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Developing Teachers' Classroom Interactions: A Description of a Video Review Process for Early Childhood Education Students

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Abstract:

This article describes a video review process for providing feedback to students and documents students' teaching practices using the CLASS in a practicum course and student teaching. Students videotaped themselves in their field-based settings and then met with the course instructors and classmates in small groups to review strengths and challenges of their teaching using the CLASS framework of teacher–child interactions. These videos were also coded by trained CLASS observers across 10 dimensions in the areas of emotional support, classroom organization, and instructional support. Results from preservice teachers' CLASS ratings indicate a pattern similar to national data sets using the CLASS, higher scores in the emotional support and classroom organization domains than in the domain of instructional support. Also, findings from the current study revealed that CLASS scores declined from students' practicum placement to the end of student teaching in the domain of emotional support and specifically in the dimensions of regard for student perspectives and behavior management. The process of using videos for providing feedback in field-based experiences is discussed as well as implications for teacher development in light of students' CLASS scores and changes in CLASS scores.

Keywords: Teacher education | Preservice teachers | Student teaching | Early childhood education | Instruction | Video review process | Observation

Article:

Preparing teachers is a complex process, particularly in teacher preparation programs that seek to prepare students to work with very young children. Early childhood teachers must be knowledgeable of child development, learning theory, content areas, and early childhood pedagogy. At the same time, they must understand how to apply what they have learned through

coursework in classroom settings in their interactions with children in the classroom. Teacher preparation programs face the challenge of introducing students to the content they need in courses to understand teaching and child development and then guiding them in the application of evidence-based practices in a variety of settings serving young children.

The connection between evidence-based practices taught in courses and discussed in seminars and the implementation of these practices in the classroom with young children is one of the greatest challenges in preparing teachers, but it is also one of the critical components of teacher preparation programs. During field-based experiences, students may feel they are expected to translate the theory and content knowledge to their practice on their own or with the help of a cooperating teacher who is not part of the university faculty (Borko & Mayfield, 1995;Clawson, 1999; Gilbert, 1999). Recent research suggests that preservice teachers benefit from opportunities to observe and reflect on their teaching in practicum settings with support from university instructors (Isenberg, 2000). However, identifying the best strategies for providing support and feedback to help students make connections between research and practice remains a challenge in the field. Students often leave a teacher preparation program equipped with content knowledge about what to teach and ideas about curriculum and activities, but are perhaps less skilled in actually providing opportunities for children to learn and how to foster positive interactions with children.

In this article we describe a feedback process using videos to discuss students' teaching practices in field-based experiences and provide support to students in applying what they learn through coursework to classroom practice using the framework of the Classroom Assessment Scoring System (CLASS; Pianta, La Paro, & Hamre, 2006). Ultimately, teacher preparation programs cannot prepare students for every situation they will face. However, by teaching students to observe their own practices, critique their areas of strengths and challenges, and receive feedback from university faculty using an evidence-based instrument related to their teaching behaviors in the classroom, the teacher preparation program assists students in developing important skills for becoming effective teachers.

Using Video for Observation and Supervision

Video has been used in teacher preparation for over 50 years, both as a teaching tool and as a supervising tool (Borg, 1972; Olivero, 1965; Wang & Hartley, 2003). More recently, a number of studies have examined using videos for reflective analysis and feedback related to teaching strategies for practicum students (Bayat, 2010;Rosean, Lundeberg, Cooper, Fritzen, & Terpstra, 2008; Sherin & Han, 2004). These studies have generally shown that students using videos often delve deeper into their teaching strategies, providing more detailed analyses of their teaching than students supervised using more traditional approaches (Rosean et al., 2008; Sherin & van Es, 2005).Bayat (2010) used both video and self-reflective journals to supervise 15 preservice teachers in early childhood education (ECE) and Sherin and Han (2004) used video clubs with in-service teachers to support reflection. Findings from these studies suggest that although

teachers/students struggled with reflection, the video assisted them in the support of reflection, served as a clarifying link between content knowledge and practice and students' perspectives, and helped students to self-identify areas and strategies for becoming more effective as teachers.

Video may provide a unique opportunity for students to observe and focus on interactions in the classroom. Video allows preservice teachers to observe the children in the classroom as well as their teaching strategies without having to react or take action as is required while they are in the classroom (Davis, 2006; Sherin & Hans, 2004;Sherin & van Es 2005). The separation from action can provide students the opportunity to clarify practices and link theory and content to application in the classroom resulting in an analytic reflection of practice (Bayat, 2010;Davis, 2006). Teaching is a complex enterprise consisting of a multitude of components and required elements, the use of video affords the opportunity to examine one or more specific areas and lessen that real-time complexity and decision-making, thus increasing opportunities for reflection and construction of connections and future directions.

Focusing Observation and Feedback on Specific Practices

Reflective supervision is a strategy frequently employed by teacher preparation programs to assist in the development of preservice teachers' learning and understanding of reflective thought and to develop reflective thinking as an inherent element of the teaching process (Dewey, 1933). In the 1980s and 1990s early childhood teacher educators advocated reflection as a necessary and effective part of the teacher education process, and there is a growing body of literature that supports reflection as a key element to improving teaching practices (Chak, 2006;Climent & Carrillo, 2001; Wesley & Buysse, 2001). Reflection affords individuals the opportunity to increase their awareness of their own practices, to think critically about their teaching practices, to rethink their assumptions, to identify gaps between what they do in the classroom and how they have been taught to teach, and to compare their practices with the practices of others they have observed.

What is relatively newer in the field is a closer examination of the reflection process and thought about how best to promote reflection and learning through observation (Wang & Hartley, 2003). Bayat (2010) highlights the distinctions between productive and unproductive reflection. Productive reflection is the goal for developing effective teachers as they use their thoughts and knowledge to make connections and identify new learning, a formative approach to learning. Unproductive reflection, on the other hand, is more the summative expression of what has happened with the analysis and construction of new knowledge absent (Davis 2006).The premise of productive reflection using classroom observations as a foundation is an important component of effective teaching, and serves as the basis for our efforts to promote students' abilities to both observe their teaching and reflect on their practices using a specific framework, incorporating their own observations as well as feedback from the course instructor.

The video feedback process used in the current study was centered on the idea that students' observations and change will be more powerful if they are asked to reflect on specific behaviors, if there is a systematic way to operationalize the behaviors of interest, and if the behaviors are meaningful in terms of the quality of teaching and the effects of teaching practices on children. Recent research suggests that there are specific teaching practices that are beneficial for children. Specifically, teacher–child interactions have recently been the focus of programs for in-service teachers. The Students, Teachers and Relationship Support (STARS) program provided teachers with one-on-one strategies to develop positive relationships with children in their classrooms (Hamre & Pianta, 2001).Denham and Burton (1996) provided an intervention program for early childhood teachers focused on developing relationships and emotional regulation with children considered at-risk. Recent results from the National Center for Early Development and Learning's Multi-state Study of Pre-kindergarten and the Statewide Early Education Programs study of over 700 kindergarten classrooms suggest that the quality of teachers' interactions with children is significantly related to children's academic and social development in prekindergarten and kindergarten (LoCasale-Crouch et al., 2007; Pianta et al., 2003).

In light of these findings we sought to provide students support and feedback during their classroom experiences by focusing their attention and helping them reflect on the specific types of behaviors and interactions that research on prekindergarten programs has indicated are important for child outcomes. We implemented a reflection process that uses a standardized measure of teacher–child interactions, the CLASS, which has been used in research to document teacher effectiveness. The CLASS operationally defines elements of teacher–child interactions (described in detail below) and provides descriptions of the types of teacher–child interactions that would be considered high quality, as well as descriptions of what would be considered low quality. We sought to combine features of a feedback process that research has described as important—personal, collaborative, and repeated reflections—with the use of a standardized evidence-based tool that operationalizes what high-quality teaching practices look like and can focus students' observations and reflection on teaching practices that seem to make a difference for children.

Specifically, we aim to (a) describe the process for using videotapes and the CLASS framework for providing feedback to students in field experiences; (b) to describe the level of emotional climate, classroom organization and instructional support for preservice teachers at different points in their education; and (c) to report students' change from an initial practicum placement to the end of their student teaching.

Method

Preservice teachers participating in the current study were enrolled in an interdisciplinary program designed to prepare students to work with children between the ages of birth and 5 years. A total of approximately 180 students are enrolled in the program. The current study focuses on the video feedback process for students enrolled in a practicum course, which is a

corequisite with a methods course. This course was taught by a tenure-track professor. CLASS ratings were made from students' videos and a summary of these data as well as a comparison of ratings to similar video data from student teaching are presented as well.

In the practicum course, students spend approximately 3 hours per week in an inclusive early childhood classroom over the course of the semester. The classroom placements include community child care centers, Head Start programs, and the University's child care/laboratory program. Programs are required to have a 4 or 5 star rating (the highest ratings) from the state's Star Rated License program to be considered as a field placement site. During the course of the semester, practicum students progress from observing children and teachers within the classroom and participating in classroom activities to planning and leading classroom activities. Students in the methods course who are enrolled in the Birth through Kindergarten Teacher Licensure Program also complete a 1-hour professional development seminar course that is a corequisite with the methods course. We used this seminar corequisite to implement the video-feedback process.

Each semester 15 to 18 students enroll in the seminar. These students are required to video themselves interacting with children in their classroom placements for approximately 45 minutes, three times over the semester as part of the course requirements and as one component of practicum supervision. All students are also are required, as part of the seminar, to participate in small-group meetings to discuss videos and receive feedback. All students enrolled in this course were asked to participate in the research study; those students who signed the consent form agreed to have their videos coded by trained observers using the CLASS.

Sample

A total of 91 students participated in the study in either the professional development seminar, student teaching, or both courses over 4 years. Sixty-eight students had complete data for the professional development seminar. Of the participating students, 68% were Caucasian, 27% African American/Black, 2% Hispanic, and 3% other ethnicities. Seventy-five percent of these students reported having experience working with children in a formal setting and 25% previously completed an associate degree in child development, early childhood education, or a related field.

Forty-six student teachers participated in the study. These were students who were in their last semester of the program and were completing student teaching for 40 hours per week in an early childhood classroom. Sixty-four percent of these students were Caucasian, 29% African American/Black, 7% other ethnicities. Sixty-nine percent of student teachers reported previous experience working with young children in a formal setting and 15% had previously completed an associate degree. Twenty-three student teachers from this sample had complete data from student teaching as well as the professional development seminar.

CLASS Measure

The Classroom Assessment Scoring System (CLASS; Pianta et al., 2006) was used as the framework for the feedback process as well as to code students' videotapes formally. The CLASS has three major domains, emotional support, classroom management, and instructional support. Within each domain there are at least three related dimensions that are rated on a 1 to 7 Likert-type scale. Emotional support is comprised of positive climate, negative climate, teacher sensitivity, and regard for student perspectives. Classroom organization includes behavior management, instructional learning formats, and productivity. Instructional support is made up of concept development, quality of feedback, and language modeling. (See La Paro, Pianta, & Stuhlman, 2004, for complete description of the CLASS). Three CLASS trained observers coded the students' videotapes. Twenty-percent of the tapes were double coded. Interrater reliability was 92% across the double-coded tapes. Coding of tapes was counterbalanced, so that a coder did not code both tapes from any one student.

Videotape Process for Practicum Students

A primary focus of the methods course corequisite professional development seminar is review and feedback of videos of students' interactions with children. As mentioned above, students videotape themselves in their practicum placement and review their video both individually and within their group. Each student is videotaped for approximately 45 minutes in the practicum placement three times during the semester. The first video is completed 2 weeks after the student has begun in their placement, the second is around the midpoint of the semester, and the final video is completed during the last 2 weeks of the practicum placement. Students view each of their videotapes using the CLASS dimensions, then meet in small groups to discuss their ratings and review their videotape. Students' first videotapes and final videotapes were additionally coded using the CLASS by trained observers and used for analyses in the current study.

Student teachers also are videotaped three times throughout the semester, at the beginning, the midpoint, and the end of student teaching. The course instructor also conducts live observations in the students' classrooms for supervision purposes. During student teaching, the course instructor views all the videotapes, but only meets with students to review their second and third videotapes. Student teachers' initial video, recorded early in the student teaching semester, and their final video, recorded in the last few weeks of the semester, were coded using the CLASS by trained observers and used for analyses in the current study.

Videotape Self-Reflection Process

The video self-reflection process was designed to provide students an opportunity to review their video with the guidance from the course instructor. The CLASS was used to provide a framework for students to observe their classroom practices. As part of the professional development seminar, students spent 2 to 3 hours learning about teacher–child interactions as defined by the CLASS, understanding the definitions provided in the manual, and viewing videos highlighting behaviors specific to teacher–child interactions. Practicum students

individually reviewed each of their videos using the CLASS dimensions in preparation for the group meeting and rated themselves on each dimension with the CLASS scale. These ratings served as a framework for students to examine their teaching and interactions, a mechanism to ensure that students reviewed their videos, and a foundation for discussion in the group meetings. However, because students were not formally trained as CLASS observers, their self-ratings were not included as data in the current study.

Group Meetings and Feedback

Small-group meetings were held for practicum students to discuss their video and provide feedback among students and from the course instructor. These meetings were considered assignments to account for the student time, attendance was mandatory, and the meetings were considered as part of the practicum supervision process. To facilitate group critiques of students' interactions and teaching, students formed small working groups the first night of class. Students developed a mission statement and goals for their group. Groups were maintained for the entire semester and several in-class and online activities were completed within these groups. These group activities were designed to help group members become comfortable working together and to build a sense of trust over the course of the semester.

Each group met with the seminar instructor for approximately 90 minutes after the completion of the first video and a second time, toward the end of the semester after the completion of the final video. Prior to the meeting each student reviewed their tape and completed the CLASS rating scale. For each group meeting, students selected a 10-minute segment from their videotape to share with the group. During the meeting, students provided the group with general information about their setting, the ages of children, and then set the context for the segment. The instructor used the following prompts to solicit comments and feedback from the group: “What did you see yourself doing well in this segment?” “What was challenging about your interactions during this segment?” “What are your goals for your time in this practicum setting this semester?” For the group meeting at the end of the semester, in addition to the questions above, students were asked about what they learned over the semester and what they still felt they needed to learn. Often, the instructor also asked questions about the importance of interactions for children and asked the students to take the perspective of the child after viewing their video segment. The instructor added comments and feedback as appropriate. To assist in the stimulation of discussion and having students prepared for the group meetings, points for the group meeting were assigned according to students being prepared with their segment and group members initiating comments and feedback to other group members.

Results

Students' videos were analyzed for overall CLASS scores and change in CLASS scores in two ways: (a) change across one semester, in their practicum semester or student teaching semester; and (b) change in scores across the program, from the beginning of their practicum placement to

the end of their student teaching. Table 1 provides the means, standard deviations, and ranges for the students' videos at the beginning and end of their first practicum experience. Initial examination of data from the students' practicum videos indicate a similar pattern to data collected from in-service teachers in a national study of state-funded pre-K programs as well as student teachers in our program (LoCasale-Crouch et al., 2007; Pianta et al., 2003). Practicum students at Time 1 ($N = 68$) generally provide moderately high levels of emotional support ($M = 5.60$, $SD = .61$) and classroom organization ($M = 4.99$, $SD = .73$) and lower levels of instructional support ($M = 2.63$, $SD = 1.07$). More specifically in each dimension, students are rated in the high moderate range in the areas of positive climate ($M = 5.09$, $SD = 1.06$), behavior management ($M = 5.26$, $SD = 1.03$), productivity ($M = 5.50$, $SD = .82$), regard for student perspective ($M = 5.32$, $SD = .89$), and sensitivity ($M = 5.07$, $SD = 1.01$) and lowest in concept development ($M = 2.28$, $SD = 1.22$), quality of feedback ($M = 2.50$, $SD = 1.18$), and language modeling ($M = 3.15$, $SD = 1.31$). Students were rated low in negative climate ($M = 1.07$, $SD = .26$), indicating minimal expressed negativity. Over the practicum semester, significant change in students' mean scores was observed in two of the CLASS dimensions. Productivity significantly decreased ($t = 2.65$, $p < .01$), so that the mean at the beginning of the semester was 5.50 and at the end of the semester was 5.10. Ratings of Quality of Feedback increased across the semester ($t = -2.833$, $p < .001$); the mean rating was 2.50 at the beginning of the semester and 3.09 at the end of the semester.

Table 1 CLASS Scores (Means, Standard Deviations, and Ranges) at the Beginning and End of the Practicum Experience ($N = 68$)

	Time 1 **mean *(SD)* [range]**	**Time 2** **mean *(SD)* [range]**	***t***	***p***
Positive climate	5.09 (1.06) [3–7]	5.35 (1.16) [2–7]	−1.463	.148
Negative climate	1.07 (.26) [1–2]	1.09 (.38) [1–3]	−.256	.798
Teacher sensitivity	5.07 (1.01) [3–7]	4.90 (.93) [3–6]	1.097	.277
Regard for student perspectives	5.32 (.89) [3–7]	5.09 (1.00) [3–7]	1.486	.142
Behavior management	5.26 (1.03) [3–7]	5.16 (1.14) [1–7]	.539	.592
Productivity	5.50 (.82) [3–7]	5.10 (1.02) [3–7]	2.65	.010**
Instructional learning formats	4.19 (1.1) [1–7]	4.16 (1.24) [1–6]	.152	.879
Concept development	2.28 (1.22) [1–6]	2.68 (1.30) [1–6]	−1.884	.064

Quality of feedback	2.50 (1.18) [1–5]	3.09 (1.35) [1–6]	−2.833	.006**
Language modeling	3.15 (1.31) [1–6]	3.10 (1.25) [1–6]	.228	.820
Emotional support	5.60 (.61) [4.00–6.75]	5.56 (.67) [4.00–6.50]	.383	.703
Classroom organization	4.99 (.73) [3.00–6.33]	4.81 (.80) [3.00–6.33]	1.414	.162
Instructional support	2.63 (1.07) [1.00–5.67]	2.96 (1.16) [1.00–5.33]	−1.763	.082

**$p < .001$.

Similar patterns in initial scores for students were observed at the beginning of the student teaching semester, as displayed in Table 2. Student teachers at Time 1 ($N = 46$) provided moderately high levels of emotional support (*M = 5.24, SD = .90*) and classroom organization (*M = 5.06, SD = .82*) and moderately low levels of instructional support (*M = 2.70, SD = 1.15*). More specifically, students were rated moderately high for behavior management (*M = 5.48, SD = 1.24*), productivity (*M = 5.57, SD = 1.00*), and as having minimal negative climate ($M = 1.20$, $SD = .40$). Students were rated in the middle range for positive climate (*M = 4.87, SD = 1.2*), teacher sensitivity (*M = 4.80, SD = 1.17*), regard for student perspective (M = 4.46, $SD = 1.71$), and instructional learning format (*M = 4.13, SD = 1.29*). Students were rated lowest in concept development (*M = 2.15, SD = 1.12*), quality of feedback (*M = 3.11, SD = 1.64*), and language modeling (*M = 2.83, SD = 1.24*), all dimensions related to instructional support. Significant change over the student teaching experience was observed in two dimensions. Behavior management scores decreased significantly from 5.48 to 4.91 ($t = 2.818$, $p < .01$), and concept development scores increased significantly from 2.15 to 2.89 ($t = -2.668$, $p < .05$).

Table 2 CLASS Scores (Means, Standard Deviations, and Ranges) at the Beginning and End of the Student Teaching ($N = 68$)

	Time 1 **mean *(SD)* [range]**	**Time 2** **mean *(SD)* [range]**	***t***	***p***
Positive climate	4.87 (1.2) [2–7]	4.83 (1.2) [2–7]	.230	.819
Negative climate	1.20 (.40) [1–2]	1.22 (.467) [1–3]	−.256	.799
Teacher sensitivity	4.80 (1.17) [2–7]	4.78 (1.25) [2–7]	.110	.913
Regard for student perspectives	4.46 (1.71) [1–7]	4.20 (1.68) [1–7]	1.046	.301
Behavior management	5.48 (1.24) [2–7]	4.91 (1.38) [2–7]	2.818	.007**

Productivity	5.57 (1.00) [3–7]	5.33 (1.07) [2–7]	1.229	.225
Instructional learning formats	4.13 (1.29) [1–7]	4.48 (1.30) [2–7]	−1.454	.153
Concept development	2.15 (1.12) [1–5]	2.89 (1.37) [1–6]	−2.668	.011*
Quality of feedback	3.11 (1.64) [1–6]	2.96 (1.19) [1–5]	.747	.459
Language modeling	2.83 (1.24) [1–5]	2.89 (1.08) [1–6]	−.308	.759
Emotional support	5.24 (.90) [3.25–6.50]	5.15 (.89) [3.00–6.75]	.616	.541
Classroom organization	5.06 (.82) [2.67–6.33]	4.91 (.88) [2.67–6.33]	1.055	.297
Instructional support	2.70 (1.15) [1.00–5.33]	2.91 (.96) [1.00–5.67]	−1.151	.256

*$p < .05$. **$p < .01$.

A final set of paired-sample *t*-tests were used to analyze change in students' CLASS scores from practicum placements to student teaching; students who had CLASS scores for both their initial practicum video and final student teaching video were included in this sample ($N = 23$). Overall, patterns of ratings matched those of individual semesters and are presented in Table 3. These analyses also revealed significant decreases in ratings on individual dimensions. Regard for student perspective decreased from 5.35 ($SD = .71$) to 4.26 ($SD = 1.58$) ($t = 3.536$, $p < .01$). Behavior management also decreased from 5.48 ($SD = .95$) to 4.78 ($SD = 1.57$) ($t = 2.390$, $p < .05$). Negative climate increased from an average score of 1.09 ($SD = .29$) to 1.39 ($SD = .58$) ($t = -2.612$, $p < .05$) (higher ratings indicate higher levels of negativity). Change in the emotional support domain was significant as well, with scores decreasing from 5.61 ($SD = .59$) to 5.05 (S $SD = .85$) ($t = 3.094$, $p < .01$).

Table 3 Change in CLASS Scores From Practicum's Student Video 1 to Student Teaching Final Video ($N = 23$)

	Time 1 mean *(SD)* [range]	**Time 2 mean *(SD)* [range]**	***t***	***p***
Positive climate	5.04 (1.02) [4–6]	4.65 (1.07) [3–6]	1.521	.142
Negative climate	1.09 (.29) [1–2]	1.39 (.58) [1–3]	−2.612	.016**
Teacher sensitivity	5.13 (1.06) [3–7]	4.70 (1.26) [2–7]	1.417	.171
Regard for student perspectives	5.35 (.71) [2–7]	4.26 (1.58) [2–7]	3.536	.002**

Behavior management	5.48 (.95) [3–7]	4.78 (1.57) [2–7]	2.390	.026*
Productivity	5.61 (.78) [3–7]	5.30 (1.11) [2–7]	.924	.365
Instructional learning formats	4.43 (1.16) [3–7]	4.48 (.95) [3–6]	−.130	.898
Concept development	2.52 (1.16) [1–5]	2.91 (1.41) [1–6]	−.920	.367
Quality of feedback	2.57 (1.04) [1–6]	2.96 (1.15) [1–5]	−1.227	.233
Language modeling	3.26 (1.21) [2–5]	2.96 (1.22) [1–6]	.837	.41
Emotional support	5.61 (.59) [4.25–6.5]	5.05 (.85) [3.25–6.5]	3.094	.005**
Classroom organization	5.17 (.73) [3.67–6.33]	4.86 (.95) [2.67–6.33]	1.342	.193
Instructional support	2.78 (.951) [1.33–5.33]	2.94 (1.12) 1.00–5.67]	−.496	.625

* $p < .05$. ** $p < .01$.

Further analyses of the change scores were conducted using characteristics of the students to determine if certain characteristics may be related to student scores. The characteristics included education (holding an associate degree in child development or a related field) and previous experience working with young children in a formal setting. In general, there was very little difference in change scores between students who had previously earned an associate degree in child development or a related field and those who had not. Students who did not have an associate degree showed a lesser decrease in Productivity ($F = 4.634, p < .05$) over the two semesters and there was a trend indicating that student teachers without an associate degree showed greater increase in Language Modeling over time ($F = 2.945, p < .10$); however, no other differences were identified. No significant differences were observed between students who had previous work experience with young children and those who did not.

Discussion

Faculty in this teacher preparation program used the video review process to assist in the development of their students' self-observation of their teaching in order to support development of their abilities to engage in effective teacher–child interactions and classroom practices. This learning process combines two essential elements of preparing teachers, observation and reflection, and a focus on teacher–child interactions, which research has indicated are important for children's growth and development (Chak, 2006; Griffiths, 2000; Pianta et al., 2003). Recent research has demonstrated that effective teacher–child interactions in early childhood have the potential to ultimately contribute to positive academic and social outcomes for children through third grade (Howes et al., 2008;Mashburn et al. 2008; Pianta et al., 2003). The video review process described in this article has implications for our own teacher education program and for

teacher education programs in general. We begin with a brief discussion of the data and its limitations followed by a discussion of what we learned from implementing this process and implications that this process has for teacher education programs. Finally, we turn to implications CLASS data may have, related to this process, for teacher education programs in general and to areas for future research.

CLASS Data From Practicum Students and Student Teachers

Our data indicate that students in our teacher preparation program generally parallel the profile of teacher practices that have been documented in previous studies of in-service teachers. In our program, student teachers generally were rated highest in aspects of emotional support and classroom organization, but lower in instructional support. It is of interest to note that analysis of both the practicum experience and student teaching seem to indicate that preservice teachers have difficulty focusing on all aspects of their teaching practice at once (i.e., high CLASS scores across all three domains). During the practicum semester, preservice teacher scores improve in quality of feedback, the responses that they provide to young children to further their learning and understanding, but decrease in productivity, providing activities for children to minimize waiting and wandering. During student teaching, student scores increase in concept development, promoting children's higher order thinking, but decrease in behavior management, preventing and redirecting children's behavior to minimize disruptions to activities and the loss of instruction time.

This pattern of development displayed by students may have implications for the timing of skill development in teacher preparation programs, as it appears students may shift their focus from one area of practice to another and have difficulty maintaining high-quality practice in all areas. More specifically, it appears that the students may be able to implement strategies related to expanding their feedback to children, but as they spend more time in the classroom and take on more responsibility in the classroom they struggle with having materials ready and keeping children engaged in activities. Similarly, as student teachers take on the role of lead teacher, they may struggle with managing classroom behavior as they are balancing their roles and responsibilities for activities. Nonetheless, they can use information from methods courses and implement open-ended questions, move away from rote activities, and support children's development of higher order thinking. However, scoring high across all areas at once is a skill still to be addressed and in fact, data indicate that even experienced teachers often struggle with achieving high scores across all CLASS dimensions (La Paro et al., 2004; LoCasale-Crouch et al., 2007).

Interactions and relationships with children have repeatedly been shown to be related to positive outcomes for children (LoCasale-Crouch et al., 2007; Pianta et al., 2003); however, the degree to which teachers are providing high levels of both emotional *and* instructional support has been the focus of several studies of in-service teachers. In a study representing approximately 80% of available pre-K programs nationwide, the majority of classrooms could be described as

providing low levels of instructional support and only 15% of the classrooms represented high levels of both instructional and emotional support (LoCasale-Crouch et al., 2007). Consistently across studies of effective classrooms, teachers are providing moderate levels of emotional support for young children, but less instructional support focused on developing analysis and reasoning skills, providing individualized feedback, or providing a rich language environment (La Paro et al., 2004; LoCasale-Crouch et al., 2007; Pianta et al., 2003). This trend appears to be similar in preservice teachers.

Limitations

Although this study presents important information about a process of providing feedback to students in field experiences and longitudinal data from students in practicum placements as well as student teaching, there are several limitations to be acknowledged. First, the sample may not be representative of teacher preparation programs nationally. These data are from one program and data were not available for all students enrolled in the program. Both the longitudinal data collection process as well as the use of videotapes resulted in a reduction in available data. Additionally, CLASS scores were calculated from one observation cycle for each student videotape. The recommended protocol for the CLASS is to code a classroom using a minimum of four observation cycles. However, in spite of these limitations, the data provide some interesting implications for teacher education programs as described above.

What We Have Learned About the Reflective Process

Our experience implementing this video review process with students has yielded a variety of observations about the teacher development process and about our program. With regard to the video review process, the students repeatedly report that videotaping themselves and discussing their interactions and teaching in groups are very useful and helpful activities. Course evaluations consistently showed that this activity was among the best learning opportunities for students enrolled in the professional development seminar. Students generally had some initial reservations about videotaping, but reported that they become accustomed to the camera and by the second videotape often forgot that they were being taped. Initially students seemed somewhat wary of the group meetings, perhaps believing that the intent is to evaluate or criticize their teaching rather than a dynamic process of providing support and feedback as they are intended.

The use of video provides a context for discussion that memory or supervisor report does not provide (Davis, 2006;Sherin & van Es 2005). The group meetings and reflection components of the feedback process appear to benefit students in several ways. Group meetings are conducted in smaller groups that allow for more interactions and often spark discussion among students about their thoughts and beliefs about teaching, their goals for teaching, and their understanding of children's perspectives in the classroom. Often students with more experience took on the role of informal mentors for students with less experience and shared their approaches or strategies. Students also appear very interested in seeing other students who are in the same settings and

experiencing the same challenges and/or successes with children or activities in that setting. Students also enjoy seeing other classrooms than their own and being able to observe different teachers, children, and activities in another placement.

Having the students complete the rating scales prior to the group meeting helps to ensure that students have reviewed their video and begun to think about their teaching in terms of the dimensions or scales being used. Overall, students tend to rate themselves high across the dimensions. Often, until they participate in discussion that focuses on observations and specific behaviors, they see themselves as “doing what they are supposed” to be doing in the classroom. After the discussion, they become more aware of the specific behaviors that contribute to a particular dimension and how they can practice the strategy in the classroom.

Often, students appear to have the most difficulty viewing their teaching practices from the perspective of the child. They know what they are supposed to do, as a teacher, they have learned and are able to implement the teaching methods. However, they do not know why they are doing something or why it is important for the child. When posed with the question, “What do you think the child learned from this interaction?” the students often would remark, “I never thought about that”; or “Oh, now I see what you mean, I hadn't noticed the child's response.” Similarly Sherin and Han (2004) used video clubs for teachers to increase teachers' perspective of students, rather than only their teaching toward the students. These challenges for teachers stress the importance of the seminar format to discuss teaching strategies and the “why” behind what they are doing in the classroom.

There are challenges inherent in the implementation of video review process with students. The mere logistics of having students videotape in classrooms can be difficult. Students can experience difficulty in finding someone who is available to help them record at the time they are assigned to their practicum. Introducing the video camera can be distracting to the children in the classroom as well as other adults. However, the majority of these challenges can be overcome. We have modified the process based on student feedback and instructor experiences. Assigning points for the completion of the videotape has helped students strive to complete these assignments with the quality of audio and video that can be used for the reflective discussions and research. Specifying the video format based on the departmental equipment that is available for viewing the tapes has also helped the process. We have also held group meetings during class times to accommodate student schedules when necessary. Overall, the video review process seems to be beneficial to the students and, with some adjustments, has proven to be a realistic way to give students individualized feedback and support and to assist them in the development of their observation, reflection, and teaching skills. What seems to be most important when incorporating a review and reflection process into a teacher education program is that the process is structured so that students understand clearly on what to reflect and how to do so, reflections are based on situations that are personally meaningful, and there are multiple opportunities for the reflections to guide practice over time (Hoban & Hastings, 2006).

Implications for Teacher Education

Beginning teachers can almost be guaranteed the provision of a curriculum and an assessment plan through the administration of their school, but they are not always provided the mentoring and support related to interactions with children that are necessary to develop positive relationships with children in their classrooms. Given this common scenario, Hamre and Pianta (2007) discuss the differences between "opportunities to teach" versus "opportunities to learn" for teachers in early childhood classrooms. The opportunities for the teacher to teach revolve around the materials and curriculum provided in the classroom. However, the materials themselves do not provide opportunities for the students to learn. Opportunities to learn come from the interactions that children have with the adults in the environment (Hamre & Pianta, 2007). Focusing on these opportunities can be an oversight in teacher education programs, as courses address standards and curriculum not necessarily built on a foundation of teacher–child interactions.

Korthagen, Loughran, and Russell (2006) suggest several principles to guide responsive teacher education programs in their efforts to prepare students effectively for teaching careers in providing children opportunities to learn. The authors suggest that no teacher education program can fully prepare students for their entire careers so it is important for teacher preparation programs to teach students how to learn from experience and how to build their professional knowledge. Teacher education programs can more effectively prepare students for their careers if they teach students how to examine their own practices and build their own theories and knowledge (rather than just applying the knowledge imparted by their professors). This kind of reflective review process places the knowledge teachers are gaining within the context of their actual teaching situations and sets the stage for students to understand the importance of continually learning and growing throughout their careers (Fund, 2010). For student teachers specifically, the authors suggest that,

… the learning … is only meaningful and powerful when it is *embedded in the experience* of learning to teach. As teacher educators we need to be actively creating situations where this can occur and for it to be a natural part of teacher preparation. (p. 1030, italics in original)

Within this view of the teacher preparation process, teaching students to analyze situations and make meaning of their experiences is critical to preparing them for successful careers. Although teacher education programs may use reflective journaling, critical discussion groups, and goal setting for learning, students may not actually know how to or have been taught how to reflect, critically discuss, or set goals for themselves. These components of teaching should be explicitly taught to teacher education students to help support their learning and growth as a teacher.

The group component of this work should not be lost either. Hoban and Hastings (2006) highlight the personal *and* collaborative nature of reflection and Korthegan and colleagues (2006) stress that it is essential for students to learn to work closely with peers/colleagues as they

learn how to teach. For new teachers, learning how to think about pedagogy and practice in a collaborative setting is equally important (or perhaps more important) as learning the theory and techniques that often are the focus of teacher preparation programs. Teaching can certainly be an isolating experience with little time allowed for collaboration and discussion. It seems critical that the learning process build on discussion of others' knowledge and experience and allow students to share their experiences, see the similarities and differences in their experiences and ultimately learn and grow from these interactions.

The video feedback process used in our teacher education program teaches students to observe and receive feedback about their classroom practices actively. Students examine the videotapes of themselves in a nonthreatening peer group with support from an instructor. The use of validated scales as a basis for self-evaluation helps students focus on specific behavioral objectives that have been directly linked through research to teacher effectiveness and to child outcomes. More importantly, the process is designed to help students develop their skills in observing and reflecting upon their own practice, and to become comfortable with the feedback process. Ideally these are skills and dispositions that they will carry with them into their teaching careers.

A final important element for the video feedback process is the opportunity for faculty within teacher education programs themselves to use data from students' reflections to examine the impact of students' preservice courses and field experiences. If we are going to ask students to reflect on their own practices in order to improve their teaching, then as teacher educators we should model the self-reflection process and use a variety of sources of information to improve our own teaching further. Student self-reflections can provide an important source of data to indicate areas where the teacher education program can be improved. In our own case, data from coding the videotapes of students in practicum placements has indicated that students need additional help in facilitating children's higher order thinking and the use of more advanced language with children. We are using these data as we plan course revisions and changes in our program of study. Incorporating some process to collect data from students' self-reflections—be it survey responses, rubrics to score students' journals, or coding observations of students—can be a valuable source of information that teacher educators can use to improve the experiences they provide for students.

Future research is also needed to provide a deeper understanding of the types of reflection students' exhibit. Videotaping students is one approach that allows access to students' reflection on their interactions and teaching practices, however, the complexity of teaching warrants examination of the multiple aspects of teaching. Future research might examine whether particular forms of reflection—action research projects, videotapes, journals, interviews, discussions—are more likely to facilitate students' reflections at different points in their preservice career or in different teaching situations.

Observation and guided discussion provide students the opportunity to think about the how and why of what they do in the classroom. The video review process that we are using in our program allows students to examine and change their practices and has provided programmatic information about areas of focus for revision and improvement of our program to develop effective teachers for young children.

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