the equipment they have at their own institutions.

The oral feedback I received from the students was quite positive. More significantly, the quality visuals they produced showed that the course was successful. Not only did the students learn the software well, but I think they know it well enough to teach it to their colleagues.

Final Recommendations

I think that Shahid Afzal is well qualified to teach the subsequent courses. I am leaving him all my training materials to use including masters of the manual, overheads, and files on disk. He will be supported by Javed Nasim and Zafar and Zafar Sultan of the Training Center. A trainer from EGS attended my class most mornings. Because he did not do the assignments, I don't know if he knows the program well enough to teach them. However, he did sometimes help students who were having problems. In my discussions with him, he seemed very knowledgeable about several programs. Because Shahid is willing and able to handle the rest of the courses, I don't think EGS's help will be required.

Other Consulting

I also spent some time at the computer graphics work station working on some of the hardware issues. I resolved most of the problems related to VideoShow and the color printer. Many of the problems could not be solved because they resulted from limitations of VideoShow. Knowing those limitations and how to work around them with Harvard Graphics is all that can be done.

After a lot of phone calls in the States and discussion with the Twin Cities VideoShow Vendor and trainer, I concluded PC Paintbrush will not work with VideoShow. I suggest that a copy of Draw Partner be purchased to go with Harvard Graphics. It has many of the features of PC PaintBrush but works with Harvard. It is not as powerful as PCPB, but it will extend the capability of Harvard for many applications.

I think Shahid understands what they must do differently to get the most out of the hardware, and I would rely on him to work with Anjum to understand how to make the most of it. He was very responsive and resolved some easy problems quickly, such as adding another serial port to the graphic computer so they didn't have to keep detaching the mouse whenever they wanted to print.

I spent some time with Anjum before my class started and showed her some tricks. Once my class began, I was only available to work with her in the afternoons when students were working on their assignments, but either the electricity would go out or she would leave at 2:30, so I was not able to spend as much time with her as I'd planned. The time I did spend with her was focused on designing and improving materials she'd created, rather than on hardware. I think she learned new things about the software, but not as much as other students who spent more time at their computers.

We used the HP scanner in class quite successfully to scan graphics with PC Paintbrush. It was easy to install and we tried all the practical applications, including making a halftone and changing the size of the image during scanning. We did not use the software that comes with the scanner because PCPB did everything we needed, and it didn't require learning a new interface.

3.1 AV TRAINING AT N.W.F.P. AGRICULTURAL UNIVERSITY, PESHAWAR

A two day workshop on the use of AV equipment was held at Peshawar Agricultural University May 22 and 23. Sixteen participants from that institution and affiliated research stations received basic instruction in the use of a 35mm camera, slide projector, and overhead transparency projector.

The TIPAN Project organized the workshop. David Hansen served as the trainer. The first day's session covered the camera and basic photography. Participants shared eleven cameras just received by the project. The introduction included equipment care, how to operate the camera and lens, and basic tips related to agricultural photography. Each camera team was given a roll of film and a four part assignment. The film was processed and printed in the evening.

The second day focused on the slide and overhead projectors. Each person checked out a slide projector and went through step by step how to change the lens, replace the bulb, and operate all the controls. A demonstration was given so students could observe how a presenter should use the slide medium to best advantage. Positioning of the screen was also demonstrated.

The same steps were gone over with the overhead transparency projector. This included proper set-up, focusing, bulb changing, and basic maintenance.

Finally, the assignment was returned and individual critiques given to each photographer. A secondary benefit that occurred is that one seriously damaged camera was discovered, fresh out of the box. It arrived with a broken mirror which cannot be repaired in-country so will be returned for a replacement.

The participants were enthusiastic and appreciative of the hands-on training. The size of the group was ideal as it allowed personal attention when necessary.

4.1 EQUIPMENT RECOMMENDATIONS

The Scientific Information Unit (SIU) is responsible for documenting research in many areas: entomology; animal science; plant pathology; soil fertility and many others. In addition, they document other, more general activities within the institution. To carry out this mission, the photographers need specialized equipment that is capable of recording the technical subject matter.

Secondly, the new AV center has two darkrooms that need to be equipped. Finally, the four provinces that the MART Project is assisting need basic equipment to function. The following general descriptions correspond to these three main areas of need and are detailed in the attached equipment request developed by the AV consultant.

SIU must develop the capability for a wide range of close-up photography. Photographer Khalil Khan has outside experience with most of the specialized equipment described here. In fact, at times he uses his personal hardware to carry out official assignments. The close-up equipment requested includes a basic bellows system, extension tubes, and macro lenses.

To carry out field photography assignments the SIU photographers should acquire a reliable 35mm system of professional camera bodies, lenses, flash units, and accessories. This includes filters, camera cases suitable for rough use, and heavy duty tripods. One camera body, Pentax, is to replace a broken camera that has two usable lenses.

The SIU unit does a large amount of copy work of graphs, charts, and titles. To do this efficiently requires the close-up equipment already described in addition to a professional copy stand and accessories.

The darkrooms will inherit the existing enlargers from SIU. However, peripherals must be added: timers, safelights, and water temperature control valves and water filters.

Finally, the provinces need a basic, easy to use, 35mm camera system that can be used for field photography, close-ups, and publicity. The system listed in the equipment request is the most basic package possible: camera, macro lens, flash, camera bag, and tripod.

The packages described will outfit the MART project with photo and darkroom equipment in the 35mm format. The equipment will be used to increase the quality and quantity of photos for slide presentations, publications, exhibits/displays, and publicity.

5. SYLLABI & PROGRAMS

5.1 ADVANCED AGRICULTURAL PHOTOGRAPHY COURSE

May 5 - 10, 1990

Instructors:

David L. Hansen, University of Minnesota, USA.

Karen L. Lilley, University of Minnesota, USA.

Khalil Ahmad Khan, Scientific Information Unit, NARC.

Course Timings:

8:30 Class

10:30 Tea Break

10:45 Review assignment

12:30 Lunch

13:30 Class

14:30 Field Assignment

18:15 Tea

18:30 Video

Saturday, May 5

Welcome:

Ashraf Tanveer, Director, SIU, NARC

Local Arrangements:

Tariq Hassan, Acting Director
Training Institute, NARC

Outline of course:

Dr. Cordell Hatch, MART Advisor

Course Objectives:

Participants will be able to:

1. Develop a quality B&W print for publication.
2. Short close-up photographs of agricultural subjects.
3. Control light to produce pleasing photographs of people.
4. Use of copy stand to photograph flat art.

Participant introductions.

Review basics:

35 camera operations:

- loading
- focusing
- shutter speeds
- f/stops

Equipment maintenance

Determining exposure

Supporting the camera

Accessories

View video program,

On Assignment: Photographic Light (Media West)
direction, form, contrast

Tea break

Lighting:

Special exposure considerations

Reflectors

Filters

Artificial light

Lens speed

Check participants' equipment:

light meters

focusing

lenses

flash

Lunch

Film types and uses:

Color transparency (for slides & publications)

Color negative (for color prints)

Black and White, continuous tone, negative (for B&W prints)

Black and White, high contrast, negative (for graphics)

Summary of professional scientific agricultural photography:

Applications: publications, exhibits, slide-tape programs, posters

Categories: field shots, close-ups, portraiture, laboratories, meetings.

"Environmental" portrait: demonstration.

Assignment #1:

Work in teams of 2 or 3. Each participant shoot no more than 10 photos. Use color negative film, shoot an "environmental" portrait of a team member in an agricultural setting using natural light, with & without a reflector.

View video program: On Assignment: Photographic Light (Media West) exposure control, metering, tonal control, film latitude

Open question and answer session.

Turn in film for assignment #1.

Sunday, May 6

Shooting research in laboratory settings:

Telling the story

Lighting

Close-ups

People shots

Lenses: normal, wide angle, telephoto, zoom, macro

Shooting meetings, conferences.

Telling the story, what is "news"

Lighting

Using a telephoto inside

Arranging posed and group photos, alternatives

Tea break

Review assignment #1

View video program, Photographic People (Kodak)
lighting, expressions, backgrounds, viewpoint

Darkroom planning: equipment and facilities

Loading film on reels for processing: demonstration.

Lunch

Assignment #2

In groups of 3, shoot one roll of B&W negative film in a research laboratory (do not use flash). Tell a story about the research. Shoot at least: 1 overview of laboratory, 1 environmental portrait of "scientist" in laboratory, 1 close-up (minimum focus of your lens). Each team develop their film and make a contact sheet. Each participant make an enlargement of his best shot, quality suitable for use in a publication.

Participants work in groups during the afternoon. After shooting assignment #2, sign up at darkroom for the hour your team will be in the darkroom. When not in the darkroom or shooting assignment #2, watch 2 video programs which will be shown 3 times during the afternoon.

View video program: Effective Use of Lenses (Kodak)
selecting lens, depth-of-field, close-up lenses, accessories

View video program: On Assignment: Photographic Light (Media West)
natural and available light, flash and artificial light.

Tea

Open discussion, question and answer session.

Monday, May 7

Close-up photography:

How "close" is "close"?

People

crops/plants

fruits/grains/blossoms

insects

Depth of field limitations

Exposure compensation

Close focusing equipment:

Macro lenses; 50mm, 100mm, 200mm

Screw on (diopter) close-up lenses

Extension tubes, bellows

Reversing and adding lenses together

Importance of tripod, cable release, of self-timer

Tea break

Review assignment #2

Macro/micro photography (continued):

Lighting, how to make a "soft box"
eliminating movement of camera and subject
backgrounds

Lunch

Field photography of agricultural subjects:

Planning, storyboard
Importance of a polarizing filter
LS, MS, CU
Action Photos
Lighting, time-of-day
Documenting research

Assignment #3

In groups of 2 or 3, shoot 1 roll of color negative film documenting research on one crop. Present five prints on this crop. Include at a minimum: 1 that is an overall (LS) field shot, 1 photo of a "researcher working with the crop", 1 clear "identification" photo of the entire plant, and 1 macro shot of a characteristic plant (blossom, fruit, leaf, or stem). Macrophotography may be done indoors or in a sheltered area.

Tea

View video program: Nature (Kodak)

Wildlife, filters, artificial light, night exposures.

Open discussion, question and answer session.

Tuesday, May 8

Professional scientific and agricultural photography:

Slow shutter speeds
Unusual, difficult angles
Livestock photography

View video program: Using Flash Effectively (Kodak)

testing flash, settings, bounce, reflector, multiple flash

Using a flash: demonstration

Direct, bounce light, fill flash outdoors, close-ups

Tea break

Review assignment #3.

Copying flat art (art, photographs, books, computer printouts)

Equipment

copy stand or tripod
camera with macro lens
cable release or self-timer
lighting
glass, tape, weights

Techniques:

tungsten film (or filter), high contrast B&W film
loading 35mm cassettes
avoiding reflections
cropping, backgrounds
changing film in mid-roll

Lunch

High contrast B&W film for title slides:

Adding color (do not overdo it!)

markers, paints, tapes, gels, special processing

Assignment #4:

In teams of 3, shoot and develop 1 roll of high contrast B&W film of at least 3 different titles or flat art. Be sure to bracket your exposures: correct exposure, +1, +2, -1, -2 f/stops. Add color to the three best slides. Select one white-on-black title and one slide from slide file to make a double exposed title.

Duplicating slides and making double exposed slides for titles.

Darkroom: Processing color transparency film (E-6)
Demonstration. (repeated tomorrow afternoon)

Tea

View video program, Existing Light Photography (Kodak)

Wednesday, May 9

Formal portraits (Manager, Photo Fashion Studio, Islamabad)

Lighting, lenses, background, posing the subject

Review assignment #4.

Tea break

Making slides of computer graphics:

Directly off the screen:

high quality monitor (adjust brightness & contrast)

dark room, camera with telephoto lens

tripod, cable release or self-timer

determining exposure, slow shutter speed

Digital film recorder vs. off-monitor

Assignment #5:

In teams of 4 or 5, shoot 1 roll of color transparency film of computer graphic images. Each participant should shoot a computer title of his institution. Be sure to bracket exposures: correct exposure, +1, +2, -1, and -2 f/stops. Be sure to use a slow shutter speed, less than 1/15 second.

Lunch

Turn in film for assignment #5.

Filing and retrieving 35mm slides and negatives:

Developing a system for managing your photos:

determine major categories

establish numbering system

guidelines for check-out and check-in

Hardware:

plastic slide sheets, metal slide boxes,

file cabinet, slide boxes

Demonstration: computer software for labelling and filing slides.

Assignment #6:

Flash photography and formal portrait. In groups of 2, shoot 1 roll of color negative film. Each participant shoot six shots: 2 direct flash pictures of a classroom or meeting scene, 2 shots of the same scene without flash, and 2 bounce flash pictures of a group of 3 or fewer people. Also shoot 6 shots using existing light for a formal portrait of your team member. Try different lighting, use a reflector for some of the poses.

Tea break

View video program: On Assignment: Photographic Design (Media W)
Part 1: camera and lens choice, framing, selective focus

Open discussion, questions and answer session.

Turn in film for assignment #6.

Tuesday, May 10

Review assignments #5 and #6.

Final question and answer session, open discussion.

Tea break

Critique of Week's work.

Participants
David Hansen
Karen Lilley
Cordell Hatch

Evaluation

Commencement

Certificates presented

Awards given for best photographs

Friday, May 11

Local sightseeing trip.

5.2 ADVANCED VIDEO PRODUCTION AND EDITING

May 12 1- 17, 1990

Instructors:

David L. Hansen, University of Minnesota, USA
Karen L. Lilley, University of Minnesota, USA
Humayun Musadiq, AV Unit, NARC
Mohammad Raqeeb, AV Unit, NARC

Course timings:

8:30 Class lecture
9:00 Assignment/Shooting
10:30 Tea
11:00 Lecture
12:30 Lunch
13:30 View video program or review assignments
14:30 Editing

Course Objectives:

Participants will be able to:

1. Plan an educational video program including outline, script, and shotlist/storyboard.
2. Plan realistic deadlines for video production.
3. Operate a video camera to produce shots that communicate technical information.
4. Edit a video program to improve the message.

Assignment:

Produce an educational video program about an agricultural subject. The maximum length of the program is 10 minutes. The program must be outlined, have a storyboard or shortlist, and have a written script. The program must include some narration (voice over). It must include a demonstration or interview totalling at least 2 minutes. At least 2 titles must be included. There must be more than 3 shots taken at minimum focus (close-up).

Deadline: Thursday, 8:30.

Saturday, May 12

Welcome

Introduction

Course objectives Expectations

"Eye Vs. TV", limitations of video

Video program design

Video equipment: camera and recorder, camcorder, accessories

Camera handling and care: demonstration

Video pre-production planning:

Audience

Objectives

Program length

Timeline and budget considerations

Video production planning

Outline

Treatment

Script

Shot lists

Logging shots

Demonstration: outdoor lighting

Basic Shots: LS, MS, CU, ECU

View video program, Video Lighting, discussion

Participants select topics for video programs

Assignment #1

Prepare a storyboard of an agricultural subject using a minimum of 3 shots: LS, MS, CU. Using camcorder, with white balance correctly adjusted/selected, shoot and edit in-camera a 60 second sequence (audio is optional).

Review Assignment #1

View video program, Guide to Home Videography (CBS/Fox)

Sunday, May 13

Location interviews & demonstrations, getting good video and audio-on camera Mic. maintain distance.

Props

Backgrounds

Assignment #2

Videotape (video and audio) a 2 or 3 minute interview or demonstration. Edit in-camera and include at least one "title" of some kind. The person being interviewed must do or show something.

Outside: Shooting action, camera and subject movement
Planning the shot
Planning, titling
Tracking a moving subject
Proper use of zoom

Outside: Location audio recording techniques
Types of microphones
Placing the microphone
Natural Sound
Undesirable background noise

Levels of video production

10:30 Video producer

In camera titles with 1/2 inch VHS camcorders

"Natural" titles: songs, poster, props

Review assignment #2. Discussion

View Video: Recording Made Easy

11:30 Demonstration: 1/2" pause control and electronic editing

12:30 Assignment: Outline video programs, prepare storyboard or shortlist.

Monday, May 14

8:30 Leave for studio tour.

Shooting of a script

Shooting without a script.

Assignment #3

Shoot field or laboratory scenes for video program. Be sure to follow storyboard/shortlist and script. Also be sure to get more than 1 shot of each scene you have planned.

Interior lighting:

Existing light: from window or door, fluorescent, tungsten sun gun.

11:00 Engineer

Audio recording inside:

- Types of microphones
- Placement of microphones
- Reducing background noise
- Recording an interview

Interview inside, demonstration (3/4 inch, for class video program)

Recording audio narration only, demonstration

Review assignment #3

View video program, On-Location Lighting (Videocraft)

View video program, How to Shoot Home Video

Tuesday, May 15

Location video shooting, close-ups

- lighting
- composition
- backgrounds
- directing action

Finalize scripts

Shoot remaining scenes for video programs.

Video editing, demonstration of 3/4 inch editing.

Video editing, 1/2 inch VHS phase control editing.

Wednesday, May 16

Narrate scripts for video programs.

evaluate what's been shot.

Complete editing video programs.

Thursday, May 17

View final video programs.

Discuss potential for video production at home institutions:

hardware

personnel

budgets, timeliness

cooperation with other institutions

Final question and answer session.

Commencement.

Distribution of certificates.

Award for best video program.

5.3 INTRODUCTORY COMPUTER GRAPHICS COURSE

May 11-19, 1990

Objectives:

The students will be able to:

1. Improve agricultural research information transfer through computer generated graphics.
2. Understand the importance of visuals as an educational tool, and be able to use visuals effectively in a presentation.
3. Become skilled in the use of Harvard Graphics and PC Paintbrush.
4. Develop a short presentation with a minimum of 10 teaching visuals and a matching handout using the graphics software, WordPerfect, Lotus, and a variety of equipment.
5. Develop a plan for sharing their computer graphics skills with others at their institutes using the equipment available to them.

Daily Schedule

08:00 Class begins
Lecture and exercises
10:30 Tea
Lecture and exercises
12:30 Lunch
13:30 Lab Time
15:30 Tea
17:00 Work Session ends (one instructor will stay to help)
19:30 Instructor leaves
20:30 Lab open if desired

WEEK 1

DAY 1: Saturday, May 19

Introduction to Graphics

Planning quality teaching presentations

Handout: Speakers' guidelines for visuals

Video: Graphic Design 1; discussion

Exercise: rough sketches of teaching visuals

Introduction to Computer graphics

Demonstration of computer and peripherals: new graphics tools

Demonstration of Harvard Graphics and PC Paintbrush

Exercise: Making text visuals on Harvard Graphics

Video: Graphic design 2; discussion

DAY 2: Sunday, May 20

Harvard Graphics: demonstration and hands-on exercises

Text graphics, pie charts, bar charts line charts

Handout: Master Graphics: Effective Overheads for Business Presentations

Discussion of readability and not misleading with graphs Critique of charts and graphs

Demonstration of how to improve graphs

Demonstration of adding clip art to graphics

More hands-on work on Harvard Graphics

Output to printers: Epson, HP Laser Jet

DAY 3: Monday, May 21

Lotus graphs: how to make them, demo and exercise

Importing Lotus graphs and data into Harvard

More work on enhancing graphics

Harvard draw/Annotate Option

Exercise: Adding text, boxes, lines, circles and polygons

Enhancing drawings

Making signs, posters, exhibits

DAY 4, Tuesday, May 22

Complete Harvard Graphics assignment

Presentation Options

Creating a Screen show

Adding transitions to a screen show

Batch printing and Making overheads

Using the N-View screen projector for presentations

Making slides of graphics off the screen

Critique of graphics

DAY 5: Wednesday, May 23

Revisions of graphics
Student presentation
Critique

DAY 6: Thursday, May 24

Making handouts and other printed pieces using WordPerfect
Importing WordPerfect graphics into WordPerfect document
Importing Lotus data and graphics into WordPerfect
Importing Harvard Graphics into WordPerfect
Designing a printed piece using various graphics in WordPerfect
Exercise: WordPerfect document with graphics
Video: Desktop Design 1
Questions and discussion on desktop publishing
Finalize a matching handout for your presentation

WEEK 2

DAY 1: Saturday, May 26

Setting up your hard disk efficiently
installing the graphics programs
High end drawing and painting software
Video: Desktop Design 2; discussion
Introduction to PC Paintbrush IV Plus
Demonstration, examples of output, comparison to Harvard
Exercise: Walking through PC Paintbrush
Becoming familiar with Mac-type graphics:
Pull down menus, the pointer, the drawing area, scroll bars, etc.
New mouse activities: click, drag, point, double click, etc.
The tool box: trying each tool
Brush, line width, erasers, color selection, shapes, lines, spray, eyedropper, hand,
scissors, gadget box, and text
Demonstration of painting with PC Paintbrush
Exercise: Using the tools in the toolbox

DAY 2: Sunday, May 27

Exercise: Creating a logo (top hat) and adding type
Designing some visuals to be produced on Paintbrush (sketches)

Using electronic clip art; viewing, printing
Enhancing clip art
Advanced features found on the Editing Menus: Effects, Options....

DAY 3: Monday, May 28

Executing a drawing
Color, pallets, etc.
Slides of color graphics off the screen
Outputting to printers
Sharing the results; discussion

DAY 4: Tuesday, May 29

Using the HP Scanner
 Modifying and retouching a picture; adding color
Using Paintbrush with Harvard Graphics screenshow
Importing paintbrush graphics into a WordPerfect document.
Completion of presentations
Discussion of using computer graphics at home institutions

DAY 5: Wednesday, May 30

Final presentations made with handouts
Critique, discussion

MAY 6: Thursday, May 31

What's next: a peek at other software & hardware options, now and in the future
Video: Desktop designs; discussion

Organizational/management issues around computer graphics and desktop design [Students share their plans for computer graphics back at their own offices]
Wrap-up discussion
Graduation

6. TERMS OF REFERENCE

6.1 Computer Graphics Consultant-Trainer

A short-term expatriate consultant is needed to train Agricultural Scientists and Communication Specialists from PARC/NARC/Provinces/other AID Projects in computer graphics equipment and its applications. The purpose of this consultancy will be to introduce and teach equipment features and operations, visual and graphics making techniques and principles, and applied software skills using such programs as Harvard Graphics, Hijaak, Lotus 1-2-3, WordPerfect 5.0, Fontasy, Picture It, PC PaintBrush Plus, etc. The Consultant must be thoroughly operational in the following:

- a. IBM AT (AST manufactured) 286 computer using MS DOS version 3.30.
- b. General Parametrics Photometric 200 PC slidemaker, using above software.
- c. VideoShow 160, using compiled presentation visuals on 5¼" floppy and various video display devices.
- d. Printers: Epson FX-1050 9-pin dot metric, CalComp color master, HP PaintJet-color, HP LaserJet Series II.
- e. Telex LCD Color and B/W Display Panels.
- f. Sony Video Projector, VP-1040
- g. Microsoft Mouse, SummaGraphics sketchpad, template, stylus, etc.
- h. HP Image Scanner

The consultancy period will be from April 30 thru May 31, 1990. Most work will be performed in Islamabad. The consultant will work with and be assisted by the MART Technical Systems Consultant, PARC Graphics Artist, NRC Scientific Information Staff, and the MART Photography/Videography Consultant-Trainer.

The consultant will conduct the first two of six courses, each of two weeks duration, six days a week, 36 hours per week. The training hours will be from 0900-1600 hours with 20 minutes coffee bread and 40 minutes lunch break. There will be 9-18 participants per course. Each participant will have an IBM AT compatible computer with 360 kb/1.2 Mb 5¼" floppy, 20/40 Mb hard disk, EGA monitor, and dot matrix printer. Additional equipment, listed above, will be available. the course may be structured as follows, subject to consultant's precourse recommendations.

TERMS OF REFERENCE

6.2 Photography/Videography Consultant-Trainer

A short-term expatriate consultant-trainer is needed to train Agricultural Scientists and Communications Specialists from PARC/NARC/Provinces/other AID Projects in advanced photographic and video production techniques.

The consultant-trainer must be thoroughly knowledgeable and operational in and able to teach the following:

1. Professional scientific agricultural photography
2. Photographic copying and special effects
3. Corporate/institutional portraiture
4. Color and black & white darkroom chemistry
5. Color and black & white darkroom chemistry
6. Negative and 35mm slide filing/management
7. Slide making from art, photographs, computers, etc.
8. Filming and processing computer graphics
9. Operating computer graphics display equipment
10. Macro and micro photography
11. Planning, writing, preparing, performing, producing, editing video
12. VHS/S-VHS camcorder ENG/EFP productions
13. Assist in teaching two-week computer graphics course

Consultant will be trainer for 6-day Advanced agricultural Photography Course, May 5-10, and Advanced Agricultural Video Production Course, May 12-17. Also, consultant will assist short-term computer consultant-trainer in teaching two-week IBM PC Computer Graphics Course, May 19-31. Consultant-trainer must be in Pakistan, April 30 - May 31, 1990.

Consultant will work with the NARC Photography and Audio-Visual Communication staffs and will receive support from the NARC Training Institute. Most work will take place in Islamabad.

7.1 KAREN L. LILLEY

Education: M.A. Journalism (Photography, with supporting ares of Instructional Systems and Management), University of Minnesota, 1976.

B.F.A. Graphic Design (with minor in Journalism), Drake University, Des Moines, Iowa, 1971.

Creighton University, Omaha, Nebraska, Art major, 1968-70.

Relevant Experience

I have over fourteen years of communication experience in planning, producing and evaluating educational materials for extension programs. Currently I am evaluating and implementing micro-computer graphics for use by the Minnesota Extension Service, including easy to use software for country extension offices, as well as sophisticated systems to provide centralized computer graphics support throughout the state.

For almost ten years I was a graphic designer (five years as art director and supervisor), producing slide sets, overheads, posters, exhibits, flip charts, publications and brochures. I have experience in communication consulting, instructional design, photography, writing, software development, and print production. I have taught graphics, computers, and educational materials development to small groups and individuals at all levels: 4-H youth, university student interns, credit courses, extension faculty in service education, extension clientele, educators, and other professionals.

I am currently consulting with the Centro International de Agriculture Tropical (CIAT) in Cali, Colombia, where I am helping with the computerization of their Communications and information Department. I have conducted workshops for international audiences including youth leaders and agency administrators. For the University of Minnesota College of Agriculture's Moroccan Project, I helped produce photographic documentation of daily life in Morocco and university activities in Rabat. I consulted on extension communication techniques with faculty and administrators at the Institute of Sylviculture, Warsaw Agricultural University, and at their forestry experiment station.

Professional History

1983-Present Computer Strategist, Extension Communication Specialist and Associate Professor, Communication Resources, Minnesota Extension Service, University of Minnesota.

Project coordinator, instructional designer, and writer for educational computer software, user manuals, and training. Work with content specialists and programmers to plan, produce and distribute extension computer aided

instruction. Helped develop the team approach to the software development process now used for all extension software. Investigated and designed standardized software packaging for all extension computer programs.

Computer graphics product manager, responsible for investigating how county and campus extension offices can use their computers to produce graphics for visual teaching materials; evaluate and recommend software and hardware for purchases; develop new graphics applications; provide staff training, on-going consultation and technical support.

Coordinated computerization of selected communication tasks, such as: editing on disk with word processors; typesetting directly from edited disks; annual country ordering of educational materials from an electronic spreadsheet; and distribution of news releases and newsletters from campus mainframe computer to country offices via modem, eliminating some printing costs.

1981-1983

Consulting Communicator, Extension Communication Specialist and Associate Professor, Communication Resources, Agricultural Extension Service, University of Minnesota.

Helped conceptualize and implement the reorganization of Communication Resources (CR), and co-developed the consulting communicator role. Served as liaison between CR and program areas of Home Economics and 4-H, consulting with administrators to clarify overall program objectives and priorities, and to manage their communication budgets. Consulted with content specialists to clarify audience, educational objectives, and to select appropriate media.

1977-1981

Extension Art Service Coordinator, Communication specialist and Assistant Professor, Department of Information and Agricultural Journalist, University of Minnesota.

Managed the graphics unit that provided art support for educational and promotional materials in all media for the Institute of Agriculture, Forestry and Home Economics, including the extension service and experiment station. Supervised a staff of graphic designers, including training of student artists and interns. Responsible for major equipment purchases and print materials.

Taught Agricultural Journalism typography courses for credit in the College of agriculture. Taught extension staff development classes to county agents campus faculty and secretaries on how to design and produce print and audiovisual educational materials.

1972-1977 Commercial Artist (Civil Service), Department of Information and Agricultural Journalism, University of Minnesota.

Graphic designer, producing art for slide sets, overheads, posters, exhibits, flip charts, publications and brochures. Worked with faculty and administrators to design materials, and with printers, photo lab, sign shop and other vendors to produce the final product.

1972 Publication Designer, Callan Publishing, Minneapolis, Minnesota.

Developed editorial and advertising layout for twenty-two professional magazines.

Memberships

Women in International Development, Heath-Zenith Computer User Groups, University of Minnesota IBM-PC User Group.

Personal Born September 12, 1950. U.S. citizen. Excellent health. Married to David Hansen; one child.

7.2 DAVID L. HANSEN

Key Qualifications

I am presently an Extension Communications Specialist with over ten years of professional experience in agricultural communications. I have been a faculty member of the Agricultural Extension Service and the Agricultural Experiment Station of the University of Minnesota since 1974. I have served in the public and private sectors as an audio visual producer and director (slide-tape, multi-media & video), mass media specialist, writer, editor, photographer, film maker, educator, advisor, and project manager-coordinator.

In my current position I work with extension specialists, administrators and county agents to design and produce educational programs for use by clientele groups. In addition, I work with researchers of the experiment station to disseminate information through print and broadcast outlets. I also am involved with public relations and fund raising efforts of the Institute of Agriculture, Forestry and Home Economics.

I manage Northern Lights, my AV company which provides services to clients in agriculture, advertising, public relations and legal services to clients in agriculture, advertising, public relations and legal services. Clients include American Cyanamid, DuPont, American Dairy Association and legal firms in over 25 states. I plan, coordinate and produce communication projects of varying sizes covering subjects related to agriculture, forestry, home economics and veterinary medicine.

I have made trips to North Africa, and produced two documentary programs on the University's Morocco Project. I have travelled East and West Europe extensively, guest lectured at the Warsaw Agricultural University and consulted at the Rawa, Poland field station. In fall, 1986 I was an AV consultant on a World Bank project at the Agricultural Development Bank of Pakistan.

Education:

M.A. Journalism and Mass Communications, University of Minnesota (all but thesis)

B.A. Journalism and Mass Communications, University of Minnesota, 1975

Diploma, Murray High School, St. Paul, Minnesota, 1970

Experience

Technical Information Production Specialist, Agricultural Development Bank of Pakistan August-October 1986

Planned and conducted audio visual training for agricultural subject specialists in ADBP head office, Islamabad. This included group and individual sessions in instructional design, script without and graphics. In addition, specified equipment needs, planned a slide reference library, produced a video program on irrigation and wrote/edited scripts and publications. This was a World Bank funded project.

University of Minnesota, Minnesota Extension Service and Agricultural Experiment Station July 1981 - present

Extension Communications Specialist/Assistant Professor. Primary responsibility is to plan, research and produce formats. Work with extension staff to develop content and with communications staff to produce and distribute program. Often this means working with outside agencies in the development of the program and coordinating production with other vendors. Also, support is provided for the public relations efforts of the Institute of Agriculture, Forestry and Home Economics.

Specific duties covered during the course of these jobs include: audience analysis; budget preparation; scheduling; researching topic; writing; editing (video, stills, & print materials); photography; coordinating graphic design, audio production, printing, and distribution; and pilot testing and evaluation.

In addition, organized and informal classes and advice is given to faculty of the extension service and experiment station. Short courses are taught each year to extension faculty to keep them abreast of new communication technology and techniques. Photography project records for 4-H members and leaders were developed to complement national materials. These have served as a national model for other states.

An additional assignment was to organize a technical support unit. Art and graphic services, photography and copy work, audio recording studio functions, and tele-conference support was combined into one unit that serves the extension service and the experiment station. A charge system was inaugurated for outside customers and initiating forms developed to clarify services and speed production. In addition, a work flow was developed for audio visual projects to spell out the responsibilities for each step in the process.

A recent assignment was to assist in the development and production of a video disc that contains 50,000 slide frames from extension libraries and photo collections. As a result, each county office now has instant access to each image, reducing distribution time and expense. Also, assistance was given in developing a word processing utility for the microcomputers used in the Minnesota EXTEND computer system. This adaptation allows a uniform script format

to be followed and saves input time when keystroking. Now, almost all script writing is done on the microcomputers.

Additional responsibility is to recommend purchase of audio visual equipment and help develop long range plans for equipment needs in country and state extension offices.

University of Minnesota. Agricultural Extension Service and College of Agriculture. Department of Information and Agricultural Journalism July 1977 - June 1981

Assistant Extension Information Specialist/Instructor. Photographer for slide-tape programs produced by the agricultural extension service. Photographer for extension, experiment station and college publications and exhibits. Worked with content specialists, script writers/editors, graphic artists, and audio technicians to produce instructional programs.

Supervised student employees who provided photo and darkroom services to campus faculty. Also, maintained a large photo collection used by extension and experiment station staff.

Developed and taught an upper level photography class for agriculture and home economics students. Team taught a publicity class designed for agricultural journalism majors. Developed a short course in slide set production techniques for country agents, team taught in locations throughout Minnesota. Also, was state contact for 4-H photography project which led to development of teaching materials and workshops for adult leaders, judges county agents and members. In addition, taught photography short courses to county agent, state specialists, and college and experiment station faculty.

In October, 1980, visited the Institute's Morocco project in Rabat and photographed activities throughout the country. After return from North Africa and travel in East and West Europe, produced two documentary slide programs about Morocco and the project. There are used to orient faculty and explain the program to interested parties.

Agricultural Extension Service. University of Minnesota July 1974 - June 1977

Graduate Research Assistant. Carried out photography assignments for campus based extension staff. Helped develop slide/tape programs, exhibits and publications. Taught 4-H members and leaders photography skills and evaluated state fair exhibits.

Languages

English	(Mother tongue)
French	(Fair)
German	(Fair)

Personal Data

Date of birth:

Family:

Address:

Telephone:

Citizenship: **U.S.**

8. LIST OF PARTICIPANTS

8.1 List of Participants course Photography May 5-10, 1990.

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2. Name Rahimullah
 Designation Photographer
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3. Name Masood Shafi
 Designation Photographer
 Address Department of Fisheries Punjab.

4. Name Dildar Hussain
 Designation Photographer
 Address Department of Fisheries Punjab.

5. Name Imtiaz Sheikh
 Designation Photographer
 Address Agency for Barani Areas Dev. Planning and Dev. Board
 Government of Punjab.

6. Name Saeed ud Din
 Designation Assistant Entomologist
 Address Agriculture and Livestock Department Govt. of Sindh, Karachi.

7. Name Muhammad Saleem Ansari
 Designation Photographer
 Address Agriculture Research Institute, Tandojam.

8. Name Fayaz Ahmedem
 Designation Photographer
 Address Ayub Agriculture Research Institute, Faisalabad.

9. Name Sajjad Malik
 Designation Lightman
 Address AVC, NARC, Islamabad.

10. Name Muhammad Hanif Chanio
Designation Vedio Cameraman
Address C/O director Training Agric. Hyderabad, Sind.
11. Name Afzal Ikram
Designation Photographer
Address C/O director Training Agric. Hyderabad, Sind.
12. Name Sikander-E-Azam
Designation Photographer
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13. Name Capt. Shafiullah Niazi
Designation D (PR)
Address H/No. 514, St. 18, 4-8/1 Islamabad.
14. Name Akbar Ali Khan
Designation Media Engineer
Address 1037-D Setalliste Town, Rawalpindi.
15. Name Khalid Ahmed Khan
Designation Technical Photographer
Address Phone No. 221-NARC.
16. Name Shafiq Ahmed
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17. Name Nazir Arthur
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Address N/No. 1896 Javid Manzil Lalkuti Rawalpindi.
18. Name Miss Anjum Ayub Khan
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19. Name Parveiz Hussain
Designation Photographer
Address H/No. 54/31, Kala Abad Colony, Quetta.
20. Name Muhammad Fazil
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21. Name K. H. Khurshied Ahmed
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22. Name Muhammad Ahmed
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23. Name Tasleem Mian
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24. Name Aamar Sher
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Address D-5 Punjab Engineering Academy Thoker Niaz, Lahore.
25. Name Muhammad Saleem Khan
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26. Name Muzammil Mehmood Siddqui
Designation Laboratory Technician
Address St.No. 2 Block No. 2 Islam Pura, Khanewal.
27. Name Muhammad Jala Arif
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30. Name Noor Khan
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31. Name Haji Muhammad Akbar
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8.2 List of Participants Course Videography
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11. Name Khalid Ahmed Khan
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27. Name Imtiaz Sheikh
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 Address Agency for Barani Areas Dev. Planning and Dev. Board
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28. Name Saeed ud Din
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8.3 List of Participants Course HG Group A
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