

# Students' Classroom Communication Effectiveness

Ann Bainbridge Frymier

*Instructional communication research has frequently examined effective teacher communication, but has ignored effective student communication. This study draws on the transactional model of communication to hypothesize that students who are effective communicators will be more successful in the classroom. Participants reported their level of interaction involvement, socio-communicative orientation, and out-of-class communication in regard to a specific class. Additionally, participants reported recently received grades, their level of state motivation to study, affective learning, performance of learning indicators, and satisfaction with instructor communication. Overall, students' communication effectiveness was positively associated with positive learning outcomes.*

*Keywords: Interaction involvement; Socio-communicative orientation; Out-of-class communication*

## Introduction

Instructional communication scholars have devoted a great deal of energy to understanding what it means to be an effective teacher in terms of communication. A process–product model (Gorham, 1988) of instructional communication emphasizes teaching processes that influence students to learn (the product). The process–product model has encouraged the application of a one-way model of communication in the classroom. If we assume a transactional model of communication (Wilmot, 1987), communication is not simply one way. Not only do teachers influence students and impact the outcome (learning), but students also influence teachers and the outcome. Therefore if we are to understand how communication functions in the classroom, we need to understand what it means to be an effective

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student as well as what it means to be an effective teacher. The goal of this research is to examine effective student communication and its relationship to positive student outcomes. Finding positive relationships among effective student communication constructs and student outcomes (e.g., learning) is a first step in the larger process of understanding effective student communication in the classroom context.

### *Being an Effective Student*

What does it mean to be an effective student? Many students (as well as their parents) believe that if they receive a good grade, they have been effective. Most educators probably place more value on learning and understand that the relationship between learning and grade is not particularly strong. A review of the literature on study skills reveals that experts in this area view an effective student as someone who has learned how to learn and manage the learning environment (Nist & Simpson, 2000). Study skills scholars emphasize learning strategies (e.g., outlining, text summarization, question generation), organizing content, and metacognitive processing of the content (Kiewra, 2002; Nist & Simpson, 2000). What seems to be lacking from all of these conceptualizations of an “effective student” is their ability to communicate effectively with the teacher. Instructional scholars have adopted the belief that to be an effective teacher one must be an effective communicator; however, a similar belief has not been applied to students. Does one need to be an effective communicator to be an effective student? If we assume that communication apprehension is an analogue of communication effectiveness as Spitzberg (1991) does, then the research overwhelming indicates that effective students need to be effective communicators (see McCroskey & McCroskey, 2002 for a review of literature on communication apprehension among students). Effective communication in the classroom involves more than not being apprehensive; but just what does it involve?

### *Socio-Communication Style and Orientation*

Communication competence and effectiveness have been defined in a variety of ways (Spitzberg, 1987; Wiemann, 1977); however, much of this research has examined competence and effectiveness in the interpersonal arena. One approach to effectiveness that has been examined in the instructional context is socio-communicative style. Socio-communicative style consists of a person’s assertiveness and responsiveness. Assertiveness and responsiveness have been defined as two major dimensions of social style, which refers to an individual’s tendency to react, associate, and adapt to another in communication situations (Borgatta, 1960; Buchholz, Lashbrook, & Wenburg, 1976; Lashbrook, 1974; Mehrabian, 1971; Merrill & Reid, 1981; Richmond & McCroskey, 1990; Snavely, 1981; Wheelless & Reichel, 1990). Assertiveness is defined as the “capacity to make requests, actively disagree, express positive or negative personal rights and feelings, initiate, maintain or disengage from conversations, and stand up for oneself without attacking another” (McCroskey & Richmond,

1996, p. 92). Responsiveness is defined as the “capacity to be sensitive to the communication of others, to be a good listener, to make others comfortable in communicating, and to recognize the needs and desires of others” (McCroskey & Richmond, 1996, p. 93). Being appropriately assertive and appropriately responsive is considered to be a component of effective communication (McCroskey & Richmond, 1996).

Socio-communicative style consists of one’s perceptions of another’s assertiveness and responsiveness. Related to this construct is socio-communicative orientation, which is a person’s perception of his or her own assertiveness and responsiveness. While socio-communicative style is based primarily on observed behaviors, socio-communication orientation is based primarily on personality and orientation toward relationships (Wooten & McCroskey, 1996). Therefore socio-communicative orientation is descriptive of one’s approach towards others and how one perceives him/herself, and is much less descriptive of how a person actually behaves than socio-communicative style.

Previous research has consistently found teacher responsiveness, and to a lesser degree teacher assertiveness, to be positively associated with effective teaching behaviors such as immediacy (Thomas, Richmond, & McCroskey, 1994; Wanzer & Frymier, 1999) and use of humor (Wanzer & Frymier, 1999). Although student assertiveness and responsiveness have not been studied extensively, it is likely that these qualities would serve students well in the classroom. A certain level of assertiveness is necessary to ask questions, seek clarification, and to participate in discussions. On the other hand, too much assertiveness may be perceived as challenging the instructor and lead to negative perceptions.

Teachers would likely perceive students who are responsive in the classroom more positively, and this was what Mottet (2000) found in his research. Mottet (2000) reported that when teachers perceived their students as nonverbally responsive, they had more positive impressions of their students. In an experimental design, Mottet, Beebe, Raffeld, and Paulsel (2004) found that teachers liked students more and were more willing to comply with requests when students were more nonverbally responsive than when they exhibited low levels of nonverbal responsiveness. Along a similar vein, Baringer and McCroskey (2000) surveyed college teachers and found that when teachers perceived students as using immediacy behaviors, they perceived students as being more attractive and reported having more affect for the students. Additionally, the teachers were more motivated to teach those students and they projected greater achievement for those students.

These results indicate that being responsive would contribute to being an effective student. There is less evidence to indicate that being assertive would make students more effective. Therefore it is likely that a component of being an effective student involves being responsive and to a lesser degree, assertive. Extending this line of reasoning, we expect students who are more effective communicators (more assertive and responsive) to have more positive outcomes in the classroom.

*Interaction Involvement*

Another approach to effectiveness is exhibiting involvement in interactions. The extent to which individuals are involved in a conversation and integrate thoughts, feelings, and experiences with the interaction has been described as interaction involvement (Cegala, Savage, Brunner, & Conrad, 1982). Individuals who are high in interaction involvement are more communicatively competent and engage in more eye gaze, more object-focused gesturing, and less body-focused gesturing than individuals low in interaction involvement (Cegala et al., 1982). This construct has been primarily considered as a general characteristic that describes a person's general behavior in interactions, although there is also situational variance in interaction involvement. Individuals who are high in interaction involvement have been found to experience more positive affect and have greater ego strength during conversations and negotiations (Cegala, 1984). The interaction involvement construct consists of three dimensions. The first is responsiveness. As just discussed, responsiveness is also conceptualized as a dimension of socio-communicative orientation (McCroskey & Richmond, 1996; Richmond & McCroskey, 1990). However it is conceptualized somewhat differently in the two constructs. Cegala et al. (1982) describe responsiveness as the "tendency to react mentally to one's social circumstance and adapt by knowing what to say and when to say it" (Cegala et al., 1982, p. 233). Cegala et al. (1982) operationalize responsiveness with items that focus on knowing what to say and knowing how to respond; whereas, McCroskey and Richmond (1996) describe responsiveness in terms of being sensitive, being a good listener, and making others comfortable and is operationalized with adjectives such as "helpful," "sympathetic," "friendly," and "gentle."

The second component of interaction involvement is perceptiveness, which refers to the ability to assess individuals' knowledge of what meaning to assign to others' behavior. Attentiveness is the third component and refers to the extent a person is cognizant of stimuli that comprise the immediate environment. These three dimensions are correlated and have been examined individually as well as together as a measure of interaction involvement (Rubin & Graham, 1988; Spitzberg, 1991).

Interaction involvement has been investigated primarily as an element of interpersonal communication rather than in the instructional context. However, Myers and Bryant (2002) examined students' self-reported interaction involvement in the classroom along with their feelings of being understood. Myers and Bryant found that interaction involvement was associated with increased affect toward the instructor, increased state motivation to study, and satisfaction with the classroom communication; however, interaction involvement did not account for as much variance as did feelings of understanding. This research supports the notion that students who communicate more effectively with their instructor learn more and are more successful in the classroom.

### *Out-of-Class Communication*

Interaction between teachers and students primarily occurs within the classroom, but communication also occurs outside of the classroom. Nadler and Nadler (2001) define out-of-class communication as

interactions outside the formal classroom that may be initiated by students or faculty. It includes advising, students seeking out faculty to ask questions about class content, faculty involvement in student organizations, and/or student–faculty discussions about non-class related issues (p. 242).

To be an effective student one often needs to interact with the instructor outside of class. Students who seek clarification on material, discuss content, seek advice, or just “get to know” the instructor are likely to do better in the class because they are more engaged with the class and/or the instructor. While interaction involvement and socio-communicative orientation reflect how students approach a class and the instructor, out-of-class communication (OCC) reflects how students behave with the instructor. Students who do not engage in OCC often stumble through assignments not really understanding what they are to do, or prepare for an exam not really understanding some of the content. Therefore, engaging in OCC is often considered to be a good thing for students to do, although not all OCC is positive. Sometimes students engage in OCC to argue with the teacher, to whine and complain, or to make excuses. These are not “effective” student behaviors. OCC, such as seeking clarification, advice, or engaging in conversations to get to know the instructor are consistent with the other “effective student” qualities discussed earlier.

### **Rationale and Hypotheses**

A great deal of time and money is devoted to training individuals how to be teachers; however, it is assumed that students know how to learn and be effective students (Kiewra, 2002). While many universities provide study skills classes to help students perform better in their classes, these classes tend to focus on study skills and information processing strategies (Nist & Simpson, 2000), and not communication skills. The research reviewed here indicates that students who communicate effectively with their teachers are likely to be perceived more positively by their teachers. It also seems quite likely that those students who communicate effectively would have more positive relationships with their instructors. Taken together, it seems likely that students who are effective communicators would learn more than those students who are less effective communicators. With the exception of Myers and Byrant (2002), the link between effective student communication and learning has not been investigated. Relying on the notion of mutual influence as implied by the transactional model of communication, it is expected that students, as well as teachers, impact learning outcomes through their communication behaviors. The

impact of teachers has been well documented. The goal of the present research was to conduct a preliminary investigation into the relationship between student communication effectiveness and student learning.

In the present study, communication effectiveness was defined and operationalized as an orientation toward communication (socio-communicative orientation and interaction involvement) and frequency of OCC. Effective student communication most likely includes more than is being measured in the present study. Effective student communication likely consists of students' orientation toward communication *and* communication behaviors in and out of the classroom. Because of the preliminary nature of this research, a self-report methodology, which is well suited for measuring student orientations toward communication and frequency of OCC, was used. Therefore the following hypotheses were advanced.

*H1: Students who report engaging in increased levels of interaction involvement, assertiveness, responsiveness, and OCC with their instructor will report greater affective learning.*

*H2: Students who report engaging in increased levels of interaction involvement, assertiveness, responsiveness, and OCC with their instructor will report more learning indicators.*

*H3: Students who report engaging in increased levels of interaction involvement, assertiveness, responsiveness, and OCC with their instructor will report higher grades.*

*H4: Students who report engaging in increased levels of interaction involvement, assertiveness, responsiveness, and OCC with their instructor will report greater motivation to study.*

*H5: Students who report engaging in increased levels of interaction involvement, assertiveness, responsiveness, and OCC with their instructor will report greater satisfaction with their communication with their instructor.*

## **Method**

### *Participants*

The participants in this study consisted of 297 students enrolled in one of two introductory communication courses at a Midwestern university. Of the 297 participants, 148 were male, 144 were female, and 5 did not indicate their sex. Thirty-three of the participants were first year students, 173 were sophomores, 52 were juniors, 34 were seniors, and five did not indicate their rank. Participants were asked to think of the instructor they had immediately preceding the course in which data was collected, consistent with the method first used by Plax, Kearney, McCroskey, and Richmond (1986). Participants reported on instructors in 45 different departments, resulting in a diverse sample of instructors being reported on.

## Measures

### Interaction Involvement

The Interaction Involvement Scale (IIS) was developed by Cegala (1981) to measure the general tendency to be involved during interpersonal interactions and consists of three dimensions, perceptiveness, attentiveness, and responsiveness. For this study the state version of the IIS<sup>1</sup> was modified so that participants were asked to evaluate the extent they were involved in interactions with a teacher during the most recent class. There are relatively few differences between the original IIS and the state version used in the present study. For example, the original IIS item, "I am keenly aware of how others perceive me during my conversations" took the form, "I was keenly aware of how my teacher perceived me."

The state IIS used in this study consisted of 18 Likert-type items using a seven-point scale anchored by "Not at all like me" and "Very much like me." Four items measured perceptiveness, six items measured attentiveness, and eight items measured responsiveness. Participants were asked to indicate the extent to which each item described them during the most recent class meeting. The IIS has been used extensively, however the state version of the IIS has not, therefore a factor analysis seemed warranted. The state IIS items were submitted to principle components analysis with iteration prior to factor extraction with varimax rotation. Criteria for factor extraction were an eigenvalue  $> 1.00$ , loadings  $\geq 0.50$  with at least two items loading at  $\geq 0.60$  on each factor, and each factor accounting for at least 5% of the variance.  $MSA = 0.86$  indicating sampling adequacy and Bartlett's test of sphericity was significant ( $\chi^2 = 2082.57$ ,  $df = 153$ ,  $p < 0.001$ ) indicating that there were adequate relationships among the variables for factor analysis to be appropriate. Three factors had eigenvalues greater than 1.00 and the scree plot indicated that three factors were likely. All items loaded  $\geq 0.50$  except for item 15 (I felt sort of "unplugged" during the class, I was uncertain of my role, my teacher's motives, and what was happening), which was dropped from the scale. While the three factors approximated Cegala's (1981) factor structure, not all items loaded on the expected factor. Loadings are shown in Table 1. For responsiveness the alpha reliability was 0.86 with a  $M = 38.12$ , and  $SD = 9.83$ . Attentiveness has an alpha reliability of 0.83 with a  $M = 15.56$  and  $SD = 5.38$ . Perceptiveness had an alpha reliability of 0.68 with a  $M = 18.09$  and  $SD = 4.14$ .

Because the focus of this study was on overall involvement with the teacher, and not the specific components of involvement, the overall measure of involvement was used to test the hypotheses. This is consistent with previous use of this scale when overall effectiveness was being studied (Spitzberg, 1991). Spitzberg (1991) reported a reliability of 0.84 for the overall scale. In the present study, the overall IIS had an alpha reliability of 0.86 with a  $M = 76.58$  and  $SD = 15.54$ .

**Table 1** Interaction Involvement Scale Factor Loadings

	Res.	Att.	Per.
1. I was keenly aware of how my teacher perceives me.			0.534
2. My mind wandered during the class and I missed parts of what was said.		0.841	
3. Sometimes during the class I wasn't sure what to say, I could not find the appropriate lines.	0.719		
4. I carefully observed how my teacher responded to me when I talked.			0.833
5. I listened carefully to what my teacher said and tried to gain as much information as possible.		0.618	
6. Sometimes during the class I was not sure what I was expected to say.	0.716		
7. Sometimes I pretended to be listening, when in fact I was thinking of something else.		0.826	
8. Sometimes during the class I felt like I knew what to say, but was hesitant to do so.	0.634		
9. Sometimes during the class I was not sure what my teacher meant or intended.	0.626		
10. During the class, I carefully observed how my teacher responded to me.			0.830
11. I felt withdrawn and distant during the conversation.	0.570		
12. Sometimes in the class I was not sure what my teacher's needs were (e.g., feedback, reassurance, etc.) until it was too late to respond appropriately.	0.722		
13. I felt confident about what to say and do during the class.	0.652		
14. I was preoccupied during the class and did not pay complete attention to my teacher.		0.874	
16. Sometimes I did not accurately perceive my teacher's intentions.	0.634		
17. I was very perceptive to the meaning of my teacher's behavior in relation to the situation and myself.			0.532
18. Sometimes during the class I could not think of what to say, I just did not respond quickly enough.	0.744		

### *Socio-Communicative Orientation*

Socio-Communicative Orientation (SCO) is an individual's perception of his or her own levels of assertiveness and responsiveness. The SCO scale was developed by Richmond and McCroskey (1990) and consists of 20 items, 10 measuring assertiveness and 10 measuring responsiveness. Previous reliabilities have been above 0.85 (Thomas et al., 1994; Wooten & McCroskey, 1996).

Participants were asked to complete the items based on how they communicated in their class immediately preceding the class in which they completed the measures. In the present study the alpha reliability for assertiveness was 0.81 with a  $M = 32.76$  and  $SD = 6.15$ . For responsiveness the alpha reliability was 0.89 with a  $M = 35.07$  and  $SD = 7.03$ .

### *Motivation*

Students' state motivation to study was measured using Richmond's (1990) motivation scale that consists of five, seven-point bi-polar adjectives (motivated–unmotivated, excited–bored, uninterested–interested, involved–uninvolved, and dreading it–looking forward to it). This scale has been used extensively (Frymier, 1994; Frymier & Shulman, 1995; Frymier, Shulman, & Houser, 1996) with reliabilities (alpha and retest) above 0.80 and has consistently been predictive of learning. In the present study the alpha reliability was 0.86 with a  $M = 19.72$  and  $SD = 6.89$ .

### *Learning*

Learning was measured using two different measures. The first, affective learning was measured using five of the eight constructs identified by Mottet and Richmond (1998). Mottet and Richmond expanded an earlier version of the scale (Andersen, 1979; Gorham, 1988; McCroskey, Richmond, Plax, and Kearney, 1985; Scott & Wheelless, 1977) drawing heavily on Krathwohl, Bloom, and Masia's (1964) work on affective learning. Since the overall affective learning score, and not the subscores, was of primary interest, five of the eight subscales were used to conserve resources and reduce respondent fatigue. Each subscale used four, seven-step bi-polar adjectives. The subscales used were: "My attitude about the content of this course:", "The likelihood of my developing an 'appreciation' for the content/subject matter:", "In 'real life' situations, my likelihood of actually recalling and using some of the information from this class:", "My attitude about the instructor of this course:", and "My likelihood of taking another course with the teacher of this course, if I had a choice and my schedule permitted: (*If you are graduating, assume you would still be here.*)" Previous alpha reliabilities for the affective learning scale have consistently been above 0.90 (Andersen, 1979; Christophel, 1990; Gorham, 1988) and the scale is well established and valid (Mottet & Richmond, 1998). In the present study the alpha reliability was 0.95 with a  $M = 100.36$  and  $SD = 25.28$ .

The second way in which learning was measured was with Frymier and Houser's (1999) revised learning indicators scale. This scale consists of seven items<sup>2</sup> that reflect activities involved in learning and uses a scale anchored by 0 (never) and 4 (very often). Frymier and Houser (1999) report an alpha reliability of 0.85 and found the scale to be positively associated with other measures of learning, student motivation, and learner empowerment, providing evidence of predictive and construct validity. In the present study the alpha reliability was 0.83 with a  $M = 15.19$  and  $SD = 5.47$ .

### *Grade*

Self-reported grade was measured as an additional indicator of student classroom success. Grades have been criticized as a measure of learning (Frymier & Houser, 1999; Gorham, 1988; Richmond, Gorham & McCroskey, 1987), and are rarely used to measure learning because of their flaws. However grades are the most important classroom outcome for students, and likely the biggest reason students seek out study skills classes. Being an effective student is much more than getting a good grade, but

certainly a good grade is a portion of what being an effective student is about. Therefore grade was included as an outcome variable. Participants were asked to report the most recent grade they had received on an assignment and on an exam. The two grades were averaged and the obtained mean grade was 3.13 with an  $SD = 0.76$ , and a range from 0.50 to 4.00.

### *Satisfaction*

Participants were asked to evaluate how satisfied they were with the communication they had with their instructor using a scale developed by Frymier and Houser (1998). Three sets of bi-polar adjectives were used with a seven-point scale. The adjective pairs were pleased–displeased, satisfied–dissatisfied, and content–discontent. Both Frymier and Houser (1998) and Myers and Bryant (2002) report an alpha reliability of 0.95. The alpha reliability for the scale was 0.92 with a  $M = 14.18$  and a  $SD = 4.59$ .

### *Out-of-Class Communication*

Out-of-Class Communication (OCC) was measured with three items, based on Nadler and Nadler's (2001) definition of OCC that asked the frequency participants had engaged in OCC with their instructor. Students were asked how frequently they had asked their instructor "questions about course content either before or after class (not during)," how frequently they had sought out their instructor for advice, and how frequently they had had conversations with their instructor "outside of the classroom about topics unrelated to the course." A modified Likert-type scale was used with the categories of 0 = never, 1 = once, 2 = 2–3 times, 3 = 4–5 times, and 4 = 6 or more times. Of the 297 participants, 38 reported never asking questions about course content before or after class, with a  $M = 1.97$ , a mode = 2, and a  $SD = 1.15$ , indicating that most students had engaged in this type of OCC 1–3 times. In regards to seeking advice from their instructor, 99 participants indicated they had never done this, with a  $M = 1.29$ , a mode = 0, and a  $SD = 1.19$ , indicating that a majority of students had sought advice 0–1 times. For the third OCC item, 162 participants indicated they had not had a conversation with their instructor unrelated to the course, with a  $M = 0.79$ , mode = 0, and a  $SD = 1.06$ , indicating again that a majority of participants had conversed with their instructors 0–1 times. The three OCC items were combined to create an overall measure of OCC with a  $M = 4.05$ ,  $SD = 2.83$ , and alpha reliability of 0.78.

## **Results**

Before specifically testing each hypothesis, correlations among all variables were examined and are shown in Table 2.

To test the first hypothesis, regression was used with interaction involvement, assertiveness, responsiveness, and OCC entered as predictor variables and affective learning serving as the criterion variable. The four predictor variables accounted for 32% of the variance in affective learning,  $F(4, 290) = 33.55$ ,  $p < 0.001$ . Interaction

**Table 2** Correlations Among Variables

	1	2	3	4	5	6	7	8	9	10	11	12
1. OCC (overall)	–											
2. Content OCC	0.83**	–										
3. Advice OCC	0.87**	0.61**	–									
4. Converse OCC	0.79**	0.45**	0.54**	–								
5. Interact involve	0.25**	0.16*	0.17**	0.29**	–							
6. Assert	0.22**	0.17**	0.18**	0.19**	0.24**	–						
7. Response	0.23**	0.21**	0.15*	0.23**	0.30**	0.11	–					
8. State Mot.	0.23**	0.17**	0.12*	0.30**	0.53**	0.20**	0.28**	–				
9. Affect learn	0.21**	0.16*	0.09	0.29**	0.50**	0.25**	0.37**	0.72**	–			
10. Learn indicators	0.25**	0.17**	0.18*	0.27**	0.37**	0.23**	0.26**	0.65**	0.67**	–		
11. Grade	0.11	0.10	0.04	0.13*	0.29**	0.09	0.17**	0.32**	0.29**	0.20**	–	
12. Satisfaction	0.32**	0.27**	0.16**	0.39**	0.49**	0.25**	0.35**	0.52**	0.66**	0.37**	0.19**	–

\* $p < 0.05$ , \*\* $p < 0.01$ .

involvement ( $\beta = 0.40$ ,  $t = 7.46$ ,  $p < 0.001$ ), assertiveness ( $\beta = 0.12$ ,  $t = 2.32$ ,  $p < 0.05$ ) and responsiveness ( $\beta = 0.24$ ,  $t = 4.55$ ,  $p < 0.001$ ) had significant beta weights in the model. OCC did not have a significant beta weight in the model.

Hypothesis 2 predicted that students engaging in interaction involvement, assertiveness, responsiveness, and OCC with their instructor would report greater learning indicators. This hypothesis was also tested using regression with learning indicators serving as the criterion variable. The four predictor variables accounted for 20% of the variance in learning indicators,  $F(4, 289) = 17.83$ ,  $p < 0.001$ . Interaction involvement ( $\beta = 0.27$ ,  $t = 4.65$ ,  $p < 0.001$ ), assertiveness ( $\beta = 0.12$ ,  $t = 2.22$ ,  $p < 0.05$ ), responsiveness ( $\beta = 0.13$ ,  $t = 2.37$ ,  $p < 0.05$ ), and OCC ( $\beta = 0.14$ ,  $t = 2.48$ ,  $p < 0.05$ ) had significant beta weights in the model.

Hypothesis 3 was also tested with regression with interaction involvement, assertiveness, responsiveness, and OCC serving as predictor variables and grade serving as the criterion variable. These four variables accounted for 9% of the variance in grade,  $F(4, 270) = 6.69$ ,  $p < 0.001$ . Interaction involvement was the only variable to have a significant beta weight,  $\beta = 0.25$ ,  $t = 3.92$ ,  $p < 0.001$ .

The fourth hypothesis proposed that students who reported engaging in increased levels of OCC, assertiveness, responsiveness, and interaction involvement with their instructor would report greater motivation to study. Again regression analysis was used with the same predictor variables. The four predictor variables accounted for 31% of the variance in motivation to study,  $F(4, 291) = 32.01$ ,  $p < 0.001$ . Interaction involvement ( $\beta = 0.46$ ,  $t = 8.67$ ,  $p < 0.001$ ) and responsiveness ( $\beta = 0.12$ ,  $t = 2.32$ ,  $p < 0.05$ ) had significant beta weights in the model, and assertiveness and OCC did not.

The fifth hypothesis proposed that students who are involved in classroom interaction, who are assertive and responsive, and who engage in OCC would be more satisfied. Regression was used with these four predictor variables, which accounted for 33% of the variance in satisfaction with communication,  $F(4, 291) = 34.72$ ,  $p < 0.001$ . All four variables had significant beta weights, interaction involvement ( $\beta = 0.37$ ,  $t = 6.99$ ,  $p < 0.001$ ), responsiveness ( $\beta = 0.19$ ,  $t = 3.67$ ,  $p < 0.001$ ), assertiveness ( $\beta = 0.10$ ,  $t = 2.10$ ,  $p < 0.05$ ), and OCC ( $\beta = 0.17$ ,  $t = 3.21$ ,  $p < 0.01$ ).

## Discussion

The overall hypothesis in this study was that students' self-reported communication effectiveness would be positively associated with positive student outcomes. This hypothesis was generally supported. Students who reported being more effective communicators in terms of involvement, responsiveness, assertiveness, and OCC generally reported greater affective learning, learning indicators, state motivation to study, and greater satisfaction with communication with their instructor. Interaction involvement consistently had the largest beta weight in the regression analyses, accounting for the greatest portion of unique variance. One of the more interesting

findings was that interaction involvement was the only variable that accounted for significant variance in reported grade. Students who reported engaging in more interaction involvement in the classroom also reported receiving higher grades.

Student responsiveness was associated with learning, motivation, and satisfaction with communication, but not reported grade. Assertiveness accounted for small portions of unique variance in affective learning, learning indicators, and communication satisfaction. Students who perceive themselves as responsive may be seeking a closer relationship with the teacher leading them to have a more positive attitude (affective learning) and to engage in more learning indicators. Assertiveness does not appear to be of particular importance. This is consistent with previous research on teacher socio-communicative style (Thomas et al., 1994; Wanzer & Frymier, 1999; Wooten & McCroskey, 1996) that has found assertiveness to be of less importance than responsiveness. If we assume that perceiving one's self as responsive is associated with actually being more responsive, then this research indicates that being a responsive communicator is a useful communication behavior for students.

Frequency of OCC accounted for unique variance in learning indicators and satisfaction with communication, but not the other dependent variables. Examination of Table 2 indicates that the OCC item measuring the frequency of conversations unrelated to course content was positively associated with all of the dependent variables including reported grade. OCC appears to be positively associated with student outcomes but that variance is shared with interaction involvement and responsiveness. Involvement in classroom interactions is something students can do during every class period, where OCC is generally infrequent. It makes sense that something one can do during every class period would have a bigger impact than something that was done infrequently.

As discussed above responsiveness is conceptualized both as a dimension of socio-communicative orientation (McCroskey & Richmond, 1996; Richmond & McCroskey, 1990) and as a dimension of interaction involvement (Cegala et al., 1982). The two measures of responsiveness were correlated at  $r=0.16$ ,  $p < 0.05$ , indicating relatively little overlap. Therefore, both approaches to responsiveness appear to be a part of effective classroom communication and are related to positive student outcomes.

As mentioned earlier, students who were involved in classroom interaction received higher grades. Of course this study is correlational in nature, so we have no way of knowing what is impacting what here. Are students who are involved in the classroom interaction better students who turn in higher quality work? Does being more involved result in greater learning? Do teachers award higher grades to students who are involved than those who are not involved for the same quality of work? These questions will be difficult to address in future research; however, if it were the case that students who communicate more effectively in the classroom learn more, study skills courses could be significantly impacted. Currently study skills courses tend to focus on effective study habits and time management, rather than communication skills. Perhaps teaching students to communicate more effectively with their

instructors would increase their learning and classroom performance. This is a direction for future research that would have both practical and theoretical implications.

An additional area for future research is to examine the behaviors associated with effective student communication. The present study examined communication orientations that are associated with effective communication. Clearly the next step is to examine the behaviors involved in effective communication.

The limitations with this study primarily revolve around the sample and the correlational nature of the study. While surveying real students in real classes enhances the ecological validity of the study, internal validity is somewhat sacrificed. We can easily examine the relationships among the variables but can only speculate on the causal relationships among them. The sample used in this study was a convenience sample of students enrolled in introductory communication classes. While there is no evidence to indicate the sample was not representative of the larger college population, the university where the data collected is fairly selective with a primarily white suburban student body. Therefore we must be very careful in generalizing these results to the larger population of college students.

## Notes

- [1] The state version of the IIS was obtained directly from Donald Cegala at The Ohio State University.
- [2] The learning indicators scale contains the following items: I like to talk about what I am doing in this class with friends and family; I explain course content to other students; I think about the course content outside the class; I see connections between the course content and my career goals; I review the course content; I compare the information from this class with other things that I have learned; I feel I have learned a lot in this class.

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