

THE DEVELOPMENT OF SLIDE AND SOUND TRAINING-PROGRAMME PRODUCTION  
SKILLS IN SECOND YEAR STUDENTS OF THE NATIONAL DIPLOMA

(PERSONNEL MANAGEMENT) :

AN EVALUATION OF THE EFFECTIVENESS OF AN ANDRAGOGICAL MODEL OF  
INSTRUCTION AS OPPOSED TO A PEDAGOGICAL MODEL OF INSTRUCTION IN  
ACQUIRING KNOWLEDGE OF, AND COMPETENCE IN, SUCH SKILLS

by

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## DECLARATION

I declare that:

this dissertation represents my own work, both in conception and execution.

All the sources I have used or quoted have been indicated and acknowledged by means of complete references.

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26 APRIL 1996

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**ABSTRACT**

This research examined whether an andragogical model of instruction is preferable to a pedagogical model for adult learners in a technikon context.

The research also explored whether motivation to learn, cognitive learning and performance in a practical assignment would be enhanced by using an andragogical model and whether the students' perceptions of the model would be more positive than those of students exposed to a pedagogical model of instruction.

The findings of this research and the literature surveyed suggest that both models can be effective but that an andragogical model is generally preferable as it leads to self-directed, independent learning, which empowers and enables students to cope in a world of continual and rapid change.

It is also argued that the two models should not be seen as being antithetical but rather viewed as being on a continuum and that interfusions of them should be sought. A situational approach to instruction should be adopted so that the models can be applied to the instructional/ learning situation in a flexible way which will accommodate the needs of individual learners.

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## CHAPTER 1

### 1.0 THE PROBLEM : INTRODUCTION AND ORIENTATION

#### 1.1 RATIONALE : FACTORS LEADING TO THE STUDY

Technikon Natal is involved to a significant degree in offering courses, both formal and non-formal, to post school students. A pedagogical model of instruction has been and is still commonly used at school level. The domination of the education system in South Africa by a narrow "ideology of national survival" (Schoeman, 1992:29) with a centralized, authoritarian and ethnocentric educational philosophy as embodied in National Education Policy Act No. 39 of 1967 probably led to the overemphasis of a pedagogical model of instruction whereby education was used for political and social ends (Hammond and Collins, 1991:17). Act 39 of 1967 stated that education should have a Christian and broad national character and that aspects such as syllabuses, courses and research would be co-ordinated on a national basis.

The problem with such prescription and rigidity is that it tends to thwart the chances of producing critical and

analytical thinking, essential attributes for teachers, instructors and learners.

In all societies with a formalised, state organised educational system, education is designed to promote specific political and social goals.

(Evetts, 1973:121)

And the existence of just such a narrow, official view of education in South Africa was stated by a Human Sciences Research Council report:

...formative education is a vehicle for moulding the conscience according to the South African hierarchy of values, ...

(1971:122)

The above paradigm of education, as best described by Ferguson (1989:317-319), appears to be a characteristic of our schools and some tertiary educational institutions. Problems created by the authoritarian, manipulative system of education, such as ideological manipulation, emphasis on rote learning and the lack of critical thinking are mentioned by Gardner (1995:6) and were outlined in the White Paper on Education and Training (Government Gazette, vol. 357, no. 16312 of March 1995). However, according to current thinking in education, it is desirable, especially at a tertiary level, that students will develop as adults, behave in

a responsible manner, and be able to move successfully into a vocation after training (NATED, 1994:4-6).

The NATED policy document goes on to say that the personal development of students should enable them to cope with problem situations and be able to study independently, and in terms of their vocation they must " ... be able to adapt to its changing demands" (NATED, 1994:9).

In support of the above, Long (1990:25) mentions that the need for societies to adapt to ongoing change has led to the shifting of emphasis in education away from a pedagogical to an andragogical approach, where teachers become facilitators of learning and students become orientated to life-long learning. These sentiments are reflected in the White Paper on Education and Training which states that the main goal of national education and training policy must "... enable all individuals to value, have access to, and succeed in lifelong education and training, ..." (1995:21). The content and methods of teaching should encourage " ... independent and critical thought..." (1995:122) which implies that the locus of control must become more learner centred.

Carnevale, in America and the New Economy, emphasises that organisations must become flexible and learning

orientated, in that jobs nowadays require employees to be flexible and able to change their job roles often during their working lives. Apart from core skills in writing, reading and computation they will need a capacity to learn, be creative, solve problems and cope with ambiguity.

... employees need the general skills necessary to move among jobs and to take responsibility for their own personal and career development.

(Carnevale, 1991:103)

Writers such as Knowles (1985 & 1988) and Laird (1986), suggest that adults learn more effectively in a learning environment which is democratic, interactive, flexible and caring, rather than in a climate which is rigid, authoritarian, formal and content orientated. The role of the instructor is therefore vital in terms of the instructional style and the climate established during the learning process. The role of the instructor should be that of a " facilitator of learning" (Knowles, 1988:75).

## 1.2 MOTIVATION FOR THE PROPOSED RESEARCH

The 1983 amendment to The Advanced Technical Education

Act, No. 40 of 1967 has led to the relative autonomy of Technikons in respect of course design, examining and certification.

Achievement of autonomy will enable a technikon to contribute towards its own curriculum content, design its own teaching strategies, and shift emphasis to continuous evaluation.

(Prior, 1986:2)

The Technikon Act No. 125 of 1993 decrees the devolution of power to technikons' Academic Boards and the technikons' Councils with regard to governance, the control of instruction and examination. Furthermore the manual for the evaluation of standards at technikons (SERTEC, 1995:16 & 21) supports technikon autonomy with regard to curriculum design and self-evaluation in terms of the accreditation of instructional programmes.

A technikon's achievement of autonomy will result in lecturing staff's having to design courses and develop teaching strategies suitable for their students. The NATED report (1994:4-9) makes it clear that education at technikons should be of a tertiary nature, supporting and guiding students towards maturity. Since students should develop into adults while studying at a tertiary level it can be assumed that an andragogical model of instruction

would be applicable in technikons and that lecturing staff should adapt their teaching strategies to suit the needs of a developing adult learner.

### **1.3 STATEMENT OF THE PROBLEM**

In order to provide a sound theoretical basis for autonomous curriculum and teaching design and to satisfy the aims of NATED 02-150 (1994) within the slide and sound training-programme component of the National Diploma (Personnel Management), it is necessary to establish whether an instructional model characterised by the application of andragogical learning principles, would have an enhancing effect on the acquisition of knowledge and production skills in the making of a slide-sound training programme, and whether that approach would be preferred, by second year National Diploma students, to the application of pedagogical learning principles.

#### **1.3.1 THE FIRST SUBPROBLEM: IMPACT ON MOTIVATION**

The first subproblem would be to evaluate the impact of an andragogical model of instruction, as opposed to a pedagogical model of instruction, on students' motivations to learn.

### **1.3.2 THE SECOND SUBPROBLEM: EFFECT ON PERFORMANCE**

The second subproblem would be to evaluate the effect of an andragogical model of instruction, as opposed to a pedagogical model of instruction, on the students' performance in a practical project.

### **1.3.3 THE THIRD SUBPROBLEM: ATTITUDE TOWARDS THE MODEL**

The third subproblem would be to evaluate whether the students' perceptions of an andragogical model applied to them would create a more favourable attitude towards learning than a pedagogical model of instruction would.

## **1.4 HYPOTHESES**

### **1.4.1 THE FIRST HYPOTHESIS**

Students' learning will be enhanced when they are exposed to an andragogical model of instruction.

### **1.4.2 THE SECOND HYPOTHESIS**

Students' performances in a practical project will be

enhanced when they are exposed to an andragogical model of instruction.

#### 1.4.3 THE THIRD HYPOTHESIS

Students will prefer a teaching/learning situation which has the characteristics of an andragogical model rather than those of a pedagogical model of instruction.

#### 1.5 UNDERLYING ASSUMPTIONS

It was assumed that:

- two similar groups of students could be selected from the research sample of second year students;
- two short courses could be presented, one having andragogical characteristics and the other having pedagogical characteristics;
- students in their second year of study at a technikon are adults and would therefore respond as adults when exposed to an andragogical model of instruction; and
- students' perceptions of the two courses could be determined and statistically generalised by means of questionnaires.

## **1.6 METHOD OF RESEARCH**

### **1.6.1 LITERATURE STUDY**

A study of some relevant literature was conducted in order to differentiate between, and consider criticism of, andragogical and pedagogical models of instruction.

### **1.6.2 RESEARCH SAMPLE**

A research sample of 48 students was selected from a population of 66 second year students of the National Diploma: Personnel Management at Technikon Natal.

#### **1.6.2.1 SELECTION OF THE RESEARCH SAMPLE**

The population of 66 students completed a pre-test and a personal questionnaire (Appendices 1 and 2 respectively). Information provided by the questionnaire, the pre-test results, students' exam results, and their course work were then used to group the research sample into two similar groups (1.6.4.1 below), each group consisting of 24 students. The similarity of the two groups was their experience and knowledge of slide-sound production and their academic results achieved at Technikon Natal.

One grouping was referred to as Group One and the other as Group Two.

### **1.6.3 COURSE CHARACTERISTICS**

In terms of content and objectives, essentially the same course was presented to Group One and Group Two.

The variation between the courses presented to the two groups consisted of andragogical and pedagogical styles of instruction. The characteristics of the two approaches are depicted in Table 1 below and are described in detail in chapter 2.

### **1.6.4 COLLECTION AND ANALYSIS OF DATA**

#### **1.6.4.1 PRE-COURSE EVALUATION OF STUDENTS**

Three sets of information were used to group the students into two similar groups, information gathered from: the questionnaire, the pre-test and academic performance (1.6.4.1.1 to 1.6.4.1.3 below, and Chapter 3, 3.1).

TABLE 1

CHARACTERISTICS OF THE INSTRUCTIONAL MODELS FOR GROUPS  
ONE AND TWO

	<u>Group One</u> ANDRAGOGICAL	<u>Group Two</u> PEDAGOGICAL
ETHOS	Informal Sharing	Formal Reserved
DECISION MAKING	Group orientated	Instructor orientated
COMMUNI- CATION	Relatively Free Multi-directional	Restricted One way
MOTIVATION	Intrinsic	Extrinsic
PRESENTATION STYLE	Participative	Authoritarian
APPROACH TO LEARNING	Process orientated	Content orientated
EVALUATION	Mutual	Exclusive to Instructor

(After Knowles, 1988:116)

#### 1.6.4.1.1 PRE-COURSE TEST

A written pre-test (Appendix 1) was completed by all students to establish their knowledge of:

- script writing
- the construction of a slide-sound training programme

- parts and operation of a 35mm single lens reflex camera
- the principles of photography.

#### **1.6.4.1.2 EXPERIENCE OF SLIDE AND SOUND PRODUCTION**

Before the course started, the students were requested to complete a questionnaire (Appendix 2) which assessed their knowledge and experience of:

- photography
- script writing
- production of an audio-visual training programme.

#### **1.6.4.1.3 ACADEMIC PERFORMANCE**

Technikon Natal records of the students' academic achievements were assessed (Chapter 3, 3.1.1).

#### **1.6.4.2 POST-COURSE EVALUATION OF STUDENTS**

Post-course evaluation assessed two post-tests and the students' practical assignment.

#### **1.6.4.2.1 POST-TEST ONE**

At the end of the course the students wrote a post-test (Appendix 3), with questions similar to the pre-test, in order to measure their acquisition of knowledge from the course.

#### **1.6.4.2.2 POST-TEST TWO**

After completion of the practical phase of the course students came together in their groups to present their programmes for evaluation and to complete the second post-test, which was designed to evaluate their retention of knowledge and their further learning (Appendix 4).

#### **1.6.4.2.3 EVALUATION OF THE PRACTICAL ASSIGNMENT**

At the evaluation sessions the slide-sound programme produced by each trainee was evaluated by using a check list (Appendix 5). A lecturer from the Department of Human Resources Management assisted the course presenter to evaluate the slide-sound programmes produced by students.

### **1.6.4.3 EVALUATION OF THE COURSE ETHOS AND THE INSTRUCTIONAL STYLE**

#### **1.6.4.3.1 POST-COURSE QUESTIONNAIRE**

At the end of the course, after writing post-test 1, the students completed a questionnaire (Appendix 6) in order for the instructor to establish their perceptions of the course ethos and his style of presentation.

#### **1.6.4.3.2 POST-COURSE/ASSIGNMENT OPINION SURVEY**

An opinion survey (Appendix 7) was conducted at the end of the evaluation session mentioned in 1.6.4.2.3, in order to evaluate the students' overall perceptions of the course and the practical phase.

### **1.6.5 ANALYSIS OF RESEARCH DATA**

#### **1.6.5.1 KNOWLEDGE ACQUISITION AND PRACTICAL WORK**

Results of the pre-test were compared with those of the two post-tests in order to establish how much knowledge of script writing, photography and slide-sound programme production was acquired during the course and its practical phase. The knowledge acquired, as reflected

in the test results, was compared for Groups One and Two in order to establish whether a significant difference in learning had occurred between the two groups.

The marks which students obtained for the slide-sound programmes were also compared, to establish whether there was a meaningful difference between the qualities of programmes produced by Groups One and Two.

#### **1.6.5.2 STYLE AND ETHOS**

The course instructor's presentational styles and the ethos of each course as perceived by the relevant group, were compared in order to establish differences.

### **1.7 LIMITATIONS OF THE RESEARCH**

The degree to which the course presenter was able to utilize an andragogical approach was limited by the facts that:

- the students were part of a formal course outside this research project, and
- the marks allocated for the tests and the practical project contributed to their formal year mark for 1993. Course objectives and content were thus to

a large extent predetermined and imposed on the students. However, the delivery of the course differed for each group. (This aspect is addressed more fully in Chapter 3, which deals with the course content and method.)

## 1.8 CONCLUSION

Conclusions and recommendations were drawn from an analysis of the findings and are set out in Chapter 6.

## CHAPTER 2

### 2.0 LITERATURE SURVEY ON THE PEDAGOGICAL AND ANDRAGOGICAL MODELS OF INSTRUCTION

#### 2.1 INTRODUCTION

In this chapter the terms "pedagogy" and "andragogy" will be explored, as will andragogical and pedagogical models of instruction. Conclusions will be drawn regarding the relevance of each model to instruction and learning in a tertiary-level teaching institution. It will be argued that an andragogical model of instruction is not only suitable to but preferable for students in tertiary educational institutions.

#### 2.2 TERMINOLOGY

##### 2.2.1 PEDAGOGY

According to Knowles the term "pedagogy" and the body of theory relating to the education of children evolved within the monastic schools of Europe. The term

"pedagogy" was derived

... from the Greek words *paid* (meaning "child") and *agogus* (meaning "leading"). So "pedagogy" means, literally, the art and science of teaching children.

(Knowles, 1980:40)

Viljoen and Pienaar agree that the term was derived from those Greek words and that the words "child" and "leading" referred to children's being led to school by their slaves. They thus translate the term "pedagogy" as "the leading of a child" (Viljoen and Pienaar, 1971:17). Pedagogy implies that learners are passive with the instructor being fully responsible for all teaching and learning decisions (Knowles, 1988:52).

#### 2.2.2 ANDRAGOGY

The term "andragogy" was first coined in 1833 by a German teacher named Alexander Kapp (Knowles, 1988:49) but, as it did not gain popularity, it vanished. It resurfaced in Europe during 1921 and was then used extensively in France, Holland and Yugoslavia during the 1960s (Davenport, 1987:17).

According to Viljoen and Pienaar (1971:175), the term

"andragogy" is derived from the Greek *aner* meaning "man" and *agogein* meaning "to accompany". It thus means "to accompany an adult". In contrast to learner passivity in the pedagogical situation, learners in an andragogical situation are encouraged by the instructor to play an active role in their own learning and to become self-directing (Knowles, 1988:53).

Warren (1989:211) maintains that the concept of life-long and adult education was initiated by a Danish theologian and philosopher called Grundtvig (1783-1872) and that Lindeman, who was influenced by Grundtvig's ideas on adult education in Denmark, introduced the concept to North America. Knowles was in turn influenced by Lindeman and regarded him as the prophet of modern adult education theory. Referring to Grundtvig, Warren (1989:222) says:

His influence ... has reached almost every adult educator, primarily through Lindeman's mediation of ideas, secondarily through the model of Danish folkhighschools (sic).

Although various philosophers and educationists in Europe and North America have used the term "andragogy" when referring to adult education it was probably Knowles who popularised the term and defined it as "the art and science of helping adults learn" (Warren, 1989:212).

Davenport feels that although andragogy has been ill defined he accepts that through good public relations skills Knowles has made the term "...a household word in adult education circles" (1987:17). In Webster's Third New International Dictionary (1986) the term is defined as "The art and science of teaching adults". Knowles's definition introduces the concept of **helping**, which is akin to facilitation and is defined below.

Knowles set out to develop a theory of adult learning based on humanistic assumptions (Merriam, 1993:106) and taking into account the apparent characteristics and needs of adult learners. It is essentially his model which is outlined and discussed below and, for the purposes of this dissertation, Knowles's definition will be used.

#### **2.2.3 INSTRUCTOR**

The term "instructor" refers to a person who instructs, presents to, or teaches, students in a practically orientated short course.

#### **2.2.4 FACILITATOR**

"Facilitator" refers to a person who guides, motivates,

stimulates new perspectives, and helps learners to learn (Brookfield, 1988:103). Knowles (1988:75) refers to Rogers who maintains that an essential element of facilitation is an appropriate relationship with the learner. A facilitator concentrates on establishing a suitable climate for learning and attends to the process of learning rather than to the content of what is being learnt.

#### **2.2.5 STUDENTS**

This term refers generically to persons studying in a school or post-school educational institution.

### **2.3 A REVIEW OF THE PEDAGOGICAL APPROACH**

The pedagogical approach implies that the learner must be guided (and, if necessary, compelled) in a particular direction.

Compulsion is therefore pedagogically justified. Who else but the educator must finally decide on the choices the child makes and the direction he follows? In the case of obstinacy the authority of the educator becomes compulsion.

(Viljoen and Pienaar, 1971:102)

A pedagogical model of instruction is authoritarian and deductive, with power being instructor-orientated. According to Newstrom and Lengnick-Hall (1991:44) and Knowles (1985:8), a traditional and extreme pedagogical model is characterised by passive learners, who lack initiative and who are extrinsically motivated. They prefer to be in a dependent relationship with the instructor and learning tends to be subject centred. Non-reflective learning, which is characterised by memorisation (Jarvis, 1987:262), would be prevalent in a pedagogical learning situation. According to Knowles (1988:62) pedagogy is like an ideology in that it requires conformity and loyalty of its adherents. Long (1990:67) supports this standpoint and, in referring to the positional power of the teacher, argues that as long as teaching and training is dominated by this form of power it will be very difficult to implement self-directed learning.

According to Steyn et al (1992:159-160) the salient features of a pedagogical situation are that: students accept no more than co-responsibility for their own decisions; students accept aid; students assimilate knowledge, skills and attitudes; pedagogues have clear objectives; pedagogues transmit content to predetermined standards; and a relationship of respect and trust

develops between instructor and student. The ideal attitude of children towards adults is subservience and dependence; children inevitably develop independence and they consequently need to move towards self-education (Steyn et al, 1992: 173-176). Arguments in support of selected aspects of a pedagogical approach will be explored in parts 2.4 and 2.5 below.

The main characteristics of the pedagogical model, as outlined by Knowles, are depicted in Table 1, (p. 11).

## **2.4 A CRITICAL REVIEW OF THE ANDROGOGICAL MODEL OF INSTRUCTION**

According to Pratt (1988:160) Knowles explains andragogy as a set of assumptions about adult learners, and makes a number of recommendations relating to the education of adults. The andragogical model of education as advocated by Knowles is based on six assumptions. Each of Knowles's assumptions is briefly outlined below and critically examined:

### **2.4.1 THE NEED FOR LEARNING**

According to Knowles adults need to know why they should

learn something, before they invest time and energy in the process. If adult learners discover for themselves why they need to know something new, they become intrinsically motivated to learn it.

... the learners discover for themselves the gaps between where they are now and where they want to be.

(Knowles, 1988:56)

One of the roles of an instructor should be to get learners involved in an awareness-creating exercise which will reveal to them their need to know, thus motivating them to learn.

#### **2.4.2 THE SELF-DIRECTING NATURE OF ADULTS**

According to Knowles adults have a strong need to be self-directing. People who are emotionally mature take responsibility for their own lives and the decisions they make. Knowles, in Craig (1987:170), says adults "... need to be seen and treated by others as being capable of taking responsibility for [themselves]." It must be assumed that Knowles sees an existential difference between adults and children (Pratt, 1988:160); he contends that adults are conventionally more self-directing than young people and want to behave

responsibly and autonomously. According to Joblin (1988:117), however, although there are three arguments in support of the notion that adults are self-directing, there are also counter-arguments to those three contentions. The case is argued hereunder.

#### 2.4.2.1 INDEPENDENCE OF LEARNERS

Humanist psychologists such as Erikson, Maslow and Rogers claim that, while it can be shown that babies are utterly dependent on adults, they develop, grow and mature as individuals and there is a gradual transition to independence.

As a counter-argument Joblin points out that every individual can be seen to be self-directing, in that everyone perceives and organises knowledge in a unique way. Moreover, not all adults are self-directing; in cases where the content to be learned is new, an adult often wants direction and, where adults are under pressures of work and family commitments, they do not always have time for self-direction.

Knowles concedes, in Craig (1987:176), that in a situation where content is alien to the learner a pedagogical approach would be realistic. Deljoy and

Mills (1989:40) point out that many adults initially feel threatened and afraid when learning to operate computers. Feuer and Geber (1988:33) refer to comments by Brookfield that the readiness of adults to be self-directing in the learning situation is consistently overestimated. The weight of evidence suggests that independence is relative to the situation and that, although independence is generally a concomitant of maturity, it is by no means always typical of adults.

#### 2.4.2.2 SOCIOLOGICAL FACTORS

On cultural grounds one can show that in most societies direction is given by adults; the notion of adults' being self-directing is especially typical of, and valued, in democratic societies. Joblin (1988:122) also refers us to Paolo Freire's observation that even in autocratic societies adults strive towards freedom and self-direction.

A contrasting observation is that in some societies, subjugated by autocratic governments, people tend to accept authority and often refrain from self-direction, as was the case in Nazi Germany and Stalinist Russia and as is still occurring in many of the world's dictatorships. Under such circumstances individuals may

even carry out inhuman acts, with the excuse that they had no choice but to obey. In authoritarian societies attempts at self-direction are viewed by authorities as a threat, and individuals are discouraged from becoming independent. In such circumstances, to be adult means "to be dependent, to honour and obey those in control and do as ... directed" (Joblin, 1988:121).

In short, while self-directed learning will occur within the humanist ideal of a self-actualised person (Oddi, 1987:27), it is not typical of all cultures or individuals. Brookfield (1995:\*), Pratt (1988:163) and Oddi (1987:27) point out that learner variables such as personality, motivation, experience and self-confidence all play an important role in determining a propensity for self-direction and that those variables can be transient. The need for instructors to be flexible in instructional style is important and will be addressed in section 2.5 below.

#### **2.4.2.3 RESEARCH FINDINGS**

Joblin (1988:119) points out that some research,

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\* [www Hypertext Document](http://www.hypertext.com/doc/). See references for the HTTP Internet address.

especially that by Tough, indicates that adults take the initiative to become involved in learning and that the majority are self-directing. Knowles (1988:57) warns, from his experience, that where adults are not able to initiate their own involvement in learning they tend to lose interest and drop out. Joblin refers to Brookfield, however, who warns that much of the research which supports the notion of self-direction in adults was conducted on middle-class, advantaged adults and cannot be taken as being representative of all adults. Brookfield (1988:103) refers to self-direction as the "most enduring article of faith" among educators of adults. Joblin also refers to research conducted by Brookfield and Thiel which shows that many successful adult learners want to be directed in an educational situation.

... when it comes to education they want direction to be given to them and not to have to give it to themselves.

(Joblin, 1988:122)

#### 2.4.2.4 CONCLUDING COMMENTS ON SELF-DIRECTION

It can be argued from the standpoints of economics and safety, that the training of complex psychomotor skills,

such as plant operation, would often necessitate an instructor-directed approach. Because most adults have experienced pedagogical schooling systems during childhood, especially in authoritarian societies, they tend to give up their authority when placed in a learning situation. Learners have often been encouraged to become dependent and, when faced with the challenges of self-directed learning, they suffer from "culture shock" (Knowles 1988:133). This should, however, not preclude the instructor from introducing learners to an andragogical style progressively, so that they can become more independent and self-directed in their learning and able to cope with an ever-changing world. Brookfield (1988:103), Hammond and Collins (1991:211), Joblin (1988:123), Long (1990:149) and Rogers (1983:26) all recommend self-directed learning, with support available where it is needed.

Adults cannot be viewed homogeneously as self-directed learners; they need to be seen in the contexts of their home and school experiences, as well as their work and current life situations. In South Africa the multi-cultural nature of the population and the demise of apartheid has increased the heterogeneity of groups of learners, which calls for a flexible approach to the teaching/learning experience. In other words, a

democratic, participative learning environment should be promoted, where learners are encouraged to take charge of their own learning, and the role of the instructor becomes that of a facilitator of learning.

#### 2.4.3 UTILITARIAN STANCE

According to Knowles adults feel motivated and ready to learn when the content of what is to be learnt relates to their life situation. They view the content from a utilitarian stance. For example when a woman marries and plans a family she becomes keen to learn about infant care and nutrition.

The critical implication of this assumption is the importance of timing learning experiences to coincide with ... developmental tasks.

(Knowles, 1988:59)

Knowles refers to a number of critical situations which occur in adult life, such as marriage, divorce or a new job, and he indicates how these can help to initiate reappraisal and learning. Knowles suggests that, where critical periods or tasks are lacking, readiness to learn can be induced by, for example, providing models of performance which should be striven for in a work situation. Provision of such models would help to make

learners aware of the need for change and learning.

A counter-argument would be that many adults learn because they are interested in, enjoy learning about, are fascinated by, or are challenged by, a new experience and not for any motive related to utility (Feuer and Geber 1988:32). Adults and children also invest great amounts of time and energy in learning and completing courses where the content is mandatory because of formalized external control and which has no immediate relevance to their life situations. Such cases occur when learning is viewed (sometimes naively) as a means to a perceived end such as a good job and salary after graduation from a programme.

#### 2.4.4 PROBLEM CENTRED ORIENTATION TO LEARNING

Adults are task- or problem-centred in their orientation to learning, in contrast with children, who become conditioned at school to a subject-centred orientation to learning (Craig, 1987:172). Knowles (1988:59) gives various examples of how what is to be learned can link with real life situations in motivating an adult to learn. It is evident that instructors should try to structure learning exercises around life-related problems which need to be solved by the adult learner.

Podeschi (1987:15) even notes that research by Piaget and Dewey indicates that children too, can become independent and problem-centred learners. Feuer and Geber point out that Knowles's premise has likewise changed, to accept that children also have a need for problem-centred learning (1988:35). In South Africa, the University of Stellenbosch has since 1978 been involved in a problem-centred mathematics teaching project in the Junior Primary phase of schooling. The project has involved selected schools in the four pre-1994 provinces of South Africa, and results so far are encouraging; the KOD-ENWOUS-WISKUNDEPROJEK report (ca. 1993) indicates that the majority of teachers have enthusiastically supported the project and find it to be a more meaningful method of teaching. According to the report benefits to pupils are that

Die leerlinge se getalbegrip, rekenvaardigheid, waaghouding en selfbeeld is oor die algemeen besonder goed ontwikkel.\*

(ca. 1993:5)

Long (1990:51) refers to fifteen-year-olds, too, who enjoyed and benefited from a problem-centred approach to

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\* The learners' comprehensions of numbers, computation skills, willingness to take risks and self-concepts are generally very well developed.

learning mathematics. The above arguments suggest that from an early age learners can enjoy and benefit from a problem-centred approach to learning. It is particularly necessary for instructors of adults who are immersed in a world of change and challenges, to foster innovative, problem-centred approaches to learning so that students at a tertiary level will be able to cope effectively with their vocations and personal lives (NATED, 1994:4-6). Boyer, in Long, (1990:25) is quoted as saying that undergraduate colleges have succeeded if their students are able to "...move with success from one intellectual challenge to another."

#### 2.4.5 INTRINSIC MOTIVATION

According to Knowles (1985:9 & 12) youths and adults are motivated both intrinsically and extrinsically; however, adults are more persistently motivated by intrinsic factors such as self-esteem, sense of responsibility, and quality of life. Adult learning programmes which apply andragogical principles and lead to personal growth and an improved life situation should thus be motivating for adults. Nonetheless, Brookfield (1988:104) points out that adults are often extrinsically motivated to learn, by anxiety-producing events such as loss of a job, death or divorce. As adults are both intrinsically

and extrinsically motivated, an instructor should attempt to know how his/her learners are motivated, so that instructional style can be adapted to the needs of individual learners.

#### 2.4.6 THE VALUE OF EXPERIENCE

The experiences of adults are greater in number and quality than those of youth, and adults generally value and rely on their biographies in a learning situation.

This difference in quantity and quality of experience has several consequences for adult education.

(Knowles, 1988:57)

Instructors of adults should make use of experiential training techniques which allow learners to tap into their own and other learners' experiences. It seems that of the six principles suggested by Knowles it is only experience which is relatively specific to adults. The experiences of adults are generally quantitatively and qualitatively greater than those of young people. Brookfield feels that:

It's the strongest and most empirically valid of Knowles' assumptions about the adult learner.

(1988:35)

There are, however, adults who live mundane lives and repeat similar experiences many times over without learning (Long 1990:31), owing to a lack of reflection; their growth is, thus, stifled. On the other hand, it can be argued that some young people have broad, rich experiences from early on in life and are able to draw on these when learning.

#### 2.4.7 GENERAL CRITICISM OF THE ANDRAGOGICAL APPROACH

Newstrom and Lengnick-Hall (1991:45) suggest that there has been a lack of criticism of the andragogical model because it describes the adult learner in an idealistic way which appeals to adults. Adults like to think of themselves as experienced, self-directing, and self-motivated. They also point out the difficulty of drawing an objective line between child and adult and argue that the degree to which one is adult or child is situational. However, and notwithstanding those claims, it seems reasonable to propose that a contingency approach, as suggested in 2.5 below, should be followed, rather than arguing within rigid paradigms.

According to Brookfield we should beware of a learning situation's being determined solely by what the learners

want, as that would be a case of the facilitator's abdicating responsibility.

Educators would be foolish to deny that they possess their own beliefs or to pretend that they are blank pages ...

(Brookfield, 1988:105)

Brookfield points out, furthermore, that learning is not always a joyous, exhilarating experience but that it can be initiated by calamitous events (2.4.5 ).

In conclusion, although adults and children are generally different there are also similarities and exceptions to the rule. There cannot be one absolute instructional model for adults and another for children. Individual learners need to be assessed and related to in a situational way (Long, 1990:48) so that the teaching/learning style can be made appropriate to their personal needs.

## 2.5 A SYNTHESIS OF THE MODELS

### 2.5.1 SYNTHESIS OF THE ANDRAGOGICAL AND PEDAGOGICAL MODELS OF INSTRUCTION

Initially Knowles viewed pedagogy and andragogy as antithetical models and according to Pratt (1988:160) some authors go to the extreme of suggesting that as adults and youth are so different pedagogy and andragogy cannot even be viewed as extremes of the same continuum. However, after valid criticism and re-evaluation of his initial premise, Knowles now agrees (1988:62) that his model is a situational one and that it should be adapted to the instructional/learning situation and the types of learners with whom one is working. Knowles agrees that:

... certain cases call for an andragogical approach, while others demand pedagogical methods

(Feuer & Geber, 1988:36)

Davenport refers to statements by Knowles where the need for a situational approach is recognised.

So I am not saying that pedagogy is for children and andragogy for adults, ... And I am certainly not saying that pedagogy is bad and andragogy is good; each is appropriate given the relevant assumptions

(Davenport, 1987:19)

Knowles (1988:62) adds that in situations where the learning content is new or where exact psychomotor skills need to be learned, a pedagogical approach would be appropriate.

So my stance now is not either-or, but both - as appropriate to the situation.

(Craig, 1987:176)

Pratt points out that where a pedagogical approach is employed there can still be an informal process of diagnosing and contracting on what should be done.

... there is nothing inherently demeaning or destructive in pedagogical, temporarily dependent, relationships.

(Pratt, 1988:168)

It is also argued that children generally prefer to learn within the andragogical model. Knowles feels that we should therefore persuade learners to become self-directing and independent as they mature in the learning process. An added advantage of developing self-directed learners is that it would go "a long way towards alleviating the problems of human obsolescence" (Long 1990:22). Furthermore Burstyn also refers to the life-long developmental process and the needs of learners to

cope with continual change (1986:180). Owing to a lack of clear distinction between the characteristics of adult and child learners and, given the great diversity among adult learners, Knowles accepts and promotes the concept of a situational approach.

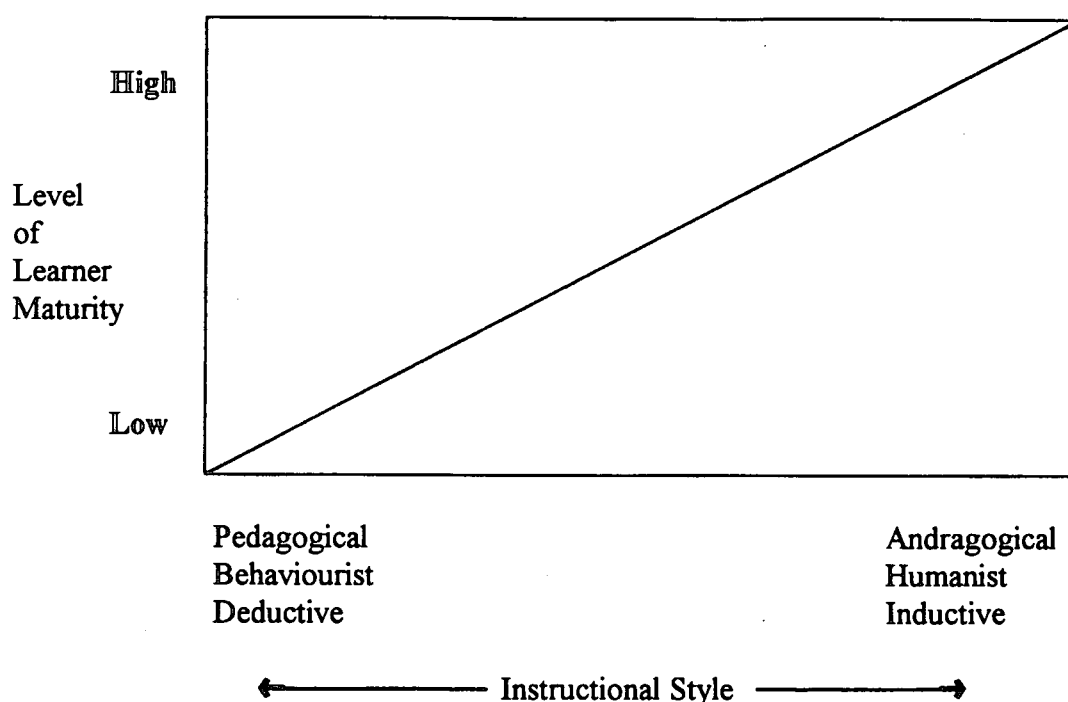
#### 2.5.2 SITUATIONAL APPROACH

Because of the diversity among learners a situational approach to instruction (Fig. 1, p.40), which is related to the degree of independence and level of knowledge of the learner, should be applied. This flexible approach would accommodate the needs of the learner in a realistic way (Pratt 1988) and would allow for movement towards the andragogical ideal advocated by Knowles. Long (1990:51) and Pratt (1988:167) support the argument that pedagogy is sometimes appropriate but that as the individual develops there should be a shift in paradigm towards an andragogical model.

Pratt (1988) suggests that there are three variables - situation, learner and teacher - which need to be taken into account when deciding on the degree of collaboration and support which should prevail in a teaching/learning situation. Factors such as the level

of competence, need for dependence, level of commitment and level of confidence each play a role in determining the appropriate approach.

FIG. 1 A POSITED PEDAGOGICAL / ANDRAGOGICAL CONTINUUM



(After Pratt, 1988)

Pratt provides a situational model which depicts andragogical and pedagogical relationships and shows varying degrees of support, direction and dependency which should relate to a learner's situation. Long also provides a situational model (1990:96), based on Hersey and Blanchard, which depicts various teaching strategies related to characteristics of the individual learner. In supporting a contingency approach Long argues that with

children the ultimate goal is to "... move the locus of control away from adults and onto the child" (1990:83). Pratt, however cautions that cognizance must be taken of dependency:

... adult educators ought to acknowledge states of dependency as potentially legitimate ...

(Pratt, 1988:170)

Knowles (1988:117) provides seven procedural guidelines for the implementation of an andragogical model which concentrates on process rather than content. The process model emphasises the need for provision of resources and procedures which will facilitate a learner's acquisition of skills and information.

The arguments considered above suggest that, given the complex diversity of learners, all with their own biographies and learning styles, instructors should adopt a flexible training model and try to adapt it to learners' needs. By using a variety of instructional approaches and methods educators can go a long way towards catering for differences. Some of the methods which could be used are: individual learning "contracts", self-paced instruction, co-operative learning groups, case studies, and role-playing (Newstrom

and Lengnick-Hall, 1991:48). Newstrom et al provide ten dimensions which can be used for assessing students and they provide a strategy for dealing with the variety of needs which individual learners would have.

A situational approach to instruction implies that as the learner becomes more self-directing there should be less formal "classroom" contact and more learning alone or in self-directed groups. A great challenge for instructors is to understand their students as well as the particular points reached in students' stages of development and their needs for support in any particular learning context. As learners mature and move towards independence the role of instructor can move to that of facilitator. Brookfield (1988:100) outlines six principles of practice (Appendix 8) which an educator of adults can use in order to facilitate learning.

## 2.6 CONCLUSION

Although the field of adult education is very broad and consists of a bewildering mosaic of theories and methodologies it is worthwhile reflecting on the varying roles which instructors of adults can adopt.

The variety of adult education typologies can stimulate us

... to see new relationships and [challenge] us to think about the nature of our individual roles as agents of change in a very broad field.

(Rachal, 1988:23)

In line with the andragogical model of instruction and Brookfield's six principles referred to above, we should encourage learners to question what is learnt: " ... reflective learning is something that adult educators should encourage ..." (Jarvis, 1987:265). The concept of reflective learning is supported by Knowles (1988:87) and also by Long (1990:83), who points to John Dewey's reflective problem-solving process in suggesting that self-observation occurs first, then goal setting takes place, self-instruction follows, and finally self-evaluation occurs. A cyclical, recurring concept of learning/problem-solving is also supported by Kolb (1984:32), Joblin (1988:123) and, Hammond and Collins (1991:163-179).

South Africa's nascent opening up and democratisation of the education and training process for all cultural groups urgently calls for a shift away from the long-established habit of dependence-inducing pedagogy

towards a process-orientated approach (Gardner 1995:6).

In the light of the above the words of Manuel Ramirez are pertinent:

... we must encourage the adoption of a new philosophy, that of cultural democracy. The right of each individual to be educated in his own learning style must be explicitly acknowledged.

(Wurzel, 1988:200)

The need for careful selection and the critical adoption of andragogical and pedagogical principles (Long 1990:48) could lead to a more meaningful learner-orientated system of education and training, one which would take into account the unique biographies and needs of learners and facilitate their progressive growth towards independence, life-long learning and ultimately their ability to cope in a meaningful way with inexorable social change.

## CHAPTER 3

### 3.0 THE RESEARCH METHOD

### 3.1 PRE-COURSE GROUPING OF STUDENTS

#### 3.1.1 ACADEMIC RESULTS

The research sample of students was split into two similar groups (3.2) by considering their 1992 final marks for Training Management 1 at Technikon Natal, expressed as percentages, together with the average percentages of two tests for Training Management 2 which were completed during the first semester of 1993.

The 1992 final mark was made up of three tests, three assignments and an end-of-year examination. For the purposes of this research, the 1992 tests were given a weighting of 70 and the 1992 assignments a weighting of 30, and together they constitute 40% of the 1992 final mark.

Weighting of the 1992 mark against the 1993 tests was discussed with the Head of Department: Human Resources Management and with the lecturer in charge of Training

Management, and it was agreed that the 1992 final mark should be given a weighting of 4 whereas the average of the two tests completed during 1993 would be given a weighting of 1. That is to say that the 1992 final mark multiplied by four, plus the average test score for 1993, and the sum divided by 5, provided the academic results which were used for grouping (3.2).

### **3.1.2 PRE-TEST**

A written pre-test, (Appendix 1), was completed by all students to establish their elementary knowledge of the parts and operation of: a 35mm single lens reflex camera, principles of photography, script writing, and the construction of a slide-sound training programme. The pre-test results were used in conjunction with academic results (3.1.1) and information from the questionnaire (3.1.3) for the grouping of students (3.2).

### **3.1.3 QUESTIONNAIRE**

Prior to the start of training, the students were requested to complete a questionnaire on their knowledge and experience of the production of slide-sound training programmes (Appendix 2). Information gleaned from the

questionnaire was used in conjunction with the pre-test results and academic results (3.2.1) to arrange the students into two homogeneous groups of twenty-four students each.

### **3.2 JUSTIFICATION OF THE GROUPING**

#### **3.2.1 ACADEMIC RESULTS**

The students' academic results (3.1.1) were used to arrange the students into two groups, each with a similar range of academic ability as reflected by their test and examination results. The two primary groupings were then modified by the results of the pre-test and questionnaire so as to have a similar ability-level for each group.

#### **3.2.2 PRE-TEST**

Pre-test information was also used to modify the two primary groups so that they had similar ranges in terms of knowledge of photography and slide-sound training programme production as indicated by the pre-test. The pre-test scores were low overall, the average score being 13.2% in a range from 0% to 32%. Consequently minimal

alteration to the groups occurred. Where a student was moved from one group to another it was ensured that he or she was replaced by another student with similar results.

### 3.2.3 QUESTIONNAIRE

The students' perceptions of their experiences of audio-visual production, as reflected in the questionnaire (Appendix 2), were used to finalise the groups so that they were also similar in terms of experience in the production of slide-sound training programmes. Of the 58 students who completed the questionnaire, 55 were rated as having little or no experience, 2 as having medium experience and only 1 as having relatively high experience. Consequently minimal rearrangement of the groups needed to be made in respect of experience.

### 3.2.4 GROUPS

Those students who did not complete the pre-test or questionnaire, or who did not have a full set of academic results, or who were relatively atypical in the light of 3.2.1, 3.2.2 and 3.2.3, were formed into a third group and also completed the course but were not considered in this research project.

For practical reasons, such as the availability of a suitable venue for training, the groups were limited to 24 students each. The balance of the students was organised into a third group (see above).

Owing to the size of the training venue, Group One and Group Two were divided into two sub-groups of 12 students each. The sub-groups One (a) and One (b) are nevertheless referred to as Group One, Two (a) and Two (b) as Group Two. Each group attended a two-day training course.

### 3.3 THE ANDRAGOGICAL APPROACH

#### 3.3.1 REALISATION OF AN ANDRAGOGICAL MODEL OF INSTRUCTION

Group One was trained using an andragogical model of instruction as outlined in Chapter 2. The model was applied as thoroughly as was practically possible and according to the research limitations mentioned in Chapter 1. Each of the seven factors outlined in Table 1 on page 11, was dealt with as follows in 3.3.2.

### 3.3.2 FEATURES OF THE ANDRAGOGICAL MODEL

#### 3.3.2.1 COURSE ETHOS

In order to achieve an informal and collaborative style the following characteristics were adopted.

##### 3.3.2.1.1 DRESS

The instructor dressed informally in casual slacks, casual shoes and casual open neck shirt. The instructor's dress was similar to that of the students and expressed an informal, participative ethos which would encourage two-way communication.

##### 3.3.2.1.2 OPENING OF COURSE

The students were welcomed, and encouraged to enjoy the course and to participate as much as possible.

The participants then did an "ice breaker" exercise which involved informal discussion for about twenty minutes, during which pairs of students were asked to elicit from each other general information such as name, school attended, family details, sports, hobbies, interests and

interesting experiences, and what the other would like to get out of the course.

While seated, each student then informally introduced his/her partner to the group, and the instructor introduced himself. Anyone was permitted to ask questions about the person being introduced.

First names were used for all students as well as for the instructor.

It appeared that the participants enjoyed the exercise and some students mentioned that it was interesting to find out more about fellow students with whom they had not previously interacted.

#### 3.3.2.1.3 NAME CARDS

Each participant had a name card placed on his/her table, which displayed the student's first name to the group. On the back of the card, facing each student, the following advice was displayed:

1. This is your course, and the result depends on your contribution.
2. Participate actively in discussions.

3. Be willing to share your experiences with other participants.
4. Keep to the subject matter.
5. Express your thoughts and ideas to others.
6. Avoid private discussions.
7. Be an active listener.
8. Be patient with the other participants.
9. Appreciate others' viewpoints.
10. Enjoy the course.

#### 3.3.2.2 DECISION MAKING PROCESSES

In order to facilitate group orientated decision-making, the following procedures were effected.

Wherever feasible the students were consulted regarding organisational and administrative features of the course, such as: times for breaks; course objectives; standards for successful completion of the course; methods of evaluation; and the time the course should commence on the following day. However aspects like course objectives and standards remained relatively inflexible, as the instructor had to operate within the parameters of the course and the academic requirements of the department. The instructor did, however, after consultation and discussion, gain the participants' acceptance of the objectives and evaluation standards.

The course programme was discussed and the students were invited to suggest additions/deletions and/or changes.

### 3.3.2.3 COMMUNICATION

In order to facilitate two-way and open communication the following procedures were adopted:

#### 3.3.2.3.1 SEATING

Tables and chairs were configured in a "horseshoe" so that participants could see one another and the instructor without hindrance. This form of seating facilitated two-way communication and discussion and was less formal than the configuration used for Group Two.

#### 3.3.2.4 MOTIVATION

Extrinsic motivation was unavoidable as the students knew that their marks would contribute towards the year mark. The instructor attempted to foster intrinsic motivation by allowing two-way and open communication and by reference to real-life applications of the content covered in the course.

#### **3.3.2.5 STYLE OF INSTRUCTIONAL DELIVERY**

In order to facilitate a participative and democratic style of presentation the instructor regularly consulted the group in respect of factual information, application of knowledge or skill, relevance of content and solutions to problems posed by the instructor. The students were told that they could at any time ask questions, make comments, and provide suggestions or answers.

#### **3.3.2.6 LEARNING PROCESS**

Process and problem-solving orientations to learning were promoted in the following ways.

##### **3.3.2.6.1 PROCESS ORIENTATION**

The instructor attended closely to facilitation of the learning process. Whenever problems regarding learning occurred, the instructor and students endeavoured to solve such problems together. A participative climate was, thus, fostered and that encouraged the participants to be involved as much as possible. The instructor considered the needs of the learners and invited regular feedback from the students.

#### 3.3.2.6.2 PROBLEM CENTRED APPROACH TO LEARNING

Participants were encouraged to solve problems and offer answers to questions as often as possible. The instructor did not readily provide information or answers but, rather, furnished situations and problems and asked the students for their answers and opinions.

From the beginning of the course as much discussion as possible was encouraged and participants were frequently invited to suggest objectives, targets, methods of evaluation, solutions to problems, times for breaks and times for deadlines.

#### 3.3.2.7 EVALUATION

As marks allocated for practical work contributed to the year mark, evaluation was made by the instructor and the lecturer from the Department of Human Resources Management. However the group was invited to comment on the criteria for evaluation, and opinions on students' programmes were elicited from the group.

### **3.4 THE PEDAGOGICAL APPROACH**

#### **3.4.1 REALISATION OF A PEDAGOGICAL MODEL OF INSTRUCTION**

Group Two was trained using a pedagogical model of instruction as outlined in Chapter 2. The model was applied as thoroughly as was practically possible. Each of the seven factors outlined in Table 1, page 11, was dealt with as follows.

#### **3.4.2 FEATURES OF THE PEDAGOGICAL MODEL**

##### **3.4.2.1 COURSE ETHOS**

In order to achieve a formal and reserved style the following characteristics were adopted.

##### **3.4.2.1.1 DRESS**

The instructor dressed formally in dark suit, formal shoes, collar and tie which contrasted with the students' dress which was informal. The formal dress of the instructor expressed a formal, authoritarian ethos and augmented the instructor-orientated approach which was applied.

#### **3.4.2.1.2 OPENING OF COURSE**

The participants were formally welcomed by the instructor, but no questions or comments were invited from the students. The instructor bluntly informed the students of the course content and timetable.

#### **3.4.2.1.3 NAME CARDS**

Each participant was given a name card, with a first name and surname, which was pasted onto the desk. No advice (3.3.2.1.3) was supplied.

#### **3.4.2.2 DECISION MAKING PROCESSES**

In order to ensure instructor-orientated decision making, the following procedures were effected.

##### **3.4.2.2.1 CONSULTATION**

The instructor avoided consultation with the participants. Students were given the timetable, the times for breaks, course objectives and standards, and methods of evaluation, in a matter-of-fact way.

### 3.4.2.3 COMMUNICATION

In order to effect uni-directional communication the following procedures were effected.

#### 3.4.2.3.1 SEATING

Tables and chairs were arranged conventionally - that is, in parallel rows facing the front of the room. The instructor placed a table at the front, from where most of the course was presented.

#### 3.4.2.3.2 CONTROL

The instructor controlled communication strictly and did not encourage questioning or comment. The instructor was the sole provider of information.

#### 3.4.2.4 MOTIVATION

The instructor did not try to foster intrinsic motivation. Extrinsic motivation was provided by references to test marks and the evaluation of practical work, both of which would contribute to the year mark.

#### **3.4.2.5 STYLE OF INSTRUCTIONAL DELIVERY**

In order to ensure an authoritarian style of presentation the instructor behaved as follows.

The instructor consulted the group as little as possible and communication was predominantly from instructor to students. Matters regarding the administration of the course, such as objectives, evaluation methods and criteria, and the course content, were imposed on participants.

#### **3.4.2.6 LEARNING PROCESS**

In order to ensure a content orientation to learning the instructor adopted the following approach.

##### **3.4.2.6.1 CONTENT ORIENTATION**

The instructor adhered strictly to the course timetable, the times given for breaks, and the content as per the course programme and handouts.

The instructor provided information and answers and did not provide situations where the students were encouraged

to solve problems. The flow of information was from the instructor to the students.

#### 3.4.2.7 EVALUATION

Evaluation was exercised exclusively by the instructor and by the lecturer from the Department of Human Resource Management.

### 3.5 EVALUATION OF STUDENTS' LEARNING AND THE PRACTICAL ASSIGNMENT

#### 3.5.1 POST-TEST ONE

At the end of the course the students wrote a test (Appendix 3) on the areas covered in the course, for twenty-five marks.

The average score, median and the range of marks were calculated for each group and compared. The marks for the two groups were compared with the marks obtained in the pre-test so as to evaluate the impact of the course on learning.

### 3.5.2 POST-TEST TWO

At the end of the final meeting with students, when their practical assignment was viewed and evaluated, they completed post-test two (Appendix 4) which was similar to post-test one and also counted twenty-five marks.

The average score, median and the range of marks were calculated for each group and compared. The marks were also compared with those for post-test one.

### 3.5.3 SLIDE-SOUND PROGRAMME EVALUATION

At the final meeting the instructor and the lecturer from the Department of Human Resources Management viewed each slide-sound programme and awarded marks to each student, using a check list (Appendix 5).

The average, median and the range of marks were calculated for each group and compared between the two groups so as to evaluate general differences.

### 3.6 EVALUATION OF THE COURSE ETHOS AND THE INSTRUCTIONAL STYLE

#### 3.6.1 POST-COURSE QUESTIONNAIRE

At the end of the course the students completed a questionnaire (Appendix 6) in order to elicit their perceptions of the course ethos and the course instructor's style of presentation. The students were requested to indicate to what extent they agreed or disagreed with each of twenty statements regarding the course.

A six-point, general rating scale (McBeath 1981:12) was used in the questionnaire. In order to avoid the inclination of respondents towards centricity (Payne 1992:200) it was decided to use a six-point scale. The absence of a middle option forced respondents into supporting either an andragogical or a pedagogical approach. The researcher, however interpreted a rating of 3 or 4 as being neutral.

To avoid the assumption that statements in support of an andragogical approach would always be scored towards the right hand side of the scale the questions were phrased in such a way that some pro-andragogical statements would

be scored to the left and others to the right (as per Oppenheim 1992:232).

### 3.6.2 FINAL (POST-ASSIGNMENT) OPINION SURVEY

At the end of the final meeting with the students, which was for the purpose of evaluating their assignments, they were requested to complete another opinion survey (Appendix 7) which consisted of ten statements. The design of the survey was similar to that of 3.6.1. for the purpose of corroborating or otherwise the immediate post-course survey, and to gauge students' feelings about the practical assignment.

## CHAPTER 4

### 4.0 ANALYSIS OF STUDENTS' TEST RESULTS AND THEIR PERFORMANCES IN THE PRACTICAL ASSIGNMENT

#### 4.1 PRE-TEST

The pre-test, which was completed before courses commenced, was used to assess each student's knowledge of script writing, photography and slide-sound programme production.

The assessments were used in grouping the students and, after the groups had been constituted, the average test scores were found to be 13.7% for Group One and 14.3% for Group Two. These very similar results indicate that the two groups were, on average, similar in knowledge of the areas mentioned above. The scores for Group One ranged from 0% to 32 % and for Group Two from 0% to 28%, indicating that, for both groups, the students' knowledge of the areas mentioned was relatively poor prior to the course. However, further analysis of the pre-test scores showed that the median scores for Group One and Group Two were 10% and 16% respectively which suggests

that students around the mid-range of Group Two were stronger than those of Group One.

#### 4.2 POST-TEST ONE

Post-test one was completed by students at the end of the course. The purpose of the test was to assess their newly gained knowledge of audio-visual programme production.

The average and median scores respectively for Group One were 81.7% and 84%, and for Group Two 79.2% and 82%. The scores for Group One ranged from 36% to 100% and for Group Two from 52% to 100%.

Overall, Group One performed slightly better than Group Two, considering their respective averages and medians for the pre-test, but it could not be concluded that the instructional style had had a significant impact on learning.

#### 4.3 POST-TEST TWO

Post-test two was completed approximately one month after the course ended and after the students had worked on and completed their practical assignments. The test was written immediately after their assignments had been evaluated.

In this test, the average score for Group One was 52.7% and for Group Two 45.5%, the difference being 7.2 percentage points.

The range of scores for Group One were between 32% and 88% with a median score of 52%, and for Group Two they ranged from 8% to 80% with a median score of 46%.

Group One scored better overall, especially in the middle and upper ranges and it could be assumed that the andragogical instructional style had had an enhancing effect on skills- and knowledge-retention, as well as on longer-term learning.

Minimum and maximum scores in Group One were both markedly higher than those in Group Two.

#### 4.4 SLIDE-SOUND PROGRAMMES

Group One had an average score of 77.2% for the practical assignment whereas Group Two had an average of 76.0%. The scores for Group One ranged from 45% to 100% and for Group Two from 40% to 100%. The median scores for Groups One and Two were 80% and 75% respectively which, as in 4.3 above, indicates that the middle range of scores for Group One were stronger than those for Group Two.

The differences between the two groups were not as significant as was the case in post-test two and it seems that the instructional styles did not have as marked effect on students' performances in the practical exercise.

It should be noted that the assignment was done by students in their own time, with minimal supervision, and it is likely that students assisted one another and interacted between groups, thus levelling any differences in impact between the two instructional styles.

#### 4.5 CONCLUSION

In conclusion it can be noted that, whereas there were no significant differences between the average group

scores for post-test one and the practical assignment, there was a significant difference in post-test two, where the andragogical model did appear to have had a positive effect on Group One.

It is also significant that in the pre-test the median score for Group One was 6% lower than Group Two but that in the three subsequent assessments there was a reversal, where the median scores for Group One were higher, by 2%, 6% and 5% respectively, than those for Group Two indicating that the andragogical model had a positive effect on the middle group of scores.

## CHAPTER 5

### 5.0 ANALYSIS OF STUDENT'S RESPONSES TO THE TWO QUESTIONNAIRES REGARDING THEIR PERCEPTIONS OF THE COURSE

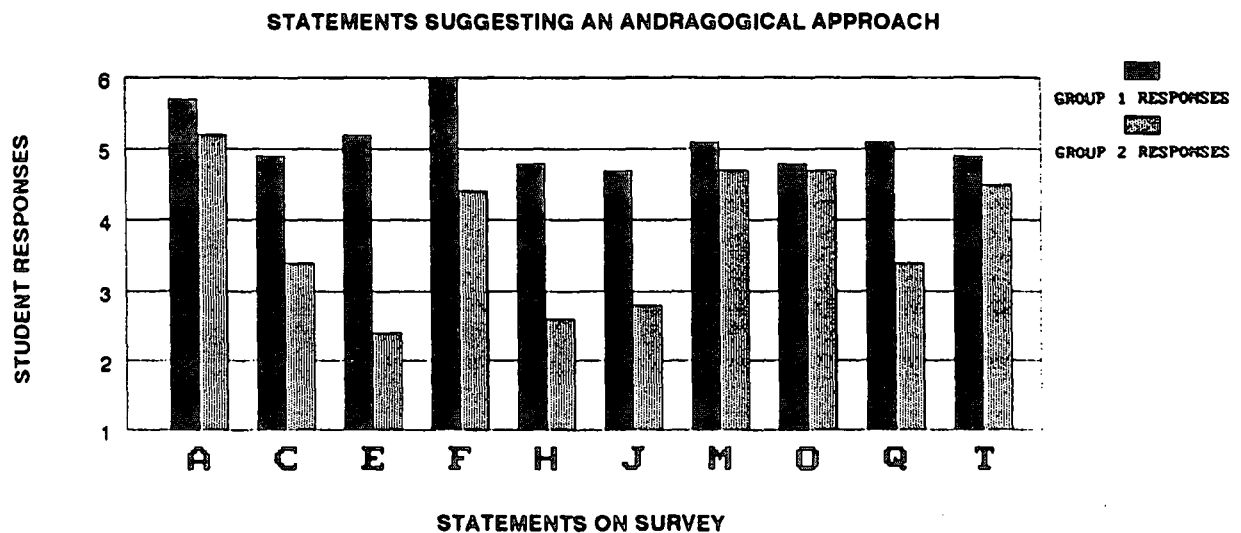
#### 5.1 QUESTIONNAIRE ONE (Appendix 6)

##### 5.1.1 STATEMENTS SUGGESTING THAT AN ANDRAGOGICAL ETHOS AND INSTRUCTIONAL STYLE WERE USED

Figure 2 below plots for each group the average responses to nine statements suggesting that the course was andragogical in nature. Group One attended the course which was andragogical in style and Group Two the course which was pedagogical in style. High scores indicate strong agreement by students that the course was andragogical in nature.

The tenth statement, T, was a general one and referred to the degree to which students enjoyed the course. It was scored fairly high by both groups, Group One being slightly higher (4.9) than Group Two (4.5). See also 5.2.2.2.4 below.

Fig. 2 RESPONSES TO QUESTIONNAIRE 1 (APPENDIX 6)



A score of 1 = Strong disagreement with the statement

A score of 6 = Strong agreement with the statement

#### 5.1.1.1 OVERALL PERCEPTIONS OF THE TWO GROUPS:

Group One showed overall agreement that the course was andragogical in nature, their scores for all the statements being higher than those of Group Two: five of the nine statements were scored between five and six, and the other four statements were scored close to five.

Group Two fluctuated between agreement and disagreement. Only one statement scored between five and six, three scored between four and five, two were in the neutral zone, and three scored between two and three, all of which indicates disagreement with the statements.

Group Two may have felt somewhat indifferent towards the pedagogical style; it may have been perceived as being usual in the light of their probable previous formal learning experiences (see p. 1). The students in Group Two may also have been reluctant to criticise the course, for reasons which will be discussed in Chapter 6.

**5.1.1.2 ANALYSIS OF SCORES FOR EACH STATEMENT BY THE TWO GROUPS** (Average scores for groups are indicated in brackets after each statement)

**5.1.1.2.1 Statement A**

*Students on this course were welcomed and put at ease during the first hour of the course.*

(Gp One = 5.7 and Gp Two = 5.2)

Both groups of students felt strongly that they had been welcomed and put at ease within the first hour of the course. Group One scored the statement slightly higher

than Group Two. Group Two's reason for feeling comfortable and experiencing low anxiety might have stemmed from the fact that their course had started in a brisk and businesslike way and that that had felt "normal" in the light of their probable previous experience. In other words, students may generally be used to lecturers' being relatively detached and task orientated. The immediate directives from the instructor, giving a clear outline of the course and objectives, may thus have removed any decision-related stress, allowing the students in Group Two to feel secure and, therefore, at ease.

#### 5.1.1.2.2 Statement C

*The trainer found out what the students wanted to learn during the course.*

(Gp One = 4.9 and Gp Two = 3.4)

Group One tended to agree strongly that the instructor and found out what they wanted to learn. Group Two was neutral in its response, perhaps because completion of the pre-tests and pre-course questionnaires may to some extent have implied to Group Two that the instructor had taken note of their needs.

#### 5.1.1.2.3      Statement E

*The students helped to decide what the course objectives should be.*

(Gp One = 5.2 and Gp Two = 2.4)

Group One tended to agree strongly that the students had helped to decide what the course objectives should be, whereas Group Two tended to disagree strongly with this statement.

#### 5.1.1.2.4      Statement F

*The students were encouraged to make comments.*

(Gp One = 6.0 and Gp Two = 4.4)

Group One agreed very strongly that the students had been encouraged to make comments. Interestingly, Group Two also tended to support the statement although they had not, in fact, been encouraged to make comments. Group Two may have felt that the situation had been relatively normal in relation to their prior experiences and they may not have felt strongly about the need to comment, since virtually no questions had been posed to them.

5.1.1.2.5      Statement H

*The students asked many questions.*

(Gp One = 4.8 and Gp Two = 2.6)

Group One tended to agree strongly that students had asked many questions whereas Group Two disagreed with this statement.

5.1.1.2.6      Statement J

*The students helped to solve problems which arose during the course.*

(Gp One = 4.7 and Gp Two = 2.8)

Group One agreed that students had helped to solve problems which arose during the course and Group Two tended to disagree with this statement.

5.1.1.2.7      Statement M

*The trainer consulted the students on how they should be evaluated.*

(Gp One = 5.1 and Gp Two = 4.7)

Groups One and Two both tended to feel that they had been consulted on how they would be assessed, Group One's

scores for the statement being slightly higher. Although Group Two was neither consulted nor encouraged to ask questions (3.4.2.2), its members may have taken for granted that some of them had been consulted before the course started, or (which is more likely, in retrospect) that the pre-course questionnaire and test had established the means of assessment.

#### 5.1.1.2.8 Statement Q

*The students learnt things on the course which will be useful in everyday life.*

(Gp One = 4.8 and Gp Two = 4.7)

Both groups felt that what they had learnt on the course would be useful in everyday life. This agreement may probably exist because, in spite of the instructional style, everyone was learning new and practical skills in photography, which have work- and life-centred utility.

#### 5.1.1.2.9 Statement Q

*Students were able to share their knowledge and experience with the group.*

(Gp One = 5.1 and Gp Two = 3.4)

Group One agreed strongly that students had been able to

share their knowledge and experience with the group whereas Group Two tended to be neutral. The reasons for the neutral response of Group Two could be similar to those provided in 5.1.1.2.4 above.

#### **5.1.2        STATEMENTS SUGGESTING THAT A PEDAGOGICAL ETHOS AND INSTRUCTIONAL STYLE WERE USED**

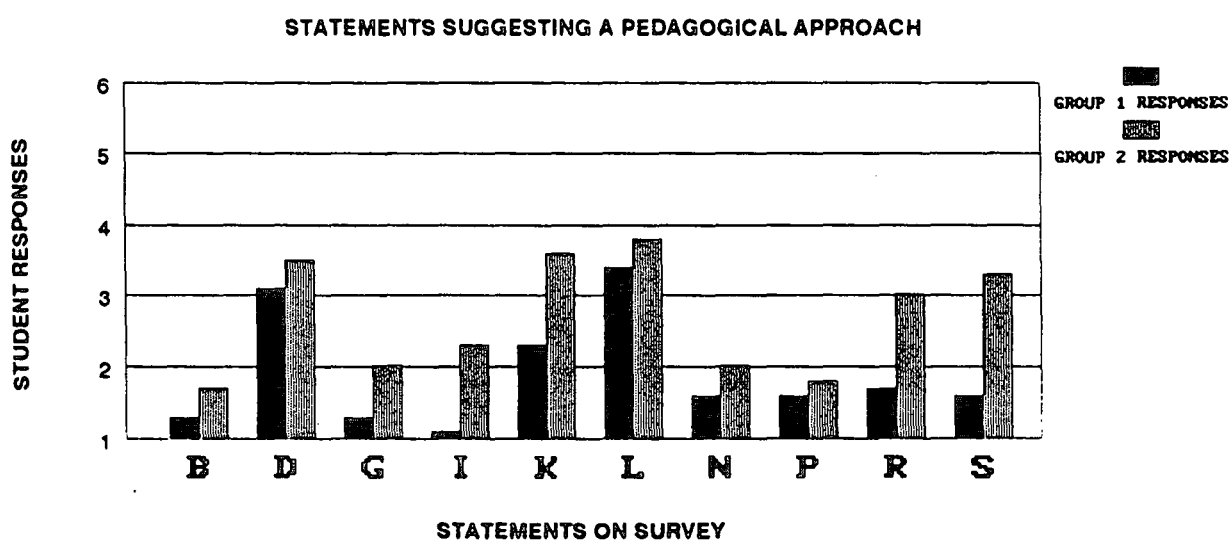
Figure 3 below plots for each group the average responses to ten statements suggesting that the course had a pedagogical nature. High scores indicate strong agreement by students that the course was perceived to be pedagogical and low scores suggest that it was not perceived to be so.

##### **5.1.2.1    OVERALL PERCEPTIONS OF THE TWO GROUPS:**

Overall there was no strong agreement that the course was pedagogical and the differences between scores for statements were smaller than in graph one. However, all the scores for Group One were lower than those for Group Two. It appears that the students were in general reluctant to support negative statements about the course. Students are probably used to a pedagogical instructional style, as mentioned in 5.1.1.1 and, if so, they would be uncritical of such a style, focussing

merely on the relative approachability and courtesy of the instructor. As the students in the research sample were attending a special course, structured differently from their usual lecture programmes, there could also have been a "halo" effect which inclined them towards feeling positive about the course.

Fig. 3 RESPONSES TO QUESTIONNAIRE 1 (APPENDIX 6)



A score of 1 = Strong disagreement with the statement

A score of 6 = Strong agreement with the statement

#### 5.1.2.2 ANALYSIS OF SCORES FOR EACH STATEMENT BY THE TWO GROUPS

##### 5.1.2.2.1 Statement B

*During the course there was little encouragement for the students to ask questions.*

(Gp One = 1.3 and Gp Two = 1.7)

Both groups disagreed strongly with the statement that there had been little encouragement for students to ask questions. It could be that Group Two had not felt the need to ask questions, or, as they had not been actively discouraged from questioning, that they disagreed with the statement.

##### 5.1.2.2.2 Statement D

*The attitude of the trainer towards the students was formal.*

(Gp One = 3.1 and Gp Two = 3.5)

Group One was neutral regarding the suggestion that the attitude of the instructor towards the students had been formal and Group Two were inclined to agree slightly. It is possible that the degree of formality of the trainer

towards students had not been perceived as being important, and it is also conceivable that the extent of formality conveyed by the trainer, notwithstanding the differences mentioned in 3.3.2.1 and 3.4.2.1, had not been strongly perceived by the students as a distinctly formal attitude. Possible reasons for their perceptions may be inferred from 5.1.2.1.

#### 5.1.2.2.3 Statement G

*There was a lack of two way communication between the students and the trainer.*

(Gp One = 1.3 and Gp Two = 2.0)

Both groups disagreed that there had been a lack of two-way communication between the students and the instructor. However Group One disagreed with this statement strongly.

The uncritical stance taken by Group Two could be for reasons similar to those mentioned in 5.1.2.2.1

#### 5.1.2.2.4 Statement I

*The trainer did not encourage students to make suggestions.*

(Gp One = 1.1 and Gp Two = 2.3)

Group One disagreed strongly that the instructor had not encouraged students to make suggestions, and Group Two tended also to disagree. The reasons for Group Two's response could again be as mentioned above.

#### 5.1.2.2.5 Statement K

*The trainer kept strict control over the students during the course.*

(Gp One = 2.3 and Gp Two = 3.6)

Group One tended to disagree that the instructor had kept strict control over students during the course whereas Group Two were neutral regarding this statement. Group Two may have felt that the control was not essentially different from what they were used to and therefore they felt disinclined to pass negative judgement on it.

#### 5.1.2.2.6 Statement L

*The course timetable was followed rigidly by the trainer.*

(Gp One = 3.4 and Gp Two = 3.8)

Both groups tended to be neutral regarding the statement that the course timetable had been followed rigidly. It could be that they perceived adherence to the timetable

as being normal. In truth, however, although the contents of the timetable had been followed, the times were not followed rigidly with Group One and had, in fact, been negotiated to some degree. Group Two did follow the times of the timetable.

5.1.2.2.7 Statement N

*The students were scared to ask questions.*

(Gp One = 1.6 and Gp Two = 2.0)

Group One tended to disagree strongly that students had been scared to ask questions. Group Two also disagreed with the statement, perhaps because they may have felt comfortable and familiar with the pedagogical style and, therefore, not intimidated by the formality of the course ethos, and they may have been reluctant to admit that they had been scared as this would have been a form of self criticism.

5.1.2.2.8 Statement P

*The trainer did not care much for the problems of students attending the course.*

(Gp One = 1.6 and Gp Two = 1.8)

Both groups tended to disagree strongly that the instructor had not cared much for the problems of students attending the course. Group Two probably felt comfortable with the pedagogical style and did not perceive themselves as having had many problems as there had been strong direction and guidance from the instructor. Perhaps, too, by being so efficient and unswerving, the instructor had been unconsciously mediating concern to the Group.

5.1.2.2.9      Statement R

*The trainer did not ask students what the standards for their assignments should be.*

(Gp One = 1.7 and Gp Two = 3.0)

Group One tended to disagree strongly that the instructor had not asked students what the standards for their assignments should be, whereas Group Two tended to be neutral. Reasons noted in 5.1.1.2.7 could be relevant here too.

5.1.2.2.10      Statement S

*I am not keen to go on to the practical part of the course.*

(Gp One = 1.6 and Gp Two = 3.3)

Group One tended to disagree strongly that they were not keen to go on with the practical part of the course, whereas Group Two tended to be neutral.

It appeared that Group One was more motivated than Group Two to continue with the assignment and it could be assumed that the andragogical approach had had a positive effect on the students' motivation.

#### 5.1.3 GENERAL CONCLUSIONS

Although the instructor felt that there had been a marked difference in the ethos and instructional style between the two courses, that had not been strongly perceived or admitted from the students' point of view. There were quite significant differences in perception between the groups for statements in support of the andragogical style but it appears that the students were reluctant to support negative statements about the courses or the instructor. As was suggested above, students are probably familiar and comfortable with a pedagogical style and therefore Group Two were not overly critical of their course.

In a conservative society (see 1.1) students tend to become dependent and are reluctant to take issue with

the instructor or his/ her instructional style and the schooling system tends to produce students who are "disempowered" and a passive work force (Davidoff and van den Berg, 1990:15). Furthermore, students can feel secure within a formal system where a pedagogical style is prevalent and students often harken back to their previous schooling experiences and "put on their dunce hats of dependency" (Knowles, 1988:56), sitting back and expecting to be taught.

Statement B is an example worth mentioning because, according to the instructor, Group Two were seldom asked questions and the students were not encouraged to ask questions, yet they did not adjudge that feature in a negative light. That response is also consistent with the response to Question N above.

## **5.2 OPINION SURVEY (Appendix 7)**

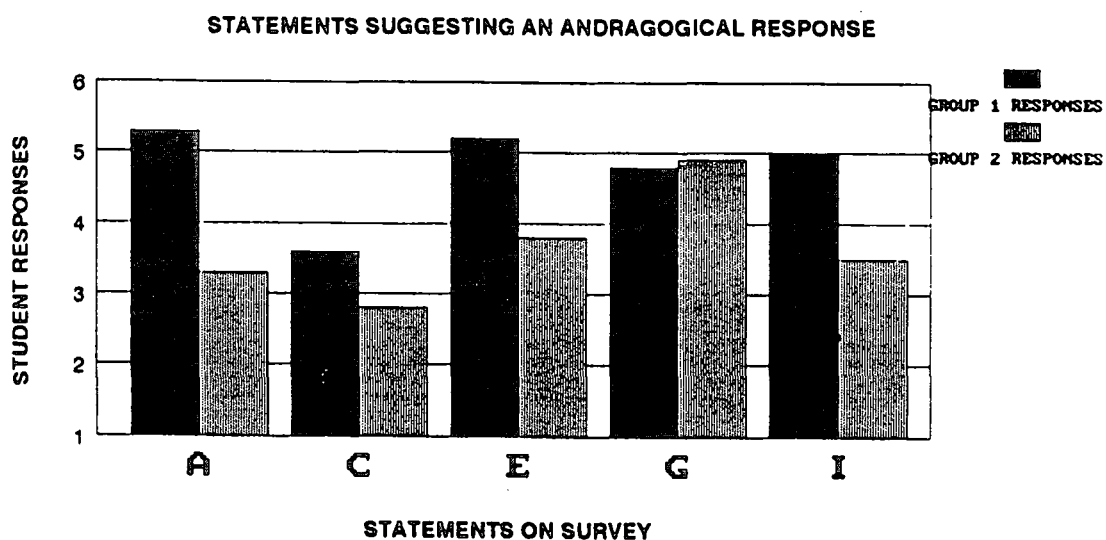
### **5.2.1 STATEMENTS SUGGESTING THAT AN ANDRAGOGICAL ETHOS AND INSTRUCTIONAL STYLE WERE USED, AND THAT STUDENTS ENJOYED AND WERE MOTIVATED BY THE COURSE**

Figure 4 below plots the average responses to five

statements suggesting that the course was andragogical, enjoyable and stimulating. High scores indicate strong agreement with the statements.

Group One attended the course which followed the andragogical style and Group Two followed a pedagogical style.

Fig. 4 RESPONSES TO OPINION SURVEY (APPENDIX 7)



	A	C	E	G	I
GROUP 1 RESPONSES	5.3	3.6	5.2	4.8	5.0
GROUP 2 RESPONSES	3.3	2.8	3.8	4.9	3.5

A score of 1 = Strong disagreement with the statement

A score of 6 = Strong agreement with the statement

#### 5.2.1.1 OVERALL PERCEPTIONS OF THE TWO GROUPS:

Group One scored four of the five statements higher than

Group Two did. Group One tended to agree strongly with four of the statements; only one statement scored in the neutral zone.

Overall, Group Two tended neither to agree or disagree strongly, three of the average scores being in the neutral area and only one statement tending towards disagreement. However, it appears significant that Group Two was generally unprepared to commit itself to a definite opinion either way. That in itself is an indictment of a pedagogical style.

#### 5.2.1.2 ANALYSIS OF THE SCORES FOR EACH STATEMENT BY THE TWO GROUPS

##### 5.2.1.2.1 Statement A

*At the beginning of the course the trainer encouraged the students to relax by letting them chat to a neighbour and find out a bit about him/her.*

(Gp One = 5.3 and Gp Two = 3.3)

Group One strongly agreed with the statement that students had been encouraged to relax at the beginning of the course, and that was consistent with their response in A (Appendix 6), whereas Group Two were neutral about

the statement. The response of Group Two indicates that they were either not objective when responding or reluctant to take a strong standpoint. Group Two probably felt comfortable within, and not threatened by, a pedagogical ethos.

#### 5.2.1.2.2 Statement C

*The students had some say as to how their assignments were to be evaluated.*

(Gp One = 3.6 and Gp Two = 2.8)

Group One felt neutral regarding the statement that students had had some say concerning the evaluation of their assignments, whereas Group two tended to disagree with this statement. These responses were realistic as the evaluation was done exclusively by the instructor and lecturer from the department of Human Resources Management (cf Limitations of the Research, p. 15).

#### 5.2.1.2.3 Statement E

*The training style during the course was participative.*

(Gp One = 5.2 and Gp Two = 3.8)

Group One agreed strongly that the style had been participative and Group Two was neutral about this

statement. The comments regarding Group Two in 5.2.1.2.2 are also relevant here. The responses to statement E were consistent with those for statements C, E, F, H, J, and Q of 5.1.1.

#### 5.2.1.2.4      Statement G

*Next year the second year Training Management students should do the same course.*

(Gp One = 4.8 and Gp Two = 4.9)

Both groups tended towards agreeing strongly that second year Training Management students during the following year should do the same course. This result was consistent with the responses to statement O (5.1.1.2.8). Regardless of instructional style, therefore, the course was perceived to be worthwhile. It can be concluded that, in respect of the value of the course content, a pedagogical style was not viewed negatively by Group two.

#### 5.2.1.2.5      Statement I

*There was a lot of two way communication between the students and the trainer during the course.*

(Gp One = 5.0 and Gp Two = 3.5)

Group One agreed strongly that there had been a lot of two way communication and Group Two tended to be neutral about this statement. This result was consistent with the trends for statement E above and those for statements G, I, and Q in sections 5.1.1 and 5.1.2.

**5.2.2        STATEMENTS SUGGESTING THAT A PEDAGOGICAL ETHOS  
AND INSTRUCTIONAL STYLE WERE USED, AND THAT  
STUDENTS NEITHER ENJOYED, NOR WERE MOTIVATED  
BY THE COURSE**

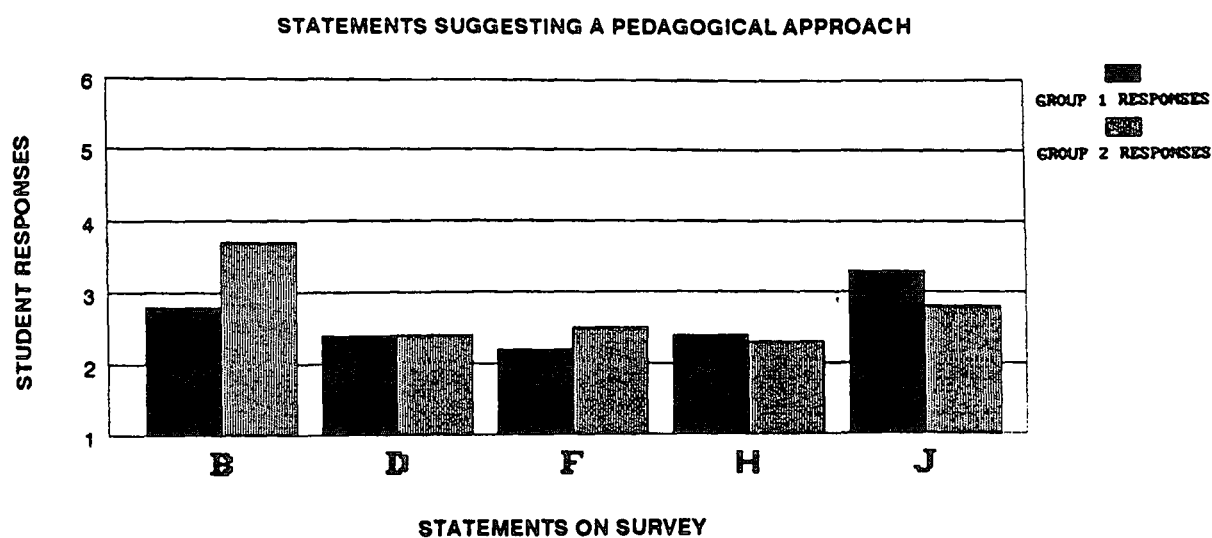
Figure 5 below, plots the average of student responses to five statements suggesting that the course was pedagogical, neither enjoyable, nor motivating for the students. High scores indicate strong agreement with the statements and low scores indicate disagreement.

**5.2.2.1    OVERALL PERCEPTIONS OF THE TWO GROUPS:**

Group One tended to disagree with four of the statements and one score was in the neutral zone. Two of the five scores were higher than the related scores from Group Two.

Group Two tended to disagree with four of the five statements and one statement was scored in the neutral area.

Fig. 5 RESPONSES TO OPINION SURVEY (APPENDIX 7)



	B	D	F	H	J
GROUP 1 RESPONSES	2.8	2.4	2.2	2.4	3.3
GROUP 2 RESPONSES	3.7	2.4	2.5	2.3	2.8

A score of 1 = Strong disagreement with the statement

A score of 6 = Strong agreement with the statement

#### 5.2.2.2 ANALYSIS OF THE SCORES FOR EACH STATEMENT BY THE TWO GROUPS

##### 5.2.2.2.1 Statement B

*The students should have been supervised more closely during the practical part of the course.*

(Gp One = 2.8 and Gp Two = 3.7)

Group One tended to disagree that they should have been

supervised more closely during the practical phase of the course whereas Group Two were neutral. This result suggests that the exposure of Group One to an andragogical model encouraged them to be more positively disposed to self-direction than Group Two and that Group Two again were reluctant to commit themselves to a strong point of view.

#### 5.2.2.2.2 Statement D

*Having to plan and do practical work on one's own is an unpleasant task.*

(Gp One = 2.4 and Gp Two = 2.4)

Both groups scored the same, which indicated that they tended to disagree with the statement that having to plan and do practical work alone was an unpleasant task. Most of the respondents had probably become used to working on their own as second year students and the instructional styles did not impact differently on their perceptions of how practical work should operate.

#### 5.2.2.2.3 Statement F

*The assignment section of the course was not enjoyable.*

(Gp One = 2.2 and Gp Two = 2.5)

Both groups indicated that they disagreed with the statement that the assignment part of the course had not been enjoyable, Group One's disagreement was slightly stronger than Group Two's. The responses are consistent with those of D above.

5.2.2.2.4      Statement H

*The course was dull.*

(Gp One = 2.4 and Gp Two = 2.3)

Both groups disagreed with the statement that the course had been dull. This response indicates that both andragogical and pedagogical courses can be interesting and is consistent with responses to F above and responses to T (5.1.1.).

5.2.2.2.5      Statement J

*I would not like to learn more about audio visual training programmes.*

(Gp One = 3.3 and Gp Two = 2.8)

Members of Group One were neutral regarding the statement that they would not like to learn more about audiovisual programmes, and Group Two tended to disagree slightly with this statement. It appears that both groups tended

to feel that they had learnt enough during the course and practical phase to satisfy their needs at the time. That response could have been due to the approaching end-of-year examinations, pressure to complete other course work, and a need to begin with their preparation for examinations.

However, if one wished to comment on the difference between the groups, one might conclude that the lower scores of Group Two were signalling dependency whereas Group One were content.

#### 5.2.3 GENERAL CONCLUSIONS

Although the instructor felt that there was a marked difference in the ethos and instructional style between the two courses, the students did not always perceive that to be the case. Overall, the responses of Group One to both questionnaires were more definite than the responses of Group Two. There were quite significant differences between the groups' perceptions in their responses to statements suggesting an andragogical style. However, there were no significant differences in their responses to statements suggesting a pedagogical style. As with the first questionnaire, the students appeared reluctant to support negative statements about the courses or the instructor, the responses to statements

D, F and H being cases in point. As suggested above, students are probably familiar and comfortable with a pedagogical style, and Group Two were therefore not overly critical of their course.

The instructional style did not appear to affect perceptions regarding the value of the courses, as both groups scored similarly for statements F, G and H.

## CHAPTER 6

### 6.0 FORMULATION OF CONCLUSIONS AND RECOMMENDATIONS

#### 6.1 CONCLUSIONS

Chapter One, page 6, stated the problem that it is necessary to establish whether an instructional model characterised by the application of andragogical learning principles would have an enhancing effect on the acquisition of knowledge and of production skills in the making of a slide-sound training programme, and whether that approach would be preferred, by second year National Diploma students, to the application of pedagogical learning principles. It was also noted that in terms of the changing dispensation in South Africa there is a need for tertiary students to become independent and self-directing so as to cope with the need for life-long learning. In the recently released discussion document, A National Training Strategy Initiative, by the National Training Board it is mentioned that a paradigm shift is needed and that learning needs to be thought of as a life-long process (1994:6).

Through the use of appropriate tertiary instructional approaches technicians can "ensure that their students are capable of independent study and research in the furtherance of knowledge in their disciplines." (Prior, 1986:43)

### 6.1.1 HYPOTHESES

#### 6.1.1.1 THE FIRST HYPOTHESIS

*Students' learning will be enhanced when they are exposed to an andragogical model of instruction.*

Post-Test One For post-test one, the differences in the median and average percentage scores between Group One and Group Two (4.2) was not significant and the impact of an andragogical style did not appear to have a significant impact on short-term learning which occurred during the course.

Post-Test Two For post-test two, the difference of 7.2 percentage points between the average percentage scores and 6 percentage points for the median scores of Group One and Group Two (4.3) is worthy of note and it can reasonably be argued that the difference was

due to the effect of the andragogical style of instruction on the students' learning.

The higher average and median scores (p.68) achieved by Group One suggest that the andragogical style of instruction had a beneficial effect on their retention of learning in the longer term.

#### 6.1.1.2 THE SECOND HYPOTHESIS

*Students' performances in a practical project will be enhanced when they are exposed to an andragogical model of instruction.*

The average percentage scores (4.4) for Groups One and Two differed by only 1.2 percentage points, which is insignificant. However the median score for Group One was 5 percentage points higher than for Group Two and it appears that the instructional style did have a positive effect on the middle range of scores for the practical work. As was pointed out on page 67 the students worked on the assignment in their own time and could have mixed between groups and they may have assisted one another, thereby diluting the effect of whichever instructional style they were exposed to.

#### 6.1.1.3 THE THIRD HYPOTHESIS

*Students will prefer a teaching/learning situation which has the characteristics of an andragogical model rather than those of a pedagogical model of instruction.*

Group One did view the instructional style which they were exposed to in a more favourable light than that of Group Two (Figure 2) and Group One perceived the style as being andragogical. Group One felt quite strongly that they had been consulted with, and allowed to, participate in decision making (statements C, E, F, H, J and Q), whereas Group Two tended to disagree with, or feel neutral about, these aspects. The responses of Group One to statements A, C, E and I (Figure 4) also suggested that they perceived the style to be andragogical, enjoyable and motivating.

Statements which tended to be negative, suggesting that the approach was pedagogical, were generally not supported by the students, indicating either that a pedagogical style was acceptable or that the students were reluctant to criticise the course. The responses of Group One to Statement S indicated that they were

motivated to go on to the practical part of the course whereas Group Two were non-committal.

In general it emerged that students preferred an andragogical style of instruction; a pedagogical style, though, can also be successful in its immediate cognitive outcomes. However, in the light of the need for, and appropriateness of, learners' developing self-direction (2.4.2) and the importance of their development into life-long learners, the andragogical model should be favoured and implemented where feasible and appropriate.

## 6.2 RECOMMENDATIONS

The andragogical approach did appear to have a positive effect on longer term learning (Post-Test Two), which may have been related to students' motivation (Statement S, Figure 3). The reversal and improvement in the three median scores of Group One (p. 68) also supports the use of an andragogical approach. The andragogical approach, on the other hand, did not have any notably negative effects on learning or on the students' practical performances and the group exposed to the andragogical style appeared to enjoy that experience to a greater degree than Group Two enjoyed the pedagogical

style. The more relaxed, informal ethos which existed during the instruction of Group One was enjoyed by the students, so it may be argued that no noticeably negative effects resulted and that this approach should therefore, in the light of these research findings, be generally pursued. The instructor also enjoyed and preferred the andragogical style of delivery and from the perspective of conducting the course did not experience any problems or discernibly negative facets.

In terms of performance, as measured by average scores, Group Two achieved similar results (barring Post-Test Two) to Group One and it can be argued that a pedagogical approach is also effective in immediate cognitive-learning outcomes, although with a few comparatively negative effects, namely: lower motivation, a lesser degree of personal involvement, less inclination to commit oneself in critical comments on the instructor or course, lower levels of interaction, and greater dependence on the instructor.

The results of the research and the literature survey indicate that an andragogical model of instruction is relevant to, suitable and preferable for, young adults and wherever feasible it should be implemented so as to

foster growth towards independence and self-directed learning.

The experimental section of this research did not apply or evaluate a situational model, but as was suggested (2.5.2) by the literature survey a strategy worthy of consideration would be to adopt a situational approach; where possible and relevant the instructional style should be adapted to suit the needs of individual learners. This implies that lecturers should move towards a facilitative role and that syllabi, content and learning materials become more flexible and open to negotiation in order to suit the needs of individual learners.

Although Knowles no longer views andragogical and pedagogical models as being antithetical (1985:12) he concludes that the andragogical model appears not to be culture bound or age restricted and can be applied

...in whole or in part, to a wide variety of educational activities and programs in a wide variety of institutional settings.

(Knowles, 1985:417)

### 6.3 SUGGESTIONS FOR FURTHER RESEARCH

Although the andragogical model has been used in a variety of programmes and has stimulated much debate it has not, according to Knowles (1985:20), stimulated much research to test its assumptions.

This research project points to a number of areas which demand further investigation.

#### 6.3.1 LONG TERM EFFECTS OF LEARNERS' EXPOSURE TO AN ANDRAGOGICAL MODEL

Research needs to be undertaken on the effect of exposing students to an andragogical style over a long period of time. For example a group of students could be exposed to an andragogical approach during various phases of their education. At a tertiary level a group of students could be exposed to the approach during their first three years of education/training in order to evaluate the effects of the approach. It would also be relevant to follow students into their working lives in order to evaluate the effects of an andragogical approach on career success and their aspirations towards further learning and development.

The apparent commitment of Group One to make more definite choices (thus suggesting greater self-confidence and openness) rather than the typical choices of Group Two in the questionnaires, is significant (5.1.3) and is an advantage of the approach.

### 6.3.2 A SITUATIONAL APPROACH

In the literature, the strong support for a situational approach (Chapter 2) needs to be examined carefully. In South Africa the majority of students have been exposed to an extreme form of ideology-based pedagogy (Schoeman, 1992:29) and a disparity in the quality of education with the result that they have become dependent learners utilising rote-learning (Gardner 1995:2) with a lack of problem-solving skills. The sudden change from secondary school to tertiary education, which is partly akin to a change from pedagogy to andragogy, results in many problems for learners such as high failure and drop-out rates. Moulder (1990:107) points out that the vast gap between school and university results in high failure rates and that in 1985 39% of students did not graduate in the required time. Ferreira and Dreckmeyr (1992:81) also point out the drastic change from school to university and note the need for schools to encourage self-study and problem-solving, along with creative and

critical. The challenges and problems mentioned above lead one to presume that the judicious application of effective instructional models is vital. Moreover, the following issues which are related to the form and application of a situational approach need to be investigated.

#### 6.3.2.1 INTRODUCTION OF AN ANDRAGOGICAL MODEL

The question of how rapidly an andragogical instructional style should be introduced to students who are used to a pedagogical model should be examined.

Exposure to an andragogical model of instruction can lead to "culture shock" (Knowles, 1988:133), (Brookfield, 1995\*) in the learners, so research should be conducted students who, owing to situational factors, have become dependent learners, in order to determine:

- how rapidly such learners could be introduced to an andragogical model of instruction
- to what extent they should be exposed to such a model

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\* [www](http://www) Internet address

- what bridging programmes, offered between school and tertiary education, and what behaviours by lecturers will facilitate the transition from dependence to independence of learners.

The extent to which sociological and psychological factors, such as upbringing, education, language, self-concept, maturity and culture, limit or encourage the successful adaptation of learners to an andragogical instructional style also needs examination.

#### **6.3.2.2 CONTENT**

Course objectives and content, as well as Bloom's taxonomy of educational objectives (Laird, 1986:107), which refer to the domains of learning which need to be engaged by instructors, ought to be considered and examined prior to determining an appropriate instructional style. Also, the extent to which learners are expected to perform complex or dangerous tasks needs to be considered as this would influence the choice of instructional styles (see 2.4.2.4).

#### **6.3.3 APPROPRIATE INSTRUCTIONAL/FACILITATION SKILLS**

The available description of an andragogical model,

while useful, needs further critical investigation with regard to its practical implication in varying situations. Further experimentation and research may be able to lead to a more appropriate and definitive model of instruction/facilitation which providers of adult education could use as a guide for their educative task.

Research needs to be conducted on how to encourage teachers and lecturers to adopt a situational, progressively andragogical, style of instruction. We need to find a means of motivating teachers and lecturers to become facilitators of learning rather than dispensers of it and, thus, foster the development of independent learners. Note, however, that the facilitation and release of forces within an Einsteinian energy system (Knowles, 1988:110) can have dramatic and unpredictable effects; the release of democratic social forces can challenge the authority of the educator. Furthermore, Gardner (1995:6) argues that the rigidity of an authoritarian approach provides a sense of security and educators will be reluctant to relinquish the approach. Consequently a means of allowing for and coping with such challenges needs to be investigated and developed.

In sum, an andragogical model has implications for educational institutions in the preparation of their

academic staff for the teaching of adult learners. As many educators have their grounding in a pedagogical paradigm

It is crucial that staff developers readjust that mind-set and view adult staff members from an andragogical perspective.

(Daleliew and Martinez, 1988:29)

#### 6.4 FINAL OBSERVATION

Human behaviour and learning are complex, fickle processes and no ideal, conclusive theories of instruction and learning exist. With reference to learning theories Laird (1986:2) points out that we have some definite answers, some tentative, many theoretical, and that nearly all are situational because of the "magnificent uniqueness" of individuals. Educators need, therefore, to adopt an eclectic, reflective approach in their search for an "ideal" model of instruction. The value of andragogical strategies is that they

... can act as provocateurs, stimulating us to see new relationships and challenging us to think about the nature of our individual roles as agents of change in a very broad field.

(Rachal, 1988:23)

APPENDICES

**Appendix 1**

PRE - TEST

AUDIO VISUAL COURSE

**STUDENT SURNAME**

**STUDENT NUMBER**

Answer the following questions in the spaces provided.

The results of this test will **NOT** contribute to your year mark. The information gained from the pre-test is simply for the purposes of my research.

1. Name three ways of providing light for photography.

1.1 . . . . .

1.2 . . . . .

1.3 . . . . .

2. What is the ASA number for normal daylight film?

2.1 . . . . .

3. Briefly explain what each of the following means :-

3.1 F. stop . . . . .

. . . . .

3.2 SLR . . . . .

3.3 Exposure . . . . .

3.4 Shutter speed . . . . .

3.5 Depth of field . . . . .

4. What colour filter is used when taking pictures on a copy stand?
  - 4.1 . . . . .
5. What two adjustments on the camera can be used to control the amount of light reaching the film?
  - 5.1 . . . . .
  - 5.2 . . . . .
6. What is each of the two main columns on an audio visual script used for?
  - 6.1 . . . . .
  - 6.2 . . . . .
7. Name three, of the five, aspects covered in the introduction section of a slide/sound programme.
  - 7.1 . . . . .
  - 7.2 . . . . .
  - 7.3 . . . . .
8. Briefly outline three advantages of programmed instruction.
  - 8.1 . . . . .
  - 8.2 . . . . .
  - 8.3 . . . . .
9. Name the two basic types of programmed instruction.
  - 9.1 . . . . .
  - 9.2 . . . . .
10. Give three principles which should be applied when questions are used in a training programme.
  - 10.1 . . . . .
  - 10.2 . . . . .
  - 10.3 . . . . .

Appendix 2

STUDENT QUESTIONNAIRE

AUDIO VISUAL COURSE

PLEASE NOTE - This questionnaire is for my personal research purposes and is not a test. Your answers will simply become part of my research statistics, so you can feel free to answer the questions with complete honesty. Please complete sections (A), (B) and (C) below before starting with question 1.

A) **FIRST NAMES**

.....

B) **SURNAME**

.....

C) **STUDENT NUMBER**

.....

Answer the following questions by **ticking** the appropriate block.

1. Have you ever used a camera to take slides or photographs?
2. Have you done photography as a hobby?
3. Have you ever made a slide/sound programme?
4. Have you attended a course on photography before?
5. Have you written a script for an audio visual programme before?
6. Have you used a Caramate slide/sound projector to record pulses onto an audio tape?
7. Rate your knowledge of how a camera works as high, medium or low.

Yes	No
Yes	No
Yes	No
Yes	No

High  
Medium  
Low

## Appendix 3

POST - TEST 1AUDIO VISUAL COURSE

STUDENT NAME (first name and surname)

. . . . .

Answer the following questions in the spaces provided.  
 The results of this test together with your assignment result will contribute  
 to your year mark.

-----

1. Name two sources of light used when taking slides.

1.1 . . . . .

1.2 . . . . .

2. What is the ASA for daylight film?

2.1 . . . . .

3. Briefly explain what each of the following means :-

3.1 SLR . . . . .

3.2 Exposure . . . . .

3.3 Depth of field . . . . .

4. Would the F. stop number be large or small when taking a picture in poor light? Provide a reason for your answer.

4.1 . . . . .

. . . . .

5. What adjustment, other than F. stop, can be made on a camera in order cope with a low light situation.

5.1 . . . . .

6. What is the colour of the filter which is used when taking pictures on a copy stand?

6.1 . . . . .

7. State what the two main columns on an audio visual script are used for?
  - 7.1 . . . . .
  - 7.2 . . . . .
8. What do the i, t and o in the introduction section of a slide/sound training programme stand for?
  - 8.1 . . . . .
  - 8.2 . . . . .
  - 8.3 . . . . .
9. Provide three advantages of programmed instruction.
  - 9.1 . . . . .
  - 9.2 . . . . .
  - 9.3 . . . . .
9. What are two differences between a branching type and a linear type of audio visual training programme?
  - 9.1 . . . . .
  - 9.2 . . . . .
10. Give three principles which should be applied when questions are used in a training programme.
  - 10.1 . . . . .
  - 10.2 . . . . .
  - 10.3 . . . . .
11. What shutter speed is selected when making use of a flash on a camera?
  - 11.1 . . . . .

TOTAL = 25

END

## Appendix 4

POST - TEST 2AUDIO VISUAL COURSE

STUDENT NAME (first name and surname)

.....  
 Answer the following questions in the spaces provided.  
 The results of this test together with your assignment result will contribute  
 to your year mark.  
 -----

1. What does the ASA rating on a film indicate ? (1)
  - 1.1 .....
2. What are two advantages of a SLR camera over the Instamatic type of camera? (2)
  - 2.1 .....
  - 2.2 .....
3. Name two sources of artificial light which are used when taking slides. (2)
  - 3.1 .....
  - 3.2 .....
4. Name two adjustments on the camera which can be used to control the exposure of a film. (2)
  - 4.1 .....
  - 4.2 .....
5. Give the reason for using a blue filter on a camera. (1)
  - 5.1 .....
6. Name the three main sections into which audio visual training programmes are usually divided. (3)
  - 6.1 .....
  - 6.2 .....
  - 6.3 .....

PTO

7. What three sets of information should the objective, as stated in an audio visual training programme, provide for the viewer? (3)
  - 7.1 . . . . .
  - 7.2 . . . . .
  - 7.3 . . . . .
8. Explain why the target population needs to be considered before designing an audio visual training programme. (2)
  - 8.1 . . . . .  
 . . . . .
9. What type of programmed instruction is used in a slide sound training programme, and what are the limitations of the type? (3)
  - 9.1 . . . . .
  - 9.2 . . . . .  
 . . . . .
10. Explain why the "question - - pause - - nominate" technique should be used when asking questions in an audio visual training programme. (2)
  - 10.1 . . . . .  
 . . . . .
11. What two techniques can be used to prevent a picture from being blurred when taking a photograph of a moving object. (2)
  - 11.1 . . . . .
  - 11.2 . . . . .
12. What are two disadvantages of a slide sound training programme. (2)
  - 12.1 . . . . .
  - 12.2 . . . . .

TOTAL = 25

Appendix 5

EVALUATION CHECKLIST FOR SLIDE AND SOUND PROGRAMME

STUDENT NAME

GROUP

	YES	NO	MARKS	
Is the programme length between 3 and 5 minutes?				1/
Is the programme structured into a beginning, middle and end?				3/
Does the programme have an introduction which includes: <ul style="list-style-type: none"> <li>- Topic,</li> <li>- Interest,</li> <li>- Need and</li> <li>- Objective</li> </ul>				1/ 1/ 1/ 1/
Is it a training programme?				2/
Is it in programmed instruction format?				1/
Are questions posed in the question - pause - nominate format?				2/
Are questions related to the objective?				1/
Does the programme provide feedback?				1/
Does the programme have sequence?				1/
Are slides and narration co-ordinated?				1/
Are slides in focus?				1/
Is the exposure of slides correct?				1/
Is there a meaningful end to the programme?				1/

Total = 20

General comments:

.....

.....

.....

.....

## APPENDIX 6

QUESTIONNAIRE POST-COURSE

The questionnaire below is to find out how you feel about the course. Your responses will be kept confidential and will in no way contribute to your marks.

The information from the questionnaire is solely for the purposes of my research, therefore feel free to be honest.

-----

Please read each statement about the course carefully.

Indicate to what extent you agree or disagree with each statement by ticking the appropriate column.

Column 6 indicates that you **strongly agree** with a statement and column 1 indicates that you **strongly disagree** with a statement.

Tick only one column per statement.

STATEMENT	1	2	3	4	5	6
A. Students on this course were welcomed and put at ease during the first hour of the course.						
B. During the course there was little encouragement for the students to ask questions.						
C. The trainer found out what the students wanted to learn during the course.						
D. The attitude of the trainer towards the students was formal.						
E. The students helped to decide what the course objectives should be.						
F. The students were encouraged to make comments.						
G. There was a lack of two way communication between the students and the trainer.						
H. The students asked many questions.						
I. The trainer did not encourage students to make suggestions.						

Column 6 indicates that you **strongly agree** with a statement and column 1 indicates that you **strongly disagree** with a statement. Tick only one column per statement.

STATEMENT		1	2	3	4	5	6
J.	The students helped to solve problems which arose during the course.						
K.	The trainer kept strict control over the students during the course.						
L.	The course timetable was followed rigidly by the trainer.						
M.	The trainer consulted students on how they would be evaluated.						
N.	The students were scared to ask questions.						
O.	The students learnt things on the course which will be useful in everyday life.						
P.	The trainer did not care much for the problems of students attending the course.						
Q.	Students were able to share their knowledge and experience with the group.						
R.	The trainer did not ask students what the standards for their assignments should be.						
S.	I am not keen go on to the practical part of the course.						
T.	I liked the way the course was run.						

END

## Appendix 7

OPINION SURVEY POST-COURSE/ASSIGNMENT

The opinionnaire below is to find out how you feel about the audio visual course and the practical assignment which you completed. Your responses will be anonymous and will in no way contribute to your marks. You do not need to put your name on the opinionnaire. The information is solely for the purposes of my research, therefore feel free to be honest.

-----

Please read each statement about the course/assignment carefully. Indicate to what extent you agree or disagree with each statement by ticking the appropriate column.

Column 6 indicates that you **strongly agree** with a statement.

Column 1 indicates that you **strongly disagree** with a statement.

STATEMENT	Strongly disagree					Strongly agree
	1	2	3	4	5	6
A. At the beginning of the course the trainer encouraged the students to relax by letting them chat to a neighbour and find out a bit about him / her.						
B. The students should have been supervised more closely during the practical part of the course.						
C. The students had some say as to how their assignments were to be evaluated.						
D. Having to plan and do practical work on one's own is an unpleasant task.						
E. The training style during the course was participative.						
F. The assignment section of the course was not enjoyable.						
G. Next year the second year Training Management students should do the same course.						
H. The course was dull.						
I. There was a lot of two way communication between the students and the trainer during the course.						
J. I would not like to learn more about audio visual training programmes.						

**Appendix 8****BROOKFIELD'S PRINCIPLES OF EFFECTIVE PRACTISE**

1. Brookfield feels that participation in learning should be voluntary and the decision to learn is the learner's. Learning situations should not coerce, bully or intimidate students into learning.
2. There should be respect shown between participants in a learning situation. Adults' self-worth should be enhanced through facilitation.
3. Learning should be a collaborative and cooperative process between facilitators and learners.  
Collaboration and continual renegotiation should occur with respect to the setting of objectives, methodology, evaluation criteria and curriculum.
4. Facilitation should lead to reflection, analysis, further activity, interpretation and so on. The cyclical and social nature of learning should be emphasised.
5. Facilitation of learning must aim to foster in students a spirit of critical reflection so that they will, through educational encounters, come to question many aspects of what they are learning and come to realise that their values, beliefs and behaviours are transmitted culturally.
6. Facilitation should aim to empower adults and encourage them to become self-directing, proactive individuals who do not simply react to forces in their environment.

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