Assessing pre-service teacher instructional competency: are observations enough?

Avaliando a competência instrucional do pré-serviço de professor: são as observações suficientes?

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Abstract: Teacher quality can positively impact student achievement (Goe, 2007). The responsibility for producing quality teachers, those that contribute to positive student outcomes, generally falls to teacher preparation programs. Teacher preparation programs seek to affect teacher quality through providing coursework in validated instructional methods designed to maximize student achievement and through fieldwork experiences. Pre-service teacher instructional ability is typically shaped throughout a teacher preparation program and refined in a capstone field experience called student teaching (NCTQ, 2011). Student teaching provides pre-service teachers with the opportunity to apply their content and pedagogical knowledge and skills in a real world setting. Pre-service teachers are often subjected to observations throughout their student teaching experience from a variety of sources including classroom teachers and teacher preparation program supervisors. In order for pre-service teachers to obtain maximum benefit from student teaching they need to be given quality feedback on their instructional performance garnered from these classroom observations. However, this feedback is often dependent on the type of observation measurement tool used. If the observation tool provides too little or inaccurate information, the feedback to the student teacher may be ineffective (Hill, Charalambous, Kraft, 2012). The purpose of this study was to assess currently used observation tools

Resumo: A qualidade do professor pode impactar positivamente o desempenho do aluno (Goe, 2007). A responsabilidade pela produção de professores de qualidade, aqueles que contribuem para os resultados positivos do aluno, geralmente recai sobre programas de preparação do professor. Programas de preparação do professor procuram afetar a qualidade do professor através de cursos em métodos validados instrucionais, projetados para maximizar o desempenho do aluno e através de experiências de trabalho de campo. Ensinar como aluno fornece professores de pré-serviço com a oportunidade de aplicar seus conteúdos e conhecimentos pedagógicos e habilidades em um cenário de mundo real. Professores de pré-serviço são freqüentemente submetidos a observações ao longo de sua experiência de ensino de estudante de uma variedade de fontes, incluindo professores de sala de aula e supervisores de programa de preparação de professores. A fim de professores de pré-serviço obterem o máximo benefício de professor estudante, eles precisam de *feedback* de qualidade no seu desempenho instrucional, obtido a partir destas observações de sala de aula. No entanto, esse *feedback* é muitas vezes dependente do tipo de ferramenta de medição de observação utilizado. Se a ferramenta de observação fornece muito pouco ou informações imprecisas, o *feedback* para o profes-

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in one teacher preparation program against these aspects, and second, to identify needed improvements in observational procedures.

Keywords: teacher preparation; observation tools; student teachers

sor estudante pode ser ineficaz (Hill, Charalambous, Kraft, 2012). O objetivo deste estudo foi avaliar ferramentas de observação usadas atualmente em um programa de preparação de professor contra estes aspectos, e em segundo lugar, identificar necessárias melhorias nos procedimentos observacionais.

Palavras-chave: preparação do professor; ferramentas de observação; professores-alunos.

The primary responsibility of any teacher is to positively impact their students' learning, understanding, and knowledge through the use of effective instructional techniques. Typically a teacher's capacity to affect these student attributes has been discussed in terms of teacher quality. There are some studies that link teacher quality to student achievement (Goe, 2007, Gujarati, 2012); however, there is still debate over what constitutes a quality teacher (Swain, 2013). In the United States, in order to be considered a highly qualified, teachers must have a bachelor's degree, be licensed or certified by the state in which they teach, and show content knowledge in the subject area in which they teach. Even with these delineated expectations, the understanding of teacher quality is tenuous. Studies designed to link teacher qualities with student achievement tend to be inconsistent in their findings (Wayne & Youngs, 2003). One U.S. indicator of teacher quality, teacher certification, has even been shown to have a negative effect on student achievement (Phillips, 2010). It is therefore important for educational stakeholders to determine what factors, in addition to the above listed teacher qualities, are linked to student achievement.

Teacher pedagogical knowledge and subject matter knowledge have been linked to student achievement. In a synthesis of the literature Rice (2003) found that subject specific coursework was a better predictor of student outcomes than degrees earned. Darling Hammond and Youngs (2002) had similar finding in their review of research, concluding that subject matter knowledge was positively related to student outcomes. Teacher pedagogical knowledge has been shown to have some effects on student achievement, however there are inconsistent findings (Wilson & Foden, 2003). Wilson and Foden postulate that this may be due to differences within and across teacher preparation programs.

Teacher instructional practices have been shown to have a substantial impact on student achievement. Frome, Lasater, and Cooney (2005) found that math teachers who fostered student motivation and engaged in instructional practices, such as solving problems outside the text and including written reports, positively influenced student achievement. This was also true for English/language teachers who required writing assignments and gave examples for students to follow. In a study of a teacher evaluation system in one charter school, Gallagher (2004) found that coherent instructional practices and skills-based goals led to greater student achievement. Student achievement has also been linked to teachers who provide students feedback, maintain high expectations for their students, conduct frequent assessments, deliver coherent clear lessons aligned with learning goals and student test performance, and provide students opportunities to use higher order thinking skills (Kannapal & Clemments, 2005; Kimball, White, Milanowski, & Borman ,2004 Newmann, Bryk, & Nagaoka, 2001; Schacter & Thum , 2004; Wenglinsky. 2000).

Recently there has been increased interest in synthesizing areas linked with improved student ou-

tcomes, and identifying these practices in in-service teachers (practicing teachers). The Bill and Melinda Gates foundations' Measures of Effective Teaching (MET) project has conducted research on observing identified effective instructional practices used by in-service teachers. In this project researchers used a variety of observation tools and found that among those identified as having a positive association with student achievement was the Danielson Framework for Teaching (Bill and Melinda Gates Foundation, 2012). The Framework for Teaching (FFT) contains 4 domains; planning and preparation, classroom environment, instruction, and professional responsibilities (Danielson Group, 2013). In these domains Danielson identifies elements essential to effective instructional practice. The Danielson group states that use of effective instructional practices leads to better teaching.

Teachers usually gain knowledge of the use of effective instructional practices, including content and pedagogical knowledge, through their teacher preparation programs. It stands to reason that in order to give pre-service teachers (students receiving teacher education training) not only an understanding of effective instructional practices but the ability to use these skills and techniques in practice, teacher training must include quality field experiences. These experiences will therefore impact teacher quality (Darling-Hammond, Berry, & Thoreson, 2001).

The responsibility of preparing quality teachers largely falls to teacher preparation programs. Teacher preparation programs seek to affect teacher quality through providing coursework in validated instructional methods designed to maximize student achievement and through fieldwork experiences. Pre-service teacher instructional ability is typically shaped throughout a teacher preparation program and refined in a capstone field experience called "student teaching" (NCTQ, 2011).

Teacher coursework varies from program to program. For example a program in elementary education usually contains courses in teaching subject areas such as reading, mathematics, social studies, and science. Along with this they may include courses on instructional planning and educational psychology. Programs in secondary education typically include a strong emphasis on content, for example a program for teaching foreign language at a secondary level typically includes taking courses in language and culture, plus courses in foreign language acquisition and teaching for proficiency. Once students reach a pre-established proficiency level in the language such as advanced low in the ACTLF (American Council on the Teaching of Foreign Language) scale, they are allowed to take a course in methods of teaching a foreign language. At this point they can start their student teaching. Finally specialty programs such as special education or teaching second language learners may include additional courses related to specialization areas such as educational planning and assessment procedures.

Most programs include field work throughout the course sequences. These field experiences usually culminate in a final field experience called "student teaching." Student teaching provides pre-service teachers with the opportunity to apply their content and pedagogical knowledge and skills in a real world setting. Pre-service teachers are often subjected to observations throughout their student teaching experience from a variety of sources including classroom teachers and teacher preparation program supervisors. For example students who will become language teachers receive observations from a Department of Foreign Languages professor. Ideally, this professor will visit the student 3 times. This is in addition to the teacher preparation supervisor visits. In order for pre-service teachers to obtain maximum benefit from student teaching they need to be given quality feedback on their instructional performance garnered from these classroom observations. However, this feedback is often dependent on the type of observation

measurement tool used. Observation tools should highlight student teacher instructional practices in the areas identified as related to student achievement. If the observation tool provides too little or inaccurate information in these areas, the feedback to the student teacher may be ineffective (Hill, Charalambous, Kraft, 2012).

Purpose

The purpose of this study was to assess currently used observation tools in one teacher preparation program and identify needed improvements in observational procedures. To do this a survey was developed based on the domains listed in the Framework for Teaching Evaluation Instrument (Danielson, 2011), planning and preparation, classroom environment, instruction, and professionalism. (See Appendix A).

The survey included 37 questions answered on a Likert type scale of 1-4, one equaling none or not helpful, two equaling very little or not enough help to improve my instruction, three equaling some or gave me some help but I could have used more, or four equaling sufficient amount or the feedback given helped me improve my instruction. One questions asked about the utility of the observation protocol and one question was open ended asking pre-service teachers for recommendation on feedback. The survey included 18 questions on written feedback and 18 questions of verbal feedback.

Surveys were given to 110 student teachers at the end of their student teaching field experience. The only identifying information asked on the survey was a question regarding the program completed; elementary, secondary, or special education. Results from the survey were analyzed using descriptive statistics and qualitative analysis.

Results

Observation Instrument: Due to a design flaw in the survey design, only 38 of the 110 participants answered the question. Answers on the survey ranged from 2-4 with a mean response on the survey was 3.5 with a standard deviation of .68.

Analysis by Domain.

Table 1. Descriptive statistics for survey responses						
Question		Range	Mean	Standard Deviation		
How helpful was the observation protocol/form used in your placement?		2-4	3.50	.68		
	Written Feedback			Verbal Feedback		
	Range	Mean	Standard Deviation	Range	Mean	Standard Deviation
To what extent did you receive feedback on your performance in the following planning areas?						
1) Lesson Objectives	1-4	3.28	.86	1-4	3.30	.85
2) Instructional Methods	1-4	3.48	.77	1-4	3.56	.74
3) Content Covered	1-4	3.35	.77	1-4	3.53	.73

	1-4	3.40	.72	1-4	3.46	.74
4) Material Use	1-4	3.40	.72	1-4	3.46	.74
5) Assessments	1-4	3.45	.75	1-4	3.47	.78
6) Lesson Planning	1-4	3.53	.70	1-4	3.50	.84
To what extent did you receive feedback on your performance in the following Classroom Environment areas?						
1) Classroom Physical Space	1-4	2.71	1.16	1-4	2.93	1.13
2) Classroom Procedures	1-4	3.28	.87	1-4	3.47	.77
3) Managing Student Behavior	1-4	3.50	.75	1-4	3.69	.57
4) Rapport with Students	1-4	3.51	.81	1-4	3.67	.64
To what extent did you receive feedback on your performance in the following Instructional areas?						
1) Communicating with Students	1-4	3.36	.90	1-4	3.55	.72
2) Questioning Techniques	1-4	3.07	.97	1-4	3.39	.79
3) Engaging students in learning	1-4	3.51	.79	1-4	3.64	.59
4) Using Assessment to Inform Instruction	1-4	3.21	.82	1-4	3.46	.68
5) Responsiveness to Student Learning	1-4	3.27	.89	1-4	3.49	.77
To what extent did you receive feedback on your performance in the following Professionalism areas?						
1) Reflecting on Teaching	1-4	3.30	.85	1-4	3.44	.79
2) Student Performance Data Collection	1-4	3.56	.74	1-4	3.30	.87
3) Showing Professionalism	1-4	3.53	.73	1-4	3.67	.67

Planning and Preparation: Overall the mean pre-service teachers' response on the feedback given during classroom observations on planning and preparation was 3.44, with a standard deviation of .78. On written feedback mean response ranged from a low of 3.28 on instructional planning methods to a high of 3.53 on lesson planning. The mean pre-service teacher response on verbal feedback ranged from a low of 3.30 on lesson planning to a high of 3.56 on instructional methods.

Classroom Environment: Overall the mean pre-service teachers' response on the feedback given during classroom observations on classroom environment was 3.34, with a standard deviation of .92. On written feedback, mean response ranged from a low of 2.71 on classroom physical space to a high of 3.51 on rapport with pre-service teachers. The mean pre-service teacher response on verbal feedback ranged from a low of 2.92 on classroom physical space to a high of 3.69 on managing pre-service teacher behavior.

Instruction: Overall the mean pre-service teachers' response on the feedback given during classroom observations on instruction was 3.39, with a standard deviation of .82. On written feedback mean response ranged from a low of 3.07 on questioning techniques to a high of 3.36 on communicating with pre-service teachers. The mean pre-service teacher response on verbal feedback ranged from a low of 3.39 on questioning techniques to a high of 3.64 on engaging pre-service teachers in learning.

Professionalism: Overall the mean pre-service teachers' response on the feedback given during classroom observations in the area of professionalism was 3.39, with a standard deviation of .87. On written fee-

dback mean response ranged from a low of 3.30 on reflecting on teaching to a high of 3.56 on pre-service teacher performance data collection. The mean pre-service teacher response on verbal feedback ranged from a low of 3.30 on pre-service teacher performance data collection to a high of 3.67 on showing professionalism.

Pre-Service Teacher Recommendations for Improvement on Observation Feedback

Thirty-eight pre-service teachers wrote responses to the question *In terms of observation and feedback, what could be done to improve the field experience*. Two of the responses were thrown out; pre-service teachers commented on the course work required rather than the observations and feedback. For the remainder of the responses three main themes were found; good experience, more needed, and communication. Nine of the pre-service teachers responded positively to the pre-service teacher teaching experience, with comments such as "the experience was great" or "I really loved my cooperating teacher". Twelve pre-service teachers indicated that they would have liked more of one or more component of their pre-service teacher teaching experience. Four pre-service teachers indicated they would like more observations, three pre-service teachers would have liked more supervisor feedback, one specifying written feedback, three pre-service teachers indicated they wanted more feedback or support from their cooperating teachers, one pre-service teacher wanted more from the content supervisor, one pre-service teacher indicated they would like more communication between the university supervisors and the cooperating teacher, and one wanted more time to go over things with the supervisors. Communication seemed to be an issue. One pre-service teacher stated there needed to be more communication with the educators abroad and two pre-service teachers commented on the communication between the various supervisors, and one pre-service teacher.

In addition to these themes, other responses were noted. One pre-service teacher did not see a supervisor for a number of weeks, one pre-service teacher did not see a content supervisor, one pre-service teacher requested better cooperating teachers, one noted a disconnect between the wants of the university supervisor and the cooperating teacher, and one commented on the supervisor showing up only on "bad teaching days".

Discussion and Conclusions

This study assessed one university pre-service teachers' perceptions of feedback provided during a student teaching field experience. Feedback was evaluated in areas identified as important for teachers seeking to produce positive student achievement including planning and preparation, classroom environment, instruction, and professionalism (Bill and Melinda Gates Foundation 2012).

Overall pre-service teachers in this study rated the feedback provided as positive. It could be determined that the current protocols used to provide pre-service teachers with feedback are adequate. However, there were some areas of needed improvement identified by the survey participants. It was noted by some pre-service teachers that they received conflicting information. Pre-service teachers in this student teaching experience receive feedback from two, sometimes three sources; university supervisors from the teacher education department, the classroom teacher in their assigned placement (cooperating teacher), and in the case of students seeking teacher licensure for a specific content area, a content area university

supervisor. The MET project found that when identifying effective teachers, using information from more than one observation and by more than one observer increased reliability. This information could benefit teacher preparation programs. If both university personal and cooperating teachers are trained to provide meaningful feedback to pre-service teachers as a way to enhance teaching performance, the reliability of this process, and in turn the quality of feedback could be increased.

In addition to including observations from more than one source, the MET project also included information on the value of student evaluations (Bill and Melinda Gates Foundation, 2012). It was found that students were accurate in identifying effective teachers. University teacher preparation programs may also want to include as part of their student teaching field experiences a survey completed by the classroom students.

Teacher preparation programs are charged with producing quality teachers, ones who instruct children using pedagogically sound techniques. These programs usually end in a practicum experience called student teaching. In order to develop throughout the student teaching experience, pre-service teachers need to be provided with quality mentoring and feedback. Teacher preparation programs must evaluate their field experience programs to ensure pre-service teachers are receiving feedback in areas linked to student achievement including, planning and preparation, classroom environment, instruction, and professionalism. These programs should also include feedback from a variety of sources including university supervisors, cooperating teachers, and students. Providing this will help insure teacher preparation programs produce quality teachers, those that elicit positive outcomes in their students.

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Appendix A

WSU Teacher Education Field Experience

This survey was developed to gather information about the quality of the observation and feedback protocols used during field experience.

Which teaching experience were you involved in during the spring 2013 semester (Circle the appropriate answer).

Field Experience:	Level 2	Level 3	Pro-core

Student Teaching:	Elementary	Secondary	Special education.

Please answer the following questions on a scale of 1-4

1 = none or it was not helpful	2 = very little or not enough to help me improve my instruction	3 = some or gave me some help but I could have used more	4 = sufficient amount or the feedback given helped me improve my instruction

How helpful was the observation protocol/form used in your placement	N/A	1	2	3	4
To what extent did you receive **written** feedback on your performance in the following planning areas:					
Lesson Objectives		1	2	3	4
Instructional Methods		1	2	3	4
Content Covered		1	2	3	4
Material Use		1	2	3	4
Assessments		1	2	3	4
Lesson Planning		1	2	3	4
To what extent did you receive **written** feedback on your performance in the following Classroom Environment areas:					
Classroom Physical Space		1	2	3	4
Classroom Procedures		1	2	3	4
Managing Student Behavior		1	2	3	4
Rapport with Students		1	2	3	4
To what extent did you receive **written** feedback on your performance in the following Instructional areas:					
Communicating with Students		1	2	3	4
Questioning Techniques		1	2	3	4

Engaging students in learning	1	2	3	4
Using Assessment to Inform Instruction	1	2	3	4
Responsiveness to Student Learning	1	2	3	4
To what extent did you receive __*written*__ *feedback on your performance in the following Professionalism areas:*				
Reflecting on Teaching	*1*	*2*	*3*	*4*
Student Performance Data Collection	*1*	*2*	*3*	*4*
Showing Professionalism	*1*	*2*	*3*	*4*
To what extent did you receive __*verbal*__ *feedback on your performance in the following planning areas:*				
Lesson Objectives	*1*	*2*	*3*	*4*
Instructional Methods	*1*	*2*	*3*	*4*
Content Covered	*1*	*2*	*3*	*4*
Material Use	*1*	*2*	*3*	*4*
Assessments	*1*	*2*	*3*	*4*
Lesson Planning	1	2	3	4
To what extent did you receive __*verbal*__ *feedback on your performance in the following Classroom Environment areas:*				
Classroom Physical Space	*1*	*2*	*3*	*4*
Classroom Procedures	*1*	*2*	*3*	*4*
Managing Student Behavior	1	*2*	*3*	*4*
Rapport with Students	*1*	*2*	*3*	*4*
To what extent did you receive __*verbal*__ *feedback on your performance in the following Instructional areas:*				
Communicating with Students	*1*	*2*	*3*	*4*
Questioning Techniques	*1*	*2*	*3*	*4*
Engaging students in learning	1	*2*	*3*	*4*
Using Assessment to Inform Instruction	1	*2*	*3*	*4*
Responsiveness to Student Learning	1	2	*3*	*4*
To what extent did you receive __*verbal*__ *feedback on your performance in the following Professionalism areas:*				
Reflecting on Teaching	*1*	*2*	*3*	*4*
Student Performance Data Collection	*1*	*2*	*3*	*4*
Showing Professionalism	*1*	*2*	*3*	*4*

In terms of observation and feedback, what could be done to improve the field experience: