

6150 207 82

UV - UFS
BLOEMFONTEIN
BIBLIOTEEK - LIBRARY

UV BIBLIOTEEK EN INLIGTINGSDIENS
UFS LIBRARY AND INFORMATION SERVICES
BLOEMFONTEIN

<p>Please note: Fines are levied on late returns. Keep your receipt as proof of returning your books. Renew books on time.</p>	<p>Let asb op: Boetes word gehef op laat terugbesorgings. Hou kwitansie as bewys vir boeke terugbesorg. Hernu boeke betyds.</p>
-------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------

Return on or before: Besorg terug voor of op:

--	--	--

NIE UITLEENBAAR VOOR
2006-08-15

R 9

University Free State



34300003232398

Universiteit Vrystaat

2006

37

*THE INFLUENCE OF LECTURERS'
VERBAL AND NON-VERBAL IMMEDIACY BEHAVIOUR
ON PERCEIVED AFFECTIVE AND COGNITIVE LEARNING*

LYDIE TERBLANCHE

Universiteit van die
Vrystaat
BLOEMFONTEIN

- 4 JUL 2006

UYSASOL BIBLIOTEEK

***THE INFLUENCE OF LECTURERS'
VERBAL AND NON-VERBAL IMMEDIACY BEHAVIOUR
ON PERCEIVED AFFECTIVE AND COGNITIVE LEARNING***

by

LYDIE TERBLANCHE

Mini-dissertation submitted in partial fulfilment of the requirements for the degree of

MASTER OF ARTS

in the

**FACULTY OF HUMANITIES
DEPARTMENT OF COMMUNICATION AND INFORMATION STUDIES**

at the

UNIVERSITY OF THE FREE STATE

SUPERVISOR: PROF. F.H. TERBLANCHE

JANUARY 2004

To my grandfather: Dr B.O. Schmidt

ACKNOWLEDGMENTS

I would like to thank:

- my mentor, supervisor and father, Professor Terry Terblanche, for his exceptional guidance in this mini-dissertation;
 - Jeanne Beunick and Karel Esterhuyse, for their valuable assistance with the methodology;
 - my family and friends for their continuous support;
- and
- my business colleagues for their infinite patience.

LYDIE TERBLANCHE

BLOEMFONTEIN

JANUARY 2004

CONTENTS

	PAGE
ACKNOWLEDGMENTS	
LIST OF FIGURES	iii
LIST OF TABLES	iv
INTRODUCTION AND ORIENTATION	01
The nature and relevance of immediacy behaviour	02
Immediacy behaviour as a dimension of cultural variety	04
The influence of lecturers' immediacy behaviour on the affective and cognitive learning of learners	04
Affective learning	05
Cognitive learning	05
The relationship between immediacy behaviour, learning and culture	06
AIMS OF THE STUDY AND FORMULATION OF HYPOTHESES	07
Research hypothesis 1	07
Research hypotheses 2	08
METHOD	08

	PAGE
Design	08
Participants	08
Measuring Instruments	09
<i>Biographical information</i>	09
<i>Immediacy behaviour</i>	09
<i>Learning</i>	11
Affective learning	11
Cognitive learning	12
Procedure	13
Statistical analysis	13
<i>Effect sizes</i>	14
RESULTS AND DISCUSSION ON FINDINGS	15
Research hypothesis 1	16
Research hypothesis 2	22
SUMMARY	24
REFERENCES	29

LIST OF FIGURES

	PAGE
<i>FIGURE 1: Immediacy behaviour scale</i>	10
<i>FIGURE 2: Affective learning scale</i>	12
<i>FIGURE 3: Cognitive learning scale</i>	13

LIST OF TABLES

	PAGE
TABLE 1: <i>Frequency distribution of participants concerning gender and home language</i>	08
TABLE 2: <i>Cronbach's α-coefficients for the scale of Immediacy</i>	10
TABLE 3: <i>Cronbach's α-coefficients for the scales of Affective learning</i>	11
TABLE 4: <i>Means and standard deviations of variables in the total research group</i>	15
TABLE 5: <i>Correlation coefficients as calculated between lecturers' immediacy behaviours and learner learning for the total group</i>	16
TABLE 6: <i>Correlation coefficients as calculated between lecturers' immediacy and cognitive learning for the Germanic (n = 187) and African (n = 150) learners respectively</i>	18
TABLE 7: <i>Correlation coefficients as determined by the relationship between lecturers' immediacy and affective learning for the Germanic (n = 163) and the African (n = 97) learners respectively</i>	20
TABLE 8: <i>Results of analyses of variances concerning the immediacy and learning variables for the two population groups</i>	23

**THE INFLUENCE OF LECTURERS'
VERBAL AND NON-VERBAL IMMEDIACY BEHAVIOUR
ON PERCEIVED AFFECTIVE AND COGNITIVE LEARNING**

INTRODUCTION AND ORIENTATION

It can generally be acknowledged that cultures, despite many similarities, differ with regard to styles and patterns of communication, the application of communication codes (Collier 1988; Hecht, Larkey & Johnson 1992; Parry 1994) and various related aspects such as the kind of communication that they view as satisfactory (Hecht & Ribeau 1984).

It is consequently not surprising that there is concern about ineffective communication because of the unique requirements that different cultures and ethnic groups attach to the communication and interpretation of messages (Kochman 1990; Martin, Hecht & Larkey 1994). Pertaining to local communication, there is also serious concern about its effectiveness within various communication contexts, especially across cultural borders (Marais 1985; Steyn 1994; Terblanche 1994).

Concerning communication in an instructional context, it seems that such contexts are increasingly characterised in current societies, in various parts of the world, by the composition of multicultural populations (Hannigan 1990; Neuliep 1995; Powell & Harville 1990). It is clear that cultural differences can somehow negatively influence the quality of communication in the instructional context, consequently causing ineffective learning. In a traditional instructional-learning context at least, learning is an interactive process within which interpersonal perceptions and communicative relationships between instructors and learners play a very important role (Richmond, Gorham & McCroskey 1987). With this as background, Sanders and Wiseman (1990: 344) enquire as to how the changes resulting from increasingly multicultural learner populations will impact on the instructor-learner relationship, and whether the communicative behaviour of instructors who are effective in non-multicultural situations will also be effective in multicultural situations.

In order to promote learning by means of more effective communication, it is necessary to identify forms of communicative behaviour that are associated with effective or ineffective instruction in certain kinds of instructional-learning contexts.

In this regard research findings indicate that, in cases where instructors display anti-social communicative behaviour such as verbal aggression, there is a decline in the motivation, learning, and satisfaction of learners (Myers & Knox 2000).

Literature shows that there are two methods that are frequently applied to describe and explain learners' perceptions of effective tertiary education, namely learners' evaluations of instructional events and the extent to which lecturers display physical and psychological immediacy (Moore, Masterson, Christophel & Shea 1996). The establishment of physical and psychological immediacy between participants in the communication process is achieved according to those forms of communicative behaviour that are normally called *immediacy behaviour*.

The nature and relevance of immediacy behaviour

The concept of immediacy behaviour was derived from the work of Mehrabian (1969) and was further developed by Andersen (1979) (Andersen, Norton & Nussbaum 1981). The dimension of immediacy in communication is anchored, at one extreme, in behaviour that communicates messages at the level of immediacy, accessibility, involvement and intimacy. At the other extreme, it is anchored in behaviour that expresses evasion and distance (Hecht, Andersen & Ribeau 1989). Viewed in its essence, the phenomenon of immediacy behaviour includes verbal and non-verbal forms of behaviour that are an indication of the availability of both an increased sensory stimulation and of a reduced physical and/or psychological distance between communication partners.

Non-verbal immediacy behaviour includes behaviour like touch, staring, direct bodily orientation, purposeful gestures, eye contact and the phenomenon of leaning forward in a communication situation.

Positive affect-indicators like pleasant and engaging vocal traits are equally important, since they indicate availability, while also communicating warmth and intimacy (Andersen, Guerrero, Buller & Jorgensen 1998; Gorham 1988; Neuliep 1995).

Verbal immediacy behaviour includes verbal utterances like praising the work of employees /learners, or the use of inclusive language (for example *our* team, *our* department or what *we* do). Revelations about oneself and humour are also included in the category of verbal immediacy behaviour.

The relevance of immediacy behaviour in interpersonal communication in general, and in instructional communication in particular, arises primarily from the principle of immediacy, which, referring to Mehrabian (1971: 1), can be described as follows:

- (1) as communicating beings, humans are attracted to other people and to a number of daily phenomena that they like, attach a high value to, and give preference to; and
- (2) they tend to move away from, or avoid, phenomena that they dislike, attach a negative value to or do not give preference to.

According to research verbal and non-verbal immediacy behavioural forms influence the nature and meaning of communication events in a variety of contexts (Allen & Shaw 1990; Comstock, Rowell & Bowers 1995; Gorham & Zakahi 1990; Menzel & Carrel 1999; Patterson, Powell & Lenihan 1986). Within these contexts it seems that the main communicative function of immediacy behaviour reflects more positive communicator-orientation towards the receiver of the message (Andersen 1979; Andersen et al. 1998; Mehrabian 1969; 1971; 1981; Andersen, Guerrero, Buller & Jorgensen 1998). Given the transactional and dynamic nature of communication events, the reverse is obviously also true, namely that the immediacy behaviour that is displayed simultaneously with interpretation actions by receivers of the message, creates a positive orientation with receivers, which is at the root of a variety of positive communication outcomes (Baringer & McCroskey 2000; McCroskey, Sallinen, Fayer, Richmond & Barraclough 1996; Thweatt & McCroskey 1998).

Immediacy behaviour as a dimension of cultural variety

Hall and Hall (1990: 3) note that each culture operates according to its own internal dynamics, its own principles and its own written and unwritten rules. It is also generally accepted that cultures differ in terms of such aspects as space, the perception of exceeding space and respecting it, and the use of forms of behaviour that increase mutual sensory stimulation between communication partners (Mehrabian 1972). One of the reasons for this, according to Gudykunst and Ting-Toomey (1988), relates to the need for sensory exposure and contact within different cultures. Intimacy through sensory exposure, and consequently "the need for close personal space," can vary between low and high in different cultures (Hall in Andersen 1991).

As a result a certain form of behaviour, which may be viewed as immediacy behaviour under certain circumstances by one culture, is not necessarily viewed as immediacy behaviour under the same circumstances by another culture.

The influence of lecturers' immediacy behaviour on the affective and cognitive learning of learners

With regard to instructional situations, numerous studies exist in which certain cultures were directly or indirectly investigated in terms of the immediacy behaviour of lecturers as a potential predictor of the effectiveness of instructional communication and the influence of communicative behaviour of lecturers on behavioural patterns of learners (Andersen, Norton & Nussbaum 1981; Comstock, Rowell & Bowers 1995; Kearney, Plax & Wendt-Wasco 1985; Richmond, Gorham & McCroskey 1987). To a lesser or greater extent, most of these studies add to Bloom's (1956: 1976) conceptualisation of learning as a process that causes the acquisition or change of affective, cognitive and/or behavioural communication. Each of these learning domains is characterised by unique focus points. Affective learning focuses on the development of a positive or negative attitude towards the subject discussed by the lecturer. Cognitive learning refers to the comprehension and retention of knowledge. The behavioural domain entails the development of psychometric skills or perceptible changes in behaviour because of learning.

In many of the studies that investigated the influence of behavioural patterns of lecturers on learning-related responses of learners, it was found that immediacy as a realistic behavioural strategy has a positive influence on one or more of the domains of learning outcomes (Christophel 1990; Gorham & Zakahi 1990; Kelley & Gorham 1988; Powell & Harville 1990; Sanders & Wiseman 1990).

Affective learning

Andersen (1979) found in the seventies that the immediacy behaviour of lecturers is a good predictor of all measures of learners' affective and behavioural relations. There was, however, no significant relationship between immediacy behaviour and cognitive learning. Adding to these findings Andersen, Norton and Nussbaum (1981) found that the communicative behaviour of lecturers makes a difference to learners' perception of effective instructional communication and in the affect of learners towards the lecturer and the course. Lecturers perceived as (1) displaying more immediacy, (2) having a more positive style of communication and (3) showing more interpersonal solidarity with learners, were also perceived as more positive and more effective. This particular researcher could also not find a meaningful relationship between communication variables and cognitive learning.

Cognitive learning

Contrary to numerous findings pertaining to the relationship between immediacy behaviour and affective learning, the relationship between immediacy behaviour and cognitive learning is less clear (Kelley & Gorham 1988; Richmond et al. 1987; Witt & Wheelless 2001). However, some findings do confirm such a relationship. Richmond et al. (1987) found that forms of immediacy behaviour are substantially associated with cognitive learning. These researchers clearly state that in this particular field not all forms of immediacy behaviour are equally important. The extent of expression in the voice, smiling and the display of a relaxed body posture seem to be some of the most important forms (Richmond et al. 1987: 584). Kelley and Gorham (1988) investigated the relationship between non-verbal immediacy behaviour and a specific cognitive learning task, namely short-term recollection.

The results clearly indicated that immediacy behaviour produced positive results on short-term recollections (Kelley & Gorham 1988: 204).

By using measuring instruments similar to those of Gorham (1988) and Richmond et al. (1987), different researchers have reported a meaningful, positive relationship between verbal and non-verbal immediacy behaviour and cognitive learning (Christophel & Gorham 1995; McCroskey et al. 1996; Menzel & Carrel 1999).

The relationship between immediacy behaviour, learning and culture

Judging by the literature on this subject, it seems that there are numerous studies that examine the influence of immediacy behaviour on learning from a multicultural perspective as well. It seems as if immediacy behaviour in general promotes learners' perceived cognitive, affective and behavioural learning in a multicultural class situation, but that certain indicators of immediacy behaviour function differently across cultures (Sanders & Wiseman 1990).

During an investigation into the differences between Afro-American and Euro-American lecturers' immediacy behaviour in an instructional context, Neuliep (1995: 275) found that Afro-American learners perceived a greater degree of immediacy behaviour in their Afro-American lecturers than Euro-American learners perceived in their Euro-American lecturers. The results indicated likewise that the impact of perceived immediacy operated differently for the two groups. Neuliep (1995: 275) mentions that this could possibly be explained by the fact that cultures differ in terms of what they expect regarding other peoples' behaviour. People tend to develop expectations in communication situations regarding forms of behaviour, such as the distance between speakers, eye contact and speech styles. The study nevertheless pointed to a significantly positive correlation between immediacy behaviour and cognitive, affective and behavioural learning.

Concerning the effect of immediacy behaviour on learning, it can be stated that research findings proved both verbal and non-verbal immediacy behaviour to be vital dimensions of an effective instructional strategy, for the promotion of affective and cognitive learning (Christensen & Menzel 1998).

In the context of Higher Education in South Africa, it is currently often the case that a lecturer, whose home language is Afrikaans or English (henceforth Germanic language), teaches learners whose home language is either one of the South African languages (the so-called "Bantu" languages - henceforth African languages), or one of the Germanic languages.

AIMS OF THE STUDY AND FORMULATION OF HYPOTHESES

On the basis of the above review, the following aims were identified, namely:

- (1) to determine whether the verbal and non-verbal immediacy behaviour of lecturers whose home language is Afrikaans or English, contributes positively to the affective and cognitive learning of learners whose home language is Afrikaans, English or one of the African languages; and
- (2) to determine whether the forms of immediacy behaviour displayed by English or Afrikaans lecturers function differently in learners whose home language is one of the African languages in relation to those whose home language is Afrikaans or English.

In addition to the aims of this study, the following research hypotheses were formulated:

Research hypothesis 1

There are significant relationships between *lecturers' immediacy behaviours* (verbal and non-verbal) and *learners' learning* (cognitive and affective).

Research hypothesis 2

Significant differences exist in the mean concerning *lecturers' immediacy and learning behaviours* for African and Germanic learners.

METHOD

Design

As there was no experimental intervention or any randomised allocation of the respondents to groups, this investigation is primarily *ex post facto* research (Huysamen 1993: 101).

In the case of *ex post facto* research, the researcher has no control over the independent variables in the sense that, before the onset of this investigation, individuals already belong on specific levels of the variables. In this investigation, participants are members of the different levels of the independent variable, namely mother tongue. The dependent variables (immediacy behaviour, affective and cognitive learning) and the independent variable, are thus studied only in retrospect.

Participants

A non-probability purposeful sample of 355 learners was obtained from the Germanic and African language groups respectively from the population of pre-graduate learners in the Faculty of Humanities from on the UFS campus. Table 1 illustrates the distribution of the participants in accordance with certain relevant biographical variables.

TABLE 1: Frequency distribution of participants concerning gender and home language

Biographical variable	N	%
Gender:		
Male	157	44,2
Female	198	55,8
TOTAL	355	100,0
Mother tongue:		
Afrikaans	139	39,2
English	42	11,8
Sotho	97	27,3
Xhosa	22	6,2
Tswana	32	9,0
Zulu	3	0,9
Other	11	3,1
Not indicated	9	2,5
TOTAL:	355	100,0

From Table 1 the following is clear:

- (a) 44,2% of learners were male and 55,8% female. This gender distribution compared statistically with that of the general population of 2001, according to which 49,2% were men and 50,8% were women (South Africa Survey 2001: 126); and
- (b) more than a third of the test group used Afrikaans as a home language. It was clear that 20 learners either did not indicate their home language, or indicated a different home language from the options on the list. Since this variable was used to form the two population groups (African and Germanic), it had been ensured that only those learners who indicated Afrikaans or English as their home language, fell under the Germanic learner group. The learners who indicated their home language as one of the African languages, formed part of the African learner group.

Measuring Instruments

Data was collected by means of a questionnaire. The questionnaire had separate sections on biographical information, immediacy behaviour and learning.

Biographical information

The following information was collected from each participant: gender and mother tongue.

Immediacy behaviour

Learners' perceptions of the immediacy behaviour of lecturers were measured in agreement with, among others, Christophel (1990), by using the Immediacy behaviour scale (see Figure 1). This scale includes statements describing lecturers' verbal (Gorham 1988) and non-verbal (Richmond, Gorham & McCroskey 1987) immediacy behaviour.

The internal consistency used to measure the scale of *Immediacy*, was determined for the current test group. Cronbach's α -coefficients were calculated with the help of the SPSS computer software (SPSS Incorporated 1983).

The coefficients are indicated in Table 2.

TABLE 2: Cronbach's α -coefficients for the scale of *Immediacy*

Scale	α -coefficients	
	Eng.	Afr.
<i>Immediacy:</i>		
Verbal behaviour	0,743	0,799
Non-verbal behaviour	0,627	0,709
Combined score	0,789	0,848

The calculated coefficients in Table 2 showed a reasonable (0,627) to high (0,848) degree of internally consistent measures for the specific scale. The scale could thus be used with confidence in the analyses that follow.

A total score was obtained by averaging the scores for both the verbal and non-verbal behaviour scales, and this is indicated in Tables 5 to 7 as *Immediacy total*.

FIGURE 1 *Immediacy behaviour scale*

Below are a series of descriptions of things some lecturers have been observed doing or saying in some classes. Please respond to the questions in terms of the class immediately preceding this class.

For each item, **encircle the number 0-4**, which indicates the behaviour of the lecturer in that class.

Scale: Never = 0 Rarely = 1 Occasionally = 2 Often = 3 Very often = 4

Verbal Items

1. Uses personal examples or talks about experiences she/he has had outside of class.
2. Asks questions or encourages students to talk.
3. Gets into discussions based on something a student brings up even when this doesn't seem to be part of his/her lecture plan.
4. Uses humour in class.
5. Addresses students by name.
6. Addresses me by name.
7. Gets into conversations with individual students before or after class.
8. Has initiated conversations with me before, after or outside of class.
9. Refers to class as "my" class or what "I" am doing. *
10. Refers to class as "our" class or what "we" are doing.
11. Provides feedback on my individual work through comments on papers, oral discussions, etc.
12. Calls on students to answer questions even if they have not indicated that they want to talk.*
13. Asks how students feel about an assignment, due date or discussion topic.
14. Invites students to telephone or meet with him/her outside of class if they have questions or want to discuss something.
15. Asks questions that have specific, correct answers. *
16. Asks questions that solicit viewpoints or opinions.
17. Praises students' work, actions or comments.
18. Criticises or points out faults in students' work actions or comments. *
19. Will have discussions about things unrelated to class with individual students or with the class as a whole.
20. Is addressed by his/her first name by the students.

Non-verbal Items

21. Sits behind desk while teaching. *
22. Gestures while talking to the class.
23. Uses monotone/dull voice when talking to the class. *
24. Looks at the class while talking.
25. Smiles at the class while talking.
26. Has a very tense body position while talking to the class. *
27. Touches students in the class.
28. Moves around the classroom while teaching.
29. Sits on a desk or in a chair while teaching.
30. Looks at board or notes while talking to the class. *
31. Stands behind podium or desk while teaching. *
32. Has a very relaxed body position while talking to the class.
33. Smiles at individual students in the class.
34. Uses a variety of vocal expressions when talking to the class.

* Presumed to be non-immediate verbal and non-verbal items. Items reflected for scoring

Learning:

Learning usually comprises of three components, namely Affective, Cognitive and Psychomotor. For this research purpose only two components are focused upon: Affective and Cognitive.

Affective learning

The affective learning of learners was measured by asking them to estimate six components of their attitudes towards course content, lecturers and behavioural intentions (see Figure 2; Christophel 1990; Gorham 1988).

For purposes of scoring, two scales as well as a total score were used. The two scales pertain to *attitude* and *behavioural intent*. During the calculation of the scale, the scale values of items that were negatively formulated, were frequently "inverted" in order to be meaningful. In calculating the correlations between individual items and the *learning* variables, the item values were not inverted. The internal consistency estimates for this scale, measured by Cronbach's alpha, are indicated in Table 3.

TABLE 3: Cronbach's α -coefficients for the scales of Affective learning

Scale	α -coefficients	
	Eng.	Afr.
<i>Affective learning:</i>		
Attitude	0,895	0,936
Behavioural intent	0,898	0,937
Combined score	0,938	0,960

The calculated coefficients in Table 3 showed a high (0,895 - 0,96) degree of internally consistent measures for the scale under discussion.

FIGURE 2 Affective learning scale

Using the following scales, evaluate the class immediately preceding this class (i.e. the same class as in the case of "immediacy behaviour"). Please circle the number that best represents your feelings for each item.

My attitude about the content of this course:								
Good	1	2	3	4	5	6	7	Bad *
Worthless	1	2	3	4	5	6	7	Valuable
Fair	1	2	3	4	5	6	7	Unfair *
Positive	1	2	3	4	5	6	7	Negative
My attitude about the behaviours recommended for this course:								
Good	1	2	3	4	5	6	7	Bad *
Worthless	1	2	3	4	5	6	7	Valuable
Fair	1	2	3	4	5	6	7	Unfair *
Positive	1	2	3	4	5	6	7	Negative *
My attitude about the instructor of this course:								
Good	1	2	3	4	5	6	7	Bad *
Worthless	1	2	3	4	5	6	7	Valuable
Fair	1	2	3	4	5	6	7	Unfair *
Positive	1	2	3	4	5	6	7	Negative *
My likelihood of actually attempting to engage in the behaviour recommended in this course:								
Likely	1	2	3	4	5	6	7	Unlikely *
Impossible	1	2	3	4	5	6	7	Possible
Probable	1	2	3	4	5	6	7	Improbable *
Would	1	2	3	4	5	6	7	Would Not *
My likelihood of actually enrolling in another course of related content, if I had the choice and my schedule permits: (If you are graduating assume you would still be here.)								
Likely	1	2	3	4	5	6	7	Unlikely *
Impossible	1	2	3	4	5	6	7	Possible
Probable	1	2	3	4	5	6	7	Improbable *
Would	1	2	3	4	5	6	7	Would Not *
The likelihood of my taking another course with the lecturer of this course, if I have a choice, is: (If you are graduating, assume you would still be here.)								
Likely	1	2	3	4	5	6	7	Unlikely *
Impossible	1	2	3	4	5	6	7	Possible
Probable	1	2	3	4	5	6	7	Improbable *
Would	1	2	3	4	5	6	7	Would Not *

* Presumed to be non-immediate verbal and non-verbal items. Items reflected for scoring.

Cognitive learning

Learners' cognitive learning was measured based on responses in two scales (See Figure 3 Christophel 1990; Richmond, Gorham & McCroskey 1987). Item one gives an indication of the extent of *simple learning* that took place. A *learning loss* score was calculated by subtracting the score in the first scale from the score in the second scale. In this way an indication of learners' overall *cognitive learning* score was obtained. If a positive *learning loss score* were to be obtained in this way, it would show that the learner felt that he/she had not learned as much as he/she would have learned in an ideal situation. As the scale consists single items, no reliabilities were calculated.

FIGURE 3 Cognitive learning scale

- (1) On a scale of 0-9, how much did you learn in the class immediately preceding this class (i.e. the same class as in the case of "immediacy behaviour"), with 0 meaning you learned nothing and 9 meaning you learned more than in any other class you've had? (circle one)
- 0 1 2 3 4 5 6 7 8 9
- (2) How much do you think you could have learned in the class immediately preceding this class (i.e. the same class as in the case of "immediacy behaviour") had you had the ideal instructor? (encircle one)
- 0 1 2 3 4 5 6 7 8 9

Procedure

The researcher personally administered the questionnaires to the participants during formal lectures. The aim and rationale of the study was explained at the outset and all students present in class were informed of the voluntary, anonymous and confidential nature of participation. Students who were willing to participate in the study were then given the opportunity to complete the questionnaire at their own pace (usually between 10 and 20 minutes) and then to hand it back to the researcher. This ensured a very high response rate as no students chose not to complete the questionnaire, while only 20 had to be discarded as the answers were incomplete. The questionnaire was presented in Afrikaans and English and respondents could complete it in the language of their choice.

Statistical analysis

In order to investigate research hypothesis 1, Pearson's correlation coefficient was calculated. To determine, however, whether correlations for Germanic and African learners differed significantly from each other, Fisher's r - to z -transformation was used. In this case the null hypothesis stated that the differences between two population correlations were equal to null, and the null hypothesis was, according to Howell (2002), compared to the following test statistics:

$$Z = \frac{r'_1 - r'_2}{\sqrt{\frac{1}{N_1 - 3} + \frac{1}{N_2 - 3}}}$$

where r'_1 and r'_2 are the z -values of the two correlations r_1 and r_2 respectively.

The original correlation coefficient was transformed according to Fisher's r to z before the test statistic value was determined.

Concerning the correlation section of the study, the size of the sample ($N = 355$) could cause the statistical power of the analyses to be large, and in this way increase the probability of statistical significance, but in actual fact, worthless results may be obtained. Consequently only the relationships that were significant in at least the 0,1% level ($\alpha = 0,001$) were reported.

Regarding the second formulated research hypothesis, one independent variable (population group) and various dependent variables (immediacy and learning variables) were used. According to Tabachnick and Fidell (1989) a one-way analysis of variance (MANOVA) is the proper statistical technique in these circumstances.

The significant F-result that was obtained with the MANOVA analyses was followed up with univariate analysis of variance on each of the dependent variables. In this analyses procedure 34 immediacy items including verbal, non-verbal, as well as five learning variables, were utilised. When dealing with different dependent variables, according to Shaw and Du Toit (1985), it is preferable that the obtained p value of each comparison, isolated, should be at least $0,01/41 = 0,0002$ in order to be significant on the multiple level of 1%.

Effect sizes

In order to reserve judgment on the practical importance of statistically significant results obtained by the investigation, the practical significance of results was examined. Effect sizes were calculated to provide a measure of practical significance. Cohen (Steyn 1999) provides information on the method according to which effect sizes can be measured in specified circumstances, as well as guidelines for the evaluation of the effect sizes.

Since the first hypothesis investigates the linear relationship between variables, Cohen (Steyn 1999) proposes that the correlation coefficient, namely p , be used as effect size.

The guideline values are as follows:

$p = 0,1$: small effect

$p = 0,3$: medium effect

$p = 0,5$: large effect

With the MANOVA two or more are compared as population means and, as indicated earlier, analyses of variance were done for this purpose. In this case the effect sizes were determined as follows:

$$f = \sqrt{k - 1 / N - k} \cdot \sqrt{F}$$

In order to interpret these effect sizes, the following guideline values were used:

$f = 0,1$: small effect

$f = 0,25$: medium effect

$f = 0,4$: large effect

The above guideline values are continuously used to evaluate the practical significance of the obtained results. Only the results of statistically significant effect sizes were determined.

RESULTS AND DISCUSSION ON FINDINGS

Before investigating the formulated research hypothesis, the descriptive statistics (means and standard deviations) concerning all the relevant variables for the whole investigation group were calculated, as indicated in Table 4.

TABLE 4: Means and standard deviations of variables in the total research group

Questionnaire/scale	N	X	s
Immediacy:			
Verbal behaviour	315	42,35	11,04
Non-verbal behaviour	323	36,35	7,26
Combined score	300	78,50	16,04
Cognitive learning:			
Simple learning	338	5,67	2,34
Learning loss	336	0,86	2,41
Affective learning:			
Attitude	260	61,03	15,88
Behavioural intent	264	57,45	17,97
Combined score	253	118,25	31,96

Research hypothesis 1

To determine whether there were in actual fact relationships between lecturers' *immediacy behaviours* and *learner learning* among UFS learners, Pearson's correlation coefficient (r) was calculated in conjunction with the SAS computer software (SAS Institute, 1985). The results for the total test group are indicated in Table 8.

TABLE 5: Correlation coefficients as calculated between lecturers' *immediacy behaviours* and *learner learning* for the total group

Lecturers' immediacy	Learning variable				
	Learning	Learning loss	Attitude	Behavioural intent	Total affect
<i>Verbal items</i>					
1	,16	-,08	,11	,17	,17
2	,39*	-,36*	,30*	,34*	,32*
3	,12	-,11	,13	,10	,14
4	,32*	-,24*	,31*	,34*	,36*
5	,26*	-,29*	,28*	,30*	,31*
6	,23*	-,24*	,26*	,24*	,27*
7	,24*	-,18*	,30*	,29*	,33*
8	,24*	-,28*	,25*	,22*	,26*
9	,11	-,03	-,08	,06	-,002
10	,31*	-,31*	,30*	,28*	,29*
11	,26*	-,26*	,12	,13	,14
12	,04	-,04	,007	,09	,07
13	,39*	-,39*	,28*	,35*	,33*
14	,26*	-,19*	,30*	,30*	,32*
15	,22*	-,15	,17	,15	,17
16	,28*	-,11	,32*	,22*	,28*
17	,43*	-,31*	,44*	,43*	,47*
18	-,02	,01	-,10	-,01	-,07
19	,07	-,05	-,01	-,04	-,02
20	,18*	-,25*	,22*	,23*	,23*
<i>Verbal total:</i>	,45*	-,42*	,44*	,43*	,46*
<i>Non-verbal items</i>					
21	-,002	,02	-,08	-,09	-,09
22	,003	,11	,04	-,03	,02
23	-,31*	,27*	-,42*	-,42*	-,43*
24	,18*	-,07	,40*	,31*	,36*
25	,28*	-,27*	,31*	,35*	,35*
26	-,11	,08	-,29*	-,28*	-,32*
27	,07	-,15	,01	,02	,01
28	,19*	-,17	,24*	,19	,22*
29	,05	-,05	-,04	-,02	-,04
30	-,20*	,13	-,10	-,12	-,12
31	-,13	,12	-,13	-,06	-,10
32	,30*	-,24*	,29*	,24*	,29*
33	,14	,12	,003	-,002	,005
34	,31*	-,21*	,36*	,37*	,39*
<i>Non-verbal total</i>	,36*	-,28*	,45*	,40*	,45*
<i>Immediacy total</i>	,47*	-,41*	,50*	,46*	,51*

* $p < 0,001$

It is clear from Table 5 that there were significant relationships for the whole test group between learners' perceptions of *lecturers' immediacy behaviour* and *learning*.

The verbal total score, the non-verbal total score, the immediacy total score as well as the majority of individual items showed significant relationships with learners' *cognitive* as well as *affective learning*.

In terms of verbal items, it is clear from Table 5 that especially item 17 (*Praises learners' work, behaviour or comments*) showed a high correlation with the different learning variables (cognitive and affective).

Regarding non-verbal items, it is clear from Table 5 that item 23 in particular (*Speaks in a monotonous or boring voice when he/she lectures*) showed a high degree of correlation with the different learning variables (cognitive and affective).

An investigation was then carried out to determine whether the aforementioned relationships differed significantly between the two population groups (Germanic and African). To manage this practically, Table 6 provides the relationship between *immediacy* and *cognitive learning*, while the relationship between *immediacy* and *affective learning* is provided in Table 7.

TABLE 6: Correlation coefficients as calculated between lecturers' immediacy and cognitive learning for the Germanic ($n = 187$) and African ($n = 150$) learners respectively

Lecturers' immediacy	Cognitive learning					
	Learning			Learning loss		
	Germanic	African	z	Germanic	African	z
<i>Verbal items</i>						
1	,22	,11	1,04	-,11	-,07	-0,36
2	,38*	,38*	0,00	-,36*	-,33*	-0,31
3	,21	,11	0,94	-,17	-,14	-0,28
4	,45*	,21	2,47+	-,38*	-,12	-2,54+
5	,38*	,17	2,07	-,37*	-,27*	-1,01
6	,34*	,20	1,37	-,33*	-,22	-1,08
7	,32*	,13	1,83	-,29*	-,05	-2,26
8	,32*	,18	1,35	-,28*	-,31*	0,30
9	,07	,16	-0,83	-,01	-,05	0,36
10	,38*	,21	1,70	-,41*	-,19	-2,22
11	,26*	,28*	-0,20	-,27*	-,25	-0,20
12	,02	,11	-0,82	-,06	-,06	0,00
13	,45*	,30*	1,59	-,38*	-,36*	-0,21
14	,32*	,16	1,55	-,21	-,12	-0,84
15	,23	,17	0,56	-,23	-,01	-1,22
16	,34*	,18	1,56	-,16	-,03	-1,19
17	,49*	,35*	1,55	-,43*	-,17	-2,62+
18	,02	-,03	0,45	-,08	,08	-1,45
19	,11	,07	0,36	-,08	-,07	-0,09
20	,21	,15	0,56	-,33*	-,16	-1,65
<i>Verbal total:</i>	,51*	,37*	1,59	-,46*	-,37*	-0,99
<i>Non-verbal items</i>						
21	,03	-,05	0,73	,03	,01	0,18
22	,06	,01	0,64	,01	,17	-1,47
23	-,37*	-,21	1,59	,32*	,18	1,36
24	,21	,16	0,46	-,13	-,01	-1,10
25	,29*	,25	0,40	-,34*	-,17	-1,65
26	-,26*	,06	1,87	,20	-,05	2,27
27	,09	,06	0,27	-,21	-,09	-1,12
28	-,24*	,13	1,04	-,26*	-,07	-1,78
29	,07	,02	0,45	-,06	-,04	-0,18
30	-,22	-,17	-0,47	,08	,18	-0,93
31	-,21	-,09	-1,12	,21	,06	1,39
32	-,26*	,32*	-0,60	-,22	-,23	0,09
33	,16	,14	0,18	-,14	-,12	-0,18
34	,50*	,10	4,08+	-,44*	,04	-4,36+
<i>Non-verbal total:</i>	,46*	,23	2,39+	-,42*	-,10	-3,16+
<i>Immediacy total:</i>	,55*	,37*	2,09	-,50*	-,31*	-2,07

* $p < 0,001$

+ $p < 0,01$ (critical z for two-sided test: $\pm 2,33$)

From Table 6 it seems that with regard to similarities:

- (a) the relationships between the verbal total scores and cognitive learning (simple learning and learning loss) variables were statistically significant for both Germanic and African learners. The relationships between the non-verbal total scores and the cognitive learning (simple learning and learning loss) variables were statistically significant for Germanic learners, while these relationships were not statistically significant for the African learner groups;

- (b) the relationships between the immediacy total scores and the cognitive learning (simple learning and learning loss) variables were statistically significant for Germanic as well as African learners;
- (c) in terms of the relationships between the verbal items and cognitive learning (learning and learning loss), numerous items had statistically significant relationships for Germanic learners, while only some items showed such relationships for African learners; and
- (d) in terms of the relationships between non-verbal items and cognitive learning (learning and learning loss), various items also showed a statistically significant relationship for Germanic learners, while only one item (item 32 – in simple learning) showed a significant relationship for African learners.

Concerning the differences in relationships between the two groups:

- (a) it was obvious that the relationship between the non-verbal total scores and simple learning differed significantly for the two groups and that the relationship between the non-verbal total score and learning also differed significantly for the two groups. The Germanic learners repeatedly showed a significantly higher relationship than the African learners did;
- (b) it was apparent that the relationship between the verbal item 4 (*Uses humour in class*) and *simple learning* differed significantly for the two groups and that the relationship between the same item and *learning loss* also differed significantly between the two groups. The Germanic learners showed a significantly higher relationship in comparison with African learners; and
- (c) it was clear that the relationship between the non-verbal item 34 (*Uses a variety of vocal expressions when he/she talks to the class*) and *simple learning* differed significantly for the two groups and that the relationship between the same item and *learning loss* also differed significantly for the two groups. The Germanic learners once again showed a significantly higher relationship in comparison with the African learners.

The relationships between *immediacy* and *affective learning* are provided in Table 7.

TABLE 7: Correlation coefficients as determined by the relationship between lecturers' *immediacy* and *affective learning* for the Germanic ($n = 163$) and the African ($n = 97$) learners respectively

Lecturers' immediacy	Affective learning								
	Attitude			Behavioural intent			Total affect		
	Germanic	African	Z	Germanic	African	z	Germanic	African	Z
<i>Verbal items</i>									
1	.21	-.03	1.87	.24	.08	1.27	.26*	.04	1.74
2	.38*	.14	1.99	.39*	.19	1.69	.40*	.16	2.02
3	.21	.05	1.25	.15	.10	0.39	.19	.11	0.63
4	.48*	.04	3.72+	.49*	.11	3.28+	.50*	.12	3.29+
5	.40*	.09	2.57+	.45*	.08	3.12+	.44*	.09	2.94+
6	.38*	.06	2.62+	.37*	.05	2.60+	.40*	.07	2.72+
7	.45*	.01	3.65+	.39*	.11	2.32	.45*	.09	3.04+
8	.35*	.06	2.35+	.29*	.11	1.45	.34*	.09	2.03
9	.001	-.19	1.48	.07	.04	0.23	.05	-.09	1.08
10	.42*	.10	2.68+	.35*	.14	1.72	.40*	.11	2.42+
11	.24	-.06	2.35+	.24	-.06	2.35+	.26*	-.06	2.46+
12	-.02	.09	0.85	.13	.07	0.47	.07	.10	-0.23
13	.38*	.10	2.31	.39*	.26	1.12	.41*	.18	1.95
14	.26*	.34*	-0.68	.26*	.35*	-0.76	.29*	.37*	-0.68
15	.22	.06	1.26	.17	.05	0.94	.20	.10	0.79
16	.38*	.21	1.44	.21	.24	-0.25	.29*	.26	0.25
17	.51*	.32	1.78	.52*	.28	2.22	.53*	.36*	1.64
18	.05	-.29	2.68+	.11	-.16	2.08	.07	-.25	2.50+
19	.15	-.24	3.05+	.14	.31	-1.38	.15	-.30	3.55+
20	.33*	.01	2.56+	.37*	-.06	3.45+	.36*	-.03	3.13+
<i>Verbal total:</i>	.55*	.18	3.35+	.51*	.22	2.61+	.56*	.21	3.23+
<i>Non-verbal items</i>									
21	-.02	-.17	1.17	-.09	-.08	-0.08	-.07	-.14	0.55
22	.12	-.05	1.32	.02	-.06	0.62	.07	-.03	0.31
23	-.46*	-.33*	-1.18	-.51*	-.22	-2.60+	-.51*	-.27	-2.20
24	.37*	.40*	-0.28	.30*	.35*	-0.42	.35*	.39*	-0.36
25	.36*	.22	1.18	.34*	.36*	-0.18	.38*	.30	0.69
26	-.28*	-.32	0.34	-.27*	-.30	0.25	-.30*	-.36*	0.52
27	.08	-.11	1.46	.10	-.10	1.54	.10	-.13	1.78
28	.27*	.21	0.49	.23	.11	0.95	.25*	.15	0.80
29	-.02	-.07	0.38	-.06	.05	-0.85	-.05	-.01	-0.31
30	-.19	.06	-1.94	-.13	-.08	-0.39	-.16	-.02	-1.08
31	-.21	-.01	-1.56	-.17	.10	-2.09	-.20	.07	-2.10
32	.28*	.27	0.08	.21	.23	-0.16	.27*	.31	-0.34
33	.05	-.05	0.77	.06	-.09	1.15	.06	-.07	1.00
34	.48*	.17	2.70+	.52*	.14	3.35+	.53*	.17	3.22+
<i>Non-verbal total:</i>	.51*	.32	1.78	.48*	.22	2.30	.53*	.28	2.32
<i>Immediacy total:</i>	.60*	.26	3.28+	.56*	.22	3.15+	.61*	.25	3.49+

* $p < 0,001$

+ $p < 0,01$ (critical z for two-sided test: $\pm 2,33$)

From Table 7 it seems that:

- (a) the relationships between the verbal total scores and affective learning (attitude, behavioural intent and total affect) variables as well as the relationships between the non-verbal total scores and affective learning variables were statistically significant for Germanic learners, while these relationships were not statistically significant in the African learners' group;

- (b) in contrast to cognitive learning, the relationships between the immediacy total scores in affective learning (attitude, behavioural intent and total affect) variables were only significant for Germanic learners; and
- (c) concerning the relationships between the verbal items and affective learning (attitude, behavioural intent and total affect), many of the items showed a statistically significant relationship for Germanic learners, while only some items show such a relationship for African learners. The same tendency occurred in terms of the relationships between the non-verbal items and affective learning (attitude, behavioural intent and total affect).

Regarding the difference in relationships between the two groups:

- (a) it was apparent that the relationship between the verbal total scores and all three of the affective learning variables (attitude, behavioural intent and total affect) differed significantly for the two groups and that the relationship between the immediacy total score and all three of the affective learning variables also differed significantly between the two groups. It was the Germanic learners who repeatedly showed a significantly higher relationship than the African learners;
- (b) the relationships between numerous verbal items and all three of the *affective learning* variables differed significantly for the two groups. The verbal items in question were:

item 4 (*Uses humour in class*)

item 5 (*Addresses learners by their names*)

item 6 (*Addresses me by my name*)

item 11 (*Gives feedback on my individual work by means of commenting on question papers, oral discussion, etc.*)

item 20 (*Is addressed by his/her first name by the class*)

Germanic learners showed a significantly higher relationship in all these items when compared with African learners;

- (c) the relationship between the non-verbal item 34 (*Uses a variety of vocal expressions when he/she talks to the class*) and all three of the *affective learning* variables differed significantly between the two groups. The Germanic learners once again showed a significantly higher relationship in comparison with the African learners.

The most important differences between the two population groups existed mainly between the verbal items and the three affective learning variables. It was furthermore clear that significant relationships between lecturers' immediacy and learning (cognitive and affective) were present mainly for the Germanic learners, and that only some of the immediacy items showed significant relationships with learning (cognitive and affective) variables for African learners.

To conclude, it was observed that, with regard to the size of effects, all the statistically significant coefficients shows a medium to large effect, which indicates that the findings have an average to large practical value.

Research hypothesis 2

In order to determine whether there were important differences in the means concerning *lecturers' immediacy* and *learning* for Germanic and African learners, the one-way MANOVA analyses - with the aid of the SAS computer software (SAS Institute 1985) - were used. The Hotelling-Lawley test size that was obtained in this manner yields an *F*-value of 2,82 for 38 and 184 degrees of freedom.

The calculated value was significant on the 0,01% level ($p = 0,0001$), and consequently there were statistically significant differences in the means for the two groups. In order to investigate these differences further, normal analyses of variance (ANOVA) were conducted, and the results are shown in Table 8.

TABLE 8: Results of analyses of variances concerning the immediacy and learning variables for the two population groups

Variables	Population Group						
	Germanic		African		F-value	p-value	f
	X	S	X	s			
1	2,57	1,20	2,40	1,39	1,87	0,1734	
2	2,82	1,05	3,20	1,05	4,56	0,0339	
3	2,43	1,12	1,86	1,25	10,54	0,0013	
4	2,70	1,12	2,39	1,18	1,05	0,3064	
5	1,99	1,56	1,39	1,40	8,34	0,0043	
6	1,64	1,70	0,81	1,30	17,89	0,0001*	0,28
7	2,06	1,26	2,19	1,35	0,02	0,8812	
8	1,52	1,45	1,24	1,36	1,81	0,1803	
9	1,71	1,21	1,67	1,40	0,58	0,4480	
10	2,06	1,24	2,25	1,42	0,99	0,3217	
11	2,00	1,16	2,05	1,50	0,19	0,6619	
12	1,96	1,21	1,56	1,38	4,18	0,0421	
13	2,09	1,22	2,56	1,37	5,42	0,0208	
14	2,25	1,29	2,60	1,40	3,49	0,0630	
15	2,30	1,03	2,63	1,19	6,66	0,0105	
16	2,51	1,04	2,74	1,15	0,89	0,3475	
17	2,26	1,12	2,55	1,40	3,88	0,0502	
18	1,65	1,06	1,38	1,35	3,24	0,0731	
19	1,75	1,17	1,38	1,30	8,34	0,0043	
20	1,60	1,69	1,59	1,68	0,13	0,7226	
21	0,61	1,11	0,68	1,25	0,05	0,8148	
22	2,57	1,20	2,03	1,45	4,48	0,0354	
23	1,39	1,46	1,12	1,31	0,34	0,5625	
24	3,49	0,71	3,48	0,94	0,07	0,7863	
25	3,01	0,99	3,12	1,07	0,09	0,7604	
26	1,20	1,25	1,20	1,40	0,64	0,4262	
27	0,62	0,95	0,66	1,15	0,11	0,7386	
28	2,33	1,29	2,44	1,46	0,57	0,4492	
29	0,91	1,26	0,95	1,34	0,09	0,7698	
30	1,48	1,17	1,38	1,33	2,98	0,0854	
31	1,39	1,38	1,76	1,49	2,69	0,1027	
32	2,85	1,10	3,19	1,04	14,84	0,0002*	0,26
33	2,21	1,25	2,03	1,45	2,18	0,1412	
34	2,34	1,22	2,29	1,38	1,40	0,2387	
Verbal total:	42,54	11,54	42,09	10,39	0,39	0,5349	
Non-verbal total:	36,40	7,38	36,28	7,13	0,02	0,8941	
Learning	5,36	2,33	6,04	2,32	4,92	0,0276	
Learning loss	1,17	2,43	0,48	2,33	3,94	0,0484	
Attitude	60,16	16,11	62,56	15,42	0,01	0,9418	
Behavioural Intent	55,63	18,73	60,59	16,20	0,97	0,3260	
Total affect	116,14	32,95	122,01	29,92	0,27	0,6010	

** p 0,0002 (multiple 1% level)

It is evident from Table 8 that differences occurred in means on two variables (item 6 and item 32) between African and Germanic learners, which is significant on the multiple 1% level. Noteworthy differences in terms of means on immediacy or learning variables did not occur. Regarding item 6 (*Addresses me by my name*), the Germanic learners showed a higher mean in comparison with African learners. Both averages, however, showed that this form of lecturer behaviour occurs seldom or occasionally. With reference to item 32 (*Has a very relaxed body posture when he/she is lecturing*), the African learners showed a higher mean compared to Germanic learners. Both means showed that this form of lecturer behaviour occurred fairly regularly.

SUMMARY

The results indicated that the impact of the perceived immediacy operated differently for the two groups, although they should be interpreted with some degree of caution. There were significant relationships for the whole test group between learners' perceptions of *lecturers' immediacy behaviour and learning*. The verbal total score, the non-verbal total score, the immediacy total score as well as the majority of individual items showed significant relationships with learners' *cognitive* as well as *affective learning*.

Verbal items, especially item 17 (*Praises learners' work, behaviour or comments*), showed a high correlation with the different learning variables (cognitive and affective). Regarding non-verbal items, item 23 in particular (*Speaks in a monotonous or boring voice when he/she lectures*) showed a high correlation with the different learning variables (cognitive and affective).

The relationships between the verbal total scores and cognitive learning (simple learning and learning loss) variables were statistically significant for both Germanic and African learners. The correlations between the non-verbal total scores and the cognitive learning (simple learning and learning loss) variables were statistically significant for Germanic learners, but were not statistically significant in the African learners' group.

Furthermore, the relationships between the immediacy total scores and the cognitive learning (simple learning and learning loss) variables were statistically significant for Germanic as well as African learners.

Regarding the correlation between the verbal items and cognitive learning (learning and learning loss), numerous items were statistically significant for Germanic learners, while only some items showed such a relationship for African learners.

In terms of the relationships between non-verbal items and cognitive learning (learning and learning loss), various items also showed a statistically significant relationship for Germanic learners, while only one item (item 32 – in *simple learning*) showed a significant relationship for African learners.

The relationship between the non-verbal total scores and simple learning differed significantly between the two groups. The relationship between the non-verbal total score and learning loss also differed significantly between the two groups. The Germanic learners repeatedly showed a significantly higher relationship than that of the African learners.

It was obvious that the relationship between the verbal item 4 (*Uses humour in class*) and *simple learning* differed significantly for the two groups and that the relationship between the same item and *learning loss* also differed significantly for the two groups. The Germanic learners showed a significantly higher relationship in comparison with African learners.

The relationship between the non-verbal item 34 (*Uses a variety of vocal expressions when he/she talks to the class*) and *simple learning* differed significantly for the two groups. The relationship between the same item and *learning loss* also differed significantly between the two groups. The Germanic learners once again showed a significantly higher relationship in comparison with the African learners.

The relationships between the verbal total scores and affective learning (attitude, behavioural intent and total affect) variables, as well as the relationships between the non-verbal total scores and affective learning variables, were statistically significant for Germanic learners, while these relationships were not statistically significant in the African learners' group.

In contrast to cognitive learning, the relationship between the immediacy total scores in affective learning (attitude, behavioural intent and total affect) variables were only significant for Germanic learners.

Concerning the correlation between the verbal items and affective learning (attitude, behavioural intent and total affect), many of the items showed a statistically significant relationship for Germanic learners, while only some items showed such a relationship for African learners. The same tendency occurred in terms of the correlation between the non-verbal items and affective learning (attitude, behavioural intent and total affect).

The relationship between the verbal total scores and all three affective learning variables (attitude, behavioural intent and total affect) differed significantly for the two groups. The relationship between the immediacy total score and all three of the affective learning variables also differed significantly for the two groups. Again it was the Germanic learners who repeatedly showed a significantly higher relationship than that of the African learners.

The relationships between numerous verbal items and all three *affective learning* variables differed significantly in the two groups. The verbal items in question were:

item 4 (*Uses humour in class*)

item 5 (*Addresses learners by their names*)

item 6 (*Addresses me by my name*)

item 11 (*Gives feedback on my individual work by means of commenting on question papers, oral discussion, etc.*)

item 20 (*Is addressed by his/her first name by the class*)

Germanic learners showed a significantly higher relationship in all these items when compared with African learners. The relationship between the non-verbal item 34 (*Uses a variety of vocal expressions when he/she talks to the class*) and all three *affective learning* variables differed significantly for the two groups. The Germanic learners once again showed a significantly higher relationship in comparison with the African learners.

The most important differences between the two population groups exist mainly between the verbal items and the three affective learning variables.

The significant relationships between lecturers' immediacy behaviour and learning (cognitive and affective) were present mainly for the Germanic learners, and only some of the immediacy items showed significant relationships with learning (cognitive and affective) variables for African learners.

Pertaining to the size of effects, it can be observed that all the statistically significant coefficients showed a medium to large effect, which indicates that the findings have an average to large practical value.

Differences occurred in means on two variables (item 6 and item 32) between African and Germanic learners. Noteworthy differences in terms of total scores on the immediacy of learning variables did not occur. Regarding item 6 (*Addresses me by my name*), the Germanic learners showed a higher mean in comparison with African learners. Both averages, however, showed that this form of lecturer behaviour occurs seldom or occasionally. Relating to item 32 (*Has a very relaxed body posture when he/she is lecturing*), the African learners showed a higher mean compared with Germanic learners. Both averages showed that this form of lecturer behaviour occurs fairly regularly.

Even though the results indicated that the impact of perceived immediacy operated differently for the two groups (possibly due to the fact that cultures differ in terms of what they expect regarding other individuals' behaviour), this study indicates a significantly positive correlation between immediacy behaviour and cognitive, affective and behavioural learning.

The research findings further prove that, in connection with the effect of immediacy behaviour on learning, both verbal and non-verbal immediacy behaviour are vital dimensions of effective instructional strategies for the promotion of affective and cognitive learning.

In conclusion, the verbal and non-verbal immediacy behaviour of lecturers whose home language is Afrikaans or English contributes positively to the affective and cognitive learning of learners whose home language is Afrikaans, English, or one of the African languages. Ultimately, the immediacy behaviour displayed by English or Afrikaans lecturers functions differently for learners whose home language is one of the African languages, than for those whose home language is Afrikaans or English.

The results of this study, in conjunction with the results of previous work on immediacy, indicate that teacher/instructor/lecturer immediacy has a significant influence on the learner-instructor/lecturer relationship. Moreover, the results of this study, combined with those of Fayer, Gorham and McCroskey (1988), Collier (1988) and Sanders and Wiseman (1990), indicate that the specific role of lecturer immediacy on learner outcomes was mediated, to some degree, by culture. As South African classrooms grow more culturally diverse, communication scientists should redouble their efforts in this promising area of research.

REFERENCES

- Allen, J.L. & Shaw, D.H. 1990. Teacher's communication behaviors and supervisors' evaluation of instruction in elementary and secondary classrooms. *Communication Education* 39: 308-322.
- Andersen, J.F. 1979. Teacher immediacy as a predictor of teaching effectiveness. *Communication Yearbook* 3: 543-559.
- Andersen, J.F., Norton, R.W. & Nussbaum, J.F. 1981. Three investigations exploring relationships between perceived teacher communication behaviors and student learning. *Communication Education* 30: 377-392.
- Andersen, P. 1991. Explaining intercultural differences in nonverbal communication. In *Intercultural communication: A reader*, edited by L.A. Samovar & R.E. Porter. Belmont, California: Wadsworth. pp. 286-296.
- Andersen, P.A., Guerrero, L.K., Buller, D.B. & Jorgensen, P.F. 1998. An empirical comparison of three theories of non-verbal immediacy exchange. *Human Communication Research* 24: 501-535.
- Barringer, D.K. & McCroskey, J.C. 2000. Immediacy in the classroom: Student immediacy. *Communication Education* 49(2): 178-186.
- Bloom, B.S. (Ed). 1956. *A taxonomy of educational objectives* (Handbook 1: The cognitive domain). New York: Longmans.
- Bloom, B.S. 1976. *Human characteristics and school learning*. New York: McGraw-Hill.
- Christensen, L.J. & Menzel, K.E. 1998. The linear relationship between student reports of teacher immediacy behaviors and perceptions of state motivation, and of cognitive, affective, and behavioral learning. *Communication Education* 47: 82-90.

- Christophel, D.M. 1990. The relationships among teacher immediacy behaviors, student motivation, and learning. *Communication Education* 39: 323-340.
- Christophel, D.M. & Gorham, J. 1995. A test-retest analysis of student motivation, teacher immediacy, and perceived sources of motivation and demotivation in college classes. *Communication Education* 44: 292-305.
- Collier, M.J. 1988. A comparison of conversations among and between domestic culture groups: How intra- and intercultural competencies vary. *Communication Quarterly* 36: 122-144.
- Comstock, J., Rowell, E. & Bowers, J.W. 1995. Food for thought: Teacher non-verbal immediacy, student learning, and curvilinearity. *Communication Education* 44: 251-266.
- Fayer, J.M., Gorham, J. & McCroskey, J.C. 1988. Teacher immediacy and student learning: A comparison between U.S. mainland and Puerto Rican classrooms. In *Puerto Rican Communication Studies*, edited by J.M. Fayer. Caracas: Icanografia.
- Gorham, J. 1988. The relationship between verbal teacher immediacy behaviors and student learning. *Communication Education* 3: 40-53.
- Gorham, J. & Christophel, D.M. 1990. The relationship of teachers' use of humor in the classroom to immediacy and student learning. *Communication Education* 39: 46-62.
- Gorham, J. & Zakahi, W.R. 1990. A comparison of teacher and student perceptions of immediacy and learning: Monitoring process and product. *Communication Education* 39: 354-368.
- Gudykunst, W.B. & Ting-Toomey, S. 1988. *Culture and Interpersonal Communication*. Newbury Park: Sage.
- Hall, E.T. & Hall, M.R. 1990. *Understanding cultural differences*. Yarmouth, Maine: Intercultural Press.

- Hannigan, T.P. 1990. Traits, attitudes, and skills that are related to intercultural effectiveness and their implications for cross-cultural training: A review of the literature. *International Journal of Intercultural Relations* 14: 89-111.
- Hecht, M.L., Andersen, O.A. & Ribeau, S. 1989. The cultural dimensions of nonverbal communication. In *Handbook of international and intercultural communication*, edited by M.K. Asante & W.B. Gudykunst. Newbury Park: Sage. pp. 163-185.
- Hecht, M.L., Larkey, L.K. & Johnson, J.N. 1992. African American and European American perceptions of problematic issues in interethnic communication effectiveness. *Human Communication Research* 19(2): 209-236.
- Hecht, M.L. & Ribeau, S. 1984. Ethnic communication: A comparative analysis of satisfying communication. *Intercultural Journal of Intercultural Relations* 8: 135-351.
- Howell, D.C. 2002. *Fundamental statistics for the behavioral sciences*. Belmont: International Thomson Publishing.
- Huysamen, G.K. 1993. *Metodologie vir die sosiale en gedragwetenskappe*. Halfweghuis: Southern Boekuitgewers.
- Kearny, P, Plax, T.G. & Wendt-Wasco, N.J. 1985. Teacher immediacy for affective learning in divergent college classes. *Communication Quarterly* 33: 61-74.
- Kelley, D.H. & Gorham, J. 1988. Effects of immediacy on recall of information. *Communication Education* 37: 198-207.
- Kochman, T. 1990. Force fields in Black and White communication. In *Cultural communication and intercultural contact*, edited by D. Carbauch. New Jersey: Lawrence Erlbaum Associates. pp. 139-217.
- Marais, H.C. 1985. On communication in a divided society. *Communicare* 4(2): 38-43.

Martin, J.N., Hecht, M.L. & Larkey, L.K. 1994. Conversational improvement strategies for interethnic communication: African American and European American perspectives. *Communication Monographs* 61(3): 237-255.

McCroskey, J.C., Sallinen, A., Fayer, J.M., Richmond, V.P. & Barraclough, R.A. 1995. A cross-cultural and multi-behavioral analysis of the relationship between non-verbal immediacy and teacher evaluation. *Communication Education* 44: 281-291.

McCroskey, J.C., Sallinen, A., Fayer, J.M., Richmond, V.P. & Barraclough, R.A. 1996. Non-verbal immediacy and cognitive learning: A cross-cultural investigation. *Communication Education* 45: 200-211.

Mehrabian, A. 1969. Some referents and measures of non-verbal behavior. *Behavioral Research Methods and Instruments* 1: 213-217.

Mehrabian, A. 1971. *Silent messages*. Belmont, California: Wadsworth.

Mehrabian, A. 1972. *Non-verbal communication*. Chicago: Aldine Atherton, Inc.

Mehrabian, A. 1981. *Silent messages: Implicit communication of emotion and attitude*. Belmont, California: Wadsworth.

Menzel, K.E. & Carrel, L.J. 1999. The impact of gender and immediacy on willingness to talk and perceived learning. *Communication Education* 48: 31-40.

Moore, A., Masterson, J.T., Christophel, D.M. & Shea, K.A. 1996. College teacher immediacy and student ratings of instruction. *Communication Education* 45: 29-39.

Myers, S.A. & Knox, R.L. 1999. Verbal aggression in the college classroom: Perceived instructor use and student affective learning. *Communication Quarterly* 47: 33-45.

Myers, S.A. & Knox, R.L. 2000. Perceived instructor argumentativeness and verbal aggressiveness and student outcomes. *Communication Research Reports* 17: 299-309.

- Myers, S.A. & Rocca, K.A. 2000. Students' state motivation and instructors' use of verbally aggressive messages. *Psychological Reports* 87: 291-294.
- Neuliep, J.W. 1995. A comparison of teacher immediacy in African-American and Euro-American college classrooms. *Communication Education* 44: 267-277.
- Parry, L. 1994. Cultural barriers to intercultural/interracial communication among black and white South African women: An exploratory study. *Communicare* 12(2): 5-20.
- Patterson, M.L., Powell, J.L. & Lenihan, M.G. 1986. Touch, compliance, and interpersonal affect. *Journal of Non-verbal Behavior* 10(1): 41-50.
- Powell, R.G. & Harville, B. 1990. The effects of teacher immediacy and clarity on instructional outcomes: An intercultural assessment. *Communication Education* 39: 369-379.
- Richmond, V.P., Gorham, J.S. & McCroskey, J.C. 1987. The relationship between selected immediacy behaviors and cognitive learning. *Communication Yearbook* 10: 574-590.
- Sanders, J.A. & Wiseman, R.L. 1990. The effects of verbal and non-verbal teacher immediacy on perceived cognitive, affective, and behavioral learning in the multicultural classroom. *Communication Education* 39: 341-354.
- Shaw, T.M. & Du Toit, S.H.C. 1985. *Causal relationships in longitudinal data* (Research Report WS-33). Pretoria: Human Sciences Research Council.
- South Africa Survey*. 2001. Johannesburg: South African Institute of Race Relations.
- Statistical Analysis System Institute. 1985. *SAS user's guide: Statistics version*. 5th ed. Cary: Author.

Statistical Practices for Social Sciences Incorporated 1983. *SPSS user's guide*. New York: Author.

Steyn, H.S. 1999. *Praktiese beduidendheid: Die gebruik van effekgroottes*. Potchefstroom: Publikasiebeheer Komitee.

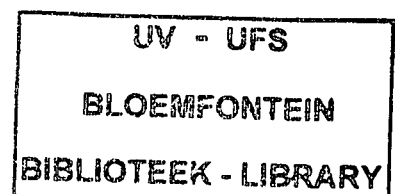
Steyn, M. 1994. A perspective on reconstructing or troubled communities: Intercultural communication and African worldview. *Communitas* 1: 15-31.

Tabachnick, B.G. & Fidell, L.S. 1989. *Using multivariate statistics*. 2nd ed. New York: Harper & Row.

Terblanche, F.H. 1994. Die aard en gemeenskapskulturele dimensie van nie-verbale boodskapverkeer met spesifieke verwysing na emblematiese gedrag. *Communitas* 1: 32-54.

Thweatt, K.S. & McCroskey, J.C. 1998. The impact of teacher immediacy and misbehaviors on teacher credibility. *Communication Education* 47: 348-358.

Witt, P.L. & Wheelless, L.R. 2001. An experimental study of teachers' verbal and non-verbal immediacy and students' affective and cognitive learning. *Communication Education* 50(4): 327-342.



1181 8859X