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Selected clothing characteristics and educator credibility

Roberts, Anna Duggins, Ph.D.

The University of North Carolina at Greensboro, 1990

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SELECTED CLOTHING CHARACTERISTICS AND EDUCATOR CREDIBILITY

by

ANNA DUGGINS ROBERTS

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

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1990

Approved by

Billie G. Oakland
Dissertation Advisor

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at the University of North Carolina at Greensboro.

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ROBERTS, ANNA DUGGINS, Ph.D. Selected Clothing Characteristics and Educator Credibility. (1990) Directed by Dr. Billie G. Oakland. 172 pp.

The purpose of this research study was to investigate the effect of selected clothing characteristics of an educator on perceptions of credibility formed by students in a first impression situation. One hundred eighty college students, 90 males and 90 females, comprised the sample.

Interactions were examined between sex of the educator, attire of the educator, color of garment, and visual design of fabric. A 2 x 2 x 3 x 3 experimental design was used with two levels of sex of the educator (male/female), two levels of attire of the educator (professional/casual), three levels of color of garment (dark/pastel/bright), and three levels of visual design of fabric (stripe/solid/print or plaid). Color prints representative of each possible treatment condition were rated by college students on source credibility dimensions of safety (trustworthiness) of the educator, qualification (expertness) of the educator, and dynamism of the educator.

Factorial analysis of variance revealed that perceptions of the educator's qualification (expertness) were significantly affected by attire and perceptions of the educator's dynamism were significantly affected by sex of the educator, attire, and color of garment. It was concluded that selected clothing characteristics affect students' perceptions of educator qualification (expertness) and dynamism. In a first impression situation, educators are perceived by students as most qualified (expert) when dressed in professional attire, and most dynamic when dressed in dark, professional attire, particulary when the educator is female.

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CHAPTER I

INTRODUCTION

As a reflection of an individual's values and lifestyle, clothing vividly communicates personal characteristics of the wearer. Referred to as the "second skin" (Horn & Gurel, 1981) or a "silent language" (Knapp, 1980), clothing may be used nonverbally as a means to determine sex, occupation, or nationality of an individual or to communicate and define personality, role, and status.

Since clothing can be easily observed with no interaction between individuals, it may influence the impression formed of the individual. Clothing is especially important as a perceptual cue in situations involving minimal information, minimal interaction, and minimal formal contact (Secord & Backman, 1964), particularly when little other information for use in impression formation is available to the observer.

The need to determine how impressions are formed, especially as they influence behavior in certain situational contexts, was pointed out by Douty (1963). Knapp (1980) identified the classroom setting as a gold mine of nonverbal behavior virtually unrecognized by scientific research, while Keith, Tornatsky, and Pettigrew (1974) discussed the need for critically identifying, isolating, and examining specific effects of both verbal and nonverbal teaching behaviors for optimized learning environments.

Since a favorable first impression influences desire for subsequent interaction, clothing may actually encourage or discourage patterns of communication between individuals (Knapp, 1980). In a classroom situation, largely defined and mediated by the form and quality of the interpersonal relations of the teacher and pupils within it, clothing of the educator may encourage interaction and enhance perceptions of credibility. Thus, a need was perceived for research investigating the effect of selected clothing characteristics of an educator on perceptions of credibility formed by students in a first impression situation.

Scope of the Problem

Theories of nonverbal communication and person perception provide a framework for the study of clothing in various contexts as it affects impression formation. A social cognitive framework devised by Lennon and Davis (1989) further organizes the body of person perception research, emphasizing the use of cognitive psychological processes with social objects, or people.

For the research and study of nonverbal communication, Knapp (1980) devised a theoretical framework incorporating physical characteristics, including physical attractiveness, and artifacts, including clothing, with other nonverbal behaviors such as kinesics, touching behaviors, paralanguage, proxemics, and environmental factors. As a major component of the physical characteristics category, the effect of physical attractiveness on communication and resultant impression formation has been the focus of much study. Researchers have

demonstrated that physical appearance is important in the perception of individuals (Bickman, 1974; Byrne, London, & Reeves, 1968; Chaikin, Gillen, Derlega, Heinen, & Wilson, 1978; Lambert, 1972; Landy & Sigall, 1974; Miller, 1970; Stillman & Resnick, 1972; Wasserman & Kassinove, 1976).

Since clothing is an integral component of physical appearance and may be observed with no interaction between individuals, it, like physical attractiveness, may influence the impression or image formed in a first impression situation (Emswiller, Deaux, & Willits, 1971). Hamid (1968) studied the influence of dress as a perceptual cue in impression formation with the use of color photographs of stimulus persons. When photographs were ranked using faces only, none of the results were statistically significant. When the dress of the stimulus person was visible, however, the influence of clothing on the type of impression formed was significant, particularly in perception of the opposite sex. Thus, impressions of an individual must be based not on physical appearance alone, but also on the clothing of the individual.

A personal characteristic often studied in association with clothing and physical appearance is perceived source credibility, or the willingness to believe what a person says and does (Tubbs & Moss, 1974). Since people tend to make early credibility judgments on the basis of whatever information is available (Widgery, 1974), when no verbal information is offered aesthetic information becomes salient, especially in an initial encounter with an individual. Varying the clothing of models has resulted in differences in credibility ratings in varied

settings (Engelbach, 1978; O'Neal, 1977; Powell, 1975; Smith, 1976; Stillman & Resnick, 1972).

It is likely, therefore, that a student's perception of educator credibility could be affected by characteristics of clothing worn by the educator, particularly in a first impression situation. However, little research has involved perception of an educator by students as a result of clothing worn.

Purpose of the Study

All people are evaluated by others as a result of impressions formed by type of clothing worn. Clothing has tremendous impact not only on the behavior of the wearer, but also on the behavior of those who perceive it (Leathers, 1976). Thus, it becomes increasingly important that we understand the role played by clothing in impression formation and in resulting judgments made by others, especially in specific situations and contexts.

The purpose of this research study was to investigate the effect of selected clothing characteristics of an educator on perceptions of credibility formed by students in a first impression situation. Further study of the role of clothing in the perceptual process in an educational setting should be of value to teachers, administrators, and counselors.

Justification

As the quest for excellence in American education continues, research concerning the teacher-student relationship becomes salient (Dickerscheid, 1985). Exploration of the impact of verbal and nonverbal

variables on the learning process and resulting enhancement of the classroom environment could increase the student's ability to receive, process, and retain information.

Transmitting of knowledge, questioning, encouraging, criticizing, and understanding of ideas and feelings all involve nonverbal elements on the part of both educators and students. Balzer (1969) and Pancrazio and Johnson (1971) pointed out the need for understanding nonverbal teaching behaviors and their effects on the quality of classroom discussion and relevant teacher-pupil interaction, while Torrance (1960), Pancrazio and Johnson (1971), and Keith, Tornatsky, and Pettigrew (1974) found that pupils were more likely to pay attention to nonverbal messages than to verbal ones, particularly when teacher verbalizations were in conflict with nonverbal behaviors.

Since first impressions may influence desire to interact or develop a relationship, chances for positive interaction in the classroom may be reduced if an initial impression is unfavorable. Research studies have shown that teachers perceive attractive students as being more intelligent, more socially adept, higher in educational abilities, and more positive in attitudes and personal traits, even when academic records of the attractive and the unattractive children studied were similar (Algozzine, 1978; Bersheid & Walster, 1972; Clifford & Walster, 1973; Rich, 1975; Rosenthal & Jacobsen, 1968; Ross & Salvia, 1975).

Even though most interactions between teachers and students were found to be positive in nature, children perceived as unattractive received less attention and engaged in fewer interactions with their teachers (Algozzine, 1976). These children who received less attention

from their teachers were then likely to respond by engaging in fewer interactions overall, and by generally being less involved in school.

Just as personal characteristics of students affect teachers' perceptions and behaviors, personal qualities of teachers may affect the reactions of their students. Few published studies to date have dealt with the effects of a teacher's appearance or dress on elementary, high school, or college students' evaluations of the teacher or on student academic performance. Chaikin, Gillen, Derlega, Heinen, and Wilson (1978) found that teachers perceived to be physically attractive by 9 and 13-year-old students received higher student evaluations and were considered to be more competent and better able to motivate, indicating that students may actually learn more from an attractive teacher because they may like the teacher better, desire to please the teacher, pay more attention, and study more.

As a major factor in perception of overall physical attractiveness, clothing may also influence perceptions of credibility, desire to interact, and ultimate learning. While studies of nonverbal behaviors in classroom settings have focused on such cues as environmental factors, touching behaviors, or physical characteristics, few have considered the effect of artifacts, such as clothing, upon perception. Cohen (1981) noted that a relationship existed between educator appearance and student ratings and achievement, but that further study of the influence of the instructors' clothing on student learning was needed. According to Cohen, this could be accomplished by studying credibility as an indicator of desire to learn.

Recent research studies have attempted to determine the effects of clothing of an educator on the learning process or the evaluation process (Butler & Roesel, 1989; Chowdhary, 1988; Engelbach, 1978; Peterson & Johnson, 1985; Reeder & King, 1984; Rosenblatt, 1980). However, no published study to date has considered the effect of specific clothing characteristics, such as style, color, or visual design of fabric, on perceptions of educator credibility formed by students in a first impression situation.

In a classroom environment, students' perceptions of educators may be affected by impressions created through clothing (Butler & Roesel, 1989). Students may judge educators on the basis of clothing worn in a first impression situation and from those judgments may form perceptions of the educator's source credibility, possibly affecting ultimate desire and willingness to interact and learn. At this time of national concern regarding teacher effectiveness, information regarding any factors impacting teacher-student interaction is vital (Butler & Roesel, 1989; Dickerscheid, 1985). Thus it becomes important not only to determine the effect of clothing of an educator upon students' perceptions of educator credibility, but also to determine which clothing characteristics are most favorably perceived.

Objectives

The objectives of the research study were:

To compare the role of selected clothing characteristics of an educator on perceptions of credibility formed by students in a first impression situation.

To determine which styles of clothing, colors, or visual designs of fabric most favorably affect students' perceptions of educator credibility in a first impression situation.

Hypotheses

As a result of the review of literature, the following hypotheses were formulated for the research study:

H_1 On the credibility dimension of safety (trustworthiness), college students' perceptions of educator credibility will be affected by:

A. sex of the educator.
B. attire of the educator.
C. color of garment.
D. visual design of fabric.

H_2 On the credibility dimension of qualification (expertness), college students' perceptions of educator credibility will be affected by:

A. sex of the educator.
B. attire of the educator.
C. color of garment.
D. visual design of fabric.

H_3 On the credibility dimension of dynamism, college students' perceptions of educator credibility will be affected by:

A. sex of the educator.
B. attire of the educator.
C. color of garment.
D. visual design of fabric.

CHAPTER II

REVIEW OF LITERATURE

Review of Theory

A theoretical framework for the study was developed through review of nonverbal communication, person perception, and social cognitive literature. Discussion of the development of theory is presented in the following order: (1) nonverbal communication theory, (2) person perception theory, and (3) social cognitive theory.

Nonverbal Communication Theory

Perspectives on Defining Nonverbal Communication

It has been said that communication is a form of behavior; since one cannot not behave one cannot not communicate (Watzlawick, Beavin, & Jackson, 1967). While many behaviors are vocal or verbal in nature, human communication also goes beyond spoken or written words (Knapp, 1980). Nonverbal cues are essential ingredients in the interpersonal communication mix, revealing a significant, and often dominant, portion of the social meaning in face-to-face interchanges (Burgoon, 1985).

People attend to nonverbal signals because they supply invaluable contextual cues that aid in interpretation of verbal messages. Nonverbal channels reveal psychological and emotional information about communicators, define the nature of the social situation, provide syntactic information facilitating the flow of verbalizations, or supply semantically redundant cues (Burgoon, 1985). By manner of dress, body

odor, physique or posture, body tension, facial expression and degree of eye contact, hand and body movement, punctuality or lack of it, one's physical position in relation to another, or vocal sounds accompanying verbal messages, individuals communicate total meaning in specific situational contexts (McCroskey, Larson, & Knapp, 1971).

Many individuals remain unaware of the extent to which nonverbal behaviors are utilized in transmitting communications. Birdwhistell (1960) estimated that the average person speaks words for a total of only 10-11 minutes per day, with the standard conversational sentence taking only 2.5 seconds. In a normal two-person conversation, the actual verbal component of the conversation carries only about 35% of the social meaning of the situation, while more than 65% of the social meaning is conveyed nonverbally. Birdwhistell's estimate was tested statistically by Philpott (1983) using meta-analysis of 23 studies, revealing that approximately 31% of the variance in meaning can be attributed to the verbal channel. The remainder, approximately 69% of the variance in meaning, was accounted for by nonverbal cues or their interaction with verbal ones.

Conceptually, the term "nonverbal" is subject to a variety of interpretations, just like the term "communication." A common source of confusion in defining nonverbal communication lies in whether the term refers to the signal "produced" (nonverbal), or the internal code for "interpreting" that signal (frequently verbal). Nonverbal events and behaviors can be interpreted through verbal symbols. However, when people refer to nonverbal behavior they are generally talking about the

signal to which meaning will be attributed, not the process of attributing meaning (Knapp, 1980).

Rather than attempting to classify behavior as either verbal or nonverbal, Mehrabian (1972) chose instead to use an "explicit--implicit" dichotomy, believing it to be the subtlety of a signal that brought it into the nonverbal realm. The subtlety seemed to be directly linked to a lack of explicit rules for coding. Mehrabian's work focused primarily on the meanings people attach to nonverbal and/or implicit behaviors, revealing a threefold perspective:

1) Immediacy. We react to things by evaluating them (positive or negative, good or bad, like or dislike).

2) Status. We enact or perceive behaviors that indicate various aspects of status (strong or weak, superior or subordinate).

3) Responsiveness. We perceive activity (slow or fast, active or passive).

Similar dimensions have been reported by researchers from diverse fields studying diverse phenomena. These three dimensions seem to be basic responses to the environment and are reflected in the way individuals assign meaning to both verbal and nonverbal behaviors (Knapp, 1980, p. 22).

While it is clear that nonverbal signals are more than mere auxiliaries to the verbal stream, there is a question of the degree to which nonverbal codes parallel verbal language systems. Nonverbal codes differ from verbal language systems in at least three unique ways: properties of universality, multimodal simultaneous encoding, and

iconicity. However, nonverbal signals do manifest many of the same properties as verbal language, such as discrete units, rule structures, multiple meanings, and transformation. Specific linguistic properties include:

1) Decomposition of many nonverbal expressions into discrete units equivalent to phonemes and morphemes, including emblems, smiles, head nods, eye contact, gestures, postural shifts, degree of body lean, and body orientation;

2) Display of semantic, syntactic, and pragmatic rules of nonverbal constructions;

3) Context bound meaning of many nonverbal behaviors;

4) Transformation of nonverbal codes (different forms of expression convey the same basic and underlying meaning); and

5) Productivity of nonverbal codes, or the ability to produce new expressions from existing ones. Gestural forms produced for specific technical uses, such as hand motions used in media broadcasting, are examples (Burgoon, 1985).

Because of the many similarities between verbal and nonverbal language systems, it is difficult to study nonverbal communication in isolation (McCroskey, Larson, & Knapp, 1971). Verbal and nonverbal channels are inextricably intertwined in the communication of the total meaning of an interpersonal exchange and should be treated as a total and inseparable unit (Burgoon, 1985; Knapp, 1980; McCroskey, Larson, & Knapp, 1971). When treated as part of a collective, ambiguity and unpredictability in meaning are replaced by regular and meaningful patterns of communication. Social functions for which such patterns have been identified include facilitation of cognitive processing and

learning, expression of emotions and attitudes, impression formation and management, relational communication, deception, social influence, and structuring and regulation of interaction (Burgoon, 1985).

Perspectives on Classifying Nonverbal Communication

The most common characterization of nonverbal codes is that they are analogic in nature, unlike the digital codes of verbal language. An analogic code contains an infinite and continuous range of naturally derived values, while a digital code, by contrast, is composed of a finite set of discrete and arbitrarily defined units. While many nonverbal signs do have intrinsic or natural meaning (such as smiling or crying), and may take on an infinite range of values, others are more appropriately treated as digital because they are discrete and arbitrary (such as the peace emblem or a greeting kiss).

A broader perspective on nonverbal communication treats all human behaviors and attributes as relevant, but hinges on the issue of intent. Whatever messages are sent intentionally by a source qualify as communication; unintended messages do not. The difficulty with the "intent" perspective is that it is very easy to deny intentionality for much of what goes on nonverbally. Conversely, inclusion of unintentional behavior as part of a nonverbal communication classification supports a receiver orientation, holding that any behavior a receiver perceives as intentional (or interprets as a message) qualifies as nonverbal communication. This perspective verges on the "all behavior is communication" approach (Burgoon, 1985).

Other authorities recommend considering not the intent of the communication, since a message may be conveyed nonverbally whether intended or not, but whether the behavior is a goal directed or a non-goal directed behavior (Knapp, 1978). When both the sender and the receiver of a message perceive the message in the same way, an effective communication occurs. If the sender perceives the message as a goal directed message, and the receiver perceives the message in the same way, the communication has been effective. Conversely, if both the sender and the receiver perceive the message as non-goal directed, an effective communication has occurred. Effective communication patterns may be depicted graphically as:

Effective Communication

Sender		Receiver
Goal directed message	----------	Goal directed message
Non-goal directed message	----------	Non-goal directed message

An ineffective communication occurs when the sender and the receiver perceive the message in different ways. This may be a problem when a non-goal directed message of a sender is perceived as a goal directed message by the receiver. Ineffective communication may be depicted graphically as:

Ineffective Communication

Sender		Receiver
Goal directed message	----------	Non-goal directed message
Non-goal directed message	----------	Goal directed message

Knapp (1983) maintained that expressive behavior, acts that produce similar interpretations in observers but are not intentional, are as important a part of nonverbal communication as is purposive, or intentional, behavior. The following classification schema devised by Knapp (1980) includes both intentional and unintentional behavior categorized under the major classifications of body motion or kinesic behavior, physical characteristics, touching behavior, paralanguage, proxemics, artifacts, and environmental factors.

Body motion, or kinesic behavior, typically includes gestures, body movements, facial expressions, eye behaviors, and posture. Movement of the limbs, hands, head, or feet; smiles or frowns; blinking, direction or length of gaze; or shifts in posture provide information about emotions, personality traits, or attitudes to the observer. Such kinesic behavior may further be classified as emblems, illustrators, affect displays, regulators, or adaptors.

Emblems are nonverbal acts that have a direct verbal translation, usually consisting of a word or two or a phrase. Most are produced with the hands and are culture specific or are even adapted to particular subgroupings within a given culture. Emblems are frequently used when verbal channels are blocked, or fail, and include such examples in American culture as gestures representing "OK" or "peace" (also known as the victory sign). Context can sometimes change the interpretation of the emblem, depending particularly on other cues accompanying it.

Illustrators depict what is being said verbally and are directly tied to, or accompany, speech. They accent, emphasize, point to, or

illustrate verbal statements, either repeating or substituting for a word or a phrase. While illustrators are learned by watching others, they are not as explicitly within the realm of awareness as emblems. Illustrators are most often used in difficult face-to-face situations when the communicator is excited or enthusiastic or when it seems that the receiver is not paying attention or does not fully understand the intended message.

While facial configurations are the primary source of affect displays, the body can also convey global affective judgments. A drooping, sad body, for example, communicates in any culture. Affect displays can repeat, augment, contradict, or be unrelated to verbal statements and, while they most often occur without any awareness on the part of the communicator, they can also be intentional.

Regulators serve to maintain and regulate speaking and listening patterns and are most often associated with turn-taking. Through such cues as head nods and eye behavior one can tell another person he/she wants to talk, ask the other person to continue, maintain the flow of the conversation, or show that he/she is finished and the other person can take a turn. Regulators are on the border of awareness and are generally difficult to inhibit in one's own communications, but individuals are very much aware of these signals when sent by others.

Adaptors are unconscious behaviors thought to develop in childhood as adaptive efforts to satisfy needs, perform actions, manage emotions, or develop social contacts. Not intended for use in communication, adaptors occur when triggered by verbal behavior in a given situation

associated with conditions occurring when the adaptive behavior was first learned. Since social constraints are placed on displaying many adaptive behaviors, they are most often seen when a person is alone.

Self-adaptors, such as holding, rubbing, squeezing, scratching, pinching, or picking one's own body, often increase as anxiety level increases in social situations. Alter-adaptors, learned in conjunction with early social experiences with giving and taking, attacking or protecting, or establishing closeness or withdrawing, involve leg movements and many restless movements of the hands and feet that may be residue learned from behaviors necessary for flight from early interaction. Object-adaptors involve the manipulation of objects often associated with a particular task such as smoking or writing. Individuals typically are more aware of performing object-adaptive than other adaptive behaviors since they are learned later in life and there seem to be fewer social constraints associated with them.

Physical characteristics, unlike kinesics, are not movement oriented and involve things that remain relatively unchanged during an interaction. While physique or body shape, body or breath odors, height, weight, hair, and skin color or tone all serve as nonverbal cues, general attractiveness is especially influential in communicating impressions.

Touching behavior includes stroking, hitting, holding, guiding another's movements, or other specific tactile events. Touching behavior has been studied as an important factor in early child development and as an influencer of adult behavior.

Paralanguage deals with how something is said, rather than with what is said, and includes factors of voice quality such as pitch range and control, rhythm control, tempo, articulation, and resonance, and vocalization factors of vocal characterizers, vocal qualifiers, and vocal segregates. Vocal characterizers include such nonverbal sounds as laughing, crying, coughing, sneezing, snoring, or hiccuping. Vocal qualifiers include intensity of the voice (overloud to oversoft), pitch (overhigh to overlow), and extent (extreme drawl to extreme clipping), while vocal segregates include such utterances as "uh-huh," "um," "ah," or "uh."

Proxemics refers to the use and perception of social and personal space and is concerned with such issues as seating arrangements, spatial relationships in crowds and densely populated areas, and conversational distance as it varies according to sex, status, role, and cultural orientation. Territoriality, or the human tendency to stake out personal and untouchable space, much as wild animals and birds do, has also been frequently studied.

Artifacts include perfume, clothes, jewelry, lipstick, eyeglasses, wigs, make-up, and other beauty aids. These objects may be manipulated with interacting persons to act as nonverbal stimuli and alter impressions formed.

Environmental factors concern those elements that are not directly related to the human relationship but impinge on it, including furniture, architectural style, interior design, lighting conditions, smells, colors, temperature, and additional noises present. This

category also includes "traces of action," impression influencing residue such as cigarette butts, bits of food, or wastepaper left behind by a person and observed by another.

An alternative classification perspective proposed by Burgoon (1985) emphasizes a message orientation. What qualifies as communication are those behaviors forming a socially shared coding system, or behaviors that are typically sent with intent, used with regularity among members of a social group, interpreted as intentional, and consensually recognizable in interpretation. A behavior qualifies as a message, whether performed unconsciously or unintentionally, if it is encoded deliberately and is interpreted as meaningful by receivers or observers. This message orientation approach requires that a behavior be habitually used as part of a coding system, implying that communicators select it often to convey a particular meaning and that observers treat it often as a purposive and meaningful signal.

The assumption that nonverbal communication is rule-governed is implicit in message orientation. Behaviors lacking consistent meanings or behaviors that fail to be combined in systematic "grammatical" ways with other nonverbal signals are excluded in the classification schema. Those codes included are kinesics, vocalics, haptics, proxemics, chronemics, manipulable features of physical appearance, and artifacts.

Kinesics are defined in the message orientation approach as visual bodily movements such as gestures, facial expressions, trunk and limb movements, posture, gaze, and the like. Vocalics, or paralanguage, refers to the use of vocal cues other than the words themselves and

includes such features as pitch, loudness, tempo, pauses, and inflection. Haptics refers to the use of touch, proxemics refers to the use of interpersonal distance and spacing relationships, and chronemics refers to the use of time as a message system, including such factors as waiting time, lead time, and amount of time spent with someone.

The physical appearance category differs from that in the previous classification system in that it includes only manipulable features such as clothing, hairstyle, make-up, and adornments. Non-manipulable characteristics such as physiognomy, body type, and height are excluded because they are not something the individual is able to change at will to create a particular meaning. While dieting and body building might be seen as attempts to modify the image projected, they are not easily manipulable or controllable. The artifact category includes manipulable objects and environmental features carrying messages from their designers or users.

Perspectives on Nonverbal Communication in the Total Communication Process

Argyle (1969) identified the primary uses of nonverbal behavior in human communication as expressing emotion, conveying interpersonal attitudes, presenting one's personality to others, and accompanying speech for the purposes of managing turn-taking, feedback, attention, and the like. As an element of the total communication process, nonverbal behaviors can repeat, contradict, substitute for, complement, accent, or regulate verbal behavior (Knapp, 1980).

Nonverbal repeating reinforces or repeats, often by gesture, what was said verbally. Contradicting occurs when the communicator says one

thing but nonverbally communicates another. Substituting occurs when facial expressions, body movements, or posture substitute for verbal messages, while complementing modifies or elaborates on the verbal message, often conveying attitude or intent. Accenting reinforces verbal messages, usually with movements of head or hands, and regulating is used to regulate the communicative flow.

Research by Keith, Tornatsky, and Pettigrew (1974) documented that:

1) Gaze direction affects the degree of emotionality permitted in an interaction, and is related to expectations of positive/negative reinforcement of the participants.

2) Facial expressiveness conveys cues of emotionality and attitudinal state and can function as a reinforcer or contradictor of the verbal flow.

3) Proximity conveys attitudinal state of the interactants, reflecting through distance between communicators the levels of permissible intimacy and liking/disliking.

4) Posture reflects emotionality and attitudinal state and is related to degree of liking/disliking between interactants.

5) Head movements convey degree of approval/disapproval between communicators.

6) Gestures are associated with affiliative approach behaviors and are related to emotional state.

7) Body contact reflects degree of emotionality by interactants.

As with verbal messages, the ability to send and receive nonverbal messages accurately is essential for developing social competence. Nonverbal skills are learned by imitating and modeling behaviors after those of others and by adapting responses to the coaching, feedback, and

advice of others. However, some people seem more sensitive to nonverbal cues and seem more adept at expressing feelings and attitudes nonverbally.

The ability to send nonverbal messages is known as encoding; receiving ability is known as decoding. Generally, effective encoders are also effective decoders and vice versa. However, there seems to be a general communication ability related to specific abilities associated with particular message classes, and for any given emotion a person may show varying levels of expertise (Knapp, 1980). Current knowledge concerning encoding and decoding abilities indicates that:

1) Humans have an extraordinary physiological ability to differentiate between a wide range of signals.

2) The acquisition and recognition of these signals is, at least in part, biologically programmed.

3) Visual channels show primacy over all other nonverbal channels.

4) Individuals vary in channel predilection and skill in encoding and decoding nonverbal signals (Burgoon, 1985).

Decoding or receiving ability is usually studied by requesting subjects to identify emotional or attitudinal state expressed by other persons seen either "live," on film, on videotape, in a photograph, or heard in an audio recording (Knapp, 1980). Rosenthal, Hall, DiMatteo, Rogers, and Archer (1979) developed a comprehensive method for testing nonverbal decoding ability known as the Profile of Nonverbal Sensitivity (PONS). The PONS test is a forty-five minute black-and-white sound film consisting of 220 numbered auditory and visual segments to which viewers

are asked to respond. In addition to a total score, a score is obtained for specific channels of communication and for combinations of channels.

Thousands of people of different ages, occupations, and nationalities have taken the PONS test. Results provide the following information about nonverbal decoding skills:

1) Females tend to be better decoders than males.

2) Decoding skills increase from kindergarten age to mid-twenties.

3) There is a minimal relationship between intelligence and other verbal measures and nonverbal decoding ability.

4) Effective decoders tend to be extroverted, popular, self-monitoring, and are judged to be effective interpersonally by others.

5) Actors, students of nonverbal behavior, and students in visual arts score well on the PONS test. Additionally, anyone rated excellent on his or her job can be expected to be an effective nonverbal decoder, regardless of occupation.

6) The possibility of a multicultural component in decoding nonverbal behavior exists.

7) Physiological arousal and practice improve nonverbal decoding ability (Knapp, 1980).

Individuals seem to have consistent biases in channel reliance; some consistently depend on verbal cues while others depend more on nonverbal ones. Others are situationally adaptable. The prevailing pattern is one of relying more frequently and for more purposes on nonverbal channels (Burgoon, 1985; Knapp, 1980; McCroskey, Larson, & Knapp, 1971) since it is assumed that nonverbal signals are more spontaneous, more difficult to fake, and less apt to be manipulated

(Knapp, 1980). In situations where individuals receive conflicting messages through two different nonverbal channels, the tendency is to believe the message emanating from the channel perceived more difficult to fake (McCroskey, Larson, & Knapp, 1971).

The function of the communication also affects channel reliance for most decoders. Verbal cues are used for factual, abstract, and persuasive communications, while nonverbal cues are used for relational, attributional, affective, and attitudinal messages. The tendency is to rely on verbalizations for the denotive or objective meaning of the message while depending on nonverbal signals for connotations, meta-messages, and meanings about the interpersonal relationship between speaker and listener. As a general pattern, adults place more reliance on nonverbal than verbal cues, especially when the verbal and nonverbal messages conflict, while children rely more heavily on verbal messages (Burgoon, 1985).

Many authorities also agree that communication is dependent upon the perceptions of the individuals engaging in the communication. Taylor (1960) contended that perception provides the basis for experiencing all visual symbols and means of communication. In any communicative event, an opinion is formed based on an analysis of the signs perceived, a sense of how those signs relate to each other, and a judgment as to how those signs relate to what they signify (Benson & Frandsen, 1976). Thus, any two individuals witnessing a communicative event, based upon past experiences and perceptions, may view the communication in entirely different ways.

Although many nonverbal signals seem to have universal forms and innate origins, cultural and subcultural norms constrain use and interpretation. Cultural display rules dictate appropriate occasions for use, assigned meanings, and presentation consequences, while subcultural patterns vary according to gender, age, race, socioeconomic status, personality, and situational context. Thus, cultural and subcultural norms must be considered in predicting behaviors and assigning meaning in interpersonal encounters (Burgoon, 1985).

Person Perception Theory

Person perception is "the process involved in knowing the internal and external states of other persons" (Warr & Knapper, 1968, p. 2), or "the processes by which man comes to know and to think about other persons, their characteristics, qualities, and inner states" (Tagiuri, 1969, p. 395). Person perception focuses on the ways in which informational cues are used to form impressions, opinions, or feelings about others (Secord & Backman, 1964).

Person perception is like perception in general in that linguistic signs are applied by the observer to both verbal and nonverbal actions, events, and stimuli in the environment. Labels applied are social judgments based on attributes of the individual perceived (Warr & Knapper, 1968). These observations or inferences made generally concern intentions, attitudes, emotions, abilities, purposes, thoughts, ideas, memories, traits, or other events inside the person that are of a strictly psychological nature (Tagiuri, 1969). Whether the judgment involves storing information or transmitting it to others, a

communication is made, either to oneself or to others (Perry & Boyd, 1972).

A person perception model developed by Warr and Knapper (1968) provides a framework for discussing and interrelating previous person perception research while encouraging new conceptualizations and research designs. Based upon interaction between an input system, a processing center, and an output system, the Warr and Knapper model presents a basis for understanding how impressions of others are formed through the processes involved in person perception (Appendix A, Warr & Knapper, 1968).

Input System

The input system serves as the determiner of information to be processed. Including both past and current stimulation, the individual selectively processes only those stimuli deemed pertinent in a given situation while filtering out the vast amount of material perceived as impertinent (Warr & Knapper, 1968). The degree of the relationship, the amount of information available, and the amount of interaction are important variables considered (Secord & Backman, 1964), as are nonverbal cues that allow rapid impression formation, such as facial features, body build, expressive movements, posture, and clothing.

Secord and Backman (1964) identified four modes of perception commonly used by individuals to form an impression, particularly in a first impression situation. These include outward appearance or superficial characteristics, a central trait and its immediate ramifications, a cluster of congruent traits, or a variety of traits.

While the traits are perceived directly, the individual then tends to infer, interpret, and judge the available information, resulting not in a single, passive act, but in an ongoing reaction to new and different stimuli entering into the perceptual process (Engelbach, 1978).

Since new information is constantly received while other information is forgotten or altered by additional input, information within a person's memory continually changes. Direct contact and interaction with an individual stimulates the input system through verbal and nonverbal channels, as does equally important indirect information gained from sources such as newspaper or magazine articles or television interviews (Warr & Knapper, 1968).

Processing Center

The processing center serves as a set of decision rules devised by the perceiver. Inference rules are made on the basis of one input, while combination rules are based on inferences from a number of individual inputs. How these are combined into rules is determined by the individual forming the perception, the situation (Warr & Knapper, 1968; Wilmot, 1979), the task involved (Warr & Knapper, 1968), and the available cues (Wilmot, 1979).

Personality is difficult to accurately perceive since it is an internal state of the person and cannot be directly observed. One can never perceive the "real" person because the concept of the "real" person is a myth. In addition, behavior is relationship bound and therefore constantly changing. When another person is perceived, the perceiver (1) imposes structure on available cues, (2) attributes

causality and responsibility to events, and (3) typically commits errors in accuracy of judgment (Wilmot, 1979).

Similarity of the observer to the subject, number of cues available, and kind of cues may influence judgment accuracy (Horn & Gurel, 1981; Knapp, 1980). As a minimum in person perception, there is the perceiver, the person, and the situation. In addition, a mutually shared field results in the person one is perceiving at the same time engaging in the same perceptual process. The perceiver's own behavior in a dyadic transaction produces reactions in the person; these reactions are then used as the basis for the perceiver's judgment. The personality characteristics perceived in a person thus depend in part on the characteristics he or she perceives in the perceiver (Wilmot, 1979), or, as stated by Tagiuri (1969, p. 396) "the perceiver may, through his own presence and behavior in the phenomenal world of the other, cause changes in the way in which the person whose state he is trying to judge presents himself."

Output System

In the output system, the individual forms an idea based on judgments made in the attributive, expectancy, and affective categories. The attributive component classifies or compares input in order to assign characteristics, or attributes, to the individual being judged (Warr & Knapper, 1968). Whether observing one's own action or that of another, an attribution is made based on available information. Attributions differ depending on whether one is attaching meaning to one's own or to another's behavior. Individuals tend to look for

personality traits in the other to explain his or her actions, but look for outside forces or environmental factors to explain their own (Wilmot, 1979).

The expectancy component refers to expectations of performance based upon attributive judgments. There is an often unconscious expectation that, because of certain attributes, an individual will behave in a particular way (Warr & Knapper, 1968). A person tends to perceive all people in the same manner, recognizing the same qualities or characteristics in each, while another person may perceive entirely different qualities or characteristics in that same person (Secord & Backman, 1964).

Expectations about a person tend to affect the way the person is perceived. If further interaction with the individual is expected, the perceiver tends to fit available information into a uniform pattern so a consistent characterization of the individual may be formed (Freedman, Carlsmith, & Sears, 1974). Characteristics of such stereotyping include categorization of persons, consensus or attributed traits, and discrepancy between attributed and actual traits (Secord & Backman, 1964).

Affective judgments are based on emotional responses such as attraction, liking, interest, respect, fear, or anxiety. As important determinants in selection and processing of input, affective judgments influence the way individuals choose to interact with others (Warr & Knapper, 1968).

Social Cognitive Theory

The cognitive processes which form the bases for perceptions and cognitions individuals use to form judgments of others are referred to as social cognition. Emphasizing the use of cognitive psychological processes with social objects, or people, social cognition is rooted in the field of cognitive psychology (Lennon & Davis, 1989).

While terms such as person perception, social perception, and impression formation have been used in clothing and human behavior literature to describe cognitive processes used in making judgments of others based upon appearance (Kaiser, 1985), these terms are considered inadequate in that they fail to distinguish theoretical differences in the research being conducted (Lennon & Davis, 1989). As early as 1969, Tagiuri pointed out the unsatisfactory nature of the term "person perception," since the term "perception" here is used in an imprecise manner most often referring to apperception or cognition, and recommended instead the use of more precise terms such as social perception or social cognition.

A social cognitive framework devised by Lennon & Davis (1989) organizes this body of research according to theoretical perspectives of social perception, categorization, attribution theory, and impression formation. Social perception concerns perceptual processes using social objects (people), categorization concerns the process of grouping these social objects into categories, attribution theory concerns perceived causality of behavior, and impression formation concerns the way knowledge one person possesses about another is organized into a general impression.

Social Perception

The social perception perspective is categorized according to factors that affect perception of an individual through stimuli processed in the input system. These include perceiver variables, object or target variables, and situational variables.

Perceiver variables are those characteristics of the perceiver that are likely to affect how the social world is perceived, such as personal goals, values, personality, memory, or knowledge structures. When forming perceptions, individuals may project their own attributes and feelings onto others (supplementary projection), or they may project characteristics lacking in themselves onto others (complementary projection) (Lennon & Davis, 1989).

Object or target variables refer to stimulus person variables and include characteristics of the person being observed. Important determinants of what is actually perceived by the perceiver, these include visual characteristics of the object, perceived importance of these characteristics, and similarity between these characteristics and self-perception.

By far the greatest amount of clothing and human behavior research in social perception has investigated the effect of visual characteristics (or type of clothing worn) of a stimulus person on judgments formed by others. Presuming that clothing symbols serve as nonverbal cues in the perceptual process, results demonstrate that variations in clothing worn by a stimulus person affect impressions formed (Lennon & Davis, 1989). The thrust of the modern work in

nonverbal communication through clothing is quantitative and analytical, rather than qualitative.

A substantial body of clothing and human behavior research has investigated the effects of specific manipulations of clothing on perception of personal traits and attitudes of stimulus persons. The impact of perceptions of social objects on subsequent evaluations and behavioral responses toward the target person has been the focus of a second category of object variable study.

The social situation or context in which an obsevation occurs may also affect social perception. Those stimuli that just happen to be around, related neither to the perceiver nor to the object of the perception, may decidedly influence perceptions formed (Lennon & Davis, 1989).

Clothing as a form of nonverbal communication is social situation or context dependent. The specific meaning communicated by clothing depends on the social situation in which it is perceived (Kaiser, 1985). Thus, perception may vary depending on whether the context is an office, a retail business, a home, or a classroom, taking on meaning as a function of the situation in which the interaction takes place.

Categorization

Rather than treating all social objects as different, there is a tendency for people to organize their perceptions by grouping social objects into categories. This may be achieved through assimilation or contrast. Assimilation concerns perception of the similarity between objects, while contrast concerns perception of the differences between objects.

One inherent difficulty in the categorization process is that categories perceived may or may not be accurate or truthful, since there is a tendency for people to distort perception to confirm their own beliefs. Contextual features, which may be assumed when not explicitly provided, may also affect the categorization process.

Stereotyping of individuals according to similar visual characteristics is a common form of categorization. The assumption is made when stereotyping that such grouping facilitates ability to know personality and behavioral characteristics of the social object (Lennon & Davis, 1989).

Attribution Theory

Attribution theory, which deals with the process of attributing meaning to behavior, has been termed the most consistent framework for discussing perception of others (Wilmot, 1979). Assuming that systematic processes are used to make attributions and that the attributions made have consequences for future behavior and relationships, attribution theorists provide models for perceived causality of social behavior (Lennon & Davis, 1989).

The perception of a temporary trait as an enduring attribute is known as temporal extension, while the tendency to perceive others as good or bad, and then to deduce and assign other traits from that decision, is known as the halo effect. Traits of a familiar person may be attributed to a stranger who resembles him/her, and if a person has one trait, it is often assumed by the perceiver that various other traits are also present (Freedman, Carlsmith, & Sears, 1974).

Impression Formation

Impression formation typically deals with the manner in which a general impression is formed from diverse bits of information about a person. Adjective traits in combination take on different meaning than in isolation and are influenced by context, resulting in a tendency to weigh stimulus information provided in an adjective checklist and to average weightings to form a composite impression. This is known as information integration (Lennon & Davis, 1989).

In summary, research in nonverbal communication presumes a knowledge of person perception and social cognition since all are apparent in any nonverbal encounter. Person perception theory focuses on the ways informational cues, often nonverbal in nature, are used to form impressions, opinions, or feelings about others (Secord & Backman, 1964). The cognitive processes which form the bases for these perceptions and cognitions individuals use to form judgments of others are referred to as social cognition (Lennon & Davis, 1989).

Whether judgments formed involve storing information or transmitting it to others, a communication is made, either to oneself or to others (Perry & Boyd, 1972). Occurring through both conscious and unconscious means (Engelbach, 1978), person perception is thus a dynamic, ongoing process, because what one sees is as much a function of him/her as it is of the qualities of the other.

Qualities attributed to the other are based on available cues and unique ways of interpreting those cues. While seeming certain, perception of the other is thus grounded in permanent uncertainty (Wilmot, 1979).

Clothing Review

Literature concerning the influence of clothing and physical attractiveness on person perception and perceived source credibility was reviewed, particularly as evidenced through nonverbal behaviors in the context of the classroom. Discussion is presented in the following order: (1) effects of clothing on person perception, (2) effects of physical attractiveness on person perception, (3) effects of physical attractiveness and clothing on perceived source credibility, and (4) studies of nonverbal behavior in classroom settings.

Effects of Clothing on Person Perception

Since clothing may be easily observed with no interaction between individuals, it may influence the impression or image formed, particularly in a first impression situation (Emswiller, Deaux, & Willits, 1971; Ryan, 1966). Within a few moments after initial contact with an individual, all people seem to make judgments based upon the clothing they see (Horn & Gurel, 1981), setting the stage for possible interaction even before any verbal interaction takes place (Buckley & Roach, 1981). Thus, clothing functions as a nonverbal cue or "sign language" that vividly reflects the wearer's values and lifestyle, transmitting initial impressions of individuals that may or may not be accurate or fair.

The effect of varying the clothing variable while holding other aspects of physical appearance constant has led to a better understanding of the role played by clothing in impression formation. When type of clothing has varied, perception of the individual's

personal qualities has generally varied as well (Butler & Roesel, 1989; Chowdhary, 1988; Dickey, 1967; Douty, 1963; Engelbach, 1978; Hamid, 1968, 1969; O'Neal, 1977; Peterson & Johnson, 1985; Powell, 1975; Reeder & King, 1984; Smith, 1976; Thomas, 1971). Dress and appearance have been found to affect other's honesty (Bickman, 1971), helping behavior (Emswiller, Deaux, & Willits, 1971; Lambert, 1972), and political behavior (Suedfeld, Bochner, & Matas, 1971).

In general, the clothing variable has been manipulated as similar-dissimilar (Emswiller, Deaux, & Willits, 1971; Suedfeld, Bochner, & Matas, 1971), attractive-unattractive (Smith, 1976), appropriate-inappropriate (Hamilton & Warden, 1966; O'Neal, 1977), professional-nonprofessional (Powell, 1975), formal-informal (Amira & Abramowitz, 1979; Butler & Roesel, 1989; Fortenberry, MacLean, Morris, & O'Connell, 1978; Giles & Chavasse, 1975; Peterson & Johnson, 1985; Stillman & Resnick, 1972), and fashionable-unfashionable (Engelbach, 1978). Responses to clothing have been modified by such variables as task, specific situation involved, or time in which the observation was made (Horn & Gurel, 1981; Knapp, 1980).

Douty (1963) studied the influence of clothing on perception of persons and found that with changes in clothing, significant differences in rating of a model's personal traits and social status occurred. Douty (1963) concluded that clothing significantly influenced judges' impressions of stimulus persons and recommended study of the influence of clothing on person perception in varying contexts.

Hamid (1968) studied the influence of dress as a perceptual cue in impression formation with the use of color photographs. When photographs were ranked using faces only, none of the results were statistically significant. When the dress of the stimulus person was visible, however, the influence of clothing on the type of impression formed was significant, particularly in perception of the opposite sex. Thus, Hamid (1968) concluded that impressions of an individual must be based not on physical appearance alone, but also on clothing of the individual.

Effects of Physical Attractiveness on Person Perception

The effect of physical appearance, particularly physical attractiveness, on communication and resultant impression formation has been the focus of much study. Researchers have shown that physical appearance is important in the perception of individuals (Argyle & McHenry, 1971; Bersheid & Walster, 1972; Bickman, 1974; Byrne, London, & Reeves, 1968; Chaikin, Gillen, Derlega, Heinen, & Wilson, 1978; Clifford & Walster, 1973; Goebel & Cashen, 1979; Hamid, 1972; Horai, Nacarri, & Fatoullah, 1974; Lambert, 1972; Landy & Sigall, 1974; Lombardo & Tocci, 1979; McKeachie, 1952; Miller, 1979; Mills & Aronsen, 1965; Smith, 1976; Thorton, 1944; Wasserman & Kassinove, 1976; Widgery, 1974; Widgery & Webster, 1969; Wilson & Nias, 1976). Physical appearance influences expectations individuals have for others and thus may be a factor in the way a person behaves, performs, or adjusts to life (Bersheid & Walster, 1972).

Although research does not reveal the source of stereotypical images of attractiveness, there is an overall tendency for people to agree on who is attractive and who is unattractive (Kleinke, 1975; Knapp, 1978, 1980). This agreement seems to be based upon regularity of features and, in earlier times, was positively related to physical health (Bersheid & Walster, 1972). At any rate, an attractive individual is generally conceded to be one with regular, typical features; a countenance with surprises is considered unattractive (Wilson & Nias, 1976).

Physical attractiveness acts as an informational cue that affects person perception and serves as a major component of successful communication (Patzer, 1985). Referring to the total appearance of an individual, physical attractiveness includes such factors as facial characteristics, hair style, grooming, posture, and clothing (Engelbach, 1978). A review of research concerning physical characteristics yields an overall view of the personal attributes associated with physical attractiveness.

Research in the area of physical attractiveness has produced four general findings:

1. Greater social power is experienced by those of higher physical attractiveness.

2. Individuals of higher physical attractiveness are better liked than those of lower physical attractiveness, all other things being equal.

3. People of higher physical attractiveness are assumed to possess more positive and favorable characteristics than those of lower physical attractiveness.

4. Those of higher physical attractiveness have different effects on others and receive different responses from others than those lower in physical attractiveness (Patzer, 1985).

Physically attractive individuals have been attributed more positive characteristics (Clifford & Walster, 1973; Miller, 1970; Wilson & Nias, 1976), have been assumed to be more intelligent (Bersheid & Walster, 1972; Clifford & Walster, 1973), have been viewed as more persuasive (Horai, Nacarri, & Fatoullah, 1974; Mills & Aronsen, 1965) and more credible (Widgery, 1974; Widgery & Webster, 1969), and have been found to more easily influence the opinion change of others (Horai, Naccari, & Fatoullah, 1974). Perceptions of physical attractiveness have been altered by such nonverbal stimuli as glasses (Argyle & McHenry, 1971; Thorton, 1944) and make-up (Hamid, 1972; McKeachie, 1952).

Bersheid and Walster (1972) determined that physically attractive children receive more interactions, and more positive interactions, from parents, teachers, and peers. Clifford and Walster (1973) examined the effects of children's physical attractiveness upon teachers' expectations. When asked to evaluate students' intellectual potential from a report card and a verbal description of accomplishments accompanied by a photo of either an attractive or an unattractive child, teachers gave a more positive evaluation to the attractive child, even though the information about all children was identical. The effect was the same for both male and female children.

Landy and Sigall (1974) and Smith (1976) studied students' evaluations of the quality of an essay and personal characteristics of the writer when physical attractiveness of the model varied. Landy and Sigall (1974) found that the writer's attractiveness was important in evaluating essay quality, with subjects' ratings most favorable when the model was physically attractive and least favorable when the model was physically unattractive. Smith (1976) found that when quality of work was considered competent, attractiveness of the model was less likely to influence evaluation of the work than when the quality of the work was considered poor.

Ratings of teachers by students are also consistent with the physical attractiveness phenomena, with teachers having higher physical attractiveness consistently evaluated more favorably on a variety of variables (Chaikin, Gillen, Derlega, Heinen, & Wilson, 1978; Goebel & Cashen, 1979; Lombardo & Tocci, 1979). Chaikin, Gillen, Derlega, Heinen, and Wilson (1978) studied a sample of 120 elementary students comprised of 9-year-olds and 13-year-olds. After viewing a videotape of a teacher, the subjects were asked to evaluate the teacher on the characteristics of competency, ability to stimulate students, and ability to motivate students. Higher evaluations were awarded to teachers of higher physical attractiveness.

Goebel and Cashen (1979) asked 150 students of varying grade level to evaluate seven dimensions of teacher performance when teachers' age, sex, race, and physical attractiveness were controlled. The physical attractiveness variable produced a significant main effect, with

teachers of higher physical attractiveness evaluated significantly more positively on all performance measures by all student education levels. Interactions between teachers' sex and physical attractiveness revealed that teachers of lower physical attractiveness who were middle-aged females and older males received the lowest evaluations of the study.

Photographs of a male or female stimulus person of high or low physical attractiveness were used by Lombardo and Tocci (1979) to evaluate the effects of physical attractiveness of a college psychology professor on college students. Sixty male and 60 female subjects evaluated the educator on a variety of personal traits, rating the professor of higher physical attractiveness significantly higher on warmth, sensitivity, superiority, communication ability, and knowledge of subject matter.

Effects of Physical Attractiveness and Clothing on Perceived Source Credibility

Perceptions of Source Credibility

A personal characteristic often studied in association with clothing and physical attractiveness is perceived source credibility, a communication element considered by McCroskey, Larson, and Knapp (1971) to be the single most important in interpersonal exchanges. In what is now considered a classic definition (Berlo, Lemert, & Mertz, 1970; DeVito, 1976; Sereno & Bodaken, 1975; Tubbs & Moss, 1974), Hovland, Janis, and Kelley (1953) referred to source credibility as the extent to which a communicator is thought to be a valid source of information and the degree of confidence placed in the communicator's intent to convey a message.

Tubbs and Moss (1974) further referred to credibility as a willingness to believe what a person says and does, while DeVito (1976) referred to credibility as the degree to which a receiver perceives the speaker to be believable. According to Berlo, Lemert, and Mertz (1970), the more credibility a communicator is perceived to have, the more likely the receiver is to accept a transmitted message, adopting the information and ideas based to a great degree on "who said it." Thus, source credibility represents the attitude of the receiver toward the source. It is what the receiver thinks of the source, not necessarily what the source is (McCroskey, Larson, & Knapp, 1971).

Source credibility is a multi-dimensional attitude and may include such dimensions as character, personality, competence, intention, and dynamism (McCroskey, Larson, & Knapp, 1971). Credibility has usually been defined in terms of the expertness and/or the trustworthiness of the source, and a given communication has been perceived in more favorable terms and has more often affected attitude change when attributed to a source having high credibility than when attributed to a source having low credibility (Aronson & Golden, 1962; Hovland & Weiss, 1951; Johnson & Scilippi, 1969; Whitehead, 1968; Widgery, 1974; Widgery & Stackpole, 1972; Widgery & Webster, 1969). Berlo, Lemert, and Mertz (1970) investigated the criteria actually used by receivers when evaluating message sources. Three meaningful and statistically independent dimensions of credibility were isolated: safety (trustworthiness), qualification (expertness), and dynamism.

Tubbs and Moss (1974) and Sereno and Bodaken (1975) also referred to three dimensions of credibility, but termed the dimensions character, authoritativeness, and dynamism. Character, similar to the safety dimension isolated by Berlo, Lemert, and Mertz (1970), refers to the speaker's perceived honesty and trustworthiness, or how objective, reliable, well motivated, and likable the speaker seems to be. Authoritativeness, similar to the qualification dimension isolated by Berlo, Lemert, and Mertz (1970), refers to expertness and the speaker's command of a subject, or how intelligent, informed, competent, and prestigious the speaker is perceived to be. Dynamism refers to the forceful and active nature, vigor, and intensity of the speaker.

A source may be perceived as high-credible on one dimension and low-credible on other dimensions. A high-credible source is one who is perceived favorably on all dimensions; a low-credible source may be perceived in a negative light on only one of the dimensions. Thus, for a speaker to be perceived as high-credible in the eyes of receivers, it is vital that all dimensions of credibility be enhanced (McCroskey, Larson, & Knapp, 1971).

The most definitive conclusion from communication research is that the impact of the source tends to dominate the effects in communication, with the success or failure of the message in many instances determined by what the source is perceived to be by the receiver. Credibility of the source prior to the beginning of the communicative act is known as initial credibility. Derived credibility is the credibility of the source produced during the act of communicating. The credibility of the

source at the completion of the communicative act, the product of the interaction between initial and derived credibility, and what the receiver thinks of the source after the communication transaction has been completed is known as terminal credibility (McCroskey, Larson, & Knapp, 1971).

At least three factors produce changes in a source's credibility: changes of receiver, changes of topic, and changes of time. Different people perceive sources in different ways. A source may be perceived as high-credible on one topic, yet low-credible on another. And as situations change over time, an individual's credibility may change with the same people (McCroskey, Larson, & Knapp, 1971).

Physical Attractiveness and Perceived Source Credibility

People tend to make early credibility judgments on the basis of whatever information is available (Widgery, 1974). When no verbal information is offered, especially in an initial encounter with an individual, aesthetic information becomes salient. Outside appearance constitutes a major source of information that may be utilized to form a first impression of an individual, with symbolic cues provided by appearance typically setting the stage for interaction even before any verbal interaction takes place (Buckley & Roach, 1981).

Widgery and Webster (1969) hypothesized that perceived physical attractiveness and credibility were positively correlated. Using a semantic scale to rate photographs of individuals on the credibility dimensions of safety, qualification, and dynamism, they determined that received visual cognitions of a speaker provide cues that allow the

receiver to make initial judgments of credibility based upon perceptions of speaker attractiveness. While judgments of all dimensions of credibility were affected, the dimension of safety was most profoundly so.

Widgery (1974) investigated the effects of sex and physical attractiveness upon perceptions of source credibility and found that sex of the receiver and attractiveness of the source were both important factors in initial credibility perception. In general, females were more influenceable than males, especially when topic salience was low. Widgery concluded that the role of source credibility in persuasion may be more dominant when topic salience is low.

Clothing and Perceived Source Credibility

Varying the clothing of a source has also resulted in differences in credibility ratings (Engelbach, 1978; O'Neal, 1977; Powell, 1975; Smith, 1976). Stillman and Resnick (1972) and Powell (1975) investigated the effect of counselor's attire on perceptions of credibility formed by subjects in a counseling session. Stillman and Resnick (1972) found no significant effect between counselor's attire and the degree to which the subject perceived the counselor to be credible. Counselors dressed in tie and sports jacket did not elicit higher disclosure and attractiveness ratings than did counselors dressed in a sport shirt and casual slacks. However, Powell (1975) found credibility scores of apathetic counselors to be raised when the counselor was dressed in non-professional attire and lowered when the counselor was dressed in professional attire.

Varying the clothing of a model in an advertisement significantly affected both source credibility ratings and intent to purchase a product (O'Neal, 1977). A significantly higher rating for the credibility dimension of expertness was found when the model was appropriately rather than inappropriately attired, while the higher the subject's clothing interest/importance score, the more likely the subject was to purchase the product when the model was appropriately attired.

Engelbach (1978) investigated the effect of fashionability of an educator's clothing on selected dimensions of perception of the educator in a first impression situation. The relationship between student ratings assigned the educator's personal characteristics, including the credibility dimension of expertness, and the subject's clothing interest/importance score when fashionability of the educator's clothing varied was determined.

Little difference was noted in ratings of the educator's credibility on the dimension of expertness when fashionability of the clothing varied. Engelbach (1978) concluded that the extent of information provided concerning the educator allowed the subjects to feel the educator was well known to them, creating a situation that was no longer a true first impression situation and influencing ratings of the educator's expertise.

Perceptions of the receiver have also been found to significantly affect judgments formed (Knapp, 1980; Ryan, 1966). Variables of the perceiver which may affect the perception of the message source and

resulting judgments of credibility include individual differences in levels of perception, personality of the perceiver, social-psychological orientation of the perceiver, background of the perceiver, and variations in clothing awareness. Interest or importance placed on clothing may also affect the subject's perception of source credibility (O'Neal, 1977; Smith, 1976).

Studies of Nonverbal Behavior in Classroom Settings

Studies of nonverbal behavior in classroom settings have focused on such cues as environmental factors, touching behaviors, and personal or physical characteristics of students and educators. Sherman and Blackburn (1975) studied the relationship between observed personal characteristics of faculty members and judged teaching effectiveness and found statistically significant higher teaching competence ratings when the instructor was perceived to be dynamic, pragmatic, amicable, and highly intellectually competent. Sex (Elmore & LaPointe, 1974; Harris, 1975; Mischel, 1974), warmth (Elmore & LaPointe, 1977; Mitchell & Dickersheid, 1985), and physical attractiveness (Chaikin, Gillen, Derlega, Heinen, & Wilson, 1978) have affected students' perceptions and evaluations of their instructors.

Elmore and LaPointe (1974) studied the influence of faculty sex and student sex on teacher evaluation and found no differences between mean ratings given male and female faculty by male and female students. In subsequent studies, warmth was found to be an important variable influencing teacher effectiveness ratings regardless of sex of the educator (Elmore & LaPointe, 1977; Mitchell & Dickersheid, 1985).

However, Harris (1975) studied the effect of sex on ratings of an instructor and found that females generally rated an educator's performance and academic rank higher than did males. Instructors using a masculine mode of teaching were rated higher in performance, rank, and masculinity than were instructors using a feminine mode of teaching, even though the male and female teachers were not perceived as significantly different, except on the dimension of masculinity, simply as a result of gender.

In a study conducted by Chaikin, Gillen, Derlega, Heinen, and Wilson (1978), it was hypothesized that a teacher's appearance could affect student evaluations such that the more attractive the teacher, the more positive the evaluation. A physical attractiveness stereotype was found to exist in the ratings of the teacher and it was determined that the more attractive the teacher was rated by the students, the more she was perceived as being competent and able to motivate. The researchers proposed that students may actually learn more from an attractive teacher because they may like the teacher better, desire to please the teacher, pay more attention, and study more.

As a major factor in the perception of overall physical attractiveness, clothing may also influence perception of an educator. Using four distinct clothing styles, Reeder and King (1984) determined that femininity and stylishness of clothing influenced high school students' ratings of an instructor. When the instructor was shown dressed in dainty, feminine clothing, she was perceived as very approachable. When viewed in a skirted suit, she was perceived to be

capable, trustworthy, a leader, and well organized. When dressed in a skirt, blouse, and vest or in a pantsuit, however, the instructor was perceived as less intelligent and old-fashioned.

Peterson and Johnson (1985) investigated the effects of differing levels of formality of teacher dress on perception of high school students and found that informally dressed teachers were seen as more sympathetic and fair while more formally dressed teachers were viewed as more knowledgeable and controlled. In a similar study, Butler and Roesel (1989) used headless color photographs of a female teacher model to examine the influence of clothing style on student perceptions of teacher characteristics, including knowledge, respect, approachability, and overall acceptability. Teacher characteristics were measured by student responses to 20 statements designed to reflect the students' perceptions of the teacher.

The results of Chi square analysis indicated differences between clothing styles on 19 of 20 statements, with teachers wearing the most extreme clothing styles eliciting the greatest reactions. Again, informally dressed teachers were seen as more approachable, less knowledgeable, and more acceptable, while more formally dressed teachers were seen as unapproachable, not especially fun, authority figures who assign homework, and possessing the image of a teacher.

While no specific form of dress in either study proved to create the most favorable impression overall, evidence suggested that, by selecting certain styles of clothing, teachers could project the specific image they wished to convey. Because of the diversity of the

roles of educators, it seemed that different clothing styles should be used depending on the specific teaching situation and the image to be conveyed (Butler & Roesel, 1989; Peterson & Johnson, 1985).

The impact of dress on student evaluations of a college instructor was investigated by Chowdhary (1988) and it was determined that the same instructor seen in Western attire was perceived differently than when seen in Indian attire. Students rated the instructor higher overall and higher in manner of presentation and course organization when clothed in a dress or skirted suit rather than when clothed in traditional Indian Saree or Salwar, Kameez, and Dupatta, indicating that effort may be needed to establish credibility and rapport in classroom situations by professors who dress differently. Chowdhary's study differed in design from most others investigating the effect of dress on students' evaluations of an instructor. Rather than using photographs, slides, or line drawings of an educator to collect the research data, a live educator in a classroom setting was evaluated over a period of time.

Researchers have also investigated the effect of clothing of an educator on student learning. Proposing that learning may be enhanced by matching teaching and learning styles, Rosenblatt (1980) investigated the influence of clothing, as a form of nonverbal communication, on the instructional process. Student teachers classified according to perceived teaching style were analyzed for differences in use of clothing. "In-fashion out-of-fashion" and "concealing-exposing" clothing dimensions differed statistically among five teaching style families (social interaction, information processing, personal source,

behavior modification, and eclectic), indicating that particular clothing uses could distinguish teaching style and that further research investigating the potential for the use of clothing in increasing effectiveness of the instructional process was warranted.

Statement of Logic

Researchers have shown that physical appearance, particularly physical attractiveness, is important in the perception of individuals. As a major component of physical appearance, clothing also functions as an important nonverbal cue used to form perceptions of others. Clothing affects perception of physical attractiveness, and physical attractiveness affects perception of credibility. Therefore, clothing affects perception of credibility. This effect of clothing on students' perceptions of educators has been the focus of numerous studies conducted in classroom settings.

CHAPTER III

PHASE I METHODOLOGY

The effect of selected clothing characteristics of an educator on students' perceptions of educator credibility was the focus of the research problem. Phase I of the study dealt with the development of the instrument and the determination of the validity of the instrument, while Phase II dealt with collection and analysis of the research data. The research procedures of Phase I are presented in the following order: (1) statement of the problem, (2) procedure, (3) selection of the Phase I sample, (4) definitions, and (5) assumptions and limitations.

Statement of the Problem

The study was designed to investigate the effect of selected clothing characteristics of an educator on perceptions of credibility formed by students in a first impression situation. The researcher sought not only to determine if, in a first impression situation, selected characteristics of clothing (including style, color, and visual design of fabric) affect students' perceptions of educator credibility, but also to determine if some of these clothing characteristics more favorably affect students' perceptions of educator credibility than do others. The ultimate aim was to identify broad categories of clothing dimensions that could best be manipulated to enhance student perception of educator credibility in a first impression situation.

Procedure

Research Design

Previous study of the effects of clothing on perception yielded valuable research design information. Both black and white and color photographs were commonly employed as the instrument to study effects of clothing on perception (Buckley, 1983b; Buckley & Roach, 1981; Butler & Roesel, 1989; Cash & Duncan, 1984; Cavior & Dokecki, 1971; Conner, Peters, & Nagasawa, 1975; Kleinke, 1975; Ross & Salvia, 1975) as were color slides (Buckley, 1983a; Douty, 1963; Freeman, Kaiser, & Wingate, 1985-86; Miller, Feinberg, Davis, & Rowald, 1982). According to Kleinke (1975), the use of photographs in studies of first impressions helped to control extraneous variables such as gestures, tone of voice, and facial expressions. Hensley (1981) also emphasized the importance of controlling physical attractiveness as a variable in order to avoid confounded results.

However, other researchers questioned the use of photographs for the study of person perception as they seemed to create an unnatural research environment. Argyle and McHenry (1971) pointed out that a possible disadvantage of using photographs is that the stimuli in question may not have the same effects as in a real-life situation where more information is available upon which to base judgments. They found that wearing spectacles increased a target person's perceived IQ by 12 points when seen briefly in a photograph, but no such effect was found when he was seen talking for five minutes.

Although these findings seem to dispute experiments in person perception using photographs or brief exposure to a stimulus person, the use of photographs is a valid method for collecting research data, particularly in situations where control of extraneous variables is desirable. The use of photographs in person perception is limited, however.

When comparing methods of object-person presentation such as pictures, movie or video tapes, or written person descriptions, Perry and Boyd (1972) found that designs using written information facilitated accuracy in impression formation when the subjects were permitted to return to the original information several times in order to consolidate the impression. However, this consolidation effect suggested that studies using a number of information sources, both written and visual, confounded results when an effort was not made to determine the effect of several sources of information on the impression formation process.

Buckley and Roach (1981), Cavior and Dokecki (1971), and Engelbach (1978) also reported confounding results in impression formation when enough information was presented in a study to allow subjects to feel that the object-person was well known to them. It seems important, therefore, that in studies of first impression formation the information available upon which impressions may be formed be limited to the specific independent variables included in the study.

An experimental design was chosen for this research problem. In order to investigate the independent effect of each variable on the dependent variable, as well as the effects due to interactions among the

variables, the factorial design was employed (Ary, Jacobs, & Razavieh, 1979). Four independent variables, sex of the educator, attire of the educator, color of garment, and visual design of fabric, were selected to investigate effects upon the dependent variable, credibility of the educator.

A 2 x 3 x 3 x 3 factorial design with two levels of sex of the educator (male/female), three levels of attire of the educator (professional/semi-professional/casual), three levels of color of garment (dark/pastel/bright), and three levels of visual design of fabric (stripe/solid/print or plaid) was used. The levels of these independent variables were crossed in the design, resulting in 54 treatment conditions.

Development of Independent Variables

The independent variables were operationalized by using a panel of college students, college faculty, and clothing professionals to identify garments to be worn for the study. The 54 possible combinations of all levels of the independent variables were determined and color slides of at least four examples of each were made. The 214 resulting slides (only two examples were available in one treatment condition) were then rated by the panel to determine the highest level of category agreement for inclusion of garments in the study.

Selection of Garments

For the purposes of this study, professional attire for a male was defined as a suit, dress shirt, and tie, while professional attire for a female was defined as a suit consisting of a jacket and matching skirt

or slacks worn with a high-necked blouse. Semi-professional attire consisted of dress slacks, dress shirt, and tie for a male and a high-necked, modest dress, or skirt or slacks worn with a high-necked blouse for a female. Casual attire for both male and female categories consisted of jeans, slacks, or shorts (and casual skirts for females) worn with sports shirts or sweaters.

An effort was made in selecting all garments photographed for the study to include only those styles considered appropriate for an educator to wear in a classroom setting and to avoid trendy or fad items that remain fashionable only for a short period of time. Skirt and dress lengths of the female model ranged from slightly below knee to mid-calf, lengths considered fashionable and appropriate for a professional woman in most fashion seasons.

Two undergraduate independent study students majoring in home economics with an emphasis in textiles and clothing at East Tennessee State University selected the garments to be photographed from ten retail establishments in Northeast Tennessee. Specialty stores, department stores, and used clothing stores, as well as private wardrobes, were used to obtain the four examples of garments needed for each treatment condition. The garments were collected and photographed over a period of four months. All garments were borrowed from the retail establishments or individuals and taken to a controlled setting to be photographed.

Selection of Models

One male and one female model of mesomorphic body type were selected to model all garments in the photographic sessions. The male model was six feet one inch in height and weighed 165 pounds, wearing a size 40 regular suit and size 15 1/2 shirt. The female model was five feet six inches in height with a weight of 118 pounds. Her dress size was eight or ten, depending upon the manufacturer of the particular garment being photographed. By photographing all garments on the same male or female model, an attempt was made to prevent extraneous variables such as posture, body size, or physical attractiveness from influencing later judgments made by subjects when rating educator credibility.

Development of Phase I Instrument

Color slides were taken against a neutral background with models standing in classic anatomical position. Heads and feet were cropped from the photographs, and models wore no jewelry or accessories other than belts which were seen as an integral component of the costume.

Garments were photographed in the clothing construction laboratory in the Department of Home Economics at East Tennessee State University. In an attempt to eliminate possible variations due to lighting, all slides were made in the afternoon (to control natural lighting from window walls) and the same combination of artificial lighting sources was used in each session. The location in the laboratory used for each photograph was fixed and a photographic tripod insured consistency of angle for each shot.

Administration of the Rating Instrument

All slides were arranged in random order for viewing to avoid response bias due to order of presentation or rater fatigue. Six separate viewings of the slides were held, with a different group of raters present at each. For each of the six viewings the slides were rearranged in varying random order.

Raters were told only that they were to view 214 slides of college educators and to designate on a rating sheet whether the garment worn in each slide most appropriately fit in a professional (P), semi-professional (SP), or casual (C) category. Raters were then given a check sheet consisting of numbered blanks from one to 214 and spaces to mark their own inclusion in student/faculty/clothing professional and male/female categories (Appendix B). The one slide in each treatment cell receiving the highest level of category agreement (70% or higher) was designated for use in Phase II of the study.

Selection of the Phase I Sample

A panel of 60 raters was selected to view and categorize the slides to determine the validity of the instrument. Twenty college faculty members from East Tennessee State University were randomly selected (with replacement) from a list of full-time, tenure-track faculty. Twenty undergraduate students representing a variety of major areas of study in a required core course at East Tennessee State University and 20 clothing professionals, including both graduate students and faculty from the Department of Clothing and Textiles at The University of North Carolina at Greensboro, were also selected to participate in the rating of the slides.

Definitions

The following definitions are given to operationalize terms used throughout the study:

Anatomical position--"A standard body position in which the body is erect with the feet together. The upper limbs hang at the side, with the palms of the hands facing forward, the fingers extended, and the thumbs pointing away from the body" (Spense & Mason, 1983, p. 8).

Clothing characteristics--Selected elements of design applied to clothing, such as line (style of the garment--professional, semi-professional, or casual), color (dark, pastel, bright), or visual design of fabric (stripe, solid, print or plaid).

First impression situation--A situation in which an individual has little or no previous information or knowledge upon which judgments or impressions may be formed.

Mesomorphic body type--"The typical, athletic body type with a hard muscular build" (Horn & Gurel, 1981, p. 143).

Person perception--"Process involved in knowing the external and internal states of other people" (Warr & Knapper, 1968, p. 2).

Source credibility--"The extent to which a communicator is perceived to be a valid source of information and the degree of confidence perceived in the communicator's intent to convey a message" (Hovland, Janis, & Kelley, 1953, p. 21).

Assumptions and Limitations

The study's assumptions were:

1. Judgments of educators made by students in first impression situations influence desire to interact, thus affecting subsequent learning.

2. Perception of educator credibility may be viewed as an indicator of student desire to learn.

3. While static in nature, color photographs are appropriate tools for studying perceptions formed in first impression situations where, by definition, little interpersonal interaction has occurred.

The study's limitations were:

1. The study was limited to one geographic location, East Tennessee State University in Johnson City, Tennessee, and to one category of subjects, college students. Thus, the results of the study may be generalized only to educators of students in mid-sized colleges and universities in the given geographic area.

2. The researcher's own values and attitudes influenced both the choice of criteria for the study (selected clothing characteristics) and assessment of the findings, thus limiting the study to those clothing characteristics deemed important by the researcher in a subjective appraisal.

3. Factors that influenced subject behavior in the past are not measurable in the present, yet could have significantly influenced responses (reaction to styles of clothing, colors, and visual design of fabric may be due to past experiences and biases).

4. An attempt to control extraneous variables (posture, physical attractiveness, lighting) may have created an unnatural environment, preventing the interaction of variables necessary to understand complex human behaviors.

5. The use of photographs for the data collection instrument, rather than the use of live educators, may have biased the subjects' responses by preventing human interaction and by omitting both verbal and nonverbal feedback commonly available for impression formation.

CHAPTER IV

PHASE I RESULTS

Phase I of the study dealt with the development and selection of color slides to be used in an investigation of the effect of selected clothing characteristics of an educator on perceptions of credibility formed by students in a first impression situation. Two levels of sex of the educator (male/female), three levels of attire of the educator (professional/semi-professional/casual), three levels of color of garment (dark/pastel/bright), and three levels of visual design of fabric (stripe/solid/print or plaid) were crossed in a factorial design to obtain 54 treatment conditions.

Four examples of garments appropriate for each treatment condition were then obtained, and the resulting 214 color slides were viewed by a panel of 60 raters comprised of college students, college faculty, and clothing professionals. The raters were told that the slides were of college educators and were asked to decide if each garment viewed best fit in a professional, semi-professional, or casual category. The one slide in each treatment condition receiving the highest level of category agreement (70% or higher) was designated for use in Phase II of the study.

Single Cell Analysis

Data were analyzed with a frequency count and percentage of response in each category option available to raters (professional,

semi-professional, casual) for each of the 214 color slides viewed. Results of the analysis are presented in Table 1.

Category agreement of 70% or higher was achieved in all casual treatment conditions and the one slide in each with the highest level of agreement was selected for use in Phase II of the study. In those treatment conditions having more than one slide with the same highest percentage of category agreement, the final slide selection was made based on photographic quality. Those slides in the casual treatment conditions designated for use in Phase II of the study are marked with a single asterisk in Table 1.

Category agreement of less than 70% was found in five of the professional or semi-professional treatment conditions. Designated by a double asterisk in Table 1, these included the male/professional/bright/print, female/semi-professional/dark/print, female/semi-professional/pastel/solid, female/semi-professional/pastel/print, and female/semi-professional/bright/solid categories.

Apparent confusion among raters in delineating the professional and semi-professional categories, particularly for the female educator, resulted in an inability to designate a color slide to be used in Phase II of the study for these five treatment conditions. The decision was made to collapse the professional and semi-professional categories and to combine the data in order to achieve 70% or higher category agreement for each treatment condition.

Table 1

Frequency Distribution of Phase I Slide Selection

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
1.	Male/professional/dark/pinstripe	P	60	100.00	60	100.00	56	93.33	60	100.00
		SP	0	0.00	0	0.00	4	6.67	0	0.00
		C	0	0.00	0	0.00	0	0.00	0	0.00
		Total:	60	100.00	60	100.00	60	100.00	60	100.00
2.	Male/professional/dark/solid	P	56	93.33	48	80.00	60	100.00	32	53.33
		SP	3	5.00	12	20.00	0	0.00	27	45.00
		C	1	1.67	0	0.00	0	0.00	1	1.67
		Total:	60	100.00	60	100.00	60	100.00	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
3.	Male/professional/dark/print	P	58	96.67	20	33.33	38	63.33	55	91.67
		SP	2	3.33	31	51.67	21	35.00	3	5.00
		C	0	0.00	9	15.00	1	1.67	2	3.33
		Total:	60	100.00	60	100.00	60	100.00	60	100.00
4.	Male/professional/pastel/pinstripe	P	58	96.67	44	73.33	47	78.33	51	85.00
		SP	2	3.33	16	26.67	13	21.67	9	15.00
		C	0	0.00	0	0.00	0	0.00	0	0.00
		Total:	60	100.00	60	100.00	60	100.00	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
5.	Male/professional/pastel/solid	P	49	81.67	53	88.33	57	95.00	42	70.00
		SP	11	18.33	7	11.67	3	5.00	15	25.00
		C	0	0.00	0	0.00	0	0.00	3	5.00
		Total:	60	100.00	60	100.00	60	100.00	60	100.00
6.	Male/professional/pastel/print	P	12	20.00	44	73.33	20	33.33	33	55.00
		SP	41	68.33	15	25.00	35	58.33	26	43.33
		C	7	11.67	1	1.67	5	8.33	1	1.67
		Total:	60	100.00	60	100.00	60	99.99	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
7.	Male/professional/bright/pinstripe	P	37	61.67	48	80.00	---		---	
		SP	20	33.33	11	18.33	---		---	
		C	3	5.00	1	1.67	---		---	
		Total:	60	100.00	60	100.00	---		---	
8.	Male/professional/bright/solid	P	43	71.67	26	43.33	12	20.00	12	20.00
		SP	16	26.67	25	41.67	34	56.67	36	60.00
		C	1	1.67	9	15.00	14	23.33	12	20.00
		Total:	60	100.01	60	100.00	60	100.00	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
9.	Male/professional/bright/print**	P	9	15.00	13	21.67	16	26.67	8	13.33
		SP	37	61.67	31	51.67	26	43.33	29	48.33
		C	14	23.33	16	26.67	18	30.00	23	38.33
		Total:	60	100.00	60	100.01	60	100.00	60	99.99
10.	Female/professional/dark/pinstripe	P	59	98.33	47	78.33	56	93.33	31	51.67
		SP	0	0.00	13	21.67	4	6.67	25	41.67
		C	1	1.67	0	0.00	0	0.00	4	6.67
		Total:	60	100.00	60	100.00	60	100.00	60	100.01

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
11.	Female/professional/dark/solid	P	54	90.00	58	96.67	53	88.33	48	80.00
		SP	6	10.00	2	3.33	7	11.67	11	18.33
		C	0	0.00	0	0.00	0	0.00	1	1.67
		Total:	60	100.00	60	100.00	60	100.00	60	100.00
12.	Female/professional/dark/print	P	43	71.67	28	46.67	47	78.33	39	65.00
		SP	17	28.33	29	48.33	12	20.00	20	33.33
		C	0	0.00	3	5.00	1	1.67	1	1.67
		Total:	60	100.00	60	100.00	60	100.00	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
13.	Female/professional/pastel/pinstripe	P	32	53.33	29	48.33	51	85.00	34	56.67
		SP	26	43.33	25	41.67	9	15.00	25	41.67
		C	2	3.33	6	10.00	0	0.00	1	1.67
		Total:	60	99.99	60	100.00	60	100.00	60	100.01
14.	Female/professional/pastel/solid	P	52	86.67	51	85.00	43	71.67	55	91.67
		SP	8	13.33	9	15.00	15	25.00	5	8.33
		C	0	0.00	0	0.00	2	3.33	0	0.00
		Total:	60	100.00	60	100.00	60	100.00	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
15.	Female/professional/pastel/print	P	27	45.00	47	78.33	45	75.00	2	3.33
		SP	30	50.00	13	21.67	15	25.00	22	36.67
		C	3	5.00	0	0.00	0	0.00	36	60.00
		Total:	60	100.00	60	100.00	60	100.00	60	100.00
16.	Female/professional/bright/pinstripe	P	52	86.67	37	61.67	14	23.33	10	16.67
		SP	8	13.33	22	36.67	37	61.67	30	50.00
		C	0	0.00	1	1.67	98	15.00	20	33.33
		Total:	60	100.00	60	100.01	60	100.00	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
17.	Female/professional/bright/solid	P	29	48.33	48	80.00	50	83.33	53	88.33
		SP	28	46.67	10	16.67	10	16.67	6	10.00
		C	3	5.00	2	3.33	0	0.00	1	1.67
		Total:	60	100.00	60	100.00	60	100.00	60	100.00
18.	Female/professional/bright/print	P	35	58.33	13	21.67	39	65.00	42	70.00
		SP	23	38.33	38	63.33	19	31.67	15	25.00
		C	2	3.33	9	15.00	2	3.33	3	5.00
		Total:	60	99.99	60	100.00	60	100.00	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
19.	Male/semi-professional/dark/pinstripe	P	12	20.00	13	21.67	2	3.33	4	6.67
		SP	44	73.33	44	73.33	43	71.67	51	85.00
		C	4	6.67	3	5.00	15	25.00	5	8.33
		Total:	60	100.00	60	100.00	60	100.00	60	100.00
20.	Male/semi-professional/dark/solid	P	14	23.33	5	8.33	15	25.00	13	21.67
		SP	41	68.33	49	81.67	41	68.33	43	71.67
		C	5	8.33	6	10.00	4	6.67	4	6.67
		Total:	60	99.99	60	100.00	60	100.00	60	100.01

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
21.	Male/semi-professional/dark/print	P	10	16.67	0	0.00	4	6.67	2	3.33
		SP	48	80.00	21	35.00	46	76.67	51	85.00
		C	2	3.33	39	65.00	10	16.67	7	11.67
		Total:	60	100.00	60	100.00	60	100.01	60	100.00
22.	Male/semi-professional/pastel/ pinstripe	P	13	21.67	10	16.67	5	8.33	9	15.00
		SP	43	71.67	45	75.00	49	81.67	49	81.67
		C	4	6.67	5	8.33	6	10.00	2	3.33
		Total:	60	100.01	60	100.00	60	100.00	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
23.	Male/semi-professional/pastel/solid	P	10	16.67	1	1.67	1	1.67	10	16.67
		SP	42	70.00	25	41.67	35	58.33	47	78.33
		C	8	13.33	34	56.67	24	40.00	3	5.00
		Total:	60	100.00	60	100.01	60	100.00	60	100.00
24.	Male/semi-professional/pastel/print	P	6	10.00	4	6.67	2	3.33	5	8.33
		SP	43	71.67	48	80.00	38	63.33	42	70.00
		C	11	18.33	8	13.33	20	33.33	13	21.67
		Total:	60	100.00	60	100.00	60	99.99	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
25.	Male/semi-professional/bright/pinstripe	P	1	1.67	0	0.00	0	0.00	1	1.67
		SP	36	60.00	30	50.00	34	56.67	42	70.00
		C	23	38.33	30	50.00	26	43.33	17	28.33
		Total:	60	100.00	60	100.00	60	100.00	60	100.00
26.	Male/semi-professional/bright/solid	P	9	15.00	3	5.00	7	11.67	1	1.67
		SP	47	78.33	46	76.67	48	80.00	32	53.33
		C	4	6.67	11	18.33	5	8.33	27	45.00
		Total:	60	100.00	60	100.00	60	100.00	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
27.	Male/semi-professional/bright/print	P	0	0.00	1	1.67	1	1.67	3	5.00
		SP	23	38.33	32	53.33	37	61.67	50	83.33
		C	37	61.67	27	45.00	22	36.67	7	11.67
		Total:	60	100.00	60	100.00	60	100.01	60	100.00
28.	Female/semi-professional/dark/ pinstripe	P	16	26.67	47	78.33	12	20.00	12	20.00
		SP	30	50.00	13	21.67	34	56.67	45	75.00
		C	14	23.33	0	0.00	14	23.33	3	5.00
		Total:	60	100.00	60	100.00	60	100.00	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
29.	Female/semi-professional/dark/solid	P	38	63.33	13	21.67	10	16.67	42	70.00
		SP	19	31.67	31	51.67	44	73.33	16	26.67
		C	3	5.00	16	26.67	6	10.00	2	3.33
		Total:	60	100.00	60	100.01	60	100.00	60	100.00
30.	Female/semi-professional/dark/print**	P	24	40.00	51	85.00	35	58.33	48	80.00
		SP	32	53.33	9	15.00	24	40.00	12	20.00
		C	4	6.67	0	0.00	1	1.67	0	0.00
		Total:	60	100.00	60	100.00	60	100.00	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
31.	Female/semi-professional/pastel/ pinstripe	P	6	10.00	9	15.00	5	8.33	1	1.67
		SP	17	28.33	43	71.67	24	40.00	26	43.33
		C	37	61.67	8	13.33	31	51.67	33	55.00
		Total:	60	100.00	60	100.00	60	100.00	60	100.00
32.	Female/semi-professional/pastel/ solid**	P	46	76.67	37	61.67	27	45.00	18	30.00
		SP	14	23.33	19	31.67	31	51.67	32	53.33
		C	0	0.00	4	6.67	2	3.33	10	16.67
		Total:	60	100.00	60	100.01	60	100.00	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
33.	Female/semi-professional/pastel/ print**	P	22	36.67	25	41.67	27	45.00	19	31.67
		SP	36	60.00	32	53.33	31	51.67	35	58.33
		C	2	3.33	3	5.00	2	3.33	6	10.00
		Total:	60	100.00	60	100.00	60	100.00	60	100.00
34.	Female/semi-professional/bright/ pinstripe	P	10	16.67	5	8.33	13	21.67	8	13.33
		SP	42	70.00	43	71.67	39	65.00	37	61.67
		C	8	13.33	12	20.00	8	13.33	15	25.00
		Total:	60	100.00	60	100.00	60	100.00	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
35.	Female/semi-professional/bright/solid**	P	2	3.33	4	6.67	33	55.00	39	65.00
		SP	23	38.33	36	60.00	25	41.67	18	30.00
		C	35	58.33	20	33.33	2	3.33	3	5.00
		Total:	60	99.99	60	100.00	60	100.00	60	100.00
36.	Female/semi-professional/bright/print	P	9	15.00	4	6.67	23	38.33	7	11.67
		SP	45	75.00	46	76.67	31	51.67	38	63.33
		C	6	10.00	10	16.67	6	10.00	15	25.00
		Total:	60	100.00	60	100.01	60	100.00	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
37.	Male/casual/dark/pinstripe	P	2	3.33	0	0.00	1	1.67	0	0.00
		SP	19	31.67	45	75.00	1	1.67	3	5.00
		C	39	65.00	15	25.00	58	96.67	57	95.00
		Total:	60	100.00	60	100.00	60	100.01*	60	100.00
38.	Male/casual/dark/solid	P	1	1.67	0	0.00	0	0.00	0	0.00
		SP	16	26.67	3	5.00	4	6.67	3	5.00
		C	43	71.67	57	95.00	56	93.33	57	95.00
		Total:	60	100.01	60	100.00	60	100.00	60	100.00*

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
39.	Male/casual/dark/print	P	2	3.33	1	1.67	0	0.00	0	0.00
		SP	42	70.00	20	33.33	4	6.67	0	0.00
		C	16	26.67	39	65.00	56	93.33	60	100.00
		Total:	60	100.00	60	100.00	60	100.00	60	100.00*
40.	Male/casual/pastel/pinstripe	P	2	3.33	0	0.00	0	0.00	0	0.00
		SP	12	20.00	1	1.67	0	0.00	3	5.00
		C	46	76.67	59	98.33	60	100.00	57	95.00
		Total:	60	100.00	60	100.00	60	100.00*	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
41.	Male/casual/pastel/solid	P	0	0.00	0	0.00	0	0.00	0	0.00
		SP	14	23.33	1	1.67	20	33.33	0	0.00
		C	46	76.67	59	98.33	40	66.67	60	100.00
		Total:	60	100.00	60	100.00	60	100.00	60	100.00*
42.	Male/casual/pastel/print	P	0	0.00	0	0.00	0	0.00	0	0.00
		SP	11	18.33	9	15.00	6	10.00	5	8.33
		C	49	81.67	51	85.00	54	90.00	55	91.67
		Total:	60	100.00	60	100.00	60	100.00	60	100.00*

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
43.	Male/casual/bright/pinstripe	P	0	0.00	1	1.67	0	0.00	0	0.00
		SP	2	3.33	0	0.00	0	0.00	2	3.33
		C	58	96.67	59	98.33	60	100.00	58	96.67
		Total:	60	100.00	60	100.00	60	100.00*	60	100.00
44.	Male/casual/bright/solid	P	0	0.00	0	0.00	0	0.00	0	0.00
		SP	7	11.67	1	1.67	0	0.00	1	1.67
		C	53	88.33	59	98.33	60	100.00	59	98.33
		Total:	60	100.00	60	100.00	60	100.00*	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
45.	Male/casual/bright/print	P	0	0.00	0	0.00	0	0.00	0	0.00
		SP	2	3.33	1	1.67	0	0.00	2	3.33
		C	58	96.67	59	98.33	60	100.00	58	96.67
		Total:	60	100.00	60	100.00	60	100.00*	60	100.00
46.	Female/casual/dark/pinstripe	P	3	5.00	0	0.00	0	0.00	0	0.00
		SP	27	45.00	2	3.33	1	1.67	6	10.00
		C	30	50.00	58	96.67	59	98.33	54	90.00
		Total:	60	100.00	60	100.00	60	100.00*	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
47.	Female/casual/dark/solid	P	2	3.33	11	18.33	2	3.33	0	0.00
		SP	22	36.67	37	61.67	10	16.67	3	5.00
		C	36	60.00	12	20.00	48	80.00	57	95.00
		Total:	60	100.00	60	100.00	60	100.00	60	100.00*
48.	Female/casual/dark/print	P	0	0.00	0	0.00	5	8.33	2	3.33
		SP	24	40.00	8	13.33	31	51.67	24	40.00
		C	36	60.00	52	86.67	24	40.00	34	56.67
		Total:	60	100.00	60	100.00*	60	100.00	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
49.	Female/casual/pastel/pinstripe	P	1	1.67	1	1.67	0	0.00	0	0.00
		SP	1	1.67	14	23.33	0	0.00	8	13.33
		C	58	96.67	45	75.00	60	100.00	52	86.67
		Total:	60	100.01	60	100.00	60	100.00*	60	100.00
50.	Female/casual/pastel/solid	P	13	21.67	0	0.00	0	0.00	0	0.00
		SP	30	50.00	4	6.67	0	0.00	0	0.00
		C	17	28.33	56	93.33	60	100.00	60	100.00
		Total:	60	100.00	60	100.00	60	100.00*	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
51.	Female/casual/pastel/print	P	3	5.00	3	5.00	14	23.33	0	0.00
		SP	23	38.33	24	40.00	33	55.00	1	1.67
		C	34	56.67	33	55.00	13	21.67	59	98.33
		Total:	60	100.00	60	100.00	60	100.00	60	100.00*
52.	Female/casual/bright/pinstripe	P	3	5.00	1	1.67	0	0.00	2	3.33
		SP	30	50.00	22	36.67	7	11.67	25	41.67
		C	27	45.00	37	61.67	53	88.33	33	55.00
		Total:	60	100.00	60	100.01	60	100.00*	60	100.00

Table 1, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
53.	Female/casual/bright/solid	P	0	0.00	3	5.00	8	13.33	0	0.00
		SP	3	5.00	32	53.33	42	70.00	1	1.67
		C	57	95.00	25	41.67	10	16.67	59	98.33
		Total:	60	100.00	60	100.00	60	100.00	60	100.00*
54.	Female/casual/bright/print	P	0	0.00	0	0.00	0	0.00	1	1.67
		SP	25	41.67	28	46.67	3	5.00	16	26.67
		C	35	58.33	32	53.33	57	95.00	43	71.67
		Total:	60	100.00	60	100.00	60	100.00*	60	100.01

P = professional
SP = semi-professional
C = casual
** Cells receiving less than 70% category agreement
* Slide selected for Phase II

Combined Cell Analysis

In each treatment condition containing the professional or semi-professional level of the independent variable "attire of the educator," rater responses indicating agreement that an example belonged in either the professional or the semi-professional category were added. A percentage of response based on this figure was then calculated for each example to determine the percentage of raters agreeing that the slide belonged in either the professional or the semi-professional categories.

Each professional treatment condition was then compared with its corresponding semi-professional treatment condition and the one slide with the highest level of category agreement (70% or higher) was designated for use in Phase II of the study. In those treatment conditions having more than one slide with the same highest percentage of category agreement, the final slide selection was again made based on photographic quality. In this manner, a revised professional level of the independent variable "attire of the educator" was developed in which category agreement of 70% or higher was achieved for each treatment condition.

Results of the combined cell analysis are presented in Table 2. Those slides in the revised professional treatment conditions designated for use in Phase II of the study are marked with a single asterisk in Table 2.

Combining the data from the original professional and semi-professional levels of the independent variable "attire of the educator" created revised professional treatment conditions and a

Table 2

Frequency Distribution of Combined Professional/Semi-professional Categories

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
1.	Male/professional/dark/pinstripe	P	60	100.00	60	100.00	56	93.33	60	100.00
		SP	0	0.00	0	0.00	4	6.67	0	0.00
		Total:	60	100.00*	60	100.00	60	100.00	60	100.00
19.	Male/semi-professional/dark/pinstripe	P	12	20.00	13	21.67	2	3.33	4	6.67
		SP	44	73.33	44	73.33	43	71.67	51	85.00
		Total:	56	93.33	57	95.00	45	75.00	55	91.67

Table 2, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
2.	Male/professional/dark/solid	P	56	93.33	48	80.00	60	100.00	32	53.33
		SP	3	5.00	12	20.00	0	0.00	27	45.00
		Total:	59	98.33	60	100.00	60	100.00*	59	98.33
20.	Male/semi-professional/dark/solid	P	14	23.33	5	8.33	15	25.00	13	21.67
		SP	41	68.33	49	81.67	41	68.33	43	76.67
		Total:	55	91.66	54	90.00	56	93.33	56	93.34

Table 2, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
3.	Male/professional/dark/print	P	58	96.67	20	33.33	38	63.33	55	91.67
		SP	2	3.33	31	51.67	21	35.00	3	5.00
		Total:	60	100.00*	51	85.00	59	98.33	58	96.67
21.	Male/semi-professional/dark/print	P	10	16.67	0	0.00	4	6.67	2	3.33
		SP	48	80.00	21	35.00	46	76.67	51	85.00
		Total:	58	96.67	21	35.00	50	83.34	53	88.33

Table 2, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
4.	Male/professional/pastel/pinstripe	P	58	96.67	44	73.33	47	78.33	51	85.00
		SP	2	3.33	16	26.67	13	21.67	9	15.00
		Total:	60	100.00*	60	100.00	60	100.00	60	100.00
22.	Male/semi-professional/pastel/pinstripe	P	13	21.67	10	16.67	5	8.33	9	15.00
		SP	43	71.67	45	75.00	49	81.67	49	81.67
		Total:	56	93.34	55	91.67	54	90.00	58	96.67

Table 2, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
5.	Male/professional/pastel/solid	P	49	81.67	53	88.33	57	95.00	42	70.00
		SP	11	18.33	7	11.67	3	5.00	15	25.00
		Total:	60	100.00	60	100.00	60	100.00*	57	95.00
23.	Male/semi-professional/pastel/solid	P	10	16.67	1	1.67	1	1.67	10	16.67
		SP	42	70.00	25	41.67	35	58.33	47	78.33
		Total:	52	86.67	26	43.34	36	60.00	57	95.00

Table 2, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
6.	Male/professional/pastel/print	P	12	20.00	44	73.33	20	33.33	33	55.00
		SP	41	68.33	15	25.00	35	58.33	26	43.33
		Total:	53	88.33	59	98.33*	55	91.66	59	98.33
24.	Male/semi-professional/pastel/print	P	6	10.00	4	6.67	2	3.33	5	8.33
		SP	43	71.67	48	80.00	38	63.33	42	70.00
		Total:	49	81.67	52	86.67	40	66.66	47	78.33

Table 2, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
7.	Male/professional/bright/pinstripe	P	37	61.67	48	80.00	---		---	
		SP	20	33.33	11	18.33	---		---	
		Total:	57	95.00	59	98.33*	---		---	
25.	Male/semi-professional/bright/pinstripe	P	1	1.67	0	0.00	0	0.00	1	1.67
		SP	36	60.00	30	50.00	34	56.67	42	70.00
		Total:	37	61.67	30	50.00	34	56.67	43	71.67

Table 2, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
8.	Male/professional/bright/solid	P	43	71.67	26	43.33	12	20.00	12	20.00
		SP	16	26.67	25	41.67	34	56.67	36	60.00
		Total:	59	98.34*	51	85.00	46	76.67	48	80.00
26.	Male/semi-professional/bright/solid	P	9	15.00	3	5.00	7	11.67	1	1.67
		SP	47	78.33	46	76.67	48	80.00	32	53.33
		Total:	56	93.33	49	81.67	55	91.67	33	55.00

Table 2, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
9.	Male/professional/bright/print	P	9	15.00	13	21.67	16	26.67	8	13.33
		SP	37	61.67	31	51.67	26	43.33	29	48.33
		Total:	46	76.67	44	73.34	42	70.00	37	61.66
27.	Male/semi-professional/bright/print	P	0	0.00	1	1.67	1	1.67	3	5.00
		SP	23	38.33	32	53.33	37	61.67	50	83.33
		Total:	23	38.33	33	55.00	38	63.34	53	88.33*

Table 2, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
10.	Female/professional/dark/pinstripe	P	59	98.33	47	78.33	56	93.33	31	51.67
		SP	0	0.00	13	21.67	4	6.67	25	41.67
		Total:	59	98.33	60	100.00	60	100.00*	56	93.34
28.	Female/semi-professional/dark/pinstripe	P	16	26.67	47	78.33	12	20.00	12	20.00
		SP	30	50.00	13	21.67	34	56.67	45	75.00
		Total:	46	76.67	60	100.00	46	76.67	57	95.00

Table 2, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
11.	Female/professional/dark/solid	P	54	90.00	58	96.67	53	88.33	48	80.00
		SP	6	10.00	2	3.33	7	11.67	11	18.33
		Total:	60	100.00	60	100.00*	60	100.00	59	98.33
29.	Female/semi-professional/dark/solid	P	38	63.33	13	21.67	10	16.67	42	70.00
		SP	19	31.67	31	51.67	44	73.33	16	26.67
		Total:	57	95.00	44	73.34	54	90.00	58	96.67

Table 2, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
12.	Female/professional/dark/print	P	43	71.67	28	46.67	47	78.33	39	65.00
		SP	17	28.33	29	48.33	12	20.00	20	33.33
		Total:	60	100.00	57	95.00	59	98.33	59	98.33
30.	Female/semi-professional/dark/print	P	24	40.00	51	85.00	35	58.33	48	80.00
		SP	32	53.33	9	15.00	24	40.00	12	20.00
		Total:	56	93.33	60	100.00	59	98.33	60	100.00*

Table 2, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
13.	Female/professional/pastel/pinstripe	P	32	53.33	29	48.33	51	85.00	34	56.67
		SP	26	43.33	25	41.67	9	15.00	25	41.67
		Total:	58	96.66	54	90.00	60	100.00*	59	98.34
31.	Female/semi-professional/pastel/ pinstripe	P	6	10.00	9	15.00	5	8.33	1	1.67
		SP	17	28.33	43	71.67	24	40.00	26	43.33
		Total:	23	38.33	52	86.67	29	48.33	27	45.00

Table 2, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
14.	Female/professional/pastel/solid	P	52	86.67	51	85.00	43	71.67	55	91.67
		SP	8	13.33	9	15.00	15	25.00	5	8.33
		Total:	60	100.00	60	100.00	58	96.67	60	100.00*
32.	Female/semi-professional/pastel/solid	P	46	76.67	37	61.67	27	45.00	18	30.00
		SP	14	23.33	19	31.67	31	51.67	32	53.33
		Total:	60	100.00	56	93.34	58	96.67	50	83.33

Table 2, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
15.	Female/professional/pastel/print	P	27	45.00	47	78.33	45	75.00	2	3.33
		SP	30	50.00	13	21.67	15	25.00	22	36.67
		Total:	57	95.00	60	100.00*	60	100.00	24	40.00
33.	Female/semi-professional/pastel/print	P	22	36.67	25	41.67	27	45.00	19	31.67
		SP	36	60.00	32	53.33	31	51.67	35	58.33
		Total:	58	96.67	57	95.00	58	96.67	54	90.00

Table 2, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response: Example A N	Example A %	Example B N	Example B %	Example C N	Example C %	Example D N	Example D %
16.	Female/professional/bright/pinstripe	P	52	86.67	37	61.67	14	23.33	10	16.67
		SP	8	13.33	22	36.67	37	61.67	30	50.00
		Total:	60	100.00*	59	98.34	51	85.00	40	66.67
34.	Female/semi-professional/bright/pinstripe	P	10	16.67	5	8.33	13	21.67	8	13.33
		SP	42	70.00	43	71.67	39	65.00	37	61.67
		Total:	52	86.67	48	80.00	52	86.67	45	75.00

Table 2, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
17.	Female/professional/bright/solid	P	29	48.33	48	80.00	50	83.33	53	88.33
		SP	28	46.67	10	16.67	10	16.67	6	10.00
		Total:	57	95.00	58	96.67	60	100.00*	59	98.33
35.	Female/semi-professional/bright/solid	P	2	3.33	4	6.67	33	55.00	39	65.00
		SP	23	38.33	36	60.00	25	41.67	18	30.00
		Total:	25	41.66	40	66.67	58	96.67	57	95.00

Table 2, cont.

Cell	Teacher/clothing characteristics	Category of Attire	Judges' response							
			Example A		Example B		Example C		Example D	
			N	%	N	%	N	%	N	%
18.	Female/professional/bright/print	P	35	58.33	13	21.67	39	65.00	42	70.00
		SP	23	38.33	38	63.33	19	31.67	15	25.00
		Total:	58	96.66	51	85.00	58	96.67*	57	95.00
36.	Female/semi-professional/bright/print	P	9	15.00	4	6.67	23	38.33	7	11.67
		SP	45	75.00	46	76.67	31	51.67	38	63.33
		Total:	54	90.00	50	83.34	54	90.00	45	75.00

P = professional
SP = semi-professional
* Slide selected for Phase II

2 x 2 x 3 x 3 factorial design for Phase II of the study. Two levels of sex of the educator (male/female), two levels of attire of the educator (professional/casual), three levels of color of garment (dark/pastel/bright), and three levels of visual design of fabric (stripe/solid/print or plaid) were crossed in the Phase II design, resulting in 36 treatment conditions.

CHAPTER V

PHASE II METHODOLOGY

Phase II of the research problem dealt with collection and analysis of data to determine the effect of selected clothing characteristics of an educator on students' perceptions of educator credibility. Procedures of Phase II are presented in the following order: (1) development of the data collection instrument, (2) selection of the Phase II sample, and (3) collection of the research data.

Development of the Data Collection Instrument

Photographs

The one slide in each treatment condition designated for use in Phase II of the study was processed as a 5 x 7 color print (Appendix C). Each color print was then matted in a neutral 8 x 10 mat having a 5 x 7 center opening and labeled on the back with a letter designation (A,B,C,D, etc.) representing treatment condition.

Credibility Rating Scale

A seven-point semantic differential based on adjectival pairs judged to be antonyms was developed from factor analytic studies conducted by Berlo, Lemert, and Mertz (1970). Extending the work on source credibility of Hovland, Janis, and Kelley (1953), who suggested a two-dimensional conception of perceived expertness and perceived trustworthiness, Berlo, et al., investigated the criteria actually used by receivers in evaluating message sources and isolated three meaningful

and statistically independent dimensions of source credibility: safety (trustworthiness), qualification (expertness), and dynamism.

Although an additional factor of sociability was initially included in the studies, when adjective scales were assigned to the factor on which they had their highest loading, the three evaluative factors of safety, qualification, and dynamism accounted for 60% of the total variance. Safety accounted for 34%, qualification for 16%, and dynamism for 10%. Nineteen of the 35 scales had their highest loading on safety, eight on qualification, and eight on dynamism. Since the four-factor solution including sociability added only 2.6% to the explained variance and only two adjective scales loaded highest on this factor, the three stable and meaningful dimensions of safety, qualification, and dynamism were recommended for use in future studies of perceived source credibility.

While emphasizing the multidimensionality of source credibility, Berlo, et al., recognized that the "image" of the source is dynamic in that it both influences and is influenced by the communicative event. In addition, they argued that source "image" should be defined in terms of the perceptions of the perceiver rather than specific characteristics of the source and that the stability and generalizability of the construct should be tested across sources, contexts, and cultures. For those wishing to use the three dimensions as an index to source credibility, Berlo, et al., suggested the following scales as most representative:

Safety: safe-unsafe; just-unjust; kind-cruel; friendly-unfriendly; honest-dishonest.

Qualification: trained-untrained; experienced-inexperienced, skilled-unskilled; qualified-unqualified; informed-uninformed.

Dynamism: aggressive-meek; emphatic-hesitant; bold-timid; active-passive, energetic-tired.

Demographics

Age, sex, rank in college, combined family income, major in college, and race were demographic variables deemed important to the study. Previous research findings indicated that such characteristics affected rater response when subjects were asked to make judgments based on clothing (Burgoon, 1985; Chowdhary, 1988; Engelbach, 1978; Harris, 1975; O'Neal, 1977; Smith, 1976).

Instrument Format

A one-page instrument including both a credibility rating scale and a demographic check sheet was developed for collection of the research data (Appendix D). The numerals one and two were printed in the upper left margin of the instrument, permitting the researcher to circle the appropriate designation indicating race of the subject, with the numeral one designating Caucasian subjects and the numeral two designating other races. A blank in the upper right margin was used to record the letter representing the treatment condition of the photograph being rated.

Written instructions requesting the subject to look at the photograph of the educator and to circle the level of each adjective pair best describing the educator were followed by a seven-point

semantic differential designed to rate the educator on the credibility dimensions of safety (trustworthiness), qualification (expertness), and dynamism. Written instructions following the adjective checklist further directed the subject to give demographic information on age, sex, rank in college, combined family income, and major in college by checking the appropriate categories on the lower half of the rating sheet. Anonymity and confidentiality of the subject were assured.

Selection of the Phase II Sample

Subjects were chosen from the student population at East Tennessee State University in Johnson City, Tennessee. A systematic random sampling technique (with replacement) was employed to select 180 subjects, 90 male and 90 female. Selection occurred in front of the university bookstore, a location commonly used by all university students.

Subjects were selected over a period of three weeks in March, 1985. Different times of the day from 8:00 a.m. to 4:00 p.m., Monday through Friday, were utilized to insure a random sampling. Sampling occurred both during and between class periods.

Two undergraduate students studying clothing and textiles merchandising were employed to select subjects for the study. Located at a booth in front of the university bookstore, one student helper counted each male who passed. When 24 males were counted, the student stopped the 25th male and asked if he were a current student at East Tennessee State University. If so, he was asked if he had participated previously in the research study and, if not, he was asked if he would

be willing to look at photographs of two college educators and answer some questions concerning the educators.

The data collection instrument was then administered by the researcher and, when the subject had completed the process, the selection procedure was repeated to determine the next subject and continued until a total of 90 male subjects had been selected. The same procedure was used by the other student helper to select 90 female subjects. When a potential subject indicated previous participation in the study or declined to participate, the student helpers thanked the individual and repeated the procedure to select that subject's replacement.

Collection of the Research Data

Each subject agreeing to participate in the study was shown two color photographs, one of a male model and one of a female model. A different combination of photographs was viewed by each subject. Subjects were told only that the photographs were of college educators.

The photographs presented the educators in various combinations of the selected levels of the four independent variables, including sex of the educator (male, female), attire of the educator (professional, casual), color of garment (dark, pastel, bright), and visual design of the fabric (stripe, solid, print or plaid). The subject saw only the clothing of the models; heads and feet were cropped from the photographs.

After viewing each photograph, the subject was asked to rate the educator using an adjective checklist describing the credibility

dimensions of safety (trustworthiness), qualification (expertness), and dynamism, and to check a list of demographic variables including age, sex, rank in college, combined family income, and major in college. Race of the subject was marked by the researcher on the top of each data collection instrument using a designation of one (Caucasian) or two (other).

The data were analyzed to determine the role of selected clothing characteristics of an educator on perceptions of credibility formed by students in a first impression situation. Frequency counts and percentages were used to evaluate the demographic data, while factorial analysis of variance was used to determine significant main effects and interactions between the variables (sex of the educator, attire of the educator, color of garment, and visual design of fabric) on the three credibility dimensions of safety (trustworthiness), qualification (expertness), and dynamism. Due to the large sample size ($N = 360$), the minimum critical level of .01 was used throughout the study to insure practical, as well as statistical, significance of the data.

CHAPTER VI

PHASE II RESULTS

The data for the study were obtained from 180 subjects in 36 experimental conditions. Results from the analyses of the data are presented in the following order: (1) description of the sample, and (2) effect of the educators' clothing on perceived source credibility, including effect of the independent variables on ratings of safety (trustworthiness), effect of the independent variables on ratings of qualification (expertness), and effect of the independent variables on ratings of dynamism.

Description of the Sample

Demographic data were analyzed in relation to age, sex, rank in college, combined family income, major in college, and race (Table 3). Frequency counts and percentages were calculated for descriptive purposes.

The subjects ranged in age from under 18 years to 25 years of age or older. Only two of the responses (.6%) were by subjects younger than 18 years of age. A majority of the responses (223, or 62%) were by subjects between the ages of 18 and 21, the ages traditionally associated with undergraduate college students. One hundred thirty five of the responses (37.4%) were by subjects 22 years of age or older, with 53 of those (14.7%) by subjects age 25 or older.

Table 3

Demographic Characteristics of the Subjects

Characteristic		N	%
Age			
Under 18		2	.6
18		29	8.1
19		58	16.1
20		78	21.7
21		58	16.1
22		43	11.9
23		22	6.1
24		17	4.7
25 or older		53	14.7
	Total	360	100.0
Sex			
Female		180	50.0
Male		180	50.0
	Total	360	100.0
Rank in College			
Freshman		78	21.7
Sophomore		73	20.3
Junior		86	23.9
Senior		85	23.6
Graduate student		34	9.4
Other		4	1.1
	Total	360	100.0
Combined Family Income			
Under $10,000		29	8.1
$10,000 to $14,999		25	6.9
$15,000 to $19,999		38	10.6
$20,000 to $24,999		49	13.6
$25,000 to $29,999		49	13.6
$30,000 to $34,999		59	16.4
$35,000 or over		111	30.8
	Total	360	100.0

Table 3, cont.

Characteristic		N	%
Major in College			
Applied Science and Technology		74	20.6
Arts and Sciences		78	21.7
Business		83	23.1
Education		66	18.3
Medicine		17	4.7
Nursing		15	4.2
Public and Allied Health		21	5.8
Undecided		6	1.7
	Total	360	100.0
Race			
Caucasian		316	87.8
Other		44	12.2
	Total	360	100.0

Fifty percent of the subjects were male and 50% of the subjects were female. A majority of the responses (322, or 89.5%) were by undergraduate students, with 78 of the responses (21.7%) by freshmen, 73 of the responses (20.3%) by sophomores, 86 of the responses (23.9%) by juniors, and 85 of the responses (23.6%) by seniors. Only 34 of the responses (9.4%) were by graduate students, while four responses (1.1%) were by students listing themselves in the "other" category.

Three-fourths of the responses (268, or 74.4%) were by subjects indicating a combined family income of $20,000 or higher, with 111 of those (30.8%) by subjects indicating a combined family income of $35,000 or higher. Ninety two responses (25.6%) were by subjects indicating a combined family income lower than $20,000, with 29 of those (8.1%) indicating a combined family income lower than $10,000.

Two hundred thirty five responses (65.4%) were by subjects majoring in Applied Science and Technology (74, or 20.6%), Arts and Sciences (78, or 21.7%), and Business (83, or 23.1%). Sixty six responses (18.3%) were by subjects majoring in Education, while 53 responses (14.7%) were by subjects majoring in health related areas, such as Medicine (17, or 4.7%), Nursing (15, or 4.2%), and Public and Allied Health (21, or 5.8%). Six of the responses (1.7%) were by subjects of undecided major.

Three hundred sixteen of the responses (87.8%) were by Caucasian subjects, while 44 of the responses (12.2%) were by subjects of other races. These sample percentages differ from the racial mix of the student population at East Tennessee State University during the 1984-85 school year, when 95.25% of the students were Caucasian and 4.75% of the students were of other races (Ikenberry, 1986).

Effect of the Educator's Clothing on Perceived Source Credibility

The study was designed to investigate the effect of selected clothing characteristics of an educator on students' perceptions of educator credibility. Interactions were examined between sex of the educator, attire of the educator, color of garment, and visual design of fabric. A 2 x 2 x 3 x 3 experimental design was used with two levels of sex of the educator (male/female), two levels of attire of the educator (professional/casual), three levels of color of garment (dark/pastel/bright), and three levels of visual design of fabric (stripe/solid/print or plaid).

Ratings of source credibility were made on the dimensions of safety (trustworthiness) of the educator, qualification (expertness) of the educator, and dynamism of the eductor. Items on the source credibility measure were scored on the basis of the most positive response (7) to the most negative response (1), with possible scores for each of the five-item dimensions ranging from 5 (low) to 35 (high).

Effect of the Independent Variables on Ratings of Safety (Trustworthiness)

On the credibility dimension of safety (trustworthiness), the highest mean rating ($\bar{x}$ = 27.90) was found when the female educator wore a professional garment of bright print, while the lowest mean rating ($\bar{x}$ = 19.60) was found when the male educator wore a casual garment of bright print (Table 4). Combined means on each level of the main effects differed by less than one point on a rating scale of 5 (low) to 35 (high) (Table 5).

Table 4

Means and Standard Deviations of Credibility Dimension Safety (Trustworthiness)

		Dark			Pastel			Bright		
		Stripe	Solid	Print	Stripe	Solid	Print	Stripe	Solid	Print
Professional										
M	$\bar{x}$	26.80	25.30	26.60	25.30	25.90	24.70	24.70	25.00	26.50
	sd	4.94	5.52	3.27	4.79	3.18	3.68	6.88	3.59	5.10
F	$\bar{x}$	25.60	25.10	25.40	26.60	27.00	26.50	26.10	23.70	27.90[a]
	sd	3.17	8.10	4.33	4.33	4.71	6.11	2.69	2.58	3.63
Casual										
M	$\bar{x}$	26.90	24.20	25.80	24.10	25.10	26.70	26.40	26.90	19.60[b]
	sd	4.58	3.77	4.66	4.75	2.92	5.17	3.92	3.78	6.02
F	$\bar{x}$	27.30	24.20	26.10	22.80	26.70	24.20	26.30	24.90	26.80
	sd	3.86	4.18	4.18	2.97	5.70	4.29	5.36	3.78	4.59

M = Male
F = Female
[a] Highest mean rating
[b] Lowest mean rating

Table 5

Main Effect Means of Credibility Dimension Safety (Trustworthiness)

Main Effects	$\bar{x}$
Sex of the Educator	
Male	25.36
Female	25.73
Attire of the Educator	
Professional	25.82
Casual	25.28
Color of Garment	
Dark	25.78
Pastel	25.47
Bright	25.40
Visual Design of Fabric	
Stripe	25.74
Solid	25.33
Print/plaid	25.57

When tested with factorial analysis of variance at a critical level of .01, no significant differences were found in student ratings of the educator on the credibility dimension of safety (trustworthiness) as a result of the main effects of sex of the educator ($F = 0.60$; $p = 0.44$); attire of the educator ($F = 1.25$; $p = 0.26$), color of garment ($F = 0.23$; $p = 0.79$), or visual design of the fabric (pattern) ($F = 0.24$; $p = 0.79$) (Table 6). In addition, no significant interactions were found when students rated the educator on the credibility dimension of safety (trustworthiness) (Table 6). While the interaction between attire, color, and visual design of the fabric (pattern) reached significance at a critical level of .05, significance was not achieved at the critical level of .01 chosen for this study.

The hypothesis formulated for the investigation of the effect of the independent variables on ratings of the educator's safety (trustworthiness) was stated as follows:

H_1 On the credibility dimension of safety (trustworthiness), college students' perceptions of educator credibility will be affected by:

A. sex of the educator.
B. attire of the educator.
C. color of garment.
D. visual design of fabric.

On the basis of the findings, sub-hypotheses 1A, 1B, 1C, and 1D were rejected. Selected clothing characteristics did not affect students' perceptions of educator credibility on the dimension of safety (trustworthiness).

Table 6

Analysis of Variance for Ratings of the Educator's Credibility

	Safety/ Trustworthiness		Qualification/ Expertness		Dynamism	
Source of Variation	F	P	F	P	F	P
Main Effects						
Attire	1.25	0.26	118.76	0.00*	22.74	0.00*
Sex M	0.60	0.44	0.17	0.69	10.15	0.00*
Color	0.23	0.79	1.00	0.37	5.69	0.00*
Pattern	0.24	0.79	0.73	0.49	1.69	0.20
Attire X Sex M	0.00	0.95	3.18	0.08	0.53	0.47
Attire X Color	0.37	0.69	0.63	0.53	2.65	0.07
Attire X Pattern	0.82	0.44	0.23	0.80	2.75	0.07
Sex M X Color	0.72	0.49	3.49	0.03	1.75	0.18
Sex M X Pattern	0.70	0.50	3.58	0.03	0.61	0.54
Color X Pattern	1.51	0.20	1.67	0.16	0.21	0.93
Attire X Sex M X Color	1.29	0.28	1.19	0.31	3.75	0.03

Table 6, cont.

Source of Variation	Safety/ Trustworthiness F	P	Qualification/ Expertness F	P	Dynamism F	P
Attire X Sex M X Pattern	0.30	0.74	1.67	0.19	0.40	0.67
Attire X Color X Pattern	2.41	0.05	1.19	0.32	0.34	0.85
Sex M X Color X Pattern	2.01	0.09	1.27	0.28	0.22	0.93
Attire X Sex M X Color X Pattern	1.20	0.31	1.36	0.25	0.45	0.77

Sex M = Sex of model
* Significant at .01 critical level

Effect of the Independent Variables on Ratings of Qualification (Expertness)

On the credibility dimension of qualification (expertness), the highest mean rating ($x = 30.80$) was found when the female educator wore a professional garment of dark stripe, while the lowest mean rating ($x = 15.90$) was found when the female educator wore a casual garment of bright solid (Table 7). Combined means on each level of the main effects differed by 6.85 points on a rating scale of 5 (low) to 35 (high), with the greatest difference in means found in the category of attire (Table 8).

When tested with factorial analysis of variance at a critical level of .01, a significant main effect for attire ($F = 118.76$; $p = 0.00$) was found for ratings assigned the qualification (expertness) of the educator (Table 6). As shown in Table 8, the credibility dimension of qualification (expertness) was rated higher ($x = 27.84$) when the educator was professionally attired than when the educator was casually attired ($x = 20.99$).

No significant differences were found in student ratings of the educator's qualification (expertness) as a result of the main effects of sex of the educator ($F = 0.17$; $p = 0.69$), color of garment ($F=1.00$; $p = 0.37$), or visual design of fabric (pattern) ($F = 0.73$; $p = 0.49$) (Table 6). While no interactions were significant at the .01 critical level chosen for the study, the interaction between sex of the educator and color of garment reached significance at the .05 critical level ($F = 3.49$; $p = 0.03$), as did the interaction between sex of the

Table 7

Means and Standard Deviations of Credibility Dimension Qualification (Expertness)

		Dark			Pastel			Bright		
		Stripe	Solid	Print	Stripe	Solid	Print	Stripe	Solid	Print
Professional										
M	$\bar{x}$	29.10	27.20	28.10	26.80	29.00	25.60	27.80	25.60	27.50
	sd	5.97	7.21	3.98	6.99	4.24	5.38	4.69	4.48	4.77
F	$\bar{x}$	30.80[a]	29.30	29.20	27.40	27.30	26.50	29.50	25.50	29.00
	sd	4.85	6.40	4.24	4.06	3.23	6.85	3.95	5.10	3.43
Casual										
M	$\bar{x}$	21.40	21.20	19.20	20.60	23.70	26.00	21.00	24.80	17.20
	sd	2.68	8.04	8.07	6.55	4.35	3.86	6.99	4.08	6.94
F	$\bar{x}$	24.10	19.20	21.60	16.90	18.50	19.80	22.90	15.90[b]	23.80
	sd	7.02	8.12	4.67	6.87	8.15	5.81	6.98	8.21	8.98

M = Male
F = Female
[a] Highest mean rating
[b] Lowest mean rating

Table 8

Main Effect Means of Credibility Dimension Qualification (Expertness)

Main Effects	$\bar{x}$
Sex of the Educator	
Male	24.54
Female	24.29
Attire of the Educator	
Professional	27.84
Casual	20.99
Color of Garment	
Dark	25.03
Pastel	24.01
Bright	24.21
Visual Design of Fabric	
Stripe	24.86
Solid	23.93
Print/plaid	24.46

educator and visual design of fabric (pattern) ($F = 3.58$; $p = 0.03$) (Table 6).

The hypothesis formulated for the investigation of the effect of the independent variables on ratings of the educator's qualification (expertness) was stated as follows:

> H_2 On the credibility dimension of qualification (expertness), college students' perceptions of educator credibility will be affected by:
>
> A. sex of the educator.
> B. attire of the educator.
> C. color of garment.
> D. visual design of fabric.

On the basis of the findings, sub-hypothesis 2B was accepted. Attire of the educator affected students' perceptions of educator credibility on the dimension of qualification (expertness). However, sub-hypotheses 2A, 2C, and 2D were rejected. Sex of the educator, color of garment, and visual design of fabric did not affect students' perceptions of educator credibility on the dimension of qualification (expertness).

Effect of the Independent Variables on Ratings of Dynamism

On the credibility dimension of dynamism, the highest mean rating ($\bar{x} = 27.10$) was found when the female educator wore a professional garment of dark stripe, while the lowest mean rating ($\bar{x} = 17.60$) was found when the male educator wore a casual garment of bright stripe (Table 9). Combined means on each level of the main effects differed by 2.77 points on a rating scale of 5 (low) to 35 (high), with the greatest difference in means found in the category of attire (Table 10).

When tested with factorial analysis of variance at a critical level of .01, significant main effects for sex of the educator ($F = 10.15$;

Table 9

Means and Standard Deviations of Credibility Dimension Dynamism

		Dark			Pastel			Bright		
		Stripe	Solid	Print	Stripe	Solid	Print	Stripe	Solid	Print
Professional										
M	$\bar{x}$	25.40	23.20	23.00	19.00	21.00	19.80	22.10	20.40	21.00
	sd	6.10	5.61	4.22	3.92	4.57	4.37	6.57	4.58	5.96
F	$\bar{x}$	27.10[a]	25.70	22.60	22.70	22.40	19.30	25.70	26.10	23.80
	sd	5.84	6.25	4.58	3.89	6.74	7.30	6.38	4.95	5.53
Casual										
M	$\bar{x}$	18.00	18.90	18.30	19.20	21.00	20.30	17.60[b]	20.80	19.60
	sd	7.07	4.46	6.68	5.94	5.75	2.91	8.33	6.25	5.46
F	$\bar{x}$	21.50	25.30	22.90	18.00	19.80	20.60	19.60	20.40	18.50
	sd	6.06	4.35	3.78	6.29	6.81	4.14	3.78	2.99	5.32

M = Male
F = Female
[a] Highest mean rating
[b] Lowest mean rating

Table 10

Main Effect Means of Credibility Dimension Dynamism

Main Effects	$\bar{x}$
Sex of the Educator	
Male	20.48
Female	22.33
Attire of the Educator	
Professional	22.79
Casual	20.02
Color of Garment	
Dark	22.66
Pastel	20.26
Bright	21.30
Visual Design of Fabric	
Stripe	21.33
Solid	22.08
Print/plaid	20.81

p = 0.00), attire of the educator (F = 22.74; p = 0.00), and color of garment (F = 5.69; p = 0.00) were found for ratings assigned the dynamism of the educator (Table 6). As shown in Table 10, the credibility dimension of dynamism was rated higher ($\bar{x}$ = 22.33) when the educator was female and lower ($\bar{x}$ = 20.48) when the educator was male, higher ($\bar{x}$ = 22.79) when the educator was professionally attired than when the educator was casually attired ($\bar{x}$ = 20.02), and higher ($\bar{x}$ = 22.66) when the color of garment was dark than when bright ($\bar{x}$ = 21.30) or pastel ($\bar{x}$ = 20.26).

No significant differences were found in student ratings of the educator's dynamism as a result of the main effect of visual design of fabric (pattern) (F = 1.62; p = 0.20) (Table 6). While no interactions were significant at the .01 critical level chosen for the study, the interaction between attire of the educator, sex of the educator, and color of garment reached significance at the .05 critical level (F = 3.75; p = 0.03) (Table 6).

The hypothesis formulated for the investigation of the effect of the independent variables on ratings of the educator's dynamism was stated as follows:

H_3 On the credibility dimension of dynamism, college students' perceptions of educator credibility will be affected by:

A. sex of the educator.
B. attire of the educator.
C. color of garment.
D. visual design of fabric.

On the basis of the findings, sub-hypotheses 3A, 3B, and 3C were accepted. Sex of the educator, attire of the educator, and color of

garment affected students' perceptions of educator credibility on the dimension of dynamism. Sub-hypothesis 3D was rejected. Visual design of fabric did not affect students' perceptions of educator credibility on the dimension of dynamism.

CHAPTER VII

SUMMARY, CONCLUSIONS, DISCUSSION, RECOMMENDATIONS

Summary

The effect of selected clothing characteristics of an educator on students' perceptions of educator credibility was the focus of the research problem. The researcher sought not only to determine if, in a first impression situation, selected characteristics of clothing affect students' perceptions of educator credibility, but also to determine if some clothing characteristics more favorably affect students' perceptions of educator credibility than do others.

A 2 x 3 x 3 x 3 factorial design with two levels of sex of the educator (male/female), three levels of attire of the educator (professional/semi-professional/casual), three levels of color of garment (dark/pastel/bright), and three levels of visual design of fabric (stripe/solid/print or plaid) was selected to investigate effects upon the dependent variable, credibility. The levels of these independent variables were crossed in the design, resulting in 54 treatment conditions.

Phase I of the study dealt with the development and selection of color slides, representative of the 54 treatment conditions, to be used in Phase II of the study. Color slides of at least four examples of each treatment condition were made. In photographing garments for the study, an effort was made to control extraneous variables, such as

posture, body size, physical attractiveness, and variations due to lighting or angle of shot, that could affect students' perceptions of educator credibility.

The 214 resulting slides (only two examples were available in one treatment condition) were then rated by a panel of college students, college faculty, and clothing professionals to determine the highest level of category agreement for inclusion of garments in the study. The one slide in each treatment condition receiving the highest level of category agreement (70% or higher) was designated for use in Phase II of the study.

Data were analyzed with a frequency count and percentage of response in each category option available to raters (professional, semi-professional, casual) for each of the 214 color slides viewed. Category agreement of 70% or higher was achieved in all casual treatment conditions and the one slide in each with the highest level of agreement was selected for use in Phase II of the study. However, category agreement of less than 70% was found in five of the professional or semi-professional treatment conditions.

Apparent confusion among raters in delineating the professional and semi-professional categories, particularly for the female educator, resulted in an inability to designate a color slide to be used in Phase II of the study for these five treatment conditions. The decision was then made to collapse the professional and semi-professional categories and to combine the data. In this manner, a revised professional level of the independent variable "attire of the educator" was developed in

which category agreement of 70% or higher was achieved for each treatment condition.

The research design for Phase II of the study using the revised professional treatment conditions then became a 2 x 2 x 3 x 3 factorial design. Two levels of sex of the educator (male/female), two levels of attire of the educator (professional/casual), three levels of color of garment (dark/pastel/bright), and three levels of visual design of fabric (stripe/solid/print or plaid) were crossed in the Phase II design, resulting in 36 treatment conditions.

Phase II of the research problem dealt with collection and analysis of data to determine the effect of selected clothing characteristics of an educator on students' perceptions of educator credibility. Using color prints developed from slides selected in Phase I, ratings of source credibility were made on the dimensions of safety (trustworthiness) of the educator, qualification (expertness) of the educator, and dynamism of the educator.

Items on the source credibility measure developed from factor analytic studies by Berlo, Lemert, and Mertz (1970) were scored on the basis of the most positive response (7) to the most negative response (1), with possible scores for each of the five-item dimensions ranging from 5 (low) to 35 (high). Demographic data relating to age, sex, rank in college, combined family income, major in college, and race of the subjects were also obtained.

Subjects were chosen from the student population at East Tennessee State University in Johnson City, Tennessee, using a systematic random

sampling technique (with replacement). One hundred eighty subjects, including 90 male subjects and 90 female subjects, were selected. Each subject rated two photographs, one of a male educator and one of a female educator, resulting in a total of 360 student responses.

Frequency counts and percentages were used to evaluate the demographic data, while factorial analysis of variance was used to determine significant main effects and interactions between the variables (sex of the educator, attire of the educator, color of garment, and visual design of the fabric) on the three credibility dimensions of safety (trustworthiness), qualification (expertness), and dynamism. Due to the large sample size (N = 360), the minimum critical level of .01 was used throughout the study to insure practical, as well as statistical, significance of the data.

Conclusions

Students' perceptions of educator credibility were significantly affected by selected clothing characteristics in this first impression situation. While selected clothing characteristics did not affect students' perceptions of educator credibility on the dimension of safety (trustworthiness), perceptions of the educator's qualification (expertness) were significantly affected by attire and perceptions of the educator's dynamism were significantly affected by sex of the educator, attire, and color of garment. However, visual design of the fabric had no significant effect on students' perceptions of the educator on any dimension of credibility.

Ratings of credibility were highest on the dimension of qualification (expertness) when the educator wore professional attire.

Ratings of credibility were highest on the dimension of dynamism when the educator was female and dressed in dark, professional attire.

It was concluded that selected clothing characteristics affect students' perceptions of educator qualification (expertness) and dynamism. In a first impression situation, educators are perceived by students as most qualified (expert) when dressed in professional attire, and most dynamic when dressed in dark, professional attire, particularly when the educator is female.

Discussion

Phase I

While not the primary focus of the study, a number of trends of possible significance for future research using the category of attire were observed in the selection of slides for Phase II. In choosing garments to be photographed for the study, the professional category for males was defined as a suit, dress shirt, and tie. The semi-professional category consisted of dress slacks, dress shirt, and tie, with the assumption made that the suit or sports jacket determined the professional nature of the outfit. Casual attire consisted of jeans, slacks, or shorts worn with sports shirts or sweaters.

When judges were asked to view slides and place the garments in the professional, semi-professional, or casual category, however, both suits with dress shirt and tie and dress slacks with dress shirt and tie were placed in the professional category. However, if these were bright in color or were plaid, unless the plaid was small, dark, and subtle, they were not considered professional. Dress shirt and slacks without the

tie were considered casual, as were slacks with polo shirts or any combination with jeans.

In the rating of slides for inclusion in the professional, semi-professional, or casual category in this study, the important feature in determining the professional nature of the ensemble for males was the tie, rather than the jacket. Whether the garment was a suit, dress slacks with sports jacket, or even dress slacks with dress shirt, if the garment was worn with a tie it was perceived professionally. Without the tie, the outfit was considered semi-professional or casual. Of secondary importance was the color or visual design of the fabric, with bright colors and obvious patterns rated out of the professional category for males.

For females, the professional category was defined as a suit consisting of a jacket and matching skirt or slacks worn with a high-necked blouse, while the semi-professional category consisted of a high-necked, modest dress, or skirt or slacks worn with a high-necked blouse. The casual category consisted of jeans, slacks, shorts, or casual skirts worn with sports shirts or sweaters.

When rated by judges for inclusion in Phase II of the study, both suits and long-sleeved, high-necked dresses were considered professional, regardless of color or pattern. Skirts with long-sleeved, high-necked blouses were also considered professional, but skirts with short-sleeved or low-necked blouses were considered casual. All garments with slacks were rated out of the professional category, even when the slacks were worn with a matching jacket and a high-necked

blouse to create a slacks suit.

For females, the important feature in determining the professional nature of the ensemble was style of the garment, particularly degree of body exposure. If the garment concealed arms, chest, and neck, it was considered professional, regardless of color or pattern. However, slacks and jeans were considered semi-professional or casual in all instances.

Future studies of clothing employing the category of attire, particularly when levels of professional or casual attire are included, should further explore these trends. Perceptions of specific characteristics of appropriate professional attire could be of value in varied occupational settings.

Phase II

Effect of Selected Clothing Characteristics on Students' Perceptions of Educator Credibility

An objective of the research study was to compare the role of selected clothing characteristics of an educator on perceptions of credibility formed by students in a first impression situation. The present study demonstrates that students' perceptions of educator credibility are affected by selected clothing characteristics in a first impression situation. However, while two of the credibility dimensions employed, qualification (expertness) and dynamism, were significantly affected by selected clothing characteristics included in the study, the credibility dimension of safety was not.

Widgery and Webster (1969) studied the relationship between perceived physical attractiveness and credibility. Using a semantic

scale to rate photographs of individuals on the credibility dimensions of safety, qualification, and dynamism, they found a positive correlation between perceived physical attractiveness of a speaker and initial judgments of credibility. While judgments of all dimensions of credibility were affected by the speaker's perceived physical attractiveness, the credibility dimension of safety was most profoundly affected.

In the research literature, the credibility dimension of safety is also commonly termed trustworthiness, character, or honesty, referring to how objective, reliable, well motivated, or likable the speaker seems to be. Nonverbal cues other than clothing may be more important in forming perceptions of speaker safety, particularly in a first impression situation, as was found in the research of Widgery and Webster (1969). Facial characteristics and expressions may be more important cues in perception of speaker safety, trustworthiness, character, or honesty, and, by excluding such cues in the methodology of the present study, valuable information commonly used to form such perceptions may have been unavailable to the subjects.

However, the credibility dimensions of qualification (expertness) and dynamism were significantly affected by selected clothing characteristics in the present study. Qualification (expertness) was significantly affected by the main effect of attire, while dynamism was significantly affected by the main effects of sex of the educator, attire, and color of garment.

In a first impression situation, these dimensions may be less influenced than safety (trustworthiness) by perceptions of physical attractiveness and judgments based on facial characteristics, and more influenced by other available cues, such as clothing characteristics. Thus, perceptions of educator safety, trustworthiness, character, or honesty may be based upon judgments formed through the "reading" of facial characteristics or cues, while perceptions of educator qualification or expertness may be more affected by the appropriate nature of the attire of the educator. Perceptions of educator dynamism may be more affected by sex of the educator and such clothing cues as style and color of garment.

Since a high-credible source is one who is perceived favorably on all dimensions, while a low-credible source may be perceived in a negative light on only one of the dimensions (McCroskey, Larson, & Knapp, 1971), for an educator to be perceived as high-credible in the eyes of students in a first impression situation it is vital that all dimensions of credibility be enhanced. The impact of both physical attractiveness and clothing of an educator on resulting student perceptions of educator safety (trustworthiness), qualification (expertness), and dynamism must be determined, as must the relationship between perceptions of educator credibility and student learning.

Significance of Interactions

While no interactions between independent variables were significant at the .01 critical level chosen for this study, interactions in each dimension of credibility approached significance.

On the dimension of safety (trustworthiness), the interaction between attire, color, and pattern approached significance ($F = 2.41$; $p = 0.05$) (Table 6). However, a comparison of main effect means (Table 5) reveals a difference of less than one point on a rating scale of 7 (low) to 35 (high).

On the dimension of qualification (expertness), the interactions between sex of the model and color ($F = 3.49$; $p = 0.03$) and sex of the model and pattern ($F = 3.58$; $p = 0.03$) approached significance (Table 6). An examination of the main effect means (Table 8), however, again reveals a difference of about one point on a rating scale of 7 (low) to 35 (high).

The interaction between attire, sex of the model, and color approached significance ($F = 3.75$; $p = 0.03$) on the dimension of dynamism (Table 6). Examination of the main effect means (Table 10) reveals a difference of less than three points on a rating scale of 7 (low) to 35 (high).

The critical level of .01 was chosen for this study. The researcher anticipated that, due to the tendency for statistical significance to be reached more easily with a large sample size ($N = 360$), statistical significance of no real pragmatic value might be achieved. While some of the interactions between variables did approach statistical significance in the study, an examination of the differences between the main effect means does, in fact, reveal very little difference of practical value. Thus, the use of the .01 critical level was appropriate for this large sample size.

Effect of Specific Levels of Independent Variables on Student's Perceptions of Educator Credibility

A second objective of this research study was to determine which styles of clothing, colors, or visual designs of fabric most favorably affect students' perceptions of educator credibility in a first impression situation. Visual design of fabric had no significant effect on students' perceptions of the educator on any dimension of credibility. This may be attributable to photographic quality of the research instrument, as some visual designs of fabric, particularly pinstripe patterns, were difficult to photograph. A research design employing live interaction could enhance this variable, permitting a more accurate assessment of the effect of visual design of fabric on perceptions of educator credibility formed by students in a first impression situation.

On both the dimensions of qualification (expertness) and dynamism, the highest mean rating was assigned when the female educator was dressed in a professional, dark, striped garment. Lowest mean ratings were assigned when both male and female educators were dressed in casual, bright garments. Further investigation of specific levels of selected clothing characteristics should explore this tendency.

Recommendations for Further Study

Further study of the effect of clothing as a nonverbal cue in person perception within an educational setting is recommended. While numerous studies have demonstrated the communicative value of teachers' dress, the question of why and under what circumstances impressions of teachers are formed remains (Butler & Roesel, 1989).

Subject Characteristic Recommendations

Future study of the influence of clothing on impression formation in an educational setting should explore the relationship between demographic characteristics of the subjects and perceptions formed. Age of the subject, sex of the subject, and subject's major in college could influence impression formation, particularly in a first impression situation.

Replication of the present study with varying student age groups and geographic locations is recommended. As a general pattern, adults place more reliance on nonverbal than verbal cues, while children rely more heavily on verbal messages (Burgoon, 1985). Thus, the age of the subject may be an important factor affecting perception of an educator when the information source is primarily nonverbal.

Since females tend to be better nonverbal decoders than males (Knapp, 1980), studies have indicated differences in perception of clothing by sex (Elmore & LaPointe, 1974; Engelbach, 1978; Harris, 1975; Mischel, 1974). Harris (1975) studied the effect of sex on ratings of an instructor and found that females generally rated an educator's performance and academic rank higher than did males, while Engelbach (1978) found that females rated an educator significantly higher than males on quality of work and expertise. Thus, the effect of sex of the subject on perceptions of an educator should be explored in future study.

The subject's major in college also influenced person perception ratings in studies by Smith (1976) and Engelbach (1978), particularly when the major was one related to high interest in clothing or one

placing importance on clothing, appearance, or grooming. Future research should investigate the effect of selected clothing characteristics of an educator on perceptions formed by students majoring in varying fields of study.

Methodological Recommendations

Educator Presentation

Researchers have questioned the use of photographs for the study of person perception, as they seem to create a static and unnatural research environment (Argyle & McHenry, 1971; Burgoon, 1985; Chowdhary, 1988). Chowdhary (1988) studied the effect of dress on students' evaluations of an instructor using a live educator in a classroom setting, thus allowing an integrative approach to the study of nonverbal behaviors as a system with an interrelationship to the verbal stream.

According to Archer and Akert (1984) and Burgoon (1985), nonverbal research employing actual interaction allows the interplay of naturally occurring behaviors so the influence of participant behaviors on each other can be better understood. Replication of the present study using live educator interaction or simulation with the use of video tape is recommended.

Credibility Measurement

Widgery and Webster (1969) studied the relationship between perceived physical attractiveness and the credibility dimensions of safety, qualification, and dynamism and determined that ratings of the dimension of safety were profoundly affected by perceptions of physical attractiveness. The present study used a similar rating scale developed from factor analytic studies of Berlo, Lemert, and Mertz (1970) to study

the effect of varying clothing characteristics on students' perceptions of educator credibility on the dimensions of safety (trustworthiness), qualification (expertness), and dynamism. However, no significant relationship was found between selected clothing characteristics and educator credibility on the dimension of safety.

Dimensions of credibility in classroom settings may differ from those of significance in other settings. Tucker (1971) noted the error in assuming that credibility dimensions isolated in studies of public figures are also important for other sources, or that rating scales developed for use in one context may be used in another.

McCroskey, Holdridge, and Toomb (1974) employed 46 semantic differential-type scales representing dimensions of source credibility observed in previous research studies to develop a credibility rating scale for use in the classroom. Results from three sample groups suggested the presence of five dimensions important in measuring source credibility of teachers: character, sociability, composure, extroversion, and competence. Replication of the present study using the credibility rating scale developed by McCroskey, Holdridge, and Toomb (1974) is recommended.

Clothing Characteristics

Further study delineating the clothing category of attire is recommended. Specific characteristics of attire perceived as professional and specific characteristics of attire perceived as casual, both for male and female models, should be determined. Differences in perception when female models wear skirts or slacks should be compared,

as should differences in perception when male models wear garments with or without a tie and with or without a jacket.

Further development of the clothing category of visual design of fabric is also recommended. Research instruments allowing clear vision of pattern should be developed to study the effect of visual design of fabric on perception formation, particularly in first impression situations.

Research Context

The need to determine how impressions are formed, especially as they influence behavior in certain situational contexts, was pointed out by Douty (1963). The effect of specific clothing characteristics, such as attire, color, and visual design of fabric, on perception formation in first impression situations should be studied in varying contexts.

Appropriateness of specific clothing characteristics may depend upon situation. Clothing characteristics most favorably affecting perceptions of educator credibility in a classroom setting may vary from those most favorably affecting perceptions of an executive in a business setting, an attorney in a courtroom, or a physician in an examining room. Further study of the effect of specific clothing characteristics upon perceptions of credibility in varied contexts is recommended.

Credibility and Learning Recommendations

Noting a relationship between educator appearance and student ratings and achievement, Cohen (1981) recommended further study of the influence of attire of an educator on student learning. According to Cohen, this could be accomplished by studying credibility as an indicator of desire to learn.

Few systematic studies of source credibility have considered the longitudinal effects of credibility or have examined the relationship between students' perceptions of educator credibility and learning. The effect of selected clothing characteristics of an educator on perceived initial credibility, perceived terminal credibility, and student learning should be determined. Thus, further study of sequential and longitudinal aspects of nonverbal communication in a classroom setting, particularly as students' perceptions of educator credibility are influenced by selected clothing characteristics, is recommended.

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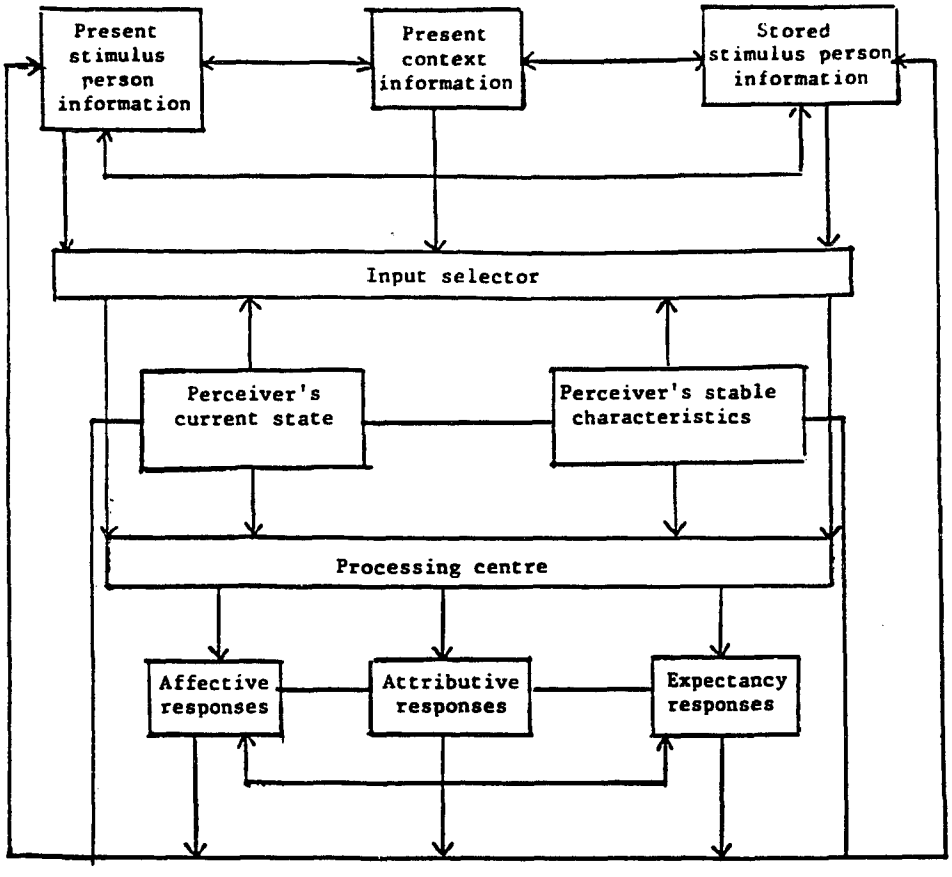
APPENDIX A

PERSON PERCEPTION MODEL



Note. From The Perception of People and Events (p. 20) by P.B. Warr and C. Knapper, 1968, New York: John Wiley and Sons.

APPENDIX B

PHASE I DATA COLLECTION INSTRUMENT

RATING BY: Student_____ Faculty_____ Clothing Professional_____

SEX OF RATER: Male_____ Female_____

Please look at each slide and use the following rating scale to mark whether you consider it to be a professional, a semi-professional, or a casual costume.

PROFESSIONAL: P SEMI-PROFESSIONAL: SP CASUAL: C

1. _____	21. _____	41. _____	61. _____
2. _____	22. _____	42. _____	62. _____
3. _____	23. _____	43. _____	63. _____
4. _____	24. _____	44. _____	64. _____
5. _____	25. _____	45. _____	65. _____
6. _____	26. _____	46. _____	66. _____
7. _____	27. _____	47. _____	67. _____
8. _____	28. _____	48. _____	68. _____
9. _____	29. _____	49. _____	69. _____
10. _____	30. _____	50. _____	70. _____
11. _____	31. _____	51. _____	71. _____
12. _____	32. _____	52. _____	72. _____
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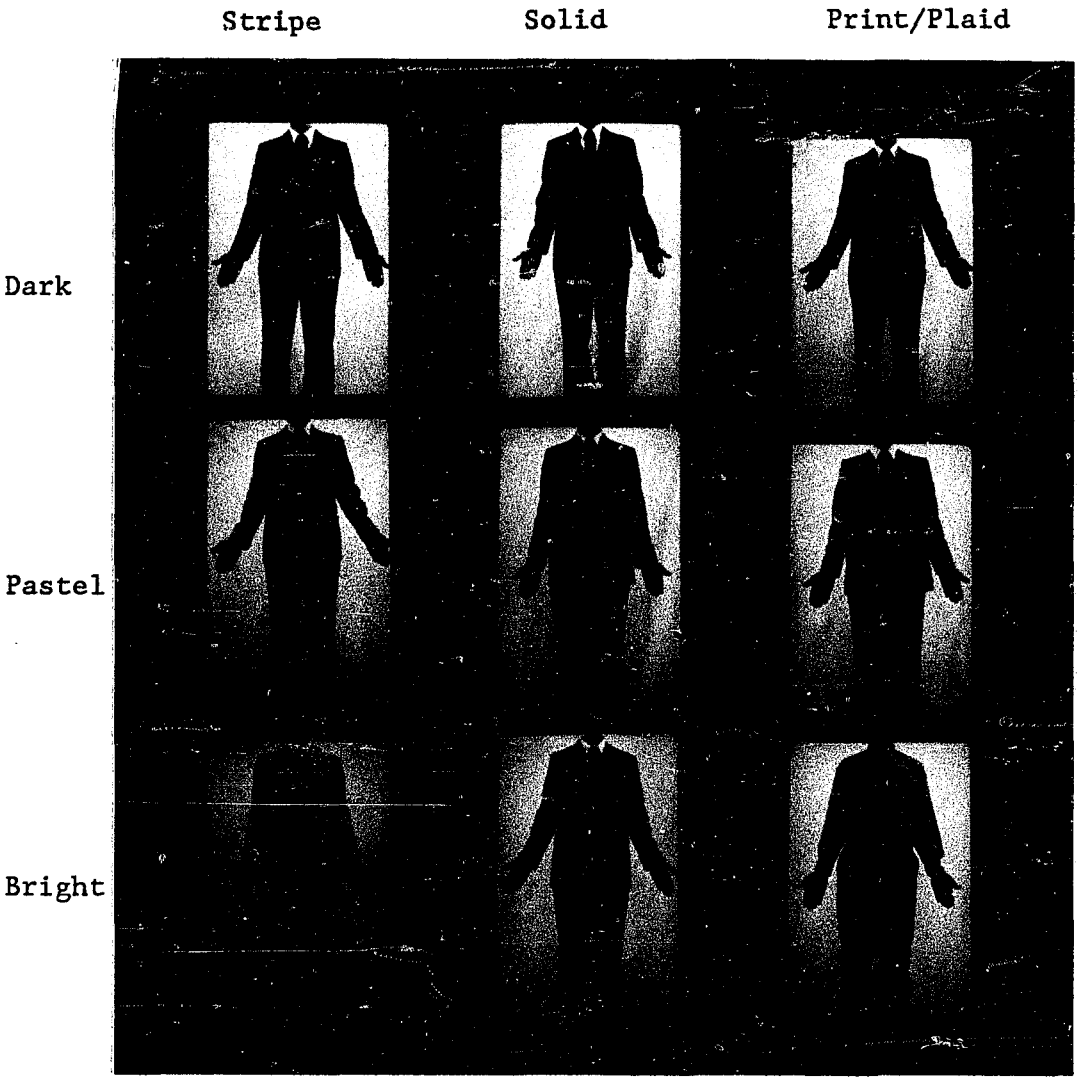
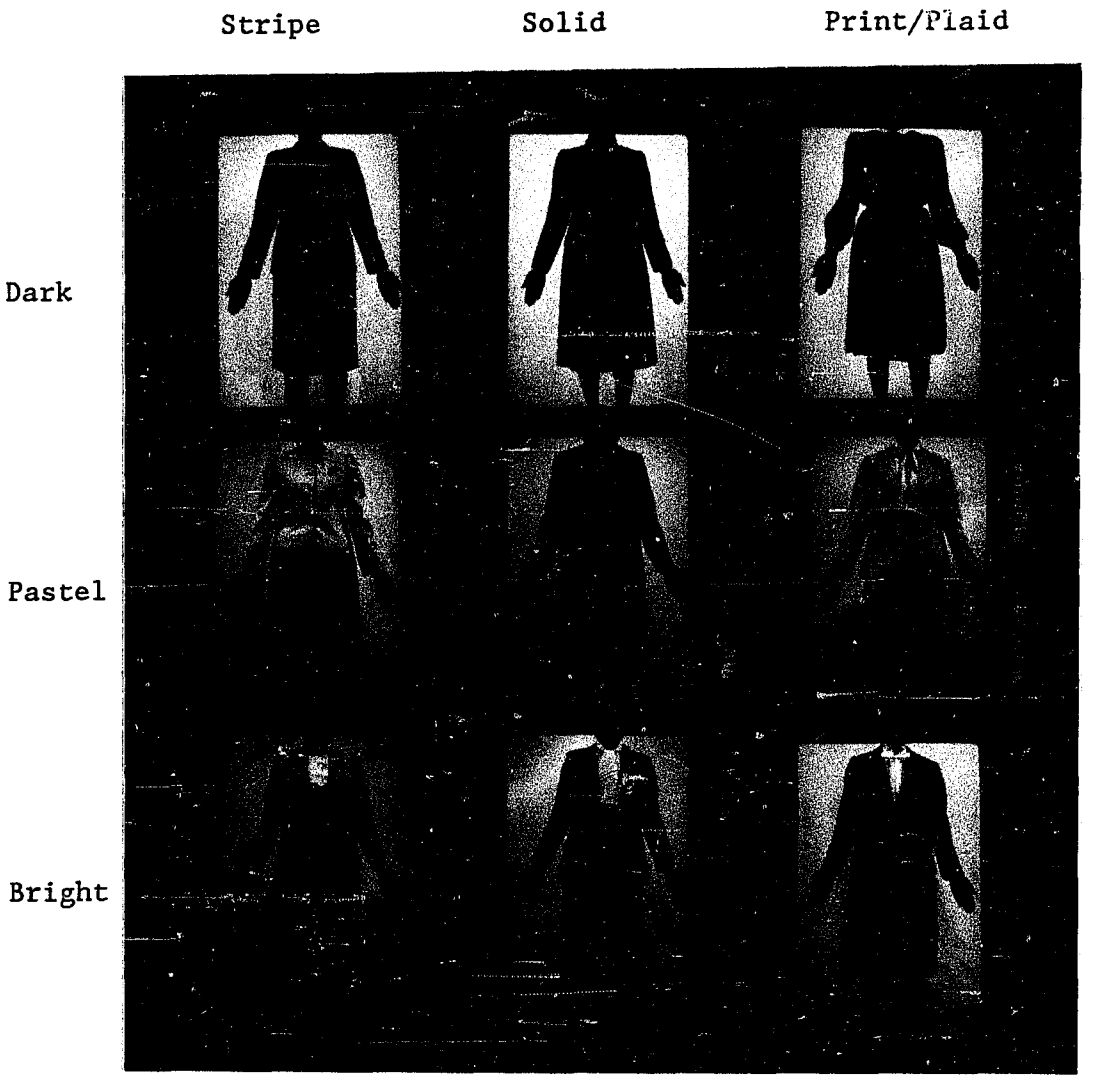
APPENDIX C

PHASE II PHOTOGRAPHS

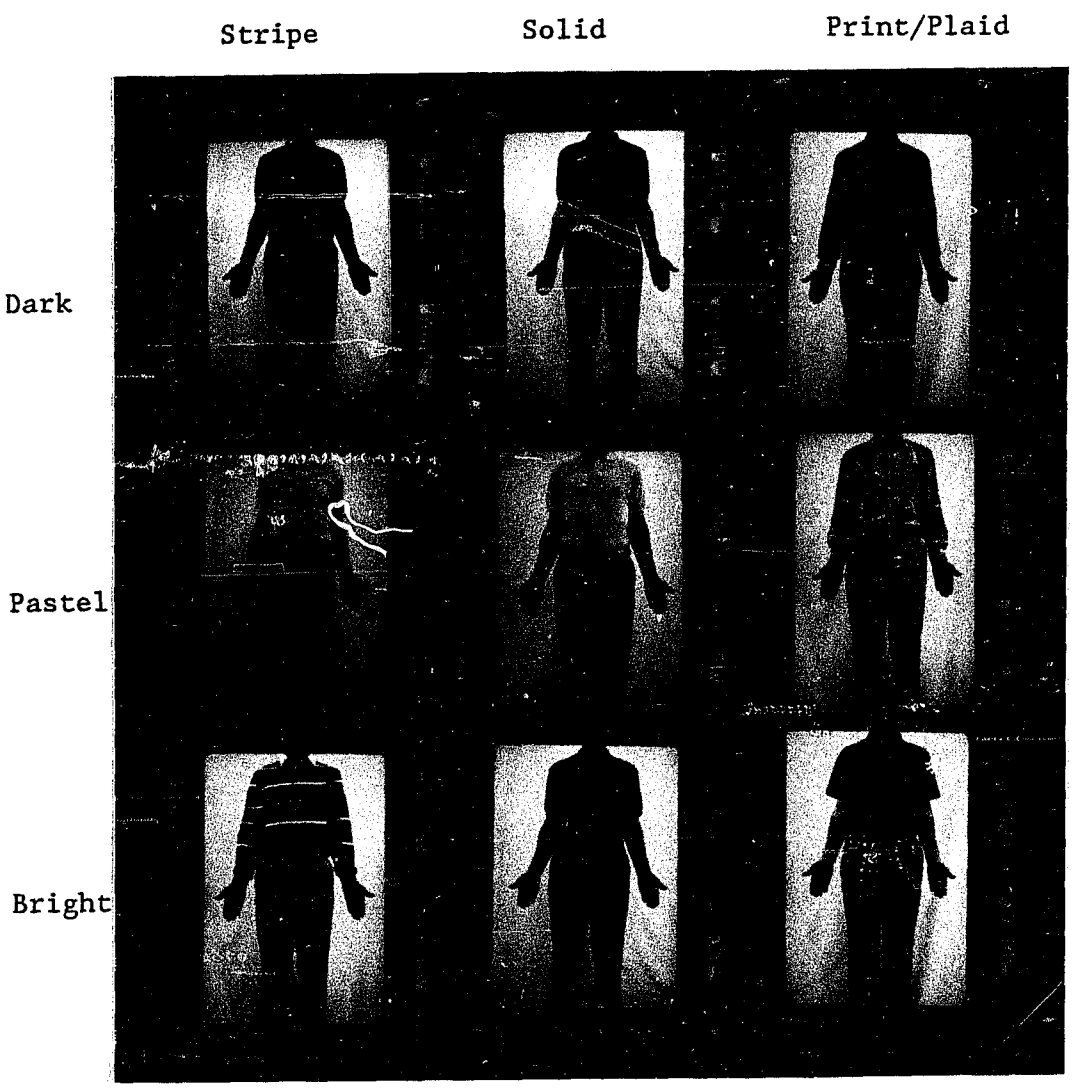
Professional/Male



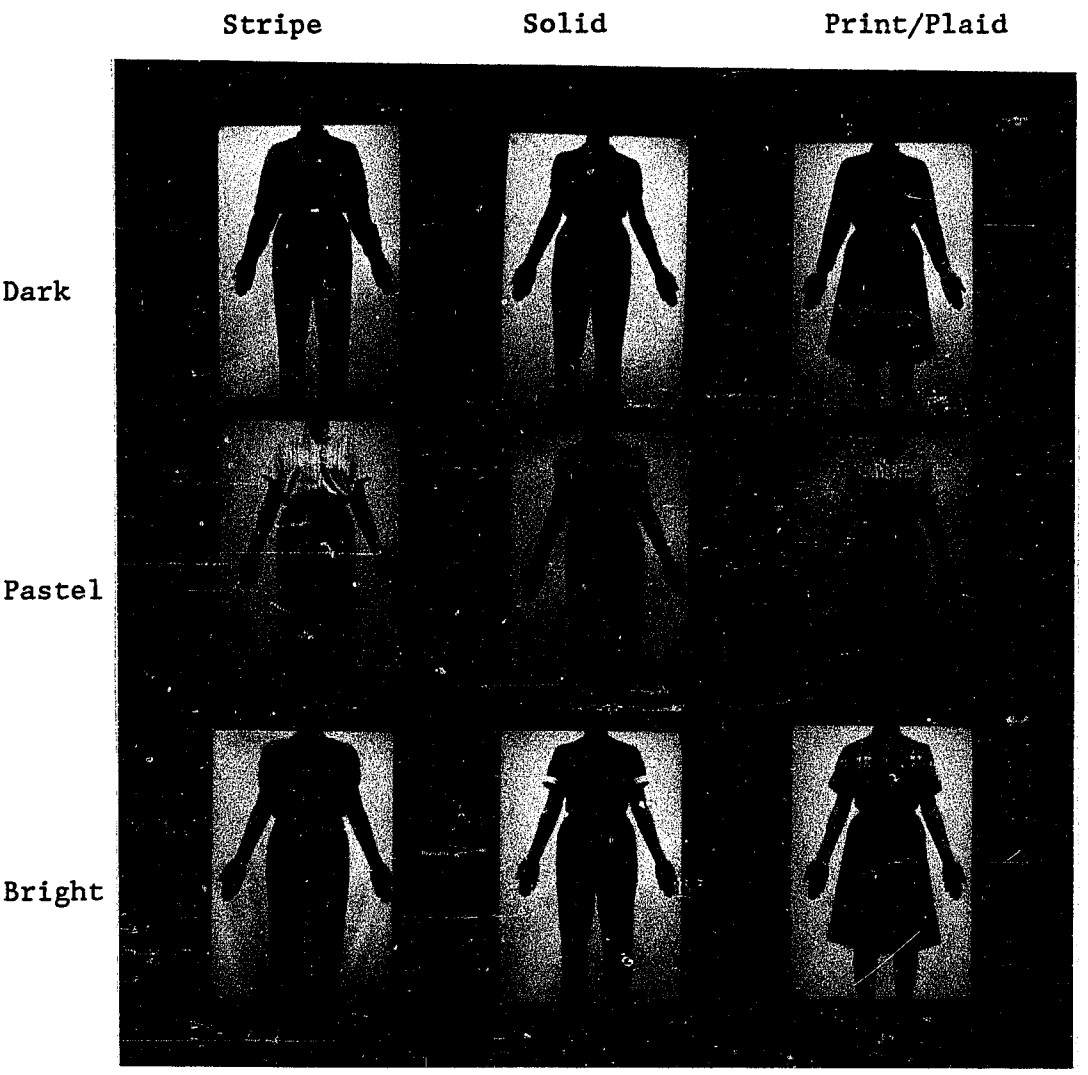
Professional/Female



Casual/Male



Casual/Female



APPENDIX D

PHASE II DATA COLLECTION INSTRUMENT

1 2 _____

As you look at the photograph of the educator before you, please circle the level of each adjective pair that you feel best describes the educator.

Safe	7	6	5	4	3	2	1	Unsafe
Just	7	6	5	4	3	2	1	Unjust
Kind	7	6	5	4	3	2	1	Cruel
Friendly	7	6	5	4	3	2	1	Unfriendly
Honest	7	6	5	4	3	2	1	Dishonest
Trained	7	6	5	4	3	2	1	Untrained
Experienced	7	6	5	4	3	2	1	Inexperienced
Skilled	7	6	5	4	3	2	1	Unskilled
Qualified	7	6	5	4	3	2	1	Unqualified
Informed	7	6	5	4	3	2	1	Uninformed
Aggressive	7	6	5	4	3	2	1	Meek
Emphatic	7	6	5	4	3	2	1	Hesitant
Bold	7	6	5	4	3	2	1	Timid
Active	7	6	5	4	3	2	1	Passive
Energetic	7	6	5	4	3	2	1	Tired

DEMOGRAPHIC INFORMATION

Please give the following information concerning yourself by placing a check in the appropriate spaces. All responses will be anonymous and confidential.

Age:

1) _____ under 18
2) _____ 18
3) _____ 19
4) _____ 20
5) _____ 21
6) _____ 22
7) _____ 23
8) _____ 24
9) _____ 25 or older

Sex:

1) _____ Female
2) _____ Male

Rank in College:

1) _____ Freshman
2) _____ Sophomore
3) _____ Junior
4) _____ Senior
5) _____ Graduate Student
6) _____ Other (specify)

_____

Combined Family Income:

1) _____ under $10,000
2) _____ $10,000 to $14,999
3) _____ $15,000 to $19,999
4) _____ $20,000 to $24,999
5) _____ $25,000 to $29,999
6) _____ $30,000 to $34,999
7) _____ $35,000 or over

Major in College:

1) _____ Applied Science and Technology
2) _____ Arts and Sciences
3) _____ Business
4) _____ Education
5) _____ Medicine
6) _____ Nursing
7) _____ Public and Allied Health