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ABSTRACT

Focusing on educational settings, this paper examines receiver apprehension (anxiety associated with the decoding, interpreting, and/or adjusting psychologically to messages sent by others). The first section, in a review of the literature, discusses the theoretical basis for receiver apprehension. A summary of educational consequences is contained in the second section, indicating that while educational consequences have not been specified, receiver apprehension has been associated with decrements in measures of academic achievement and with higher levels of test anxiety. The third section presents a typology of potential educational outcomes of receiver apprehension, characterized into major educational domains based upon the conceptual nature of receiver apprehension. Three figures are included. Twenty-nine references and a 31-item comprehensive bibliography of empirical research on receiver apprehension are attached. (SR)

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Receiver Apprehension in Educational Settings:
A Typology of Outcomes and Comprehensive Bibliography

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Abstract

Receiver apprehension has received considerable attention since Wheelless (1975) conceptualized the variable as anxiety associated with the decoding, interpreting, and/or adjusting psychologically to messages sent by others. While the educational consequences of receiver apprehension have not been specified, the variable has been associated with decrements in measures academic achievement and higher levels of test anxiety. In this paper, a typology of potential educational outcomes of receiver apprehension is specified and a comprehensive bibliography of receiver apprehension research is reported.

Receiver Apprehension in Educational Settings:
A Typology of Outcomes and Comprehensive Bibliography

Wheless (1975) advanced receiver apprehension as a variable relevant to effective information processing in education contexts. Noting evidence for reticence (Phillips, 1968) and communication apprehension (McCroskey, 1970), Wheless reasoned that an individual's communicative role (source or receiver) should function relatively independently in fear or anxiety arousing contexts. Specifically, he suggested that the fear of sending messages was related to social approval, while the fear of receiving messages was related to processing information. Termed receiver apprehension, the variable was defined as ". . . the fear of misinterpreting, inadequately processing and/or not being able to adjust psychologically to messages sent by others" (Wheless, 1975, p. 263). Wheless asserted that the anxiety associated with the receiver role of communication would affect information processing abilities, cognitive adjustments to messages, and educational performance.

Although a substantial body of literature has accumulated of the variable, the educational implications of receiver apprehension is unclear. Explanations for receiver apprehension do not share a common theme or concentrate on a unified set of dependent measures. Instead, the literature has evolved in a

fragmented and disjointed manner. For example, while Wheelless (1975) focused upon the issue of anxiety, Beatty (1981) equated receiver apprehension with cognitive complexity and Preiss (1987) offered a constructivist explanation for the variable. On a pragmatic level, deficiencies in theory construction will affect the advice offered educators for dealing with receiver apprehension in the classroom. For this reason, we divide our discussion into Three sections: (a) the theoretical basis for receiver apprehension, (b) a summary of educational consequences of receiver apprehension, and (c) a typology of potential educational outcomes of receiver apprehension..

Theoretical Basis of Receiver Apprehension

The most comprehensive attempt to explain receiver apprehension was initiated by Wheelless and Scott (1976). They asserted that apprehension occurs as a function of the fear of encountering new information. Wheelless and Scott (1976) made this case when they advanced two distinctions between source- and receiver-based communication anxieties: (1) encoding versus decoding functions, and (2) specific versus general contexts. Receiver apprehension was conceptualized as a more situational-type anxiety associated with message decoding. Like oral communication apprehension, receiver apprehension appeared to be more of a fearful reaction than a generalized, phobic

anxiety (Wheless, 1975).

Wheless and Scott (1976) adopted the view that receiver apprehension was associated with general or specific information processing situations. Building on the work of Spielberger (1966), Wheless and Scott (1976) distinguished between fear and general anxiety on the basis of "state" and "trait" characteristics of the phenomena. State anxiety was related with specific things, events, and situations that could be identified (e.g., water, heights, etc.), while trait anxiety, was related to a generalized activation level of the individual which functions across many situations. Figure 1 illustrates the differences between fear and pathological, generalized anxiety. Wheless and Scott (1976) noted that two conditions were clearly tied to fear

Insert Figure 1 about here

(Condition I) and general anxiety (Condition IV). Further, the factor distinguishing between the two conditions was an understanding of the causes of the arousal: Receiving information. Figure 1 also depicts two conditions labeled apprehension that were not clearly tied to either the fear or general anxiety constructs. Wheless and Scott (1976) reasoned that "an individual who understands the reasons for his/her

apprehensiveness -- albeit a specific or general situation -- appears to be more fearful than pathologically anxious. Likewise, the person who has a phobic reaction to a specific situation but does not rationally understand the reasons for the reaction, also seems to be more fearful than pathologically anxious" (pp. 2-3). Therefore, the two conditions labeled apprehension (Conditions II and III) seemed related to the concept of fear, rather than generalized anxiety. This reasoning suggested that receiver apprehension could be conceptually summarized as a fearful, but not necessarily understood reaction to information processing in both specific and general situations.

Receiver apprehension studies dealing with listening effectiveness and information processing effectiveness appear to be consistent with the fear/situation explanation. For example, Roberts (1986) found that Receiver Apprehension Test (RAT) scores were related to listening situations. Total listening ability and long-term memory, as measured by employed the Watson-Barker Listening Test (Watson & Barker, 1984), was negatively correlated with RAT scores. However, short-term memory was not associated with receiver apprehension. In the area of short-term memory, Daniels and Whitman (1979) detected a significant effect for receiver apprehension on recall of facts following exposure to an experimental message.

In the area of information processing effectiveness, additional evidence has reinforced the early research on classroom performance (Wheless & Scott, 1976) and academic achievement (Scott & Wheless, 1977). For example, there is reason to believe that stress plays a role in the processing of information for apprehensive individuals. Bock and Bock (1984) found that, when under stress, highly apprehensive students rated student speakers leniently. When the stress was removed, low receiver apprehensive raters committed the fewer leniency errors. These findings tend to support the anxiety explanation because situational demands may suppress or exaggerate existing fears of encountering new information. The variability in leniency errors suggests that receiver apprehension may function as a perceptual screen or filter that affects information processing efficiency.

Beatty and his colleagues made the case for information processing differences in studies focusing on the cognitive consequences of receiver apprehension. In the context of listening efficiency, Beatty, Behnke and Henderson (1980) found that respondents scoring high on the RAT instrument tended to respond anxiously in situations where incoming information required complex processing or psychological adjustment (p.135). Low processing efficiency was interpreted to mean that receiver apprehensives have difficulty assimilating new information.

Working from assimilation theory (McReynolds, 1976), Beatty (1981) reasoned that inefficient information processing results in backlogs of unassimilated facts that produces a conditioned anxiety. In other words, receiver apprehension may be produced as secondary anxiety, and the "trait" may emerge as response associated with receiving information. As predicted, Beatty (1981) found a significant correlation between cognitive backlogs and receiver apprehension.

In a related study, Beatty and Payne (1981) explored receiver apprehension and cognitive complexity as an explanation for cognitive backlogs. Because complexity levels set information processing thresholds, cognitively simple receivers should experience a backlog of unprocessed information. The authors found a significant negative correlation between cognitive complexity and receiver apprehension. Employing participants from a different geographic region and education level, Bocchino (1984) replicated the cognitive simplicity/receiver apprehension finding.

There is a body of receiver apprehension research indicating that the variable is a habitual response to information processing situations. Using a measure of physiological arousal (tympanic temperature), Roberts (1984) found a positive correlation between receiver apprehension and arousal while listening to two tape recorded messages. The stronger, stable

correlation associated with the second message suggested that the RAT instrument was measuring habitual, rather than situated, communication apprehension (p. 128). Beatty (1985) made a similar case when he examined the stability of RAT scores after processing complex messages. The "relatively stable" nature of the scores was interpreted as supporting the trait-like characteristics of receiver apprehension. This was consistent with earlier research correlating the RAT with a measure of state anxiety (Beatty, Behnke, & Henderson, 1980).

Because the secondary anxiety approach views receiver apprehension as assuming trait-like characteristics, it is reasonable to expect the RAT to be moderately correlated with other "anxiety-related" personality variables. There is evidence supporting this assumption. Studies have detected a small, but significant correlation between the RAT (Wheless, 1975) and the Revised Receiver Apprehension Test (RRAT; Wheless & Scott, 1976) and the communication apprehension (McCroskey, 1970). Similarly, Borzi (1985) found a significant positive correlation between the RAT and general shyness. In a study designed to develop a measure of trait information anxiety, Williams (1976) found a moderate correlation between his instrument and the RRAT.

Educational Implications of Receiver Apprehension

There is strong evidence that receiver apprehension has

educational consequences. Decrements in the information processing efficiency attributed to receiver apprehension have been associated with nearly a full GPA point loss for high apprehensive students when compared to low apprehensive students in university classrooms (Wheless & Scott, 1976). Further, Bock and Bock (1984) found that receiver apprehensives under stress tended to commit leniency errors; e.g., overestimating the performance of speakers. Finally, McDowell and McDowell (1978) found that receiver apprehension was higher in primary and secondary schools than in university classes.

These results suggest that receiver apprehension must be considered when developing curriculum and targeting educational objectives. However, the curriculum implications of "treating" receiver apprehension are vague. A real danger exists that poor conceptualization of receiver apprehension will lead to simplistic treatment programs for the "problem." For example, Wolvin and Coakley (1985) made the claim that the receiver apprehensive listener "may have to learn how to relax before he or she can listen effectively" (p. 106). This diagnostic advice may be quite inappropriate, as the nature of the "anxiety" associated with receiver apprehension is unclear.

Figure 2 illustrates the potential error of prescribing relaxation as a "cure" for receiver apprehension. This approach assumes that anxiety serves as a barrier that interferes with

listening abilities (Condition III). However, the student who is anxious when listening may have a rational basis for the

Insert Figure 2 about here

apprehension: poor information processing abilities. This student (Condition IV) may not be helped by relaxation. Further, relaxation training may move this student to Condition II, an irrational state where no concern is exhibited toward unsatisfactory processing abilities. Treatment programs should focus on apprehension and skills. Moving students to Condition I may require systematic desensitization (Goss, Thompson, & Olds, 1978), training in critical thinking or argumentation (Infante & Rancer, 1982), and/or practice in message evaluation (Phillips, 1978).

Clearly, the entire approach to "treatment" for receiver apprehension is poorly reasoned. Receiver apprehension is a complex variable that transcends current programs designed to measure and improve listening skills. Consequently, educational practices must focus upon improving information processing and listening skills at all receiver apprehension levels. For those who experience anxiety, special educational techniques should be developed. These programs must consider the apprehensive

student's breadth of information on a topic area, educational background, and reinforcement history related to listening. Irrational fears (Conditions II and III) may not respond to relaxation techniques alone. Also, the optimal "mix" of treatment strategies will vary based upon the theoretical nature of receiver apprehension. Consequently, researchers must devote increased attention to refining a theory of receiver-based anxiety in the context of educational environments.

Potential Educational Outcomes of Receiver Apprehension

After thirteen years of study, receiver apprehension has not emerged as an issue in the education or communication and instruction literature. While there is evidence that receiver apprehension is associated with decrements in information processing effectiveness, information processing complexity, and listening ability, few investigators have examined the specific behaviors used in educational settings. We identified features of the educational environment related to receiving/processing/adjusting to messages and had no difficulty specifying a list of expected outcomes:

1. Low academic achievement motivation.
2. High test and evaluation anxiety.
3. Lower achievement test and assignments.

4. Poor library research skills.
5. Poor study habits.
6. Preference for structured assignments.
7. Logic flaws in message construction.
8. The tendency to express opinions rather than use evidence.
9. Inappropriate social behavior.
10. Writing deficits.
11. Reading deficits.
12. History of withdrawing from courses.
13. Greater risk of dropping out from school.

If receiver apprehension is an important variable in educational settings, the range of classroom outcomes must be determined and the magnitude of the effects must be specified.

We suspect that the classroom consequences of receiver apprehension are subtle and pervasive. Figure 3 details a typology of educational outcomes based upon our search for related studies and the only review of receiver apprehension literature (Preiss, Wheelless, & Allen, under review). We attempted to characterize educational outcomes into major educational domains based upon the conceptual nature receiver apprehension.

insert Figure 3 about here

The typology is not intended to be comprehensive. Rather, the breakdown illustrates the diversity of possible outcomes in educational settings.

We see a pattern in the typology that reflects a general orientation to education; e.g., that information is a "thing" to be learned, that knowledge and truth are synonymous, that theory is unimportant because it is abstract, that all questions have right or wrong answers, and that protracted deliberation will not solve a problem. We have also seen students who embrace these views change during the course of their academic careers. It is possible that receiver apprehension is a "normal" developmental stage in the educational process. As a result, we are reluctant to prescribe a "treatment" for receiver apprehension in academic settings.

Of course, educators should be aware of the potential effects of receiver apprehension and make appropriate curriculum adjustments when practical. For example, Widgley (1987) believes that training in argumentation may lower apprehension. If true, educators may wish to develop argumentation skills earlier in the academic term. These skills may provide a valuable supplement to

critical thinking exercises, minimize receiver apprehension, and set the stage for more demanding assignments. We expect apprehensive receivers to exhibit lower verbal skills. These individuals may find remedial courses in writing and/or reading helpful in reducing anxiety and improving verbal performance. Until the nature and educational effects of receiver apprehension are determined, treatment programs (e.g., systematic desensitization) should be employed cautiously. Adjusting curriculum and utilizing study skills centers or other university resources may be a more feasible alternative. To assist educators in making this determination, we have included a comprehensive bibliography of empirical research on receiver apprehension.

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Figure 1

Situations Best Described asFear, General Anxiety, or Apprehension

	Situationally Specific	Situationally General
Rationally Known Causes	FEAR I	APPREHENSION II
Rationally Unknown Causes	APPREHENSION III	GENERAL ANXIETY IV

(Wheless & Scott, 1976, p. 2)

Figure 2

Rational and Irrational Bases
for Receiver Apprehension

		Information Processing Efficiency	
		Satisfactory	Unsatisfactory
Receiver Apprehension Level	Low	Rational I	Irrational II
	High	Irrational III	Rational IV

(Preiss & Wheelless, 1987)

Figure 3

A Typology of Educational Outcomes of Receiver ApprehensionEducational
Domain

COGNITIVE DOMAIN

- a. Knowledge
- b. Comprehension
- c. Application
- d. Analysis
- e. Synthesis
- f. Evaluation

AFFECTIVE DOMAIN

- a. Attending
- b. Responding
- c. Valuing
- d. Organization
- e. Characterization
by a value

PSYCHOMOTOR DOMAIN

- a. Perception
- b. Set
- c. Guided Response
- d. Mechanism
- e. Complex Response
- f. Adaptation
- g. Origination

Low Cognitive Integration	Categorical Thinking	Errors in Comprehension
Unable to Synthesize Information	Low Cognitive Complexity	Low Lister- Adaptation
Intolerance For Ambiguity In Novel and Complex Situations	Low Need-For- Cognition	Communication Apprehension
	Low Achieve- ment Motivation	Lower Self-Esteem
Selective Perception	Social Withdrawl	Information Avoidance
Routinized Behaviors	Impulsivity	Seeks Belief- Consistent Information
MISINTER- PRETING	INADEQUATE PROCESSING	FEAR OF ADJUSTING

RECEIVER APPREHENSION DIMENSIONS

NOTE: Receiver apprehension dimensions are from Wheelless (1975); Educational domains are from Bloom, Engelhart, Hill, and Krathwohl (1956), Krathwohl, Bloom, and Masia (1964), and Simpson (1972).

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