The Importance of Nonverbal Aspects of Communication in Teaching and the Pre- and Inservice Teacher Education Curriculum

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Abstract

The ability to express and decode nonverbal cues is assumed to be an essential quality in communication and teaching. To validate, generalize and expand upon earlier research on the importance of nonverbal competencies in communication and teaching, i.e., the relationship of nonverbal competencies (e.g., expressiveness/"charisma" and nonverbal sensitivity) and psycho-social and personality dimensions, a coordinated set of 13 correlational studies was conducted with students of education and student teachers (N=1339).

Significant positive relationships were found between expressiveness/"charisma" and success in interpersonal relations, extraversion, competence- and control orientations, and self-efficacy.

As opposed to many studies in the USA results revealed low or/and inconsistent correlations between nonverbal decoding ability and the same psycho-social and personality dimensions.

Nonverbal expressiveness/"charisma" can be seen as an important dimension for effective teaching in the USA and Germany. For the importance of Nonverbal Sensitivity we still have to rely on consideration and findings from studies conducted in the USA. Recommendations for infusing this aspect of communication/teaching success into pre- and inservice teacher education will be discussed.

Introduction

Although much of the communication process in the classroom is verbal, the essence of eloquent, passionate, or spirited communication involves facial expressions, gestures, body position and movement to transmit, extend, differentiate, or modify verbal messages and the delivery of lesson content (Anderson, 1998; Argyle, 2002). The development of emotional states that are exciting, moving, inspiring, or captivating, and of interpersonal attitudes is often determined by nonverbal "expressiveness," often referred to as "charisma" or "spirit" (Friedman, Riggio, & Casella, 1988). This, as research has impressively documented, is a significant variable related to the influence of communicators and to success of social interaction in teaching (Friedman, Prince, Riggio, & DiMatteo, 1980).

Not only the ability to send nonverbal cues expressively, but also being able to *accurately decode* them, has bearing in the daily professional life of teachers. In interpersonal communication, interactants are required to encode and decode simultaneously, i.e. to perceive and interpret the nonverbal cues of others while displaying meanings, emotions, attitudes, and intentions at the same time. Thus, as studies document (see Knapp & Hall, 2002), both sending and receiving abilities are of importance in the communication process.

Purpose of Studies

The purpose of this project was to conduct a coordinated set of correlational studies (13 samples) to generalize and expand upon earlier research on the importance of nonverbal skill in communication and teaching, i.e. the relationship of nonverbal competencies (Nonverbal Sensitivity, Expressiveness/"Charisma") and psycho-social and personality dimensions (Success in Interpersonal Relations, Directiveness, Extraversion, Self-Efficacy Expectation, Competence and Control Orientations, and various personality dimensions from a personality inventory, Age, and Gender) within the German context (1). In addition**,** the association of encoding and decoding abilities was investigated.

Rationale/Review of Research

Nonverbal Encoding Abilities. "The ability to convey nonverbal messages to others, particularly the sending of emotional messages, is a critical skill for social success, and a fundamental component of the larger construct of communication competence." (Riggio, 2006, 87). From the rich body of research, mostly conducted in the in the USA, it can be concluded that nonverbal encoding skills, especially ***Nonverbal Expressiveness,*** play a crucial role in communication and teaching. The expressive use of nonverbal cues is often considered *and* studied as an ingredient of the more general, sometimes elusive terms like: buoyancy, energy, stimulation, animation, enthusiasm, or charisma (understood largely as nonverbal expressiveness). Research reviews of Barr (1948), Rosenshine (1970; 1971), Klinzing (1984), Klinzing & Gerada Aloisio (2004b) concluded that high-inference and low inference measures of those variables are related to aspects of *professional success* (i.e., for teachers - measures of desired student/audience behaviors, attitudes and achievements). Even charismatic physicians

were likely to have more patients than their less charismatic colleagues (DiMatteo, 1979; DiMatteo, Taranta, Friedman, & Prince, 1980; DiMatteo, Hays, & Prince, 1986).

Studies on the relation of nonverbal expressiveness and psycho-social dimensions documented that people who were more expressive/"charismatic", were able to enact affect more accurately (Friedman et al., 1980; Friedman, Riggio,, & Segall, 1980; Riggio & Riggio, 2005; Riggio, 2006; Klinzing & Gerada, 2007a; 2007b), appeared as more attractive to others (DePaolo, Blank, Swaim, & Hairfield, 1992), were perceived as more likable and attractive when meeting new people (Friedman, Riggio, & Casella, 1988; Riggio & Friedman, 1986), were able to influence others with their emotions through their nonverbal behavior (Friedman & Riggio, 1981), were more socially self-confident and less lonely and shy, reported larger and more supportive social networks (Riggio, 1992), had lectured to groups of people, had been elected to office in an organization, had theatrical experiences, had opted or were selected for employment that involved working with and influencing people, or had worked as a sales person (Friedman et al., 1980).

Besides these findings on the relation of nonverbal expressiveness to communication success and psycho-social variables, several ***personality dimensions*** are also closely tied to nonverbal Expressiveness/"Charisma" (measured by the Affective Communication Test (ACT, see Friedman et al. 1980). Research on personality dimensions and "Charisma" revealed significant relationships with characteristics considered as important for social life such as *affiliation, extraversion, self-esteem, and internal locus of control (internality).* Furthermore, ACT-scores were related to *achievement orientation* and *playfulness,* but also to *dominance.* "Charisma" was not or only very *weakly* related to *social desirability, self-monitoring, impulsivity, trait anxiety, self-monitoring, lie* and *machiavellianism.* Nonverbal expressiveness was negatively related to *neuroticism* and *social recognition.* No relationship between age and expressiveness was found (Klinzing & Gerada Aloisio, 2004a).

Nonverbal expressions are more difficult to control than verbal ones. Thus they may reflect gender differences and similarities with greater validity than verbal behaviors. Friedman et al. (1980) found weak (but nearly significant) differences in favor to woman in two samples ($r=0.09$, $p<0.11$; $r = 0.11$, $p<0.07$). No statistical differences between men and women in encoding abilities were found among German students of education and student teachers (Schiefer, Kunkel,

Steiger, Revenstorf, & Klinzing, 1984; Klinzing, Kunkel, Schiefer, & Steiger, 1984; Klinzing & Gerada Aloisio, 2004a).

Thus, research on the relationship of nonverbal skill/expressiveness/"charisma" with a wide range of psychosocial or personality dimensions in the USA suggests that a powerful variable is tapped; this research also contributes to the understanding of this psychosocial construct.

Accuracy of Decoding Nonverbal Cues. Research on the relationships of nonverbal perceptiveness with psychosocial and personality dimensions refers to the importance of this aspect of communication and contributes to its understanding. Positive findings were obtained on the relationship between nonverbal judgment ability and clinical ability, teaching excellence (Rosenthal, Hall, DiMatteo, Rogers, & Archer (1979) and the satisfaction and appointment-keeping records of actual patients of physicians (DiMatteo, et al. 1986).

The importance of this variable is also determined by US-research on the systematic relation of this ability to a wide range of social-psychological and personal dimensions. Riggio (2006) and Losoya & Eisenberg (2001) reported recent studies by Nowicki & Duke (2001), Hall & Carter (1999), Archer, Costanzo & Akert (2001), Ambady, Hallahan & Rosenthal (1995), and Hodgins & Zuckerman (1990). These authors found that nonverbally sensitive individuals possess a greater overall social competence, are more socially aware and competent, had more supportive and higher quality relationships, are more empathic and other-oriented. Refering to older studies, Knapp & Hall (2002) summerized that skilled decoders of nonverbal signs and signals have been found to be *"better adjusted, less hostile and manipulating, more interpersonally democratic and encouraging, more extraverted, less shy, less socially anxious, more warm, more empathic, more cognitively complex and flexible."* (Knapp & Hall, 2002, 85). In addition, skilled decoders are more *self-monitoring*, are more *popular and sensitive* to the needs of others, and report higher levels of *warmth and satisfaction* in their own personal relationships (Hall, 1998; Knapp & Hall, 2002; see also Klinzing & Gerada Aloisio, 2004a); for this self-rated success in current interpersonal relations**,** Rosenthal et al. (1979, 263ff) found consistent and significant positive correlations to nonverbal sensitivity (assessed with the PONS) in three samples, but the correlations were small in magnitude. In a sample of college students which might be comparable to the sample of university students in the studies of the present report, Rosenthal et al. (1979) found significant relationships between PONS scores and

"Understanding in Friendships" and "Making Friends more Quickly".

In studies examining traits associated with accuracy in decoding nonverbal signs and signals, one of the most consistent findings was the tendency for women to be more effective decoders than men (Hall, 1998). In about 80% of about three dozen earlier studies and studies on 133 samples using the PONS-test to investigate *nonverbal sensitivity as a main effect of gender* (Rosenthal et al., 1979), it was shown that females tend to be more accurate at nonverbal judging than men (M ES = 0.42). Knapp & Hall (2002, 97) summerized this tendency as follows:

"We reviewed a large number of different correlates of accuracy in decoding and encoding nonverbal cues, among which one of the most consistent is the tendency for females to be more effective communicators as both decoders and encoders."

As Knapp & Hall (2002, 83) stated, these findings hold up, generally, whether the subjects are from the USA or not. However, in one German sample (reported in Rosenthal et al., 1979), a tendency of higher nonverbal sensitivity for men was found (ES = 0.21s). Following on this study Schiefer et al. (1984), Klinzing (1998; 2003; 2004), Klinzing & Gerada Aloisio (2004a; 2004b) and Gerada Aloisio & Klinzing (2005) conducted several investigations with university students using the PONS and other tests (Test on Decoding Emotions from Facial Expressions, TDEFE, Ekman & Friesen, 1975). The authors didn't find statistically significant differences in decoding abilities between men and women. In the studies reported here the possible superiority of women on nonverbal decoding abilities was again examined in the German context.

Research conducted in the USA suggests that advancement in age may reflect changes in attention, memory, and perception. The skill of decoding nonverbal cues develops from childhood to age 30 and seems to decrease later on in life (Rosenthal et al., 1979; Liebermann, Rigo & Campain, 1988, Klinzing & Gerada Aloisio, 2004a).

In face-to-face communication**,** interactants are decoding and encoding nonverbal cues simultaneously. Are receiving and sending skills part of a general communication ability? Knapp & Hall (2002) reported findings from about a dozen studies and found positive, weak as well as negative relationships.

Findings of 13 correlational studies are reported here to have replicated, thus validated, and

also expanded these findings from the USA in the context of German student teachers and students of education.

The Studies

Hypotheses

The following hypotheses were formulated as null-hypotheses for the 13 studies:

There is no significant relationship ($p < 0.05$) between:

1.1 Encoding Ability (assessed as "Charisma" with the ACT) and *Factors of Success in Current Interpersonal Relations*: Factor 1: "Quality of Opposite Sex Relationships"; 2: "Quality of Same-Sex Relationships"; 3: "Number of Friends"; 4: "Speed in Making Friends"; 5: "Understanding in Relationships", Rosenthal et al., 1979);

1.2 Encoding Ability (assessed as "Charisma" with the ACT) and *Directiveness* (assessed with the F-D-E);

1.3 Encoding Ability (assessed as "Charisma" with the ACT) and *Extraversion* (assessed with the F-D-E);

1.4 Encoding Ability (assessed as "Charisma" with the ACT) and *Self-Efficacy Expectation* (assessed with the SWE);

1.5 Encoding Ability (assessed as "Charisma" with the ACT) *and Competence and Control Orientations* (assessed with the FKK: Self-Concept of Own Abilities, Internality, Social Externality, Fatalistic Externality, Self-Efficacy, Externality, Self-Efficacy minus Externality);

1.6 Encoding Ability (assessed as "Charisma" with the ACT) and *Personality Dimensions* (assessed with the FPI: Nervousness, Aggressiveness, Depression, Excitability, Sociability, Calmness, Dominance, Inhibition, Openness, Extraversion, Emotional Lability, Masculinity);

1.7 Encoding Ability (assessed as "Charisma" with the ACT) and *Age*;

1.8 Encoding Ability (assessed as "Charisma" with the ACT) and *Gender*.

2.1 Nonverbal Sensitivity (PONS) and Factors of *Success in Current Interpersonal Relations:* Factor 1: "Quality of Opposite Sex Relationships"; 2: "Quality of Same-Sex Relationships"; 3: "Number of Friends"; 4: "Speed in Making Friends"; 5: "Understanding in Relationships");

2.2 Nonverbal Sensitivity (assessed with the PONS) and *Directiveness* (assessed with the F-D-E);

2.3 Nonverbal Sensitivity (PONS) and *Extraversion* (assessed with the F-D-E);

2.4 Nonverbal Sensitivity (PONS) and *Self-Efficacy Expectation* (assessed with the SWE);

2.5 Nonverbal Sensitivity (PONS) and *Competence and Control Orientations* (assessed with the FKK: Self-Concept of Own Abilities, Internality, Social Externality, Fatalistic Externality, Self-Efficacy, Externality, Internality minus Externality);

2.6 Nonverbal Sensitivity (PONS) and *Personality Dimensions* (assessed with the FPI: Nervousness, Aggressiveness, Depression, Excitability, Sociability, Calmness, Dominance, Inhibition, Openness, Extraversion, Emotional Lability, Masculinity);

2.7 Nonverbal Sensitivity (PONS) and *Age*;

2.8 Nonverbal Sensitivity (PONS) and *Gender*;

3. *Nonverbal Sensitivity* (assessed with the PONS) and *Encoding Ability* (assessed as "Charisma" with the ACT).

Subjects

Altogether **1339** student teachers and students studying pedagogy as a major in two large German Universities (males: 367; females: 972) signed up to participate in the 13 correlational studies. For some participants data were not available for a number of reasons: These include: momentary indispositions; incompletion of the tests because some participants had to leave the session before the test was administered, inattendence, or failure to return the tests.. *Figure 1* gives a profile of the participants of the studies based on age, gender, number of semesters completed, and majors studied at the universities.

Figure 1: **Profile of the Participants in the Correlational Studies**

Study 1: **Lecture University of Tuebingen: *"Nonverbal Communication".* N=131** university students, female=107; male=24 (age: M=22.85; s=4.59; semester completed: M=1.68 (s = 1.41); no information: 14)

In this sample there were no PONS-test repeaters.

Majors:

Diploma	***MA***	***Student Teachers***			
	Pedagogy + Sociology, Philology, History, Philosophy, Linguistics, Arts., Political Sc. etc.	**Philol-ogy**	**Mathm./ Sciences**	**Mathm./ Sciences/ Philolo-logy**	**Sport/ Phil. oder Sciences**
77	**38**	**9**	**0**	**0**	**0**

No information: 7

(Continued)

Figure 1, cont.

Study 2: **Seminar University of Stuttgart:** *„Nonverbal Aspects of Human Communication"*. **N=60** university students, female: 37; male: 23 (age: M= 24.1 (s=3.48, no information: 1)

In this sample there were no PONS-test repeaters.

Majors:

MA-, Diploma-Students	*Student Teachers*				
Pedagogy + Sociology, Philology, History, Philosophy, Linguistics, Arts., Political Sc. etc.	**Philol-ogy**	**Mathm./ Sciences**	**Mathm./ Sciences/ Philolo-logy**	**Sport/ Phil. oder Sciences**	**Coputer Science**
23	**25**	**1**	**4**	**3**	**4**

Study 3: **Seminar University of Tuebingen: *"Classroom Management".*** **N=44** university students, 28 female: 28, 16 male; (age: M=23.98, s=3.15).

In this sample there were no PONS-test repeaters.

Majors:

Diploma- MA-Students	*Student Teachers*			
Pedagogy + Sociology, Philology, History, Philosophy, Linguistics, Arts., Political Sc. etc.	**Philol-ogy**	**Mathm./ Sciences**	**Mathm./ Sciences/ Philolo-logy**	**Sport/ Phil. oder Sciences**
6	**12**	**3**	**14**	**5**

No information: 4

Study 4: **Lecture University of Tuebingen: *"Nonverbal Aspects of Human Communication II"* . N=126**; 27 male; 99 female (age: M =22.94; s =4.02 years, no information 1); semester completed: 2.80; s = 1.56; no information: 34).

There were no PONS-test repeaters in this sample.

Majors:

MA-, Diploma-Students	*Student Teachers*			
Pedagogy + Sociology, Philology, History, Philosophy, Linguistics, Arts., Political Sc. etc.	**Philol-ogy**	**Mathm./ Sciences**	**Mathm./ Sciences/ Philolo-logy**	**Sport/ Phil. oder Sciences**
100	**15**	**1**	**2**	**4**

no information: 4

(Continued)

Figure 1, cont.

Study 5: Seminar **University of Tuebingen: *"Models of Teaching"*. N=82** university students, 28 male; 54 female. (age: M=24.11, s=3.69), semester completed: M=6.77, s=1.77, no information: 3).

Sample without PONS-test-repeaters: N=67; age: M=24.12 (s=3.87); semester completed: M=6.11 (s=1.86, no information: 1).

Majors:

MA-, Diploma-Students	*Student Teachers*			
Pedagogy + Sociology, Philology, History, Philosophy, Linguistics, Arts., Political Sc. etc.	**Philol-ogy**	**Mathm./ Sciences**	**Mathm./ Sciences/ Philolo-logy**	**Sport/ Phil. oder Sciences**
8	**42**	**19**	**7**	**6**

Study 6: **Lecture University of Tuebingen: *"Nonverbal Communication".* N=95** university students, female: 58; male: 37; age: M=23.52 (s=3.80, no information: 1); semester completed: M=4.05, s= 2.03, no information: 12).

Sample without PONS-test-repeaters: N=75 (age: M=23.56 (s=4.14 years); semester completed: 3.95, s=2.09, no information: 17.

Majors:

Diploma-, MA-Students	*Student Teachers*			
Pedagogy + Sociology, Philology, History, Philosophy, Linguistics, Arts., Political Sc. etc.	**Philol-ogy**	**Mathm./ Sciences**	**Mathm./ Sciences/ Philolo-logy**	**Sport/ Phil. oder Sciences**
26	37	2	12	8

No information: 10

Study 7: **Seminar University of Tuebingen: *"Nonverbal Processes in Human Communication"*. N=56** university students, 11 males; 45 females (age: M=24.70, s=5.14 years; semesters completed: M=5.23, s=2.86; N=55).

Sample without PONS -test-repeaters: N=50 ***(age: M=24.98, s=5.36 years; semester completed: 5.20, s=2.99 (N=49).***

Majors

MA-Students	*Diploma-Students* (Comp. Science)	*Student Teachers (Secondary)*			
Pedagogy + Sociology, Philology, Art History, Philosophy, Linguistics, Sport, or Music		**Philol-ogy**	**Mathm./ Science**	**Mathm./ Science+ Philol-**	**Sport+ Sciences or**
2	**15**	**21**	**5**	**11**	**2**

(Continued)

Figure 1, cont.

Study 8: **Seminar University of Stuttgart: *"Models of Teaching"*. N=110** university students, 34 males; 76 females (age: M=24.00, s=3.17 years); semesters completed: 6.55, s=2.55, no information: 1.

Sample without PONS-test-repeaters: N=105: age: M=24.02 (s=3.23) years; semester completed: M=6.57 (s=2.42).

Majors

MA-Students	*Diploma-Students* (Comp. Science)	*Student Teachers (Secondary)*			
Pedagogy + Sociology, Philology, Art History, Philosophy, Linguistics,		**Philol-ogy**	**Mathm./ Science**	**Mathm./ Science+ Philol-**	**Sport+ Sciences or Sport, or Music**
31	**5**	**48**	**4**	**8**	**14**

Study 9: **Lecture University of Tuebingen: *"Observation and Experiment in Educational Research"+ Seminar: "Effective Teaching Practices".* N=191** university students, female: 138, male: 53 (age: M = 24.03, s=3.91 years; semester completed: M=5.41, s=2.94, no information: 6.

Sample without PONS-test-repeaters : N=156; age: 23.96 (s=3.79, no information: 3), semester completed: M=5.31 (s=3.07, no information: 3).

Majors:

Diploma-, MA-Students		*Student Teachers*			
Pedagogy + Sociology, Philology, History, Philosophy, Linguistics, Arts., Political Sc. etc.		**Philol-ology**	**Mathm./ Sciences Philolol-ogy**	**Mathm./ Sciences/**	**Sport/ Phil. or Sciences**
41	**32**	**60**	**26**	**8**	**23**

No information: 1

Study 10: **Seminar University of Tuebingen: *"Group Management and Classroom Discipline".* N=81** university students, females 60; males 21; (age: M=23.22, s=2.71 years); semester completed: M=6.14 (s=2.24; no information: 6).

Sample without PONS-test-repeaters: N=64; age M=23.38 s=1.84); semester completed: M=5.67 /s=1.82; no information: 6.

Majors:

Diploma-, MA-Students		*Student Teachers*			
Pedagogy + Sociology, Philology, History, Philosophy, Linguistics, Arts., Political Sc. etc.		**Philol-ology**	**Mathm./ Sciences**	**Mathm./ Sciences/ Philolo-logy**	**Sport/ Phil. oder Sciences**
3	**2**	**40**	**9**	**10**	**16**

No information: 1

(Continued)

Figure 1, cont.

Study 11: **Lecture University of Tuebingen: *"Nonverbal Aspects of Human Communication I".* N=158** university students, female 114, male 44; (age: M=23.19, s=3.35 years); semester completed: M=4.32, s=2.44; no information: 9).

Sample without PONS-test-repeaters: N=150; age: M=23.07 (s=3.29, no information: 8).

Majors:

Diploma-, MA-Students		*Student Teachers*			
Pedagogy + Sociology, Philology, History, Philosophy, Linguistics, Arts., Political Sc. etc.	**Philol-ology**	**Mathm./ Sciences**	**Mathm./ Sciences/ Philolo-logy**	**Sport/ Phil. oder Sciences**	
35	**51**	**47**	**1**	**9**	**12**

+ 3 Medicine

Study12: **Lecture University of Tuebingen: *"Nonverbal Aspects of Human Communication" .* N=109** university students, female: 86; male: 23; (age: M=23.50 (s=4.87 years, no information: 1); semester completed: M=3.38 (s= 2.22, no information: 5).

Sample without PONS-test repeaters: N=93; age: M=23.61 (s=5.22, no information: 5); semester completed: M=3.31 (s=2.37, no information: 5).

Majors:

Diploma-, MA-Students		*Student Teachers*			
Pedagogy + Sociology, Philology, History, Philosophy, Linguistics, Arts., Political Sc. etc.	**Philol-ology**	**Mathm./ Sciences**	**Mathm./ Sciences/ Philolo-logy**	**Sport/ Phil. oder Sciences**	
59	**25**	**10**	**0**	**8**	**7**

No information: 1

Study 13: **Seminar University of Tuebingen: *"Group Management and Classroom Discipline".* N=96** university students, female: 70; male: 26; age: M=24.86 (s=5.49) years; semester completed: M=5.26 (s=2.34).

Sample without PONS-test-repeaters: N=67; age: M=25.27 (s=5.78); semester completed: M=5.42 (s=2.30).

Majors:

Diploma-, MA-Students		*Student Teachers*			
Pedagogy + Sociology, Philology, History, Philosophy, Linguistics, Arts., Political Sc. etc.	**Philol-ology**	**Mathm./ Sciences**	**Mathm./ Sciences/ Philolo-logy**	**Sport/ Phil. oder Sciences**	
21	**23**	**30**	**4**	**7**	**11**

Data Collection

1. ***The Assessment of Encoding Ability:*** To assess nonverbal encoding ability /"Charisma", the ***Affective Communication Test*** (ACT) was administered. This paper-and-pencil self-report test, consisting of 13 items, was developed and carefully studied by Friedman et al. (1980) as a measure of individual differences in nonverbal communication ability, in terms of expressiveness, "charisma"/"spirit". For each item, subjects indicate on a nine-point scale, from -4 to +4 the extent to which the statement is true or false as it applies to them. As for many other studies, this self-report measure was chosen as an alternative to more costly and time-consuming direct observation (Riggio & Riggio, 2001; Riggio & Riggio, 2005; Riggio, 2006). However, as mentioned above, it is not merely an assumption that much of what is meant by this powerful variable can be understood by nonverbal expressiveness as two studies have demonstrated: In a study by Friedman et al. (1980) "Charisma" was positively related to emotional encoding tasks. Also, in the project reported here, ACT-scores were correlated with direct group observations using the Rating of Alter Competence (RAC) and Self-Rated Competence (SRC, Spitzberg 1988; Spitzberg & Cupach, 1985; Klinzing & Gerada Aloisio, 2007a). Results show a significant relationship between "Charisma" and "Expressiveness", particularly with "Accuracy of De-/Encoding Ability".

Test-retest reliability and internal consistency of the ACT ranged from 0.77 to 0.91 (Friedman et al., 1980). Test-retest-reliability assessed in the project for students who took the PONS test twice (with a five to six-months interval between testings) was $r = 0.64$ ($p<0.01$, $N=25$).

Studies to validate this test turned out to be very promising (Friedman et al., 1980; Riggio & Riggio, 2001; 2005, see above). Treatment validity (Popham, 1972) was established in experimental training studies by Klinzing & Gerada Aloisio (2007a). The ACT was used in all studies reported in this paper.

2. ***The Assessment of Decoding Ability.*** To assess the degree of decoding accuracy, the *Profile of Nonverbal Sensitivity* (PONS-test, Rosenthal et al., 1979) was administered. This test utilizes a 47-minute black and white film and sound track composed of 220 numbered two-second auditory and/or visual segments. For each segment, test takers are presented with two

everyday-life situations. They have to select one of two descriptions according to which they think best corresponds to the given segment. The 220 segments are based on 20 scenes categorized into four quadrants, of five scenes each, on the *positivity* and *dominance* dimension: the positive-dominant, the positive-submissive, the negative-dominant, and the negative-submissive behavior. Reliabilities of the PONS-test (test-retest reliability) was: 0.69; internal consistency: 0.86 (Rosenthal et al., 1979). Test-retest-reliability as assessed in this project for students who took the PONS test twice (with a five to six-months interval between testings) was r= 0.66 ($p<0.01$; N=58). Indications for validity of this instrument are given by Rosenthal et al. (1979, see above). Treatment validity (Popham, 1972) was established by eight experimental training-studies (Klinzing, 2007; Klinzing & Gerada Aloisio, 2007a). The PONS-test was used in all studies reported in this paper.

The studies reported here and other studies form part of a project which started in 2004. Since then there were students who took the PONS a second time as they participated in lectures and seminars in which this test also featured as part of the data collection. Because the test effects of the PONS are strong (see Rosenthal et al., 1979; Klinzing, 2003; 2004) the data of participants who took the PONS the first time have been calculated separately from those of the total group with the *"test repeaters"*.

3. ***The Assessment of Attitudes and Personality Dimensions.*** To examine the relation of nonverbal skill to psycho-social and personality dimensions, five paper and pencil tests were administered. Not all of the instruments described below could be administered in all studies.

3.1 ***Self-Rating on Success in Current Relationships*** (Rosenthal et al., 1979). This instrument consists of 16 items (nine-point scales). Factor analyses revealed five factors: 1:"Quality of Opposite Sex Relationships"; 2: "Quality of Same-Sex Relationships"; 3: "Number of Friends"; 4: "Speed in Making Friends"; 5: "Understanding in Relationships" (Rosenthal et al., 1979). Reliabilities and indications for the validity of this instrument are given by Rosenthal et al. (1979). This test was administered in all studies reported in this paper with exception of *Study 13*.

3.2 ***Directiveness and Extraversion:*** These variables were assessed by the *Questionnaire of Directiveness* ("Fragebogen zur direktiven Einstellung", F-D-E, Bastine & Brengelmann, 1971, Bastine, 1971). This test contains 16 items (six-point scales) to determine *Extraversion* (derived from Brengelmann & Brengelmann, 1960) and 16 items to determine *Directiveness*. Reliabilities

in terms of internal consistency in different samples ranged from 0.80 to 0.89, in terms of test-retest reliability from 0.80 to 0.95 for both scales (Bastine, 1971). Indications for validity of this test are promising; these and norms are given by Bastine (1971). Indications for treatment validity (Popham, 1975) can be derived from studies reported by Klinzing & Gerada Aloisio (2004a; 2007b) and Klinzing, Koehler, Laupp, & Gerada Aloisio (2004). This test was administered in all studies reported in this paper.

3.3 The ***Perceived Self-Efficacy Scale*** (Schwarzer, Mueller, & Greenglass, 1999) contains 10 items (four-point-scales) and was administered to measure the generalized sense of self-efficacy expectation. This test was developed from and based of Bandura's concept of self-efficacy (Bandura 1977; 1986; 1997). The scale is reliable (alpha = 0.75 and 0.90), it has also proven valid in terms of convergent and discriminant validity. (For example, it correlates positively with self-esteem and optimism and negatively with anxiety, depression and physical symptoms). Indications for treatment validity (Popham, 1975) can be derived from studies reported by Klinzing & Gerada Aloisio (2007a). This Test was used in *Study 10, 11, 12, and 13.*

3.4 To assess ***Control- and Competence Orientations***, the "Fragebogen zu Kompetenz- und Kontrollueberzeugungen" (FKK, 32 items, six-point-scales, Krampen, 1991) was administered.. This test consists of four primary scales with eight items each:

1. *Generalized Self-Concept of Own Abilities* (SK);
2. *Internality of Control Orientations* (I);
3. *Social Externality of Control Orientation* (powerful others' control orientation, P);
4. *Fatalistic Externality of Control Orientation* (chance control orientation, C).

Besides these primary scales, there are combined, secondary scales:

1. *Self-efficacy (SKI, 16 items)* combines SK (Self-Concept of own Abilities) and I (Internality); and

2. *Externality of Control Orientation (PC = 18 items),* combines P (*Social Externality of Control Orientation*) and C (*Fatalistic Externality of Control Orientation*).

A tertiary scale, *Self-Efficacy minus Externality (32 items),* was constructed on the difference between SKI (*Self-efficacy)* and PC *(Externality) (SKI* – PC).

Reliabilities in terms of internal consistency and test-retest reliability in different samples ranged from 0.70 to 0.90, across all scales. Indications for validity of this test in terms of content, discriminant and convergent validity, and treatment validity are promising (Krampen, 1991).

Indications for treatment validity (Popham, 1975) assessed in the project reported here can be derived from studies of Klinzing & Gerada Aloisio (2007). This Test was used in *Study 10, 11, 12, and 13.*

3.5 ***The Freiburger Persönlichkeitsinventar (Freiburger Personality Inventory, FPI,*** (Fahrenberg, Selg, Hampel 1978,). This instrument (114 items) contains nine factor-analytically developed scales with operationally defined personality dimensions; in addition three more scales were developed on an item-analytic basis (Scales E, N, and M).

Scale FPI 1: Nervousness (17 items): psychosomatic disturbed – psychosomatic not disturbed;

Scale FPI 2: Aggressiveness (13 items): spontaneously aggressive, emotionally immature – not aggressive, controlled;

Scale FPI 3: Depression (14 items): ill-humoured, unassertive - content, assertive;

Scale FPI 4: Excitability (10 items): excitable/irritable, easily frustrated - calm, dull;

Scale FPI 5: Sociability (14 items): sociable, lively – unsociable, reserved;

Scale FPI 6: Calmness (10 items): self–assured/confident, good humoured – irritiable, hesitant;

Scale FPI 7: Dominance (17 items): reactive aggressive, assert – yielding, moderate;

Scale FPI 8: Inhibition (10 items): inhibited, tense - unconstrained, able to make friends;

Scale FPI 9: Openness (14 items): open, self-critical - closed, un-critical;

Scale FPI E: Extraversion (12 items from five FPI Scales, particularly from FPI 5 and FPI 2): extraverted – introverted;

Scale FPI N: Emotional Lability (12 items, the items stem from four FPI-scales, particularly from FPI 3 and FPI 4): emotionally labile - emotionally stable;

Scale FPI M: Masculinity (13 items stemming from seven FPI-scales, particularly from FPI 1 and FPI 8): typical male – typical female self-description. (Fahrenberg et al. 1978). This test was used in *Study 1-7.*

Results

In *Tables 1.1 - 1.5* the results for the relationships between *Nonverbal Expressiveness (ACT)* and psychosocial and personality dimensions are summarized.

Table 1.1: **Relationships between *Nonverbal Expressiveness (ACT)* and Success in Interpersonal Relations. Product Moment Correlations and p-Values for Study 1 – 13*.**

	"Charisma": Affective Communication Test (ACT)					
	Study 1	**Study 2**	**Study 3**	**Study 4**	**Study 5**	**Study 6**
	r (p)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p)**
Success in Interpersonal *Relations*	(N=83)	(N=41)	(N=44)	(N=78)	(N=30)	(N=45)
Factor 1: Quality of Opposite Sex Relationship	**-0.06 (n.s.)**	**0.18 (n.s.)**	**0.44 (n.s.)**	**0.11 (n.s.)**	**0.30 (n.s.)**	**0.20 (n.s.)**
Factor 2: Quality of Same Sex Relationship	**0.14 (n.s.)**	**0.13 (n.s.)**	**0.25 (n.s.)**	**0.10 (n.s.)**	**0.57 (p<0.01)**	**0.43 (p<0.01)**
Factor 3: Number of Friends	**0.19 (n.s.)**	**-0.30 (n.s.)**	**-0.44 (n.s.)**	**0.07 (n.s.)**	**-0.21 (n.s.)**	**-0.12 (n.s.)**
Factor 4: Speed of Making Friends	**0.17 (n.s.)**	**0.28 (n.s.)**	**0.35 (n.s.)**	**0.06 (n.s.)**	**0.33 (n.s.)**	**0.50 (p<0.01)**
Factor 5: Understanding in Relationship	**0.05 (n.s.)**	**0.03 (n.s.)**	**0.33 (n.s.)**	**0.26 (p<0.05)**	**0.40 (p<0.05)**	**0.43 (p<0.01)**

(Continued)

Table 1.1 cont. **"Charisma" Affective Communication Test (ACT)**

	Study 7	Study 8	Study 9	Study 10	Study 11	Study 12	Study 13
	r (p)** (N=35)	**r (p**)** (N=76)	**r (p**)** (N=168)	**r (p**)** (N=65)	**r (p**)** (N=136)	**r (p)** (N=83)	**r (p**)**
Success in Interpersonal Relations							
Factor 1: Quality of Opposite Sex Relationship	**0.32 (n.s.)**	**0.29 (p<0.05)**	**0.31 (p<0.01)**	**0.40 (p<0.01)**	**0.26 (p<0.01)**	**0.24 (p<0.05)**	**---**
Factor 2: Quality of Same Sex Relationship	**0.15 (n.s.)**	**0.26 (p<0.05)**	**0.21 (p<0.01)**	**0.23 (n.s.)**	**0.27 (p<0.01)**	**0.23 (p<0.05)**	**---**
Factor 3: Number of Friends	**-0.30 (n.s.)**	**-0.11 (n.s.)**	**-0.22 (p<0.01)**	**-0.07 (n.s.)**	**-0.30 (p<0.01)**	**-0.17 (n.s.)**	**---**
Factor 4: Speed of Making Friends	**0.46 (p<0.01)**	**0.45 (p<0.01)**	**0.47 (p<0.01)**	**0.34 (p<0.01)**	**0.46 (p<0.01)**	**0.31 (p<0.01)**	**---**
Factor 5: Understanding in Relationship	**0.36 (p<0.05)**	**0.40 (p<0.01)**	**0.26 (p<0.01)**	**0.29 (p<0.05)**	**0.26 (p<0.01)**	**0.29 (p<0.01)**	**---**

*. Due to circumstances mentioned above some participant data could not be used. .**two tailed test, n.s.: p>0.05. ---: Data for this variable were not assessed in this sample.

Table 1.2: **Relationships between *Nonverbal Expressiveness (ACT)* and Directiveness (rigid, imposing attitudes), Extraversion (FDE), and Self-Efficacy (SWE). Product Moment Correlations and p-Values for Study 1 – 13*.**

	Study 1	**Study 2**	**Study 3**	**Study 4**	**Study 5**	**Study 6**
	"Charisma": Affective Communication Test (ACT)					
	r (p)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p)**
Directiveness **(FDE)**	**0.21 (p<0.05)** (N=105)	**0.11 (n.s.)** (N=40)	**0.02 (n.s.)** (N=40)	**0.19 (n.s.)** (N=75)	**0.22 (n.s.)** (N=70)	**0.04 (n.s.)** (N=53)
Extraversion **(FDE)**	**0.67 (p<0.01)** (N=105)	**0.69 (p<0.01)** (N=41)	**0.81 (p<0.01)** (N=41)	**0.63 (p<0.01)** (N=75)	**0.68 (p<0.01)** (N=70)	**0.75 (p<0.01)** (N=53)
Self Efficacy Expectation (Whole Group)	---	---	---	---	---	---

(Continued)

Table 1.2 cont. **"Charisma" Affective Communication Test (ACT)**

	Study 7	**Study 8**	**Study 9**	**Study 10**	**Study 11**	**Study 12**	**Study 13**
	r (p)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p)**	**r (p**)**
Directiveness (Whole Group)	**0.17 (n.s.)** (N=30)	**0.21 (n.s.)** (N=66)	**0.13 (n.s.)** (N=142)	**0.10 (n.s.)** (N=63)	**0.31 (p<0.01)** (N=141)	**0.27 (p<0.01)** (N=102)	**0.13 (n.s.)** (N=95)
Extraversion (Whole Group)	**0.85 (p<0.01)** (N=30)	**0.68 (p<0.01)** (N=66)	**0.59 (p<0.01)** (N=142)	**0.45 (p<0.01)** (N=63)	**0.68 (p<0.01)** (N=141)	**0.66 (p<0.01)** (N=102)	**0.65 (p<0.01)** (N=95)
Self Efficacy Expectation (Whole Group)	---	---	---	**0.19 (n.s.)** (N=62)	**0.46 (p<0.01)** (N=153)	**0.24 (p<0.05)** (N=95)	**0.30 (p<0.01)** (N=96)

*Due to circumstances mentioned above some participant data could not be used. **two tailed test, n.s.: p>0.05. ---: Data for this variable were not assessed in this sample.

Table 1.3: **Relationships between *Expressiveness (ACT)* and Competence and Control Orientations (FKK). Product Moment Correlations and p-Values for Study 10 – 13*.**

	"Charisma" Affective Communication Test (ACT)			
	Study 10 (N=69) **r (p**)**	**Study 11** (N=154) **r (p**)**	**Study 12** (N=98) **r (p**)**	**Study 13** (N=95) **r (p**)**
Competence- and Control Orientations (FKK):				
Self Concept of Own Competencies (SK)	**0.33 (p<0.01)**	**0.31 (p<0.01)**	**0.35 (p<0.01)**	**0.30 (p<0.01)**
Internality (I)	**0.29 (p<0.05)**	**0.22 (p<0.01)**	**0.24 (p<0.05)**	**0.23 (p<0.05)**
Social Externality(P)	**0.06 (n.s.)**	**-0.14 (n.s.)**	**-0.13 (n.s.)**	**-0.23 (p<0.05)**
Fatalistic Externality(C)	**-0.05 (n.s.)**	**-0.17 (p<0.05)**	**-0.15 (n.s.)**	**-0.19 (n.s.)**
Self – Efficacy (Combined Score of SK and I)	**0.36 (p<0.01)**	**0.30 (p<0.01)**	**0.33 (p<0.01)**	**0.30 (p<0.01)**
Externalism (PC)	**-0.006 (n.s.)**	**-0.18 (p<0.05)**	**-0.16 (n.s.)**	**-0.24 (p<0.05)**
Internality - Externality (SKI–PC)	**0.19 (n.s.)**	**0.28 (p<0.01)**	**0.28 (p<0.01)**	**0.30 (p<0.01)**

*Due to circumstances mentioned above some participant data could not be used. **two tailed tests.

Table 1.4: **Relationships between *Nonverbal Expressiveness (ACT)* and Various Personality Dimensions Assessed with the Freiburger Personality Inventory (FPI). Product Moment Correlations and p-Values for Study 1 – 7*.**

	"Charisma": Affective Communication Test (ACT)						
	Study 1	**Study 2**	**Study 3**	**Study 4**	**Study 5**	**Study 6**	**Study 7**
	r (p) (N=98)**	**r (p**) (N=40)**	**r (p**) (N=34)**	**r (p**) (N=83)**	**r (p**) (N=56)**	**r (p**) (N=38)**	**r (p) (N=18)**
FPI 1 ***Nervousness***	**0.03 (n.s.)**	**-0.29 (n.s.)**	**-0.12 (n.s.)**	**-0.09 (n.s.)**	**-0.13 (n.s.)**	**0.15 (n.s.)**	**0.27 (n.s.)**
FPI 2 ***Aggressiveness***	**0.0003 (n.s.)**	**-0.07 (n.s.)**	**0.00 (n.s.)**	**-0.01 (n.s.)**	**-0.14 (n.s.)**	**0.05 (n.s.)**	**-0.23 (n.s.)**
FPI 3 ***Depression***	**-0.10 (n.s.)**	**-0.34 (p<0.05)**	**-0.25 (n.s.)**	**-0.25 (p<0.05)**	**-0.29 (p<0.05)**	**-0.08 (n.s.)**	**-0.04 (n.s.)**
FPI 4 ***Excitability***	**0.16 (n.s.)**	**-0.14 (n.s.)**	**-0.01 (n.s.)**	**0.23 (p<0.05)**	**0.19 (n.s.)**	**0.17 (n.s.)**	**0.35 (n.s.)**
FPI 5 ***Sociability***	**0.53 (p<0.01)**	**0.78 (p<0.01)**	**0.74 (p<0.01)**	**0.58 (p<0.01)**	**0.51 (p<0.01)**	**0.78(p<0.01)**	**0.75(p<0.01)**
FPI 6 ***Calmness***	**0.21 (p<0.05)**	**0.40 (p<0.01)**	**0.11 (n.s.)**	**0.29 (p<0.01)**	**0.22 (n.s.)**	**0.39 (p<0.05)**	**0.42 (n.s.)**
FPI 7 ***Dominance***	**0.05 (n.s.)**	**-0.13 (n.s.)**	**-0.24 (n.s.)**	**0.03 (n.s.)**	**-0.05 (n.s.)**	**0.02 (n.s.)**	**0.17 (n.s.)**
FPI 8 *Inhibition*	**-0.40 (p<0.01)**	**-0.52 (p<0.01)**	**-0.19 (n.s.)**	**-0.34 (p<0.01)**	**-0.21 (n.s.)**	**-0.30 (n.s.)**	**0.08 (n.s.)**

(Continued)

Table 1.4 cont.

FPI 9 *Openess*	**0.19 (n.s.)**	**-0.06 (n.s.)**	**0.11 (n.s.)**	**0.08 (n.s.)**	**0.08 (n.s.)**	**0.05 (n.s.)**	**-0.02 (n.s.)**
FPI E ***Extraversion***	**0.49 (p<0.01)**	**0.61 (p<0.01)**	**0.69 (p<0.01)**	**0.56 (p<0.01)**	**0.58 (p<0.01)**	**0.72 (p<0.01)**	**0.66(p<0.01)**
FPI N *Emotional Lability*	**-0.10 (n.s.)**	**-0.36 (p<0.05)**	**-0.13 (n.s.)**	**-0.24 (p<0.01)**	**-0.21 (n.s.)**	**0.04 (n.s.)**	**-0.20 (n.s.)**
FPI M *Masculinity*	**0.26 (p<0.01)**	**0.35 (p<0.05)**	**0.15 (n.s.)**	**0.31 (p<0.01)**	**0.14 (n.s.)**	**0.14 (n.s.)**	**0.09 (n.s.)**

*Due to circumstances mentioned above some participant data could not be used. **two tailed tests. Correlations between nonverbal competencies and FPI-scales are also subject of the MA-dissertation of D. Wolleydt.

Table 1.5: **Relationships between *Nonverbal Expressiveness (ACT)* and Age, Gender. Product Moment Correlations and p-Values for Study 1 – 13*.**

	Study 1	Study 2	Study 3	Study 4	Study 5	Study 6
	"Charisma": Affective Communication Test (ACT)					
	r (p)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p)**
Age (Whole Group)	**0.07 (n.s.)** (N=111)	**0.20 (n.s.)** (N=43)	**-0.03 (n.s.)** (N=41)	**0.0003 (n.s.)** (N=94)	**0.06 (n.s.)** (N=71)	**-0.08 (n.s.)** (N=69)
Gender (Whole Group)	**0.21 (p<0.05)** (N=111)	**0.14 (n.s.)** (N=43)	**0.14 (n.s.)** (N=41)	**0.31 (p<0.01)** (N=94)	**0.19 (n.s.)** (N=71)	**0.43 (p<0.01)** (N=69)

(***Continued)***

Table 1.5 cont.

	"Charisma" Affective Communication Test (ACT)						
	Study 7	**Study 8**	**Study 9**	**Study 10**	**Study 11**	**Study 12**	**Study 13**
	r (p)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p)**	**r (p**)**
Age (Whole Group)	**-0.05** (N=47)	**-0.10 (n.s.)** (N=82)	**0.13 (n.s.)** (N=175)	**0.01 (n.s.)** (N=73)	**0.01 (n.s.)** (N=157)	**0.22 (p<0.05)** (N=101)	**0.04 (n.s.)** (N=96)
Gender (Whole Group)	**0.29 (n.s.)** (N=47)	**-0.15 (n.s.)** (N=82)	**0.11 (n.s.)** (N=175)	**0.16 (n.s.)** (N=73)	**-0.005 (n.s.)** (N=157)	**-0.009 (n.s.)** (N=102)	**0.36 (p<0.01)** (N=96)

**Due to circumstances mentioned above some participant data could not be used. **two tailed tests.

Results, as summarized in *Table 1.1 -1.5*, show that there are positive significant correlations between nonverbal encoding abilities ("Charisma"/ Nonverbal Expressiveness) and psycho-social and personality dimensions relevant for educational professions.

Expressiveness is positively but weakly related to factors of *Success in Interpersonal Relations* ("Quality of Opposite and Same Sex Relationships" (Mdn. r = 0.28; 0.23; statistically significant in five/six studies), "Speed of Making Friends" (Mdn. r = 0.35, significant in seven studies), and "Understanding in Relationships" (Mdn. r = 0.28, significant in nine studies). *Hypothesis 1.1 can be rejected.*

Expressiveness is positively but very weakly related to Directiveness (Mdn. r = 0.17; significant in *Study 1, 11, 12*). *Null-Hypothesis 1.2 can therefore only be rejected for Study 1,11,* and *12.*

Furthermore, ACT-scores are strongly related to *Extraversion* (FDE/FPI, Mdn. r = 0.68; significant in all 13 studies), positively but weakly related to *Self-Efficacy Expectation* (SWE: Mdn. r = 0.27, significant in four out of five studies), and to scales of Competence and Control Orientations (FKK: *Self Concept of Own Competencies:* Mdn. r = 0.32; *Internality*, Mdn. r = 0.24; *Self-Efficacy*, Mdn. r = 0.32; and the *Total Score: Internality – Externality*, Mdn. r = 0.28, significant in all studies with only one exception: *Study 10* for the total score). *Hypothesis 1.3, 1.4, and 1.5 can be rejected.*

Expressiveness/"Charisma" is also positively related to various personality dimensions (as assessed with the *Freiburger Personality Inventory, FPI):* to *Sociability* (Mdn. r = 0.74, significant in all seven studies where it was assessed), *Calmness* (Mdn. r = 0.29, significant in four studies), and again strongly related to *Extraversion* (Mdn. r = 0.61, significant in all studies). ACT-scores are *negatively* related to *Depressio*n (Mdn. r = -0.25, significant in *Study 2, 4, 5*), *Inhibition* (Mdn. r = -0.30, significant in *Study 1, 2, and 4*), and *Emotional Lability* (Mdn. r = -0.20, significant in *Study 2, 4*). Interestingly, expressiveness is very weakly related to Nervousness, Aggression, and Excitability. *Hypothesis 1.6 can be rejected for these variables.*

Expressiveness is very weakly related to *Gender* (Mdn. r = 0.16, significant in *Study 1, 4, 6, 13*) and unrelated to Age (Mdn. r = 0.01, significant, however, in *Study 12*). *Hypothesis 1.7 and 1.8 can not be rejected.*

The results for the relation of *Nonverbal Sensitivity* (PONS) to psychosocial and personality dimensions are summarized in *Table 2.1 – 2.5*.

Table 2.1: **Relationships between Nonverbal Sensitivity (PONS) and Success in Interpersonal Relationships. Product Moment Correlations and p-Values for Study 1 – 13 for the Total Group and the Group without PONS-test Repeaters *(in Italics)****

	Study 1	**Study 2**	**Study 3**	**Study 4**	**Study 5**	**Study 6**
	Profile of Nonverbal Sensitivity (PONS)					
	r (p)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p)**
Success in Interpersonal Relations	**(N=83)**	**(N=50)**	**(N=18)**	**(N=88)**	**(N=34)** *(N=29)*	**(N=51)** *(N=40)*
Factor 1: Quality of Opposite Sex Relationship	**0.14 (n.s.)** *******	**-0.15 (n.s.)** *******	**0.06 (n.s.)** *******	**0.14 (n.s.)** *******	**0.16 (n.s.)** *0.01 (n.s.)*	**-0.10 (n.s.)** *0.08 (n.s)*
Factor 2: Quality of Same Sex Relationship	**0.07 (n.s.)** *******	**0.14 (n.s.)** *******	**-0.12 (n.s.)** *******	**0.02 (n.s.)** *******	**0.41 (p<0.05)** *0.32 (n.s.)*	**0.05 (n.s.)** *0.09 (n.s.)*
Factor 3: Number of Friends	**0.03 (n.s.)** *******	**0.10 (n.s.)** *******	**0.05 (n.s.)** *******	**-0.09 (n.s.)** *******	**-0.27 (n.s.)** *-0.12 (n.s.)*	**-0.04 (n.s.)** *-0.05 (n.s.)*
Factor 4: Speed of Making Friends	**0.01 (n.s.)** *******	**0.40 (p<0.01)** *******	**-0.08 (n.s.)** *******	**-0.15 (n.s.)** *******	**0.27 (n.s.)** *0.18 (n.s.)*	**0.16 (n.s.)** *0.15 (n.s.)*
Factor 5: Understanding in Relationship	**0.19 (n.s.)** *******	**0.03 (n.s.)** *******	**-0.15 (n.s.)** *******	**0.26 (p<0.05)** *******	**0.28 (n.s.)** *0.10 (n.s.)*	**0.16 (n.s.)** *0.29 (n.s.)*

(Continued)

Table 2.1 cont. **Profile of Nonverbal Sensitivity (PONS)**

	Study 7	Study 8	Study 9	Study 10	Study 11	Study 12	Study 13
	r (p**)	r (p**)	r (p**)	r (p**)	r (p**)	r (p)	r (p**)
Success in Interpersonal Relations	**(N=41)** ***(N=41)***	**(N=83)** ***(N=79)***	**(N=176)** ***(N=149)***	**(N=54)** ***(N=41)***	**(N=134)** ***(N=127)***	**(N=77)** ***(N=65)***	
Factor 1: Quality of Opposite Sex Relationship	**0.19 (n.s.)** ***0.19 (n.s.)***	**-0.09 (n.s.)** ***-0.10 (n.s.)***	**0.0004 (n.s.)** ***-0.02 (n.s.)***	**0.03 (n.s.)** ***0.21 (n.s.)***	**0.01 (n.s.)** ***0.007 (n.s.)***	**-0.06 (n.s.)** ***-0.01 (n.s.***	**---** **---**
Factor 2: Quality of Same Sex Relationship	**0.14 (n.s.)** ***0.14 (n.s.)***	**-0.002 (n.s.)** ***-0.009 (n.s.)***	**0.05 (n.s.)** ***0.05 (n.s.)***	**-0.006 (n.s.)** ***0.14 (n.s.)***	**0.06 (n.s.)** ***0.05 (n.s.)***	**0.10 (n.s.)** ***0.16 (n.s.)***	**---** **---**
Factor 3: Number of Friends	**-0.11 (n.s.)** ***-0.11 (n.s.)***	**0.11 (n.s.)** ***0.11 (n.s.)***	**-0.10 (n.s.)** ***-0.03 (n.s.)***	**-0.17 (n.s.)** ***-0.13 (n.s.)***	**0.08 (n.s.)** ***0.12 (n.s.)***	**0.08 (n.s.)** ***0.10 (n.s.)***	**---** **---**
Factor 4: Speed of Making Friends	**-0.05 (n.s.)** ***-0.05 (n.s.)***	**-0.13 (n.s.)** ***-0.14 (n.s.)***	**0.05 (n.s.)** ***0.07 (n.s.)***	**0.04 (n.s.)** ***-0.06 (n.s.)***	**0.03 (n.s.)** ***0.04 (n.s.)***	**-0.23 (p<0.05)** ***-0.13 (n.s.)***	**---** **---**
Factor 5: Understanding in Relationship	**0.03 (n.s.)** ***0.03 (n.s.)***	**0.006 (n.s.)** ***-0.01 (n.s.)***	**-0.004 (n.s.)** ***-0.03 (n.s.)***	**0.06 (n.s.)** ***0.23 (n.s.)***	**0.13 (n.s.)** ***0.13 (n.s.)***	**0.04 (n.s.)** ***0.11 (n.s.)***	**---** **---**

**Due to circumstances mentioned above some participant data could not be used. **two tailed test, n.s.: p>0.05. ***There were no PONS-test repeaters in this sample. ---not assessed in these studies.

Table 2.2: **Relationships between Nonverbal Sensitivity (PONS) and Age, Gender, and "Charisma" (ACT). Product Moment Correlations and p-Values for Study 1 – 13 * for the Total Group and the Group without PONS-test Repeaters *(in Italics)****

	Study 1	**Study 2**	**Study 3**	**Study 4**	**Study 5**	**Study 6**
	Profile of Nonverbal Sensitivity (PONS)					
	r (p)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p)**
Directiveness (FDE) (Whole Group)	**-0.09 (n.s.)** (N=98)	**0.02 (n.s.)** (N=47)	**0.15 (n.s.)** (N=40)	**0.05** (N=84)	**-0.15 (n.s.)** (N=73)	**-0.009 (n.s.)** (N=57)
Directiveness (FDE)	***	***	***	***	***-0.14 (n.s.) (N=66)***	***-0.006 (n.s.) (N=45)***
Extraversion *(Whole Group)*	**-0.03 (n.s.)** (N=97)	**0.02 (n.s.)** (N=48)	**0.12 (n.s.)** (N=40)	**0.15 (n.s.)** (N=84)	**0.003 (n.s.)** (N=73)	**0.006 (n.s.)** (N=57)
Extraversion(FDE)	***	***	***	***	***0.05 (n.s.) (N=66)***	***0.03 (n.s.) (N=45)***
Self Efficacy Expectation (Whole Group)	---	---	---	---	---	---
Self Efficacy Expectation *(Without Test rep.)*	***	***	***	***	***	***

(Continued)

Table 2.2 cont.	**Profile of Nonverbal Sensitivity (PONS)**						
	Study 7	**Study 8**	**Study 9**	**Study 10**	**Study 11**	**Study 12**	**Study 13**
	r (p)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p)**	**r (p**)**
Directiveness (Whole Group)	**-0.19 (n.s.)** (N=36)	**-0.14 (n.s.)** (N=79)	**-0.005 (n.s.)** (N=153)	**0.02 (n.s.)** (N=53)	**-0.07 (n.s.)** (N=139)	**-0.009 (n.s.)** (N=91)	**0.009 (n.s.)** (N=94)
Directiveness *(Without Test rep.)*	***-0.15 (n.s.)*** *(N=32)*	***-0.15 (n.s.)*** *(N=75)*	***-0.16 (n.s.)*** *(N=127)*	***0.07 (n.s.)*** *(N=40)*	***-0.07 (n.s.)*** *(N=132)*	***-0.04 (n.s.)*** *(N=76)*	***-0.01 (n.s.)*** *(N=66)*
Extraversion (Whole Group)	**0.19 (n.s.)** (N=36)	**0.01 (n.s.)** (N=79)	**-0.04 (n.s.)** (N=153)	**0.07 (n.s.)** (N=53)	**0.02 (n.s.)** (N=139)	**-0.14 (n.s.)** (N=91)	**0.12 (n.s.)** (N=94)
Extraversion *(Without Test rep.)*	***0.26 (n.s.)*** *(N=32)*	***0.04 (n.s.)*** *(N=75)*	***-0.08 (n.s.)*** *(N=127)*	***0.19 (n.s.)*** *(N=40)*	***0.03 (n.s.)*** *(N=132)*	***-0.05 (n.s.)*** *(N=76)*	***-0.002(n.s.)*** *(N=66)*
Self Efficacy Expectation (Whole Group)	---	---	---	**-0.07 (n.s.) (N=52)**	**0.13 (n.s.) (N=153)**	**0.09 (n.s.) (N=89)**	**0.09 (n.s.) (N=95)**
Self Efficacy Expectation *(Without Test rep.)*	---	---	---	***-0.08 (n.s.)*** *(N=40)*	***0.12 (n.s.)*** *(N=145)*	***0.05 (n.s.)*** *(N=76)*	***0.02 (n.s.)*** *(N=66)*

*Due to circumstances mentioned above some participant data could not be used. **two tailed tests; n.s.: p>0.05. ***There were no PONS-test repeaters in this sample. ---: not assessed in these studies.

Table 2.3: **Relationships between *Nonverbal Sensitivity (PONS)* and Competence and Control Orientations (FKK). Product Moment Correlations and p-Values for Study 10 – 13 for the Total Group and the Group without PONS-test Repeaters *(in Italics)****

	Nonverbal Sensitivity (PONS)			
	Study 10 (N=56) *(N=43)*	**Study 11** (N=152) *(N=127)*	**Study 12** (N=91) *(N=77)*	**Study 13** (N=94) *(N=65)*
Competence- and Control Orientations (FKK):	**r (p**)**	**r (p**)**	**r (p**)**	**r (p**)**
Self Concept of Own Competencies (SK)	**-0.04 (n.s.)** ***0.04 (n.s.)***	**0.23 (p<0.01)** ***0.22 (p<0.01)***	**-0.11 (n.s.)** ***-0.10 (n.s.)***	**0.05 (n.s.)** ***-0.13 (n.s.)***
Internality (I)	-0.15 (n.s.) ***-0.11 (n.s.)***	**0.16 (p<0.05)** ***0.16 (p<0.05)***	**-0.21 (n.s.)** ***-0.25 (n.s.)***	**-0.005(n.s.)** ***-0.15 (n.s.)***
Social Externality (P)	***-0.09 (n.s.)*** ***-0.11 (n.s.)***	**-0.02 (n.s.)** ***-0.007 (n.s.)***	**-0.03 (n.s.)** ***0.04 (n.s.)***	**-0.05 (n.s.** ***0.12 (n.s.)***
Fatalistic Externality (C)	**0.22 (n.s.)** ***0.26 (n.s.)***	**-0.10 (n.s.)** ***-0.10 (n.s.)***	**0.09 (n.s.)** ***0.09 (n.s.)***	**0.05 (n.s.)** ***0.13 (n.s.)***
Self – Efficacy (Combined Score of SK and I)	**-0.11 (n.s.)** ***-0.03 (n.s.)***	**0.22 (p=0.01)** *0.22 (p<0.01)*	**-0.20 (n.s.)** *-0.18* ***(n.s.)***	**0.001(n.s.)** ***-0.15 (n.s.)***
Externalism (PC)	**0.11 (n.s.)** ***0.14 (n.s.)***	**-0.07 (n.s.)** ***-0.06 (n.s.)***	**0.04 (n.s.)** ***0.08 (n.s.)***	**-0.005(n.s.)** ***0.14 (n.s.)***
Internality vs. Externality (SKI – PC)	**-0.12 (n.s.)** ***-0.09 (n.s.)***	**0.18 (p<0.01)** ***0.17 (p<0.05)***	**-0.13 (n.s.)** ***-0.14 (n.s.)***	**0.01 (n.s.)** ***-0.16 (n.s.)***

*Due to circumstances mentioned above some participant data could not be used. **two tailed tests.

Table 2.4: **Relationships between *Nonverbal Sensitivity (PONS)* and Various Personality Dimensions as Assessed with the FPI. Product Moment Correlations and p-Values for Study 1 – 7* for the Total Group and the Group without PONS-test Repeaters (*in Italics)**

	Study 1	Study 2	Study 3	Study 4	Study 5	Study 6	Study 7
	Profile of Nonverbal Sensitivity (PONS)						
	r (p)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p)**	**r (p**)**
	(N=96)	**(N=36)**	**(N=34)**	**(N=87)**	**(N=61)** *(N=53)*	**(N=42)** *(N=31)*	**(N=24)** *(N=21)*
FPI 1 ***Nervousness***	**0.02 (n.s.)** ***	**-0.17 (n.s.)** ***	**0.03 (n.s.)** ***	**-0.11 (n.s.)** ***	**-0.24 (n.s.)** ***-0.19 (n.s.)***	**-0.29 (n.s.)** ***-0.13 (n.s.)***	**0.12 (n.s.)** ***-0.07 (n.s.)***
FPI 2 ***Aggressiveness***	**0.03 (n.s.)** ***	**-0.41 (p<0.01)** ***	**0.30 (n.s.)** ***	**0.002 (n.s.)** ***	**0.15 (n.s.)** ***0.10 (n.s.)***	**-0.02 (n.s.)** ***-0.08 (n.s.)***	**-0.17 (n.s.)** ***-0.14 (n.s.)***
FPI 3 *Depression*	**-0.08 (n.s.)** ***	**-0.09 (n.s.)** ***	**0.11 (n.s.)** ***	**-0.16 (n.s.)** ***	**0.01 (n.s.)** *0.001* ***(n.s.)***	**-0.15 (n.s.)** ***-0.09 (n.s.)***	**0.30 (n.s.)** *0.11 (n.s.)*
FPI 4 ***Excitability***	**-0.05 (n.s.)** ***	**-0.14 (n.s.)** ***	**0.20 (n.s.)** ***	**-0.06 (n.s.)** ***	**-0.17 (n.s.)** ***-0.16 (n.s.)***	**-0.30 (p<0.05** ***-0.21 (n.s.)***	**-0.07 (n.s.)** ***-0.16 (n.s.)***
FPI 5 ***Sociability***	**0.13 (n.s.)** ***	**0.14 (n.s.)** ***	**-0.09 (n.s.)** ***	**0.15 (n.s.)** ***	**0.15 (n.s.)** *0.23* ***(n.s.)***	**-0.0008 (n.s.)** ***0.06 (n.s.)***	**-0.06 (n.s.)** *-0.18 (n.s.)*
FPI 6 ***Calmness***	**0.10 (n.s.)** ***	**-0.02 (n.s.)** ***	**-0.10 (n.s.)** ***	**0.14 (n.s.)** ***	**-0.03 (n.s.)** *0.006* ***(n.s.)***	**-0.03 (n.s.)** ***-0.05 (n.s.)***	**-0.13 (n.s.)** *-0.10 (n.s.)*
FPI 7 ***Dominance***	**0.02 (n.s.)** ***	**-0.15 (n.s.)** ***	**0.19 (n.s.)** ***	**-0.06 (n.s.)** ***	**-0.002 (n.s.)** ***0.04 (n.s.)***	**-0.006 (n.s.)** ***-0.03 (n.s.)***	**0.05 (n.s.)** ***0.02 (n.s.)***
FPI 8 ***Inhibition***	**-0.10 (n.s.)** ***	**-0.06 (n.s.)** ***	**0.21 (n.s.)** ***	**-0.28 (p<0.01)** ***	**-0.03 (n.s.)** ***0.003 (n.s.)***	**-0.18 (n.s.)** ***-0.14 (n.s.)***	**-0.17 (n.s.)** ***-0.16 (n.s.)***

(Continued)

Table 2.4 cont.

	Study 1	Study 2	Study 3	Study 4	Study 5	Study 6	Study 7
	Profile of Nonverbal Sensitivity (PONS)						
	r (p)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p)**	**r (p**)**
	(N=96)	**(N=36)**	**(N=34)**	**(N=87)**	**(N=61)** *(N=53)*	**(N=42)** *(N=31)*	**(N=24)** *(N=21)*
FPI 9	**0.10 (n.s.)**	**-0.19 (n.s.)**	**0.30 (n.s.)**	**0.02 (n.s.)**	**0.32 (p<0.05)**	**-0.03 (n.s.)**	**0.20 (n.s.)**
Openness	***	***	***	***	***0.33 (p<0.05)***	***-0.22 (n.s.)***	***0.07 (n.s.)***
FPI E	**0.18 (n.s.)**	**0.0001 (n.s.)**	**0.18 (n.s.)**	**0.16 (n.s.)**	**0.16 (n.s.)**	**-0.18 (n.s.)**	**-0.13 (n.s.)**
Extraversion	***	***	***	***	***0.18 (n.s.)***	***-0.03 (n.s.)***	***-0.21 (n.s.)***
FPI N	**-0.06 (n.s.)**	**-0.09 (n.s.)**	**0.11 (n.s.)**	**-0.17 (n.s.)**	**0.002 (n.s.)**	**-0.20 (n.s.)**	**0.21 (n.s.)**
Emotional Lability	***	***	***	***	***-0.03 (n.s.)***	***-0.11 (n.s.)***	***0.10 (n.s.)***
FPI M	**-0.06 (n.s.)**	**-0.06 (n.s.)**	**0.12 (n.s.)**	**0.10 (n.s.)**	**0.12 (n.s.)**	**-0.01 (n.s.)**	**0.09 (n.s.)**
Masculinity	***	***	***	***	***0.10 (n.s.)***	***-0.24 (n.s.)***	***0.12 (n.s.)***

* Due to circumstances mentioned above some participant data could not be used. **two tailed test, n.s.: p>0.05. ***There were no test repeaters in this sample. Correlations between nonverbal competencies and FPI-scales are also subject of the MA-dissertation of Desiree Wolleydt.

Table 2.5: **Relationships of Nonverbal Sensitivity (PONS) and Age, Gender, and "Charisma" (ACT). Product Moment Correlations and p-Values for Study 1 – 13*.**

	Study 1	**Study 2**	**Study 3**	**Study 4**	**Study 5**	**Study 6**
	Profile of Nonverbal Sensitivity (PONS)					
	r (p)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p)**
Age (Whole Group)	**-0.28 (p<0.05)** (N=117)	**0.01 (n.s.)** (N=59)	**-0.24 (n.s.)** (N=44)	**-0.05 (n.s.)** (N=119)	**-0.12 (n.s.)** (N=82)	**-0.08 (n.s.)** (N=79)
Age *(without test-rep.)*	***	***	***	***	***-0.09 (n.s.)*** ***(N=67)***	***-0.10*** ***(N=60)***
Gender (Whole Group)	**0.15 (n.s.)** (N=117)	**0.01 (n.s.)** (N=59)	**0.22 (n.s.)** (N=44)	**-0.06 (n.s.)** (N=120)	**0.02 (n.s.)** (N=82)	**0.02 (n.s.)** (N=79)
Gender ***(without test rep.)***	***	***	***	***	***-0.06 (n.s.)*** *(N=67)*	***0.06 (n.s.)*** *(N=60)*
"Charisma" (ACT) (Whole Group)	**0.09 (n.s.)** (N=97)	**0.12 (n.s.)** (N=42)	**0.14 (n.s.)** (N=41)	**0.17 (n.s.)** (N=93)	**-0.003 (n.s.)** (N=71)	**-0.22** (N=56)
"Charisma" (ACT) *(Without test rep.)*	***	***	***	***	***0.03 (n.s.)*** *(N=67)*	***-0.15 (n.s.)*** *(N=43)*

(Continued)

Table 2.5 cont. **Profile of Nonverbal Sensitivity (PONS)**

	Study 7	Study 8	Study 9	Study 10	Study 11	Study 12	Study 13
	r (p)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p**)**	**r (p)**	**r (p**)**
Age *(Whole Group)*	**-0.27 (n.s.)** (N=54)	**-0.10 (n.s.)** (N=110)	**-0.15 (p<0.05)** (N=191)	**-0.15 (n.s.)** (N=59)	**-0.08 (n.s.)** (N=155)	**-0.33 (p<0.01)** (N=92)	**-0.18 (n.s.)** (N=95)
Age (without test rep.)	***-0.25 (n.s.) (N=49)***	***-0.08 (n.s.) (N=105)***	***-0.18 (p<0.05) (N=156)***	***-0.11 (n.s.) (N=46)***	***-0.08 (n.s.) (N=147)***	***-0.37 (p<0.01) (N=76)***	***-0.05 (n.s.) (N=66)***
Gender (Whole Group)	**0.001 (n.s.)** (N=54)	**0.23 (p<0.05)** (N=110)	**-0.09 (n.s.)** (N=191)	**0.07 (n.s.)** (N=59)	**0.02 (n.s.)** (N=155)	**0.05 (n.s.)** (N=92)	**0.05 (n.s.)** (N=95)
Gender (without test-rep.)	***0.07 (n.s.) (N=49)***	***0.22 (p<0.05) (N=105)***	***-0.001 (n.s.) (N=156)***	***0.13 (n.s.) (N=46)***	***0.02 (n.s.) (N=147)***	***0.13 (n.s.) (N=77)***	***0.03 (n.s.) (N=66)***
"Charisma"	**0.25 (n.s.)** (N=45)	**0.11 (n.s.)** (N=82)	**0.11 (n.s.)** (N=175)	**0.01 (n.s.)** (N=56)	**0.05 (n.s.)** (N=154)	**-0.02 (n.s.)** (N=90)	**0.14 (n.s.)** (N=95)
"Charisma" *(Without Test rep.)*	***0.18 (n.s.*** *(N=41)*	***0.11 (n.s.)*** *(N=78)*	***0.16 (n.s.)*** *(N=145)*	***0.19 (n.s.)*** *(N=44)*	***0.07 (n.s.*** *(N=146)*	***0.03 (n.s.)*** *(N=76)*	***-0.03 (n.s.)*** *(N=66)*

*Due to fairly normal lapses data were not available for some participants.**two tailed test, n.s.: p>0.05.
***There were no test repeaters in this sample. *Italics:* Sample without test repeaters.

As the results in *Table 2.1 – 2.5* indicate, correlations between *accuracy of decoding* (PONS) and psychosocial and personality dimensions turned out to be low and/or inconsistent.

Medians of the correlations between PONS and Factors of *Success in Current Interpersonal Relations* ranged from r = 0.005 to r = 0.12 (Mdn. r = 0.02). Results became statistically significant only in four (out of 65) cases: for *Factor 4* in *Study 2* and *12*, for *Factor 2* in *Study 5*, and for *Factor 5* in *Study 4. Null-Hypothesis 2.1 can not be rejected.*

Also, the correlations between Nonverbal Sensitivity (PONS) and *Directiveness* (Mdn. r = 0.009/-0.07), *Extraversion* (Mdn. r = 0.02/0.03), and *Self Efficacy Expectation* are very weak and in no case, significant. (Mdn. r = 0.09/0.04; SWE) *Null Hyptheses 2.2, 2.3, and 2.4. can not be rejected.*

Negative relationships between scales of *Competence and Control Orientations* and Nonverbal Sensitivity emerged as well as positive and negative relationships but these ranged from very weak to weak. For the total score (SKI – PC) the median correlation was Mdn. r = -0.06. The results became statistically significant only in *Study 11* (N=152) for Self Concept of Own Competencies, Internality, and for the combined scores: *Self-Efficacy,* SKI, and *Self-Efficacy – Externality,* SKI–PC, in the desired direction. *Null-Hypothesis 2.5 can only be rejected for Study 11*.

The relationships between Nonverbal Sensitivity and personality dimensions as assessed with the Freiburger Personality Inventory (FPI) are also disappointing. Medians ranged from Mdn. r = 0.16 to Mdn. r= -0.08 (Mdn. r = 0.04). Four results (out of 84) became statistical significant in *Study 2* (FPI 2), *Study 4* (FPI 8), *Study 5* (FPI 9), and *Study 6* (FPI 4). *Hypothesis 2.6 can not be rejected.*

Interestingly, as in the studies conducted in USA (Rosenthal et al., 1979; Knapp & Hall, 2002) and in Germany (Klinzing & Gerada Aloisio, 2004a), the results for the relationship between Nonverbal Sensitivity and *Age* among young adults indicate that there might be a loss of nonverbal perceptiveness as one gets older (Mdn. r = -0.15; significant in *Studies 1, 9,* and *12*). *Hypothesis 2.7 can partly be rejected.*

Correlations between Gender and nonverbal decoding abilities (PONS) are close to zero

(Mdn. r= 0.02) and only in one case statistically significant (*Study 8*). *Null-Hypothesis 2.8 can not be rejected.*

In the current project, as in the studies from the USA (Knapp & Hall, 2002), no statistical or practical significant relationships could be obtained between *decoding (PONS)* and *encoding abilities (ACT)* (Mdn. r = 0.12/0.08; in no case statistical significant). *Null-Hypothesis 3 can not be rejected.*

From the nine null-hypotheses only two could partly be rejected (null-hypotheses 2.7 and 2.11)

Summary and Discussion

The purpose of the project was to conduct a coordinated set of correlational studies to validate, generalize and expand upon earlier research on the importance of nonverbal skill in communication and teaching, i.e. the relationship between nonverbal skill (Nonverbal Sensitivity, Expressiveness/“Charisma”) and psycho-social and personality dimensions with 13 samples of student teachers and students of education (N=1339) in two large universities in South-West Germany.

In the 13 already evaluated German studies the findings of the relation of **Nonverbal Sensitivity (PONS)** to the variables reported in the paper are disappointing. *Accuracy in decoding* was found to be very weakly, rarely statistically significant and/or inconsistently related to psycho-social and personality dimensions. The relationship between Nonverbal Sensitivity (PONS) and Extraversion and between PONS and (Non-)Directiveness, as reported e.g., by Rosenthal et al. (1979), Hall (1998), and Knapp & Hall (2002), could not be replicated in the German context. Only two of relations found in the USA could be confirmed: a loss of Nonverbal Sensitivity with Age (see also Klinzing & Gerada Aloisio, 2004a) and the very weak and not significant correlation between Decoding and Encoding abilities: Encoding and Decoding abilities do not belong to the same aspect of communicative competence also in the German context.

With relation to nonverbal decoding abilities, the findings from the present studies are not

able to *extend* the research on the importance of nonverbal sensitivity and the characterization of skilled decoders conducted in the USA (see above): no or very weak or inconsistent relationships between Nonverbal Sensitivity and *Self-Efficacy (SWE), Competence and Control Orientations (FKK),* and various *Personality Dimensions (FPI)* were found.

Furthermore, as opposed to many studies in the USA very weak relationships could be found between *Gender* and Nonverbal Sensitivity (PONS). These findings confirm those obtained in other German studies (Klinzing, 1998; 2003; 2004; Klinzing et al., 1984; Schiefer et al., 1984) and may be explained by cultural differences between the USA and Germany.

Out of nine null-hypotheses only two could (at least) be partly rejected. In face-to-face communication**,** interactants are required to notice, decode and interpret others' verbal and nonverbal cues, while simultaneously acting out affects and cognitions by nonverbal cues. To establish the importance of Nonverbal Sensitivity we still have to rely on this consideration and findings from studies conducted in the USA (see above and Rosenthal et al., 1979; Hall, 1998; Knapp & Hall, 2002; Riggio, 2006).

The findings for **Encoding Abilities** in terms of charisma/spirit, however, are promising. Positive and significant relationships could be found between "Charisma" (largely understood as nonverbal expressiveness) and its psycho-social and personality counterparts. The following findings from studies conducted in the USA could be replicated in the German context: significant positive relation of "Charisma"/Expressiveness to *Extraversion,* and *Internal Locus of Control* (see Friedman et al., 1980; Hall, 1998), - not, however, to *Dominance/Directiveness.*

The previous research could be *expanded* with findings on the relationship between "Charisma" and four factors of, *Success in Current Interpersonal Relations ("Quality of Opposite and Same Sex Relations", "Speed of Making Friends", "Understanding of Relationships")* and also to *Self-Efficacy Expectation* (FEW). Furthermore, "Charisma" was related to scales of *Competence and Control Orientations* (*Self-Concept of Own Competencies,* again with *Self-Efficacy,* and the overall score of Control Orientations, *Self-Efficacy - Externality, FKK).* Regarding personality dimensions (FPI) "Charisma" was strongly positive related to *Sociability, Calmness* and again to *Extraversion*; it was *negatively* related to *Depression, Inhibition,* and *Emotional Lability*.

Gender was very weakly related to “Charisma”. Small, but significant relationships between gender were found in four studies, for “Charisma” favouring females. The weakness of gender differences confirm findings obtained in other German studies (Klinzing et al., 1984; Schiefer et al., (1984); Klinzing & Gerada Aloisio, 2004a) and may be explained by cultural differences between the USA and Germany. In comparison to the relationship between personality characteristics and nonverbal abilities, however, gender effects often turned out to be much weaker. For example, personality characteristics like Sociability, Extraversion or Competence and Control Orientations seem to be more important then sex/gender. To question whether gender/sex is a decisive human characteristic for social behavior (Hirschauer, 1989; Gildemeister & Wetterer, 1992; Klann-Delius, 2005; Gildemeister, 2007) seems to be justified for nonverbal aspects of communication.

Results also indicated that there is no relationship, i.e., no loss of “Charisma” with Age (Klinzing & Gerada Aloisio, 2004a).

From the findings of the studies conducted in this project (with six out of eight null-hypotheses rejected) and in the USA, it can be concluded that the systematic relationship found between charisma or nonverbal expressiveness and various psychosocial and personality dimensions, point to the importance of this variable.

Moreover, a refined understanding of this concept has emerged. “Charisma” is the ability to convey messages expressively and unambiguously (see Friedman et al., 1980; Klinzing & Gerada Aloisio, 2007a), thereby to excite or captivate others, - an essential quality of people in various occupations which are related to social interaction and influence like teaching. “Charisma” is related to better interpersonal adjustment and thus to Affiliation (Friedman et al, 1980), Success in Interpersonal Relations, Sociability, and Calmness. Furthermore, “charismatic” persons are characterized as being extraverted, possessing a healthy Achievement-Orientation, Self-Esteem (Friedman et al. 1980), Self-Concept of Own Abilities, Internal Locus of Control, and Self-Efficacy-Expectation. “Charisma” is more than mere sociability or a function of acting ability; expressiveness is a characteristic that successfully influences the emotions, the attitudes, and the behavior of interactants and consequently the outcomes of interactional situations, like attitudes and achievement (Klinzing, 1984; Klinzing & Gerada Aloisio, 2004b), or popularity of physicians (Friedman et al. 1980).

On the other hand, "charisma" of persons is only slightly related to Self-monitoring, not related to Trait-Anxiety or Emotionality, and negatively related to *Neuroticism* (Friedman et al., 1980), *Depression*, *Inhibition*, and *Emotional Lability*.

But does "Charisma" equate to manipulation? In other words, is a charismatic leader for example, dominant, directive, or even manipulative? As research by Friedman et al. (1980) demonstrated, expressive persons have a degree of exhibition and playfulness about them, they want to impress people, to be at the centre of attention, and therefore**,** to be heard and seen. This desire is translated into reality through impressive communication. "Charisma", therefore, although somewhat related to dominance in American studies (but not so in the German ones, which also very weakly to directiveness), is not the desire and ability to manipulate and control but rather the ability to be successful in interactional situations.

In conclusion, on grounds of studies conducted in the USA and Germany, "Charisma" can be seen as important for effective leadership and teaching. As was demonstrated in a set of replicated experimental studies Nonverbal expressiveness/"Charisma" and Nonverbal Sensitivity can be improved in a relatively short time by systematic behavioral training (and thereby some of the psychosocial and personality dimensions included in the studies, like Extraversion, aspects of Competence and Control Orientations: Self-Efficacy can also be improved) was demonstrated in a set of replicated experimental studies (Klinzing, 2007; Klinzing & Gerada Aloisio, 2004b; 2007b). These important aspects of effective communication and teaching (Nonverbal expressiveness/"Charisma" and Nonverbal Sensitivity) should be infused into the pre- and inservice curriculum of professions requiring intensive social interaction.

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(1) Six of the studies on the FPI on gender differences form part of the MA-thesis by Desiree Wolleydt (University of Tuebingen). 18 studies of the project will be analyzed for gender effects in the doctoral dissertation of Bernadette Gerada Aloisio, Malta. Thanks to Martina Gerada (Malta/London) for the correction of the authors sometimes awkward English.

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