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The Influence of lecturers' verbal and non-verbal immediacy behaviour on perceived affective and cognitive learning in a multicultural context.

ABSTRACT

The intention of the present study was to determine whether (1) the 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) whether the form of immediacy behaviour displayed by English or Afrikaans lecturers functions differently for learners whose home language is one of the African languages in relation to those whose home language is Afrikaans or English. Data was collected by means of a questionnaire that had separate sections on immediacy behaviour and learning. Positive correlations between the immediacy behaviour of the lecturers and the affective and cognitive learning of the learners were observed for the whole test group. The immediacy behaviour displayed by the lecturers functions differently for learners whose home language is one of the African languages than for those whose home language is Afrikaans or English. Considering these findings, it is imperative that instructional communication in today's South Africa be increasingly characterized by a culture-centred approach.

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1. 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 in 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 characterized 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 a 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.

1.1 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 (i.e. immediacy behaviours that convey meaning to other people without the use of words) includes behaviour such as touching, 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 communicating warmth and intimacy (Andersen, Guerrero, Buller & Jorgensen, 1998; Gorham, 1988; Neuliep, 1995).

Verbal immediacy behaviour (i.e. immediacy behaviours that convey meaning to other people by means of words) includes verbal utterances such as 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 can, referring to Mehrabian (1971:1), be described as follows:

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

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).

1.2 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 aspects such 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.

1.3 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) conceptualization of learning as a process that causes the acquisition or change of affective, cognitive and/or behavioural communication. Each of these learning domains is characterized 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).

1.4 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 not find a meaningful relationship between communication variables and cognitive learning either.

1.5 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).

1.6 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 Southern African languages (the so-called 'Bantu' languages - henceforth African languages), or one of the Germanic languages.

2. AIMS OF THE STUDY AND FORMULATION OF HYPOTHESES

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

- (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 are perceived differently by 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:

2.1 Research hypothesis 1

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

2.2 Research hypothesis 2

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

3. METHOD

3.1 Design

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

3.2 Participants

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

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

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

From Table 1 the following is clear:

- (a) 44,2% of the 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.

3.3 Measuring instruments

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

3.3.1 Biographical information

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

3.3.2 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.

Scale	α -coefficients	
	English	Afrikaans
Immediacy:		
Verbal behaviour	0,743	0,799
Non-verbal behaviour	0,627	0,709
Combined score	0,789	0,848

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

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

3.3.3 Learning:

Learning usually comprises three components, namely affective, cognitive and psychomotor. For this research purpose only two components are focused upon: affective and cognitive.

3.3.4 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 the 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.

Scale	α -coefficients	
	English	Afrikaans
Affective learning:		
Attitude	0,895	0,936
Behavioural intent	0,898	0,937
Combined score	0,938	0,960

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

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.

3.3.5 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 of 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? (circle one)

0 1 2 3 4 5 6 7 8 9

3.4 Procedure

The researchers personally administered the questionnaires to the participants during formal lectures. The aim and rationale of the study were explained at the outset and all the students present in class were informed of the voluntary, anonymous and confidential nature of their participation. The 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 return it 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.

3.5 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.

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 fact, worthless results may be obtained. Consequently, only the relationships that were significant in at least the 0,1% level ($= 0,001$) 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 a univariate analysis of variance on each of the dependent variables. In this analysis procedure 34 immediacy items, including verbal, non-verbal, as well as five learning variables, were utilized. When dealing with different dependent variables, 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% (Shaw & Du Toit, 1985).

3.5.1 *Effect sizes*

In order to reserve judgment on the practical importance of statistically significant results obtained by the investigation, the practical significance of the results was examined. Effect sizes were calculated to provide a measure of practical significance. Since the first hypothesis investigates the linear relationship between variables, the correlation coefficient, namely p , was used as effect size (Cohen in Steyn, 1999).

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:

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

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.

4. RESULTS AND DISCUSSION OF THE 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.

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

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

4.1 Research hypothesis 1

To determine whether there were in fact relationships between lecturers' *immediacy behaviours* and *learner learning* among UFS learners, Pearson's correlation coefficient (*r*) was calculated. The results for the total test group are indicated in Table 5.

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*

* $p < 0,001$

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

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 and 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 in particular (Speaks in a monotonous or boring voice when he/she lectures) showed a high negative 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.

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
18	,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	,2	,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: $\pm 2,33$)

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

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 loss 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.

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	-,023
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	-,1	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: $\pm 2,33$)

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

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 show 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 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.

Variables	Population Group						f
	Germanic		African		F-value	p-value	
	<i>X</i>	<i>S</i>	<i>X</i>	<i>s</i>			
1	2,57	1,20	2,40	1,39	1,87	0,1734	0,28
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*	
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*	
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	
Leaming	5,36	2,33	6,04	2,32	4,92	0,0276	
Leaming 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)

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

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.

5. SUMMARY AND CONCLUSIONS

The focus of the study was on possible relationships that could occur between learners' perception of their lecturer's immediacy behaviour and their learning behaviour. Regarding immediacy behaviour, the total score, as well as verbal and non-verbal immediacy behaviour scores were used. In terms of learners' learning behaviour, not only a total score, but also cognitive and affective learning scores were used. These relationships were investigated in the totals as well as in the Germanic and African scores respectively. The most important findings are summarized below:

In the total group, the 1% level shows a significant relationship between the total immediacy, the verbal and non-verbal immediacy and their total learning behaviour score. All three of these coefficients were positive and showed a medium to big effect size, which points to the fact that the result is significant for the practice. These positive relationships thus indicated that a) the immediacy behaviour of lecturers in general, and b) the verbal and non-verbal immediacy behaviour had a positive influence on the general learning behaviour of learners. It was furthermore important to indicate that for the total group, the verbal and non-verbal immediacy behaviour of the lecturer showed a significant relationship with learners' cognitive and affective learning behaviour. It also yielded positive correlation coefficients. This means that the more a lecturer tends to make use of verbal and non-verbal immediacy behaviour, the higher the degree of learning (cognitive and affective) that learners experience.

The verbal immediacy behaviour items that correlate the most in the total groups with their cognitive learning behaviour are items 2 (Asks questions or encourages students to talk), 13 (Asks how students feel about an assignment, due date or discussion topic) and item 17 (Praises learners' work, behaviour or comments). The non-verbal immediacy behaviour items that correlate the highest with their cognitive learning behaviour in the total group are items 23 (Speaks in a monotonous or boring voice when he/she lectures), 32 (Has a very relaxed body position while talking to the class) and 34 (Uses a variety

of vocal expressions when he/she talks to the class). In terms of these items, items 32 and 34 show a positive correlation with the cognitive learning behaviour of the learner, while item 23 shows a negative correlation. This means that if a lecturer tends to use a variety of vocal expressions when he/she talks to the class, has a very relaxed body position while talking to the class and does not speak in a monotonous or boring voice, he/she has a positive influence on learners' cognitive learning behaviour.

The verbal immediacy behaviour items that correlate the highest with affective learning behaviour in the total group, are items 4 (Uses humour in class), 7 (Gets into conversations with individual students before or after class) and 17 (Praises learners' work, behaviour or comments). This implies that when learners perceive a lecturer as someone who uses humour, is accessible to speak to learners after class and encourages their work and actions, such learners also perceive their affective learning behaviour as positive. Concerning non-verbal items, it is especially item 23 (Speaks in a monotonous or boring voice when he/she lectures) and item 34 (Uses a variety of vocal expressions when he/she talks to the class) that show a high correlation with the learners' affective learning. Item 23 correlates negatively while item 34 shows a positive correlation. Consequently, it can be concluded that when a lecturer is perceived as having a variety of vocal expression in class, and not having a monotonous/dull voice, the effect on affective learning behaviour is positive. From the afore-mentioned it is clear that items 17 (verbal behaviour), 23 and 24 (non-verbal behaviour) showed a high relationship with learners' cognitive and affective learning.

The study furthermore investigated whether there were possible differences between the two groups of learners (Germanic/African) regarding the afore-mentioned relationships. The most significant findings regarding this matter will now be discussed.

Firstly, it can be indicated that there were no significant differences in the relationship between the total immediacy behaviour of lecturers and learners' cognitive learning behaviour in the two groups. Significant differences in this regard occurred between the non-verbal immediacy behaviour and the cognitive learning behaviour of the two groups. In comparison to the Germanic group, the African group showed a positive relationship between the non-verbal immediacy behaviour and their cognitive learning behaviour.

In affective learning behaviour, a significant difference in the relationship between the total immediacy behaviour of the lecturer and the learners' affective learning behaviour in both groups was found. In comparison to the African group, the Germanic group showed a higher positive relationship between the two said variables. There was also a significant difference in the relationship between the verbal immediacy behaviour and

the learners' affective learning behaviour for the two groups. Once again, the Germanic group showed a higher positive relationship between the two variables than in the case of the African group.

Regarding the non-verbal immediacy behaviour and their affective learning, however, no significant difference in the relationship was found. It seems thus that regarding cognitive learning, the non-verbal immediacy behaviour of the lecturer – and in affective learning, the verbal immediacy behaviour of the lecturer plays a bigger role in the Germanic groups than in the African group. It must however be kept in mind that this behaviour (verbal and non-verbal immediacy) does play a role in the African learner's learning (cognitive and affective), but that the relationship is not as strong as in the Germanic group.

In conclusion, even though the finding indicated that the influence of perceived immediacy operated differently for the two groups, this study confirmed past research, which indicated a significantly positive correlation between immediacy behaviour and cognitive and affective learning.

6. RECOMMENDATIONS

On the basis of both the theoretical approach to the study and the findings of the study, the following general recommendations can be made:

- (1) Given the fact that the demography of the South African classroom is becoming increasingly multicultural, lecturers should, with a view to improving the quality of their instructional communication, be made aware of what kinds of verbal and non-verbal forms of behaviour are noticed as indicators of immediacy.
- (2) In the assessment of lecturers, the perceptions of the learners regarding the measure to which they make use of immediacy behaviour must be taken into account.
- (3) Immediacy behaviour displayed by lecturers and the influence thereof on learners in the South African context should be examined more closely.
- (4) The impact of verbal and non-verbal immediacy behaviour on learning in a culturally diverse classroom should also be investigated, in the case of lecturers whose home language is one of the African languages.

- (5) Since instructional communication is transactional in nature, an assessment should also be made of the implications of learners' immediacy behaviour on the communicative behaviour of their lecturers.
- (6) Forms of behaviour of lecturers, such as caring, affinity-seeking, clarity, argumentativeness and interpersonal attraction, which are closely related to immediacy behaviour, should also be investigated in terms of the roles that they play in learning as such.

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 Samovar, L.A. & PORTER, R.E. eds. *Intercultural communication: A reader*. Belmont, California : Wadsworth. pp. 286-296).
- ANDERSEN, P.A., GUERERO, 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. 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 Fayer, J.M. *Puerto Rican Communication Studies*, 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*. eds. Asante, M.K. & Gudykunst, W.B. 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*. ed. Carbauch, D. 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.
- PATERSON, M.L., POWELL, J.L. & LENIHAN, M.G. 1986. Touch, compliance, and interpersonal affect. *Journal of Non-verbal Behaviour*, 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. 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*. 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.