

A Comparison of Student and Professor Perceptions of Teacher Immediacy Behaviors in Large Agricultural Classrooms

Christopher M. Estep¹
Sul Ross State University
Alpine, TX



Karla P. Shelnett² and T. Grady Roberts³
University of Florida
Gainesville, FL

Abstract

The purpose of this study was to examine student and professor perceptions of teachers' use of immediacy behaviors in large college of agriculture classrooms. A convenience sample of 555 students and eight professors were surveyed. Students perceived that professors were engaging in the classroom but infrequently initiated one-on-one student interactions. Professors also perceived that they were engaging in the classroom and least frequently initiated one-on-one interactions with individual students. When comparing responses from students and professors, professors perceived they more frequently displayed 21 of the 24 immediacy behaviors than their students perceived. The largest discrepancy was professors perceived that they provide feedback and comments on student work much more often than their students perceived. Professors and students were in agreement that professors frequently use a variety of vocal expressions, use humor, smile at the whole class and have relaxed body positions while teaching. Professors and students were also in agreement that professors infrequently initiate one-on-one interactions with individual students.

Introduction

In recent years great emphasis has been placed on the quality of education that undergraduates receive; many have purported that changes must be made in the American higher education system. The National Research Council (NRC, 2009) indicated that societal issues, including changing climates, energy insecurities, food safety, public health problems and national security are the inheritance of today's college undergraduates. Arum and Roksa (2011) and others have suggested

that college graduates are underprepared to meet these challenges. Accordingly, many have proffered learning outcomes in an effort to define standards for success in higher education (e.g. Association of Public and Land-grant Universities, 2009; Association of American Colleges and Universities, 2002; Keeling, 2004; Kellogg Commission, 2001; National Research Council, 2009). However, as Ewell and Wellman (2007) pointed out, success in higher education can be defined in many ways.

In its National Symposium on Postsecondary Student Success, the National Postsecondary Education Cooperative (NPEC) tackled the task of defining undergraduate student success by pinpointing elements that contribute to success (Ewell and Wellman, 2007). As a result, the NPEC posited that educational experiences provided by faculty members are "the single most potent component" contributing to student success (Ewell and Wellman, 2007, p. 5). Similarly, Kuh, Kinzie, Buckley, Bridges and Hayek (2006) reported that prior research has indicated that one of the main predictors of student success has been positive faculty/student interaction. What is more, Komarraju, et al. (2010) suggested that interactions with faculty members, good or bad, can leave a long lasting impression on students. Therefore, an investigation into factors that affect faculty/student interactions is warranted.

Cotten and Wilson (2006) proposed that interactions between students and faculty members can be either formal or informal and can occur in or out of the learning environment. Much of the previous research has investigated informal interactions between faculty and students outside of the classroom and shown

¹Assistant Professor; Box C-11 Alpine, TX 79832; 432-837-8210; cestep@sulross.edu

²Assistant Professor; 3038A McCarty Hall D Gainesville, FL 32611; 352-273-3535; kpagan@ufl.edu

³Professor; 117C Bryant Hall Gainesville, FL 32611; 352-273-2568; groberts@ufl.edu

A Comparison of Student

that informal, out-of-class interactions have helped increase students' motivation (Pascarella and Terenzini, 2005); however, fewer studies have investigated the dynamics of student/teacher interactions within the learning environment. According to Velez (2008), one important variable that explains in-class student/teacher interactions has been teacher immediacy.

Literature Review

Teacher immediacy is defined as the verbal and non-verbal behaviors used by teachers that help increase the psychological and/or physical closeness between teachers and students (Christophel, 1990). Examples of verbal immediacy behaviors include, using personal examples in teaching, using humor, calling students by name and praising students' work, while nonverbal behaviors would include, smiling at students, gesturing while teaching, moving about the classroom and having a relaxed body position while teaching. Prior research on teacher immediacy, which has mostly been conducted in the area of communication education, has shown that the use of verbal and nonverbal immediacy behaviors by teachers has been positively related to student motivation (Chesebro and McCroskey, 2001; Christophel, 1990; Christophel and Gorham, 1995), student affect toward learning (Chesebro, 2003; Chesebro and McCroskey, 2001; Christensen and Menzel, 1998), behavior (Christensen and Menzel, 1998), cognitive learning (Chesebro and McCroskey, 2001; Goodboy, et al., 2009) and achievement (Wilson and Locker Jr., 2008).

More specific to agricultural education, Velez and colleagues (Velez, 2008; Velez and Cano, 2008; Velez and Cano, 2011) examined teacher immediacy in relation to motivational processes. In his doctoral dissertation, Velez (2008) investigated the relationships between immediacy and self-efficacy and task-value motivation. He found that verbal immediacy had a low positive association with self-efficacy and task-value motivation. Results also revealed that nonverbal immediacy had moderate positive correlations with self-efficacy and low positive correlations with task-value motivation. Likewise, Velez and Cano (2008) found similar results. They discovered that nonverbal immediacy had a significant, positive relationship with expectancy-value motivation, with a slightly smaller positive relationship between verbal immediacy and expectancy-value motivation. Velez and Cano (2011) examined teacher immediacy in relation to classroom, student and instructor variables among college of agriculture students at The Ohio State University. They found that students enrolled in elective courses perceived their instructors to exhibit more verbal and nonverbal immediacy behaviors than students in non-elective courses. Additional results showed that verbal immediacy was rated the highest in classes of 0-29 students and that immediacy decreased as class size increased. What is more, Velez and Cano (2011) found that students reported greater immediacy behavior use from older instructors and female instructors.

Additional research investigating the use of teacher immediacy behaviors in agricultural education has been conducted by Estep and associates (Estep, 2012; Estep and Roberts, 2013; Estep et al., 2013; Roberts et al. (2012). Estep et al. (2013) and Roberts et al. (2012) examined the frequency of verbal and nonverbal immediacy behaviors used by successful instructors in the college of agriculture at the University of Florida. Both studies indicated that instructors who are successful employ a variety of verbal and nonverbal immediacy behaviors during classroom instruction. In a qualitative study by Estep and Roberts (2013), students in the college of agriculture at the University of Florida were asked to describe behaviors used by instructors that helped the students engage in classroom learning. One emergent theme in the study was teacher immediacy. The participants in the study indicated that when teachers utilized immediacy behaviors, they were more prone to be engaged in the classroom. Similar to the work by Velez (2008), Estep (2012) examined immediacy in relation to motivation in large college of agriculture classrooms. He found positive relationships between immediacy and motivation and engagement. Moreover, Estep (2012) found that verbal immediacy was a significant predictor of students' values/goal motivation, cognitive/metacognitive strategy use and change in student expectancy for success and values/goal motivation. Likewise, nonverbal immediacy was found to be a significant predictor of changes in students' expectancy for success, values/goal motivation and changes in resource management strategy use. Another finding by Estep (2012) was that teacher immediacy and professor/student rapport were highly related and that rapport greatly increased the amount of variance accounted for in motivation and engagement.

While prior research has illustrated the benefits of teacher immediacy, most studies have focused solely on students' perceptions of teachers' immediacy use. Jensen (1999) purported that immediacy use by teachers can be a powerful tool, but that many teachers do not possess knowledge of how to properly use immediacy behaviors. Consequently, an investigation into teachers' perceptions of their own immediacy might provide insight into how to help teachers better utilize these behaviors.

Raviv et al. (1990) posited that in classroom settings teachers' and students' perceptions of classroom activities will differ. Theoretically, each individual in the classroom will form their perceptions based on their prior experiences (Dewey, 1938). Raviv et al. (1990) suggested that the perceptions of the teacher should determine the direction of teaching and learning in the classroom. However, a student's perception of classroom activities will determine how they engage in the classroom (Ormrod, 2008). As a result, Raviv et al. (1990) recommended examining both student and teacher perceptions as a matter of practical and theoretical significance.

Gorham and Zakahi (1990) investigated students' and teachers' perceptions of the teachers' immediacy behaviors and found that students and teachers generally agreed on the immediacy behaviors used by the teachers. However, specific immediacy items that had the lowest correlations between student and teacher responses were: (a) looks at the class while talking; (b) uses monotone/dull voice while talking to class; (c) has a very relaxed body position while talking to the class; (d) has initiated conversations with me before, after, or outside of class (teacher version: I have initiated conversations with all or most of my students before, after, or outside of class); (e) will have discussions about things unrelated to class with individual students or with the class as a whole; (f) asks how students feel about an assignment, due date, or discussion topic; and (g) uses personal examples or talks about experiences she/he has had outside of class. While the instructors and students in Gorham and Zakahi's study generally agreed on the immediacy behaviors used, the instructors tended to rate their use of almost every verbal and nonverbal immediacy behavior higher than did the students.

A similar study conducted by Martin (1994) found that students' and teachers' perceptions of immediacy use by the instructors differed and that instructors rated themselves higher in immediacy than did students. Additionally, Martin found that both students' and teachers' perceptions of immediacy behavior use increased throughout the course of the semester.

Furthermore, prior studies by Whittington and colleagues (Whittington, 1995; Whittington and Newcomb, 1993) have shown that in college of agriculture classrooms, instructors' perceptions of their teaching behaviors may not always match their actions. Whittington and Newcomb (1993) found that instructors in a college of agriculture reportedly aspired to teach at high cognitive levels, while classroom observations revealed them teaching at much lower levels. Moreover, Whittington (1995) found similar results among college of agriculture instructors at the University of Idaho.

Purpose

The National Research Agenda of the American Association for Agricultural Education (Doerfert, 2011) stressed the need to examine teaching and learning in agricultural education, broadly defined. More specifically, priority four of the research agenda addressed the need for meaningful and engaged learners. An important aspect of teaching and learning that might affect student motivation and engagement is the interpersonal interaction that takes place between teachers and students in the classroom and perceptions of teacher immediacy behavior use is one way to examine these interactions. Therefore, the purpose of this study was to examine student and professor perceptions of teachers' use of immediacy behaviors in large college of agriculture classrooms and determine what discrepancies in perceptions about teacher immediacy behavior use exist

between teachers and students. The following research objectives guided this study:

1. Determine students' perceptions of the occurrence of immediacy behaviors used by instructors,
2. Determine instructors' perceptions of the occurrence of their own immediacy behaviors and
3. Compare student perceptions to professor perceptions of immediacy behavior occurrence.

Methods

This descriptive study utilized a convenience sample from ten large classes in the College of Agricultural and Life Sciences at the University of Florida during the fall 2011 semester. Large classes were defined as classes containing 50 to 100 students. Friedel (2006) reported that no standardized definitions of class size exist, but that prior studies have considered classes with over 50 students to be large.

Upon approval of the University of Florida's Institutional Review Board, instructors of classes that met the criteria were contacted about participating in the study and eight instructors accepted; two of the instructors allowed two of their classes to participate in the study. A total of 555 students and 8 instructors participated in the study. All participants were provided written informed consent prior to participation in the study.

The Immediacy Behavior Scale (Christophel, 1990) was used to collect the data. The instrument was administered to students in each of the ten classes. Additionally, the instructor of each class completed a modified online version of the Immediacy Behavior Scale following the students' administration. The Immediacy Behavior Scale is a 34 item Likert-type scale that measures students' perceptions of the frequency of verbal and nonverbal immediacy behaviors used by their instructor. The scale ranges from 1 to 5 with, 1 = never; 2 = rarely; 3 = occasionally; 4 = often; and 5 = very often. Post-hoc reliability for internal consistency of the items was tested using Cronbach's Alpha and the instrument was found to have an acceptable reliability ($\alpha = .86$).

For objectives one and two, data were analyzed by calculating the frequencies of student and instructor responses for each of the immediacy behaviors. To accomplish objective three, the Borich Needs Assessment Model (Borich, 1980) was used to calculate the discrepancies between student and instructor responses. Typically the Borich model is used in educational settings to calculate mean weighted discrepancy scores between teachers' perceived competencies in certain skills and their perceived relevance of those skills to aid in the design of professional development. However, Borich (1980) indicated that the needs assessment model can also be utilized to calculate discrepancy scores between supervisors and employees. Therefore, for the purpose of this study, the researchers determined that an examination of the differences in student and teacher perceptions of teacher immediacy was an appropriate use

A Comparison of Student

of the model (Borich, G.D., personal communication, May 4, 2012).

According to the Borich (1980) methodology, student data was separated by class and class means were calculated for each item. The class' mean for each item was then subtracted from the corresponding instructor's response for the item. The difference was multiplied by the mean of the instructors' responses for that item to get the discrepancy score. A separate discrepancy score was calculated for each instructor on each item and lastly, each discrepancy score for a particular item was averaged to get the final mean weighted discrepancy score (MWDS) for the item. A positive MWDS indicated that the instructors rated themselves higher on that particular item, while the value of the MWDS indicates the magnitude of the discrepancy. Borich did not assign any particular value system to MWDS strengths, but indicated that discrepancy scores will vary depending upon the average of the responses. Once the MWDS were calculated, they were ranked in order of magnitude.

Results

Objective one was to determine students' perceptions of the occurrence of immediacy behaviors used by instructors. For this objective, students indicated that the most frequently used teacher immediacy behaviors by instructors were: (a) looks at the class while talking, (b) asks questions or encourages students to talk, (c) smiles at the class while talking, (d), uses personal examples or talks about experiences she/he has had outside of class and (e) uses a variety of vocal expressions when talking to the class. Conversely, students perceived that the least frequently used immediacy behaviors by instructors were: (a) provides feedback on my individual work through comments on papers, oral discussions, etc.; (b) is addressed by his/her first name by the students; (c) has initiated conversations with me before, after, or outside of class; (d) will have discussion about things unrelated to class with individual students or with the class as a whole and; (e) touches students in the class. Table 1 shows the percentages of student responses for each of the teacher immediacy behaviors. Several items that were reverse coded were removed, as these items represented the inverse of behaviors already included in the results.

Table 1. Student Perceptions of Occurrence of Teacher Immediacy Behaviors (n = 555)

Immediacy Behavior	Occurrence of Immediacy Behaviors (%)				
	Never	Rarely	Occasionally	Often	Very Often
Looks at the class while talking	.4	.2	1.1	10.6	87.7
Asks questions or encourages students to talk	.2	2.5	8.5	22.5	66.3
Smiles at the class while talking	0	2.0	8.1	25.5	64.4
Uses personal examples or talks about experiences she/he has had outside of class	0	.5	8.6	29.9	60.9
Uses a variety of vocal expressions when talking to the class	1.3	6.5	15.0	27.6	49.7
Has a very relaxed body position while talking to the class	1.1	1.3	10.6	37.9	49.1
Gestures while talking to the class	1.3	4.7	13.5	32.9	47.7
Addresses students by name	4.3	13.9	18.8	18.3	44.7
Moves around the classroom while teaching	3.6	10.1	22.1	21.5	42.7
Uses humor in class	.2	2.3	15.8	39.0	42.6
Invites students to telephone or meet with him/her outside of class if they have questions or want to discuss something	5.0	6.8	18.2	32.6	37.3
Asks questions to solicit viewpoints or opinions	1.6	12.2	18.9	31.6	35.6
Refers to class as "our" class or what "we" are doing	1.5	3.6	22.4	37.6	34.9
Gets into conversations with individual students before or after class	.7	5.3	25.9	33.4	34.7
Smiles at individual students in the class	4.5	12.7	23.7	24.8	34.4
Praises students' work, actions, or comments	1.3	5.6	23.5	37.7	31.9
Addresses me by name	33.0	16.5	11.1	8.2	31.2
Gets into discussions based on something a student brings up even when this doesn't seem to be part of his/her lecture plan	1.8	11.7	31.0	28.9	26.5
Asks how students feel about an assignment, due date, or discussion topic	5.8	10.9	31.9	31.5	19.9
Provides feedback on my individual work through comments on papers, oral discussions, etc.	16.8	13.0	24.7	27.2	18.3
Is addressed by his/her first name by the students	56.1	12.5	5.6	7.8	18.1
Has initiated conversations with me before, after, or outside of class	31.4	17.2	25.2	10.4	15.9
Will have discussion about things unrelated to class with individual students or with the class as a whole	17.2	36.9	27.7	10.1	8.1
Touches students in the class	67.8	16.8	10.3	2.9	2.2

For objective two, which was to determine instructors' perceptions of the occurrence of their own immediacy behavior use, results revealed that instructors perceive they most frequently (a) use personal examples or talk about experiences they have had outside of class, (b) gesture while talking to the class, (c) look at the class while talking, (d) ask questions to solicit viewpoints or opinions and (e) ask questions or encourage students to talk. On the contrary, the least frequently used immediacy behaviors as perceived by instructors were: (a) I will have discussions about things unrelated to class with individual students or with the class as a whole, (b) I am addressed by my first name by the students, (c) I know the names of all my students, (d) I touch students in the class and (e) I have one-on-one conversations with my students. Table 2 presents the percentages of instructor responses of their own immediacy behavior use. Likewise, reverse coded items were removed from the results.

The third objective was to compare student perceptions to professor perceptions. This was accomplished by calculating Mean Weighted Discrepancy Scores (MWDS). As noted previously, positive MWDS indicate that professors rated themselves higher, while negative MWDS indicated that students rated the professor higher. Additionally, the MWDS value indicates the magnitude of the discrepancy between professors' and students' means for each item. Results are presented in Table 3 in order of MWDS values. Professors rated themselves higher on 21 of the 24 behaviors. The largest discrepancies were observed for the following items: (a) provides feedback on my individual work through comments on papers, oral discussions, etc.; (b) will have dis-

cussions about things unrelated to class with individual students or with the class as a whole; (c) moves around the classroom while teaching; (d) gestures while talking to the class; and (e) smiles at individual students in the class.

Professors and students were in close agreement on seven behaviors (MWDS less than .66). These included: (a) uses a variety of vocal expressions when talking to the class; (b) uses humor in class; (c) addresses me by name; (d) has initiated conversations with me before, after, or outside class; (e) has a very relaxed body

position while talking to the class; (f) smiles at the class while talking; and (g) looks at the class while talking.

There were four immediacy behaviors that students and professor both agreed that instructors displayed infrequently (means of less than 3.0). These included: (a) touches students in the class ($M_s = 1.48$; $M_p = 2.50$); (b) is addressed by his/her first name by the students ($M_s = 2.04$; $M_p = 2.90$); (c) addresses me by name ($M_s = 2.74$; $M_p = 2.90$); and (d) has initiated conversations with me before, after, or outside class ($M_s = 2.56$; $M_p = 2.70$).

Table 2. Professor Perceptions of Occurrence of Teacher Immediacy Behaviors (n = 8)

Immediacy Behavior	Occurrence of Immediacy Behaviors (%)				
	Never	Rarely	Occasionally	Often	Very Often
I use personal examples or talk about experiences I have had outside of class	0	0	0	25.0	75.0
I gesture while talking to the class	0	0	0	25.0	75.0
I look at the class while talking	0	0	0	37.5	62.5
I ask questions to solicit viewpoints or opinions	0	0	25.0	25.0	62.5
I ask questions or encourage students to talk	0	0	0	50.0	50.0
I move around the classroom while teaching	0	0	0	50.0	50.0
I smile at individual students in the class	0	0	37.5	12.5	50.0
I use humor in class	0	0	12.5	50.0	37.5
I invite students to telephone or meet with me outside of class if they have questions or want to discuss something	0	12.5	0	50.0	37.5
I refer to class as "our" class or what "we" are doing	0	0	25.0	37.5	37.5
I smile at the class while talking	0	0	25.0	37.5	37.5
I praises students' work, actions, or comments	0	0	37.5	25.0	37.5
I provide feedback on individuals' work through comments on papers, oral discussions, etc.	0	0	12.5	62.5	25.0
I have a very relaxed body position while talking to the class	0	0	12.5	62.5	25.0
I use a variety of vocal expressions when talking to the class	0	0	12.5	62.5	25.0
I ask how students feel about an assignment, due date, or discussion topic	0	12.5	12.5	50.0	25.0
I get into discussions based on something a student brings up even when this doesn't seem to be part of my lecture plan	0	0	50.0	25.0	25.0
I address students by name	0	12.5	37.5	25.0	25.0
I get into conversations with individual students before or after class	0	0	12.5	75.0	12.5
I will have discussions about things unrelated to class with individual students or with the class as a whole	0	0	50.0	37.5	12.5
I am addressed by my first name by the students	0	62.5	12.5	12.5	12.5
I know the names of all my students	12.5	37.5	37.5	0	12.5
I touch students in the class	25.0	50.0	12.5	0	12.5
I have one-on-one conversations with my students	12.5	37.5	25.0	25.0	0

Table 3. Discrepancies in Professor and Student Perceptions of Immediacy Behavior Occurrence

Item	M_s	M_p	MWDS
Provides feedback on my individual work through comments on papers, oral discussions, etc.	3.12	4.20	4.52
Will have discussions about things unrelated to class with individual students or with the class as a whole.	2.54	3.70	4.30
Moves around the classroom while teaching.	3.86	4.60	3.41
Gestures while talking to the class.	4.13	4.80	3.20
Smiles at individual students in the class.	3.59	4.30	3.06
Asks questions to solicit viewpoints or opinions.	3.76	4.40	2.80
Touches students in the class.	1.48	2.50	2.56
Is addressed by his/her first name by the students.	2.04	2.90	2.50
Asks how students feel about an assignment, due date, or discussion topic.	3.42	4.00	2.31
Uses personal examples or talks about experiences she/he has had outside class.	4.46	4.80	1.62
Invites students to telephone or meet with him/her outside of class if they have questions or want to discuss something.	3.84	4.20	1.53
Praises students' work, actions, or comments.	3.84	4.20	1.52
Gets into discussions based on something a student brings up even when this doesn't seem to be part of his/her lecture plan.	3.59	3.90	1.22
Refers to class as "our" class or what "we" are doing.	3.98	4.20	.93
Asks questions or encourages students to talk.	4.43	4.60	.80
Addresses students by name.	3.70	3.90	.77
Gets into conversations with individual students before or after class.	3.92	4.10	.73
Uses a variety of vocal expressions when talking to the class.	4.05	4.20	.64
Uses humor in class.	4.16	4.30	.61
Addresses me by name.	2.74	2.90	.47
Has initiated conversations with me before, after, or outside class.	2.56	2.70	.39
Has a very relaxed body position while talking to the class.	4.28	4.20	-.34
Smiles at the class while talking.	4.44	4.30	-.61
Looks at the class while talking.	4.84	4.70	-.66

Note. M_s = Student Mean; M_p = Professor Mean

Conclusions, Recommendations and Implications

Students perceived that professors used a variety of immediacy behaviors in the classroom (looking at the class, smiling at the class, using personal examples/experiences and using a variety of vocal expressions). However, students also perceived that professors infrequently initiated one-on-one or relational student interactions (providing feedback on my individual work, being addressed by his/her first name, initiating conversations with individual students and touching students). Similarly, professors perceived that they used various immediacy behaviors in the classroom (using personal examples, gesturing while talking, looking at the class and asking a lot of questions to involve students), while they perceived that they least frequently initiated relational, one-on-one interactions with individual students (having one-on-one conversations, being addressed by their first names, knowing the names of their students and touching students).

The results of this study revealed differences between student and professor perceptions of immediacy behaviors exhibited by professors in larger classes. Professors perceived they were displaying 21 of the 24 immediacy behaviors more frequently than their students indicated. The largest discrepancy between professors' and students' perceptions was professors perceived that they provide more feedback and comments on student work than students perceived. The second largest discrepancy was that professors more frequently indicated that they have discussions about topics unrelated to class. Other immediacy behaviors with larger discrepancies were for nonverbal behaviors related to classroom interactions (moving around the classroom, gesturing and smiling at individual students). Professors and students were in agreement that professors frequently use a variety of vocal expressions, use humor, smile at the whole class and have relaxed body positions while teaching. Professors and students were also in agreement that professors infrequently initiate one-on-one interactions with individual students (touching students, being addressed by their first names, calling on students by name and initiating conversations with individual students).

The findings of this study are congruent with findings by Estep et al. (2013) and Roberts et al. (2012). Similar to these studies, the students in this study reported that their instructors are using a variety of teacher immediacy behaviors. However, the one-on-one immediacy behaviors that students indicated instructors used infrequently in this study were the relational immediacy behaviors preferred by the students in Estep and Roberts' (2013) study. The discrepancy scores revealed that students and instructors agreed that the relational immediacy behaviors were lacking. Thus, according to Estep (2012) the instructors in this study might not be utilizing teacher immediacy to its fullest potential to build relationships with students, which might have det-

perimental effects on student motivation and engagement. Instructors should consider implementing more one-on-one immediacy behaviors to help improve interactions with students.

Additionally, the differences observed in this study confirmed Raviv et al.'s (1990) assertion that perceptions of classroom interactions can vary between students and professors. The finding that professors rated themselves higher on almost every immediacy behavior is also consistent with findings by Gorham and Zakahi (1990) and Martin (1994).

Teaching large classes presents several challenges related to higher student/professor ratio and classroom infrastructure in larger classrooms (theater style arrangement, fixed chair/desks, large size, etc.). These conditions can make it much more difficult to create an engaging environment in which professors build personal relationships with students. Results of this study revealed that professors seem to be doing a reasonable job of engaging the whole class through the use of immediacy behaviors, but not individual students. Student engagement is a precursor for learning (McLaughlin et al., 2005) and it would appear that some students in these larger classes are not being engaged. Further research focused on individual student engagement is advisable to determine if this realized. In the interim, professional development for faculty who teach larger classes on student engagement is suggested.

Of all the findings in this study, the most concerning to the researchers was the discrepancy between professors and students on the feedback provided to students. Faculty believed that they provided feedback often, whereas students believed that they received feedback occasionally. Providing timely and quality feedback to students is an important part of the teaching and learning process (Svinicki and McKeachie, 2011). It is unknown how frequently feedback was actually provided and quality of that feedback. Further research should be conducted to examine this issue more closely.

The results of this study may also have implications for the promotion and tenure process at the University of Florida. Evaluation of faculty teaching uses a combination of student course evaluations and a peer review of the teaching process. If faculty members' self-assessment of teaching differs from their students, their perceptions when evaluating other faculty may also differ from student perceptions. A former Dean of the College of Agricultural and Life Sciences at the University of Florida indicated that the peer review reports are often much more flattering than what student course evaluations indicate (Barrick, R.K., personal communication, June 21, 2013). Faculty may not have the appropriate knowledge to assess teaching. Further research could examine faculty knowledge of effective teaching principles. Additionally, professional development programs could be developed for faculty on how to assess teaching.

This study examined both student and professor perceptions of immediacy behaviors exhibited in larger

classes. Student and professor responses may not be an exact indicator of the actual behaviors that occur throughout a semester. Further observational research should be conducted to measure the actual frequency that these behaviors occur. Additionally, the convenience sample used in this study limits the generalizability of the results. This study should be replicated in other large classes and at other universities to see if similar results are realized.

Another opportunity for further inquiry on this phenomenon relates to class size, delivery method and level. This study focused on undergraduate classes with 50 to 100 students delivered face-to-face. Additional research should look at both smaller and larger classes. Further research should also examine online courses of varying sizes. Finally, research on graduate classes of varying sizes would add to our understanding of this topic.

Literature Cited

- Association of Public and Land-grant Universities. 2009. Human capacity development: The road to global competitiveness and leadership in food, agriculture, natural resources and related services (FANRRS). Washington, DC: APLU.
- Arum, R. and J. Roksa. 2011. Academically adrift: Limited learning on college campuses. Chicago, IL: University of Chicago Press.
- Association of American Colleges and Universities. 2002. Greater expectations. Washington, DC: AACU.
- Borich, G.D. 1980. A needs assessment model for conducting follow-up studies. *Jour. of Teacher Education* 31(3): 39-42.
- Chesebro, J.L. 2003. Effects of teacher clarity and nonverbal immediacy on student learning, receiver apprehension and affect. *Communication Education* 52(2): 135-147.
- Chesebro, J.L. and J.C. McCroskey. 2001. The relationship of teacher clarity and immediacy with student state receiver apprehension, affect and cognitive learning. *Communication Education* 50(1): 59-68.
- Christensen, L.J. and K.E. Menzel. 1998. The linear relationship between student reports of teacher immediacy behaviors and perceptions of state motivation and of cognitive, affective and behavioral learning. *Communication Education* 47(1): 82-90.
- Christophel, D.M. 1990. The relationships among teacher immediacy behaviors, student motivation and learning. *Communication Education* 39: 323-340.
- Christophel, D.M. and J. Gorham. 1995. A test-retest analysis of student motivation, teacher immediacy and perceived sources of motivation and demotivation in college classes. *Communication Education* 44: 292-306.
- Cotten, S.R. and B. Wilson. 2006. Student-faculty interactions: Dynamics and determinants. *Higher Education* 51(4): 487-519.
- Dewey, J. 1938. *Experience and education*. New York, NY: Simon and Schuster.
- Doerfert, D.L. (ed.). 2011. *National research agenda: American Association for Agricultural Education's research priority areas for 2011-2015*. Lubbock, TX: Texas Tech University Dept. of Agr. Education and Communications.
- Estep, C.M. 2012. *The relationships among teacher immediacy, professor/student rapport and self-regulated learning*. PhD Diss., Agr. Education and Communication Dept., Univ. of Florida, 305 Rolfs Hall, Gainesville, FL.
- Estep, C.M. and T.G. Roberts. 2013. Teacher behaviors contributing to student content engagement: A socially constructed consensus of undergraduate students in a college of agriculture. *Jour. of Agr. Education* 54(1): 97-110.
- Estep, C.M., C.T. Stripling, N.W. Conner, A. Giorgi and T.G. Roberts. 2013. An examination of the learning activities, cognitive level of instruction and teacher immediacy behaviors of successful instructors in a college of agriculture. *Jour. of Agr. Education* 54(2): 15-28.
- Ewell, P. and J. Wellman. 2007. *Enhancing student success in education: Summary report of the NPEC initiative and National Symposium on Postsecondary Student Success*. National Postsecondary Education Cooperative
- Friedel, C.R. 2006. *Dissimilar cognitive styles and their relationships with undergraduate student stress, motivation and engagement*. PhD Diss., Agr. Education and Communication Dept., Univ. of Florida, 305 Rolfs Hall, Gainesville, FL.
- Goodboy, A.K., K. Weber and S. Bolkan. 2009. The effects of nonverbal and verbal immediacy on recall and multiple student learning indicators. *Jour. of Classroom Interaction* 44(1): 4-12.
- Gorham, J. and W.R. Zakahi. 1990. A comparison of teacher and student perceptions of immediacy and learning: Monitoring process and product. *Communication Education* 39: 354-368.
- Jensen, K.K. 1999. Training teachers to use verbal immediacy. *Communication Research Reports* 16(3): 223-232.
- Keeling, R.P. 2004. *Learning reconsidered: A campus-wide focus on the student experience*. (<http://www.myacpa.org/pub/documents/learningreconsidered.pdf>). American College Personnel Association. (Accessed October 1, 2013).
- Kellogg Commission. 2001. *Returning to our roots: Executive summaries of the reports of the Kellogg Commission on the future of state and land-grant universities*. (<http://www.aplu.org/NetCommunity/Document.Doc?id=187>). APLU. (Accessed October 1, 2013).
- Komarraju, M., S. Musulkin and G. Bhattacharya. 2010. Role of student-faculty interactions in developing college students' academic self-concept, motivation

A Comparison of Student

- and achievement. *Jour. of College Student Development* 51(3): 332-342.
- Kuh, G.D., J. Kinzie, J.A. Buckley, B.K. Bridges and J.C. Hayek. 2006. *What matters to student success: A review of the literature: Report for the National Symposium on Postsecondary Student Success*. National Postsecondary Education Cooperative.
- McLaughlin, M., D.J. McGrath, M.A. Burian-Fitzgerald, L. Lanahan, M. Scotchmer, C. Enyeart and L. Salganik. 2005. *Student content engagement as a construct for the measurement of effective classroom instruction and teacher knowledge*. Washington, DC: American Institutes for Research.
- Martin, J.L.S. 1994. *A comparison of instructor and student perceptions of immediacy over the course of a semester*. PhD Diss, Dept. of Communication, Univ. of Oklahoma, 660 Parrington Oval, Norman, OK.
- National Research Council. 2009. *Transforming agricultural education for a changing world*. Washington, DC: National Academies Press.
- Ormrod, J.E. 2008. *Human learning*. 5th ed. Upper Saddle River, NJ: Pearson Prentice Hall.
- Pascarella, E.T. and P.T. Terenzini. 2005. *How college affects students: Volume 2: A third decade of research*. San Francisco, CA: Jossey-Bass.
- Raviv, A. and E. Riesel. 1990. Teachers and students: Two different perspectives?! *Measuring social climate in the classroom*. *American Educational Research Jour.* 27(1): 141-157.
- Roberts, T.G., N.W. Conner, C.M. Estep, A. Giorgi and C.T. Stripling. 2012. *Examining the teaching behaviors of successful teachers in a college of agricultural and life sciences*. *NACTA Jour.* 56(2): 21-28.
- Svinicki, M.D. and W.J. McKeachie. 2011. *McKeachie's teaching tips: Strategies, research and theory for college and university teachers*. 13th ed. Belmont, CA: Wadsworth.
- Velez, J.J. 2008. *Instructor communication behaviors and classroom climate: Exploring relationships with student self-efficacy and task value motivation*. PhD Diss., Dept. of Agr. Communication, Education and Leadership, The Ohio State Univ., 2120 Fyffe Road, Columbus, OH.
- Velez, J.J. and J. Cano. 2008. *The relationship between teacher immediacy and student motivation*. *Jour. of Agr. Education* 49(3): 76-86.
- Velez, J.J. and J. Cano. 2011. *A descriptive analysis of the relationships between student autonomy, instructor verbal and nonverbal immediacy and classroom, instructor and student variables*. In: *Proc. Annu. Mtg. of American Association for Agr. Education*, Coeur d'Alene, ID, 24-27 May.
- Whittington, M. S. 1995. *Higher order thinking opportunities provided by professors in college of agriculture classrooms*. *Jour. of Agr. Education* 36(4): 32-38.
- Whittington, M.S. and L.H. Newcomb. 1993. *Aspired cognitive level of instruction, assessed cognitive level of instruction and attitude toward teaching at higher cognitive levels*. *Jour. of Agr. Education* 34(2): 55-62.
- Wilson, J.H. and L. Locker Jr. 2008. *Immediacy scale represents four factors: Nonverbal and verbal components predict student outcomes*. *Jour. of Classroom Interaction* 42(2): 4-10.

