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Prioritizing Competencies for Beginning Teachers in High-poverty Schools: A Delphi Study

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Abstract: *Teacher quality is a significant factor predicting student achievement, especially for low-income students. However, information about which teaching competencies warrant emphasis during pre-service training is lacking. The purpose of this study was to investigate experts' ratings on the importance and difficulty of teaching competencies for beginning teachers and whether those ratings differed for low-income school settings. Thirty-one academic and practitioner experts in beginning teacher development participated in this Delphi study. Participants rated 8 of 25 teaching competencies as very important and very difficult for beginning teachers with broad consensus among experts. However, there were differences in ratings between academics and practitioners. Finally, experts rated many of the competencies as more important and more difficult for beginning teachers in low-income schools. Implications for teacher training are discussed.*

Key Words: teacher education; high-poverty schools; teacher development

For more than two decades, scholars have attempted to isolate the factors most likely to increase student achievement and reduce educational disparities. Teacher quality has emerged as a powerful predictor of student success. For example, Wright, et al. (1997) found that teacher effects were the dominant factor affecting student achievement gains. Similarly, Nye et al. (2004) found "substantial differences among teachers in the ability to produce achievement gains in their students" (p. 253). Subsequent studies provided more evidence that variation in teacher quality could be statistically isolated as a significant factor predicting student achievement (Aaronson et al., 2007; Kane, et al., 2005; Rivkin, et al., 2005; Wright et al., 1997).

The clear finding that teachers were vital for student success prompted reform efforts aimed at defining, measuring, and improving teacher effectiveness, including teacher evaluation reform (Anderson et al., 2016; Sawchuk, 2015) and improving teacher preparation (Worrell et al., 2014). Teacher preparation programs have been widely criticized for failing to produce high-quality teachers. For example, Levine (2006) concluded, "Many students seem to be graduating from teacher education programs without the skills and knowledge they need to be effective teachers" (p. 3). Levine argued that teacher preparation programs have a "curriculum in disarray" which leads to a "chasm between theory and practice" (p. 4).

Research also suggests that teacher quality is particularly important for students in low-income schools (Nye et al., 2004). Unfortunately, in the low-income schools where teacher quality matters most, average teacher effectiveness tends to be lower (Sass, et al., 2012; Xu et al., 2015).

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Data from a recent IES report on beginning teachers' level of preparation (2018) showed that teachers in high-poverty schools reported significantly lower rates of preparation than those in low-poverty schools.

There are at least two possible reasons for lower teacher quality in low-income schools. First, low-income schools tend to have less-experienced teachers (Hanushek, et al., 2004; Xu et al., 2015) and beginning teachers are generally less effective than more experienced teachers (Clotfelter et al., 2010; Hanushek et al., 2004; Xu et al., 2015). Second, low-income school settings are different from higher income settings. Some evidence suggests low-income schools provide less supportive environments for teachers (Johnson et al., 2011). Another interpretation is that low-income schools require specialized teaching skills. Miller et al., (2005) assert that attempts to close the income achievement gap have failed because beginning teachers are not adequately prepared to instruct culturally and linguistically diverse (CLD) students.

Because school income gaps are closely related to racial achievement gaps (Center for Education Policy Analysis, 2016), research on low-income schools can be useful in investigating educational issues pertinent to CLD students. However, there are limitations in interpreting research in high-poverty schools and its implications for CLD students. For example, disparities in educational attainment between Black and White students persist for families with similar incomes (Chetty et al., 2018), suggesting that poverty does not fully explain disparities across racial groups. Further, while more Black and Latino students attend high-poverty schools than White students, a majority of Black and Latino students (55%) do not attend high-poverty schools (Snyder & Musu-Gillette, 2015). Therefore, strategies aimed at improving outcomes for CLD students cannot be solely targeted to high-poverty schools. Despite these limitations, the body of scholarship related to culturally responsive teaching supports the notion that teachers working with CLD (and disproportionately low-income) students should have specialized skills.

THEORETICAL PERSPECTIVE

There is a lack of consensus among educational researchers about how to improve beginning teacher quality in low-income schools. Some researchers argue "good teaching is good teaching regardless of the learning environment" (Berman, 2015, p. 386) and others contend that teacher preparation should be specialized for work in low-income schools (National Partnership for Teaching in At-Risk Schools, 2005). The present study addressed the research problem from a Vygotskian perspective. Specifically, the study investigated beginning teacher's objective zone of development and the Zone of Proximal Development (ZPD). The objective zone comprises the teaching competencies that reflect current institutional demands and expectations (Chaiklin, 2003). Investigating the objective zone addressed the question: *What competencies characterize a high-quality beginning teacher?* Because the objective zone of development is defined by social and cultural context, the study also investigates whether the objective zone varies by school setting. This helps answer the question: *Do competencies of high-quality beginning teachers differ in low-income schools?* Finally, the ZPD is the distance between one's actual development (the subjective zone) and institutional expectations (the objective zone) (Vygotsky, 1978). Better understanding the ZPD for the typical beginning teacher will help us answer the question: *Which competencies are particularly difficult and merit prioritization in teacher education?*

TEACHING COMPETENCIES

Several major studies have identified teaching strategies associated with improved student outcomes. Educators rely on these findings to construct frameworks for teacher evaluation and to

guide curricular content in teacher preparation (Council of Chief State School Officers, 2013). We synthesized three such studies: Beesley and Apthorp (2010), Hattie (2009), and Kyriakides et al. (2013) (see Appendix A). Beesley and Apthorp's work extended and updated the Marzano et al., (2001) meta-analysis on instructional strategies linked to student outcomes. Kyriakides et al.'s meta-analysis investigated the effect size of the dynamic model of teaching proposed by Creemers and Kyriakides (2006). Hattie identified school, teacher, and student level influences on student learning based on 800 prior meta-analyses. We included only the teacher-level factors that Hattie determined to have demonstrated above-average effect size in his analysis (0.40).

The teaching strategies from these three meta-analyses generally fall into two broad categories: learning environment (including classroom management, culture, and climate) and instruction (including teaching strategies and assessment). While these studies identified a broad range of effective teaching strategies, they did not specifically examine the competencies important for the beginning teacher or for work in low-income school settings. Therefore, it is unclear which of these competencies warrant prioritization in teacher preparation and training.

STUDY PURPOSE

The purpose of this study was to investigate the relative importance and difficulty of teaching competencies for beginning teachers and whether the importance and difficulty of teaching competencies differed across school settings. The study did not aim to compare high and low poverty school settings, but rather to investigate whether "good teaching is good teaching" regardless of setting or if low-income schools require specialized teaching competencies. To address this, we garnered the views and ratings of expert academic and practitioner educators using a Delphi technique.

The Delphi technique is a method for investigating consensus among selected experts (Day & Bobeva, 2005; Hsu & Sandford, 2007) and is employed for issue identification and prioritization (Day & Bobeva, 2005; Okoli & Pawlowski, 2004). This technique is distinct from other types of data collection and analysis because a multi-round feedback process allows respondents to modify their ratings based on information from other experts (Hsu & Sandford, 2007). After each survey round, the researcher summarizes the results and provides those data to the respondents in the next round. This process encourages respondents to consider peer input and reassess their positions. However, because respondents are anonymous to one another, they are less likely to be influenced by group dynamics like dominant individuals or group pressure for conformity (Hsu & Standford, 2007). The present study focused on issue identification and prioritization by asking respondents to identify and rate teaching competencies on scales of importance and difficulty for beginning teachers and for beginning teachers in low-income settings.

This study addressed the following research questions: (1) How do experts rate competency importance and difficulty for beginning teachers? (2) To what extent do academics and practitioners exhibit consensus on competency ratings? (3) Do experts' importance and difficulty ratings differ by school setting?

DESIGN AND METHODOLOGY

PARTICIPANTS

The Delphi Method does not rely on a representative sample. Rather, the method depends of the collective judgements of qualified experts. Therefore, careful selection of participants is critical to the study's validity (Day & Bobeva, 2005; Hsu & Sandford, 2007; Okoli & Pawlowski,

2004). We followed Okoli and Pawlowski's (2004) process for selecting participants. Building on Delbecq, et al.'s (1975) guidance for soliciting experts, Okoli and Pawlowski (2004) propose a detailed five-step process for selecting Delphi study participants including (a) preparing a *Knowledge Resource Nomination Worksheet (KRNW)*; (b) populating the worksheet with names; (c) nominating additional experts; (c) ranking experts; and (d) inviting experts. The present study included two major classes of experts: academic (faculty and researchers in higher education) and practitioner (school, district, and policy groups).

We created a KRNW that listed the relevant organizations and institutions from which to recruit experts. We then compiled a list of individual names from each of the identified organizations. We reviewed organizational websites for relevant experts based on their professional title, description of job duties, and areas of research. Specifically, we prioritized expertise in new teacher development, teacher preparation, and educational equity. We identified a total of 90 potential participants. Next, we rated experts based on the qualification criteria rubric (see Appendix B). To ensure ratings were consistent and accurate, two members of the research team rated several experts together and then rated experts separately. Interrater reliability was considered adequate when rating difference was one point or less. We ranked experts by rating and invited participants beginning with the highest ranks.

We sent a recruitment letter to each identified expert with a link to a *Qualtrics*^{TM} questionnaire in which participants indicated their relevant expertise to confirm eligibility. Two inclusion criteria were necessary to participate in the study: (a) experience working with beginning teachers (those with fewer than three years of experience), and (b) experience in low-income school settings in which at least 75% qualify for free/reduced lunch (Snyder & Musu-Gillette, 2015). After potential participants confirmed they met those two criteria, they identified themselves as either "academic" or "practitioner," selected relevant experience, and indicated informed consent.

Thirty-one experts confirmed their qualifications and agreed to participate in the study, including 15 academics and 16 practitioners. All participants scored four or higher on the rating criteria rubric, indicating extensive expertise in beginning teacher development. The academic panel was comprised of faculty in colleges of education including: Deans (n=2), Professors (n=2), Associate Professors (n=3), Assistant Professors (n=4), Researchers (n=1), and Lecturers/Professors of the Practice (n=3). The practitioner panel included a leader in an educational research organization (n=1), leaders of educational management and policy groups (n=7), and school and district-level leaders (n=8).

The participant eligibility survey prompted respondents to indicate the primary contexts in which they had worked with beginning teachers. Results indicated participants had extensive collective experience in pre-service and beginning teacher support and development, including professional development (n= 27), education course instructor (n=26), pre-service teacher supervision (n=25), new teacher mentoring (n=21), instructional coaching (n=18), induction support (n=12), and school leadership (n=10).

RESEARCH DESIGN

The Delphi study included three rounds, adapted from the recommendations by Hsu and Sandford (2007). Surveys were administered using *Qualtrics*^{TM} software. Participants had two weeks to complete each survey round.

SURVEY ROUND ONE

Hsu and Sandford (2007) recommend that respondents first complete an open-ended questionnaire before ranking or rating items. However, the authors note that it is "both an acceptable and a common modification of the Delphi process format to use a structured questionnaire in round one that is based upon an extensive review of the literature" (p. 2). For the present study, we began with a pre-populated list of teaching competencies based on existing meta-analyses and results of our literature review identifying teaching competencies linked to positive student outcomes (see Appendix C). We asked respondents to select the competencies that should be included and to make comments for suggested revision. To allow for the possibility that other important competencies may not be represented in the pre-populated list, we invited respondents to add additional competencies. To synthesize round one results, we compiled all participant comments for each competency and revised competency language to reflect participants' suggestions (see Appendix D). We grouped the revised competencies into the following categories (a) learning environment, (b) instruction, and (c) professionalism.

SURVEY ROUND TWO

We asked respondents to rate each competency from the synthesized list on a 4-point rating scale for both importance and difficulty for beginning teachers and for beginning teachers in low-income schools. After collecting responses for round two, we calculated the percentage of responses along the scale and the interquartile range for each competency in each school setting. We also analyzed the round two data to determine which competencies displayed consensus (interquartile range less than or equal to one). For the items on which consensus was not reached, we contacted participants with outlier ratings to request justification.

SURVEY ROUND THREE

We synthesized and included round two data in the round three survey, including competency rating scale percentages, interquartile range, and comments from outliers. In survey round three, we asked respondents to review the data before rating competencies on importance and difficulty again. After collecting round three responses, we recalculated the percentages and interquartile range for each competency in each school setting.

DATA ANALYSIS

We analyzed survey data to calculate importance and difficulty ratings, indicators of consensus, differences between academics and practitioners, and differences by school setting.

IMPORTANCE

We defined importance as the extent to which a teaching competency factors into the beginning teacher's developmental trajectory. Beginning teachers that master important competencies improve quickly and are more likely to become effective teachers (Atteberry et al., 2015). Less important competencies may be developmentally appropriate for more experienced teachers, but are not vital for the beginning teacher. Respondents rated each competency on a 4-point scale for importance (1 = not at all important, 2 = less important, 3 = important, 4 = very important).

DIFFICULTY

We defined difficulty as the amount of time and effort required to become proficient in a competency. Difficult competencies take more time and effort to learn and to implement in practice. Respondents rated each competency on a 4-point scale for difficulty (1 = easy, 2 = less difficult, 3 = difficult, 4 = very difficult).

CONSENSUS

There is no general standard for measuring consensus in Delphi studies and, therefore, many different measures have been used (von der Gracht, 2012). For example, Delphi researchers have used percentages of responses on the scale, movement toward measures of central tendency, and statistical indicators of stability across survey rounds (Holey et al., 2007). We investigated consensus on individual competencies and consensus across participant panels.

CONSENSUS ON INDIVIDUAL COMPETENCIES. To investigate consensus on individual items, a measure of central tendency is reported in connection with a measure of dispersion. The appropriate measures depend on the level at which the variables are measured (von der Gracht, 2012). The data for the present study were ordinal ratings on a 4-point scale. Therefore, the most appropriate measure of central tendency was the mode. We tabulated the percentage of responses in each scale category, which signaled the mode (highest percentage) and prevalence of other responses along the scale. The most appropriate measure of dispersion for these data is the interquartile range (IQR). IQR values less than or equal to one are a suitable consensus indicator on a 4-point scale (von der Gracht, 2012). We investigated the extent to which experts agreed on the importance and difficulty of individual teaching competencies. Feedback from round two (mode, interquartile range, and outlier comments) were provided in round three to alert respondents to areas of consensus and dissention.

CONSENSUS BY PARTICIPANT PANEL. To investigate whether practitioners and academics converged on their ratings, we tested for differences between these subgroups using the chi square test for independence (von der Gracht, 2012).

DIFFERENCES BY SCHOOL SETTING. To investigate whether the importance or difficulty of competencies varied for beginning teachers in low-income schools, we tested for differences across school setting using the Wilcoxon matched-pairs signed-ranks test. In this case, the data were considered dependent, as the same participant rated the same competency in two different settings (school type).

ANALYSIS OF DATA

ROUND ONE RESULTS

The purpose of round one was to compile a comprehensive list of teaching competencies which would then be rated by participants in rounds two and three. A list of 31 competencies was generated via review of the literature and all 31 competencies were selected by multiple participants. Participant comments fell into three broad categories: requests for clarity, suggestions for revised wording, and recommendations to combine or separate competencies. We synthesized participant suggestions by separating one competency into two, incorporating 11 competencies into existing competencies, and adding 4 additional competencies based on participant suggestions. Because all competencies were selected by multiple participants, none were removed.

The resulting list of 25 revised competencies was coded by domain and used in rounds two and three (see Appendix D).

ROUND TWO RESULTS

The primary purpose of round two was to investigate the extent of consensus among participants on each competency. We examined each competency's interquartile range to determine whether the item reached consensus (IQR ≤ 1). Of the 25 competencies, five showed a lack of consensus on at least one of the four scales for a total of 8 non-consensus items. For each of the non-consensus items, we examined the participants' ratings to identify outliers (ratings more than one scale point from the mode). We contacted each of the 21 outlier participants to request justification for the rating. We compiled the mode, IQR, and outlier comments for non-consensus items to send to participants in round three (see Appendix E).

ROUND THREE RESULTS

The purpose of round three was to gather final importance and difficulty ratings after providing participants a summary of round two data. We examined round three descriptive data and conducted statistical analyses to test for differences between academic and practitioner panels and differences across school settings.

COMPETENCY IMPORTANCE AND DIFFICULTY. Competency modes ranged from two to four. Of the 50 possible importance and difficulty combinations (25 competencies for beginning teachers and 25 competencies for beginning teachers in low-income schools), four were rated important, but less difficult. Forty-six were rated both important and difficult. A subset of eight competencies was rated both "very important" and "very difficult." Of this subset, the competencies from the learning environment domain were specific to low-income schools (Figure 1).

CONSENSUS BY ITEM. The number of non-consensus items (IQR>1) decreased from eight of 100 in round two to seven of 100 in round three, though some items shifted from consensus to non-consensus and vice-versa. In total, 93 of 100 the items displayed consensus in round three.

DIFFERENCES BETWEEN ACADEMICS AND PRACTITIONERS. Table 1 shows the significance values and notes which statistic is reported for each item. Four of the 100 tests showed statistically significant differences between panels (values less than .05); the remaining 96 items showed no significant differences. Table 1 also shows the effect size for each item, as calculated by Cramer's V. Three of the statistically significant items had medium to large effect sizes and one displayed a large to very large effect size.

One of the underlying assumptions of Pearson's chi-square is that no more than 20% of the cells have an expected count less than five. That assumption was often violated in this data set. For the instances in which the assumption was violated, we used Fisher's Exact Test for 2x2 contingency tables and the Likelihood Ratio for 2x3 and 2x4 contingency tables (McHugh, 2013).

Figure 1
Competency Importance and Difficulty

Difficulty	Not Important (1)	Less Important (2)	Important (3)	Very Important (4)
Very Difficult (4)			❖ I16 • I17	❖ LE1 ❖ LE5 • I2 ❖ I2 • I4 ❖ I4 • I10 ❖ I10 • I14 ❖ I14 • I15 ❖ I15 ❖ I17
Difficult (3)			• LE1* • I3 ❖ I3 • I7 ❖ I8 • I9 ❖ I9 • I12 • I13 ❖ I13 • I16*	• LE2 ❖ LE2* • LE3 ❖ LE3 • LE5 ❖ LE6 • I1* ❖ I1* • I5 ❖ I5* • I6 ❖ I6 ❖ I7 • I11 ❖ I11 ❖ I12 • PI ❖ P1 • P2 ❖ P2*
Less Difficult			• I8	• LE4 ❖ LE4 • LE6
Easy (1)				

Importance

- • Beginning teachers
- ❖ Beginning teachers in low-income schools

* Non-consensus

Table 1

Results of Test for Differences between Academic and Practitioner Panels

Competency	Importance		Difficulty		Importance Low-income		Difficulty Low-income	
	Value (Statistic)	Cramer's V	Value (Statistic)	Cramer's V	Value (Statistic)	Cramer's V	Value (Statistic)	Cramer's V
LE1	.895 (L)	.086	.031* (L)	.471	.919 (L)	.075	.069 (L)	.414
LE2	.483 (F)	.267	.404 (L)	.268	1.00 (F)	.000	.628 (L)	.212
LE3	.651 (F)	.167	.045* (L)	.393	.651 (F)	.167	.221 (L)	.274
LE4	.066 (L)	.418	.185 (L)	.365	.053 (L)	.432	.694 (L)	.218
LE5	1.00 (P)	.000	.475 (L)	.262	1.00 (F)	.000	.693 (L)	.189
LE6	.474 (L)	.222	.503 (L)	.255	.316 (L)	.254	.983 (L)	.075
I1	.066 (L)	.418	.403 (L)	.288	.290 (L)	.284	.391 (L)	.293
I2	.230 (L)	.308	.710 (P)	.136	.006* (L)	.510	.651 (F)	.167
I3	.166 (L)	.334	.165 (L)	.362	.379 (L)	.251	.529 (L)	.205
I4	1.00 (F)	.000	.806 (L)	.119	.682 (F)	.151	.921 (L)	.074
I5	.098 (L)	.357	.220 (L)	.373	.160 (L)	.310	.092 (L)	.441
I6	.915 (L)	.077	.142 (L)	.400	.460 (L)	.226	.112 (L)	.426
I7	.121 (L)	.338	.019* (L)	.448	.211 (L)	.279	.163 (L)	.336
I8	.907 (L)	.081	.145 (L)	.375	.816 (L)	.115	.454 (L)	.272
I9	.264 (F)	.272	.928 (L)	.071	.462 (F)	.202	.486 (L)	.188
I10	1.00 (F)	.000	.487 (L)	.187	1.00 (F)	.073	.313 (L)	.254
I11	.710 (F)	.136	.149 (L)	.344	.700 (F)	.141	.544 (L)	.197
I12	.324 (L)	.249	.685 (L)	.158	.481 (L)	.189	.518 (L)	.208
I13	.167 (L)	.189	.508 (L)	.254	.269 (L)	.288	.508 (L)	.254
I14	1.00 (F)	.073	.924 (L)	.072	1.00 (F)	.073	.924 (L)	.072
I15	1.00 (P)	.000	.481 (L)	.189	1.00 (F)	.073	.428 (L)	.209
I16	1.00 (P)	.000	1.00 (L)	.000	1.00 (F)	.000	.736 (L)	.141
I17	.521 (L)	.208	.617 (L)	.178	.176 (L)	.337	.749 (L)	.139
P1	1.00 (F)	.000	.536 (L)	.200	.651 (F)	.167	.557 (L)	.197
P2	1.00 (F)	.067	.748 (L)	.200	1.00 (F)	.073	.338 (L)	.314

*statistically significant L=Likelihood Ratio P=Pearson's Chi-Square F=Fisher exact test

Effect size: <.10: trivial; .10 - .30: small to medium; .30 - .50: medium to large; >.50: large to very large (Cohen, 1992)

Table 2 shows the four competencies that displayed statistically significant differences between the academic and practitioner panels. Practitioners rated differentiating content (I2) more important in low-income schools than academics. For the other three significant items, practitioners tended to rate the items as more difficult.

Table 2

Differences across Participant Panels: Statistically Significant Items

Code	Rating Difference	Competency	Effect Size
LE1	Rated more difficult by practitioners	Creates a student-centered learning environment by incorporating student voice and choice.	.471
LE3	Rated more difficult by practitioners	Establishes a culturally responsive and inclusive learning environment by honoring diversity inside and outside of the classroom (e.g., ethnicity, language, ability, gender identity, etc.).	.393

I2	Rated more important by practitioners*	Differentiates content by providing challenging yet accessible learning opportunities (e.g., scaffolding, acceleration, and enrichment).	.510
I7	Rated more difficult by practitioners	Uses clear and concise language to communicate lesson objectives and academic expectations.	.448

*In low-income schools
Effect size: <.10: trivial; .10 - .30: small to medium; .30 - .50: medium to large; >.50: large to very large (Cohen, 1992)

DIFFERENCES ACROSS SCHOOL SETTING. We used the Wilcoxon Signed Ranks Test to analyze difference in participant ratings across school settings (beginning teachers versus beginning teachers in low-income schools). Table 3 displays results including differences in ranks (z, 2-tailed), statistical significance of the differences (*p*), and effect size (*r*). Positive z values indicate more important or more difficult ranks for beginning teachers. Negative ranks indicate more important or difficult ranks for beginning teachers in low-income schools. We calculated effect size using Pearson's correlation: $r = z/\sqrt{N}$, where N is the number of cases (30 participants * two scales=60 cases).

Of 50 total items, 20 showed statistically significant differences ($p < .05$) across school setting. All of the significant items showed higher ratings in low-income schools. That is, the items were rated more important (n=9) or more difficult (n=11) in low-income schools. Of the 20 statistically significant items, 13 had small to medium effect sizes and 7 had medium to large effect sizes (see Table 4).

Table 3

Results of Wilcoxon Signed Ranks Test for Differences across School Setting

Competency	Importance			Difficulty		
	z	*p*	*r*	*z*	*p*	*r*
LE1	-2.070	.038*	-0.267	-1.890	.059	-0.244
LE2	0.000	1.00	0.000	-2.887	.004*	-0.373
LE3	0.000	1.00	0.000	-1.667	.096	-0.215
LE4	-1.414	.157	-0.183	-2.271	.023*	-0.293
LE5	-2.000	.046*	-0.258	-2.333	.020*	-0.301
LE6	-1.342	.180	-0.173	-2.828	.005*	-0.365
I1	-1.342	.180	-0.173	-1.000	.317	-0.129
I2	-2.000	.046*	-0.258	-2.449	.014*	-0.316
I3	-2.530	.011*	-0.327	-1.342	.180	-0.173
I4	-1.414	.157	-0.183	-2.000	.046*	-0.258
I5	-1.000	.317	-0.129	-1.414	.157	-0.183
I6	-2.000	.046*	-0.258	-2.000	.046*	-0.258
I7	-1.414	.157	-0.183	-2.000	.046*	-0.258
I8	-2.449	.014*	-0.316	-1.633	.102	-0.211
I9	-1.000	.317	-0.129	-1.414	.157	-0.183
I10	-1.000	.317	-0.129	-1.414	.157	-0.183
I11	-1.414	.157	-0.183	-2.236	.025*	-0.289
I12	-2.000	.046*	-0.258	-1.633	.102	-0.211
I13	-1.414	.157	-0.183	.000	1.000	0.000
I14	0.000	1.00	0.000	.000	1.000	0.000
I15	-1.000	.317	-0.129	-2.000	.046*	-0.258
I16	-1.414	.157	-0.183	-2.449	.014*	-0.316
I17	-1.000	1.00	-0.129	-1.000	.317	-0.129
P1	0.000	1.00	0.000	-1.732	.083	-0.224
P2	-2.000	.046*	-0.258	-2.060	.039*	-0.266

*statistically significant at p≤.05, Z=difference in ranks (2-tailed), p=statistical significance, r= Pearson's correlation (effect size); Effect size: <.10: trivial; .10 - .30: small to medium; .30 - .50: medium to large; >.50: large to very large (Cohen, 1992)

Table 4

Differences across School Settings

Code	Competency	Rating Difference	Effect Size
LE1	Creates a student-centered learning environment by incorporating student voice and choice.	More important in low-income schools	.267
LE2	Builds and maintains positive teacher-student relationships.	More difficult in low-income schools	.373
LE4	Creates a safe and organized physical environment with efficient access to learning materials.	More difficult in low-income schools	.293
LE5	Clearly and consistently implements guidelines for student behavior.	More important and more difficult in low-income schools	Imp: .258 Diff: .301
LE6	Recognizes student effort and provides positive reinforcement.	More difficult in low-income schools	.365
I2	Differentiates content by providing challenging yet accessible learning opportunities (e.g., scaffolding, acceleration, and enrichment).	More important and more difficult in low-income schools	Imp: .258 Diff: .316
I3	Provides graphic and non-linguistic representations of content (e.g., concept-mapping).	More important in low-income schools	.327
I4	Provides rigorous learning experiences that allow all students to meet and exceed content standards.	More difficult in low-income schools	.258
I6	Incorporates student interest and culture into lesson design.	More important and more difficult in low-income schools	Imp: .258 Diff: .258
I7	Uses clear and concise language to communicate lesson objectives and academic expectations.	More difficult in low-income schools	.258
I8	Provides rationale for lesson (i.e., real-world and/or practical connections).	More important in low-income schools	.316
I11	Models strategies and provides guided and independent practice (i.e., gradual release of responsibility).	More difficult in low-income schools	.289
I12	Actively engages students by employing strategies that deepen understanding of the content (e.g., hands-on materials, manipulatives, technology use).	More important in low-income schools	.258

I15	Provides scaffolding for students in need of additional support (e.g., modified, small group or individualized instruction).	More difficult in low-income schools	.258
I16	Facilitates classroom discussion and poses critical questions.	More difficult in low-income schools	.316
P2	Effectively collaborates with colleagues, families, and other educational specialists.	More important and more difficult in low-income schools	Imp: .258 Diff: .266

Imp=importance, Diff=difficulty
Effect size: <.10: trivial; .10 - .30: small to medium; .30 - .50: medium to large; >.50: large to very large (Cohen, 1992)

DISCUSSION

COMPETENCY IMPORTANCE AND DIFFICULTY

The importance ratings for all 50 items (25 competencies in two school settings) was either "important" or "very important." These findings help construct Vygotsky's objective zone of development by defining the competencies that characterize a high-quality beginning teacher.

Difficulty ratings help to approximate the ZPD for the typical beginning teacher and provide insight about which competencies merit prioritization in teacher training. Forty-six of 50 items rated either "difficult" or "very difficult." Of the eight competencies rated both "very important" and "very difficult," those from the learning environment domain were specific to low-income schools. These findings suggest the objective zone of development is different in low-income schools. Specifically, several elements of the learning environment are especially important and difficult in low-income settings.

CONSENSUS BY ITEM

Ninety-three of 100 items displayed consensus among participants in round three (Figure 1). These findings suggest experts agree, in large part, about the importance and difficulty of teaching competencies for beginning teachers. Interestingly, experts showed consensus on all items that were rated both very important and very difficult. Of the seven non-consensus items, six were difficulty ratings, suggesting areas of expert disagreement were largely related to competency difficulty.

DIFFERENCES BETWEEN ACADEMICS AND PRACTITIONERS

Ninety-six percent of the items showed no differences across participant panels, suggesting agreement among academics and practitioners on most competencies. Of the four items that showed differences across panels, one was rated as more important by academics and three were rated more difficult by practitioners. These findings may reflect the theory and practice chasm between academics and practitioners in which practitioners are more cognizant of the difficulty of implementing strategies taught in teacher preparation programs.

DIFFERENCES ACROSS SCHOOL SETTINGS

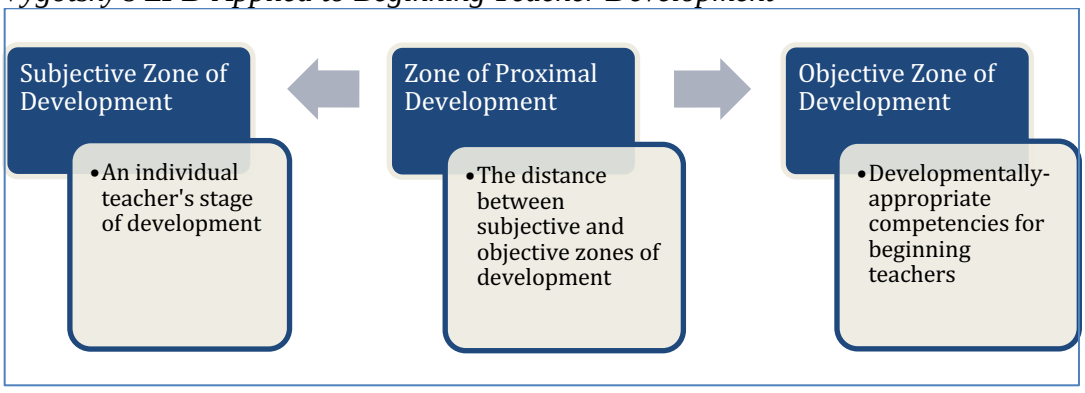
Forty percent of the items were rated significantly more important and/or more difficult in low-income schools. No items were rated less important or less difficult in low-income schools. The competencies rated more important in low-income schools largely concur with the body of scholarship related to culturally responsive teaching. For example, scholars emphasize the importance of high academic expectations with scaffolding (Ladson-Billings, 2009), cultural competence (Evans & Gunn, 2012; McGee Banks & Banks, 1995), culturally relevant curricula (Delpit, 2012; Ladson-Billings, 2009), and relationships with students and their families (Delpit, 2012; Ladson-Billings, 2009; McGee Banks & Banks, 1995). It is important to note that these competencies were also rated important or very important for all beginning teachers. Therefore, the findings do not suggest that these competencies are important *only* for beginning teachers in low-income schools, but rather that they are *especially* important for beginning teachers in low-income settings. These differences in importance ratings across settings suggest different expectations for teachers in high-poverty schools – or, in Vygotskian terms, differences in the objective zone of development.

Differences in difficulty ratings across school context also warrant careful analysis. Why do experts consider almost half of teaching competencies (11 of 25) to be more difficult in low-income schools? One participant commented that she was not sure why there should be any difference in ratings unless participants have perceptions about children tied to race or income. Differences could be due to perceived differences in support structures or working conditions within schools. For example, some research indicates that low-income schools tend to be less supportive environments for teachers (Johnson et al., 2012). One participant commented, "I've heard from [a number of beginning teachers] that they felt disconnected and found it hard to get anyone to pay attention to their basic needs."

In Vygotskian terms, the ZPD (the distance between the objective and subjective zones of development) for a typical beginning teacher may be wider in low-income schools because the objective zone is a bit further from the subjective zone (see Figure 2). Findings did not suggest different competencies were important in low-income schools, but rather that many competencies were *more important* in those settings. In other words, perhaps we expect more of teachers in low-income schools and, therefore, the job is more difficult.

Figure 2

Vygotsky's ZPD Applied to Beginning Teacher Development



It is also possible that the subjective zone varies by school setting. In other words, beginning teachers in low-income schools could be generally less effective than their counterparts

at higher-income schools (due to lower quality preparation, personal characteristics, or other factors). Based on participant comments, it is possible that several factors contributed to the differences or that participants themselves were not fully cognizant of why their ratings differed. For example, one participant commented,

> I have been reflecting on the survey questions. In many cases it was hard to answer whether or not something is more difficult in a [low-income] school because it depends SO MUCH on the person. The kids themselves are not harder to teach, but it can be a more stressful culture to operate in. What I am thinking about is how teaching in a [low-income] school is harder because of the secondary stress and PTSD teachers face from dealing with the difficult issues in their students' lives..... but I still cannot put my finger on being able to describe or provide evidence for what makes it so different.

IMPLICATIONS

PRIORITIZING IMPORTANT AND DIFFICULT COMPETENCIES

While most competencies were rated both important and difficult, the expert participants in this study agreed that a subset of eight competencies was both very important and very difficult for beginning teachers. Of this subset, three were specific to low-income school settings, suggesting teacher training programs should emphasize why these competencies are so important in low-income settings and focus on implementing them effectively.

The five most important and difficult competencies across school settings are related to some technical aspects of high-quality teaching, including differentiating content, scaffolding, using data to inform instruction, and incorporating student critical thinking. These concepts likely require additional time in coursework and guided practice in the field during teacher preparation and additional support for beginning teachers.

The competencies rated most important and difficult specific to low-income settings were creating a student-centered learning environment, implementing guidelines for student behavior, and promoting student collaboration. Literature and research on teaching culturally and linguistically diverse (and disproportionately low-income) students may be especially useful in addressing these competencies. For example, Weinstein et al. (2004) propose a set of principles for culturally responsive classroom management including recognizing one's own ethnocentrism, knowledge of student's cultural backgrounds, understanding the broader social context, implementation of culturally responsive management strategies, and committing to building caring classrooms. Haynes and Zacarian (2010) note that student collaboration and small group work is especially important for English Language Learners. The authors provide theory and practical strategies for guiding student collaboration.

Because all competencies were rated important, teacher training programs should not focus solely on those deemed most important and difficult. However, there are several possible ways to emphasize these competencies. First, teacher training programs could allot more coursework time to the most important and difficult skills – perhaps returning to these concepts over several courses throughout the training program. Second, programs could require that teacher candidates demonstrate proficiency on these competencies to graduate (perhaps while allowing partial proficiency on less-important skills). Finally, policymakers and administrators could modify teacher evaluation systems such that the most important competencies are weighted more heavily

than those that are less-important. Further research in this area is needed to determine which approach is warranted.

BUILDING CONSENSUS

Findings demonstrated consensus among experts on the vast majority of competencies. However, the areas on which experts did not reach consensus could have important consequences for beginning teachers. The non-consensus items (among all participants and across panels) were largely related to competency difficulty. This could be related to wide variation in beginning teacher preparation. In this interpretation, the rationale for lower ratings may be: *this should not be difficult,* while higher ratings reflect the reality of inadequately-prepared beginning teachers. For example, for one non-consensus competency (I1), a participant commented,

> I'm assuming in my response here that candidates go through a program that is reputable and that includes clinical practice. If neither of those is true, then my rating is off. But then that's not a challenge for the beginning teacher; it's a challenge for the preparation system in my view.

Overall, the findings reinforce a central theme: beginning teaching is difficult. Producing effective beginning teachers requires sustained communication between teacher preparation programs and the school districts in which their graduates go on to work. Differences in perceptions about which competencies are important and difficult may lead to misalignment between teacher preparation curricula and in-service professional development and induction support. Systematic and iterative feedback between institutions of higher education and school districts may help facilitate a smooth transition from pre-service to in-service teaching and, ultimately, improve outcomes for students.

LIMITATIONS

As with any research study, there are limitations that should be addressed in interpreting this study's findings. First, the list of competencies modified and rated by participants was drawn from literature linking observable teaching strategies to student outcomes. Therefore, the competencies were limited to those that met the literature search criteria. However, in round one participants "wrote in" competencies that did not meet those criteria and we included those competencies in rounds two and three. It is possible that additional competencies, had they met the search criteria, would have been rated important by participants.

Next, the 4-point rating scales on the survey instruments may have limited the data analysis. We chose 4-point scales to "force" responses into important or difficult categories. Also, because participants had to rate each competency on four scales, fewer scale points was more feasible logistically. While the data from round two showed sufficient variability, 46 of 50 items were rated both important and difficult (modes 3 or 4) in round three. A broader scale may have shown more variability in the data. Finally, caution should be exercised in interpreting statistical significance because the large number of tests increases the potential for Type 1 error.

DIRECTIONS FOR FUTURE RESEARCH

This study's findings illuminate the teaching strategies most important and difficult for beginning teachers according to national experts. Subsequent studies could add to these findings by quantitatively determining which beginning teacher competencies best predict success in future years. The widespread adoption of systematic teacher evaluation systems makes these analyses possible. Further, more research is needed on how to best prioritize the most important and difficult competencies during teacher preparation and induction programs. Finally, and perhaps most importantly, subsequent studies should attempt to address the question: Why is beginning teaching in low-income schools more difficult? Several possibilities have been raised in prior literature, but comments from this study's participants and a lack of consensus on specific indicators suggest more information is needed to address this issue.

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APPENDIX A

Synthesis of Meta-Analyses
(Beesley & Apthorp, 2010; Hattie, 2012; Kyriakides et al., 2013)

Domain	Competency
Learning Environment	Creates and sustains a positive learning environment (Kyriakides) Facilitates student responsibility for learning (Kyriakides) Communicates effectively with students (Kyriakides) Reinforces student effort and provides recognition (Beesley & Apthorp) Maintains positive teacher-student relationships (Hattie) Creates student-centered learning environment (Hattie) Communicates high expectations for student learning (Hattie) Efficiently organizes and manages classroom environment (Kyriakides) Creates safe physical environment with access to learning materials (Kyriakides) Provides rules and guidelines for student behavior (Hattie)
Instruction	Provides clear explanation of content and expectations (Hattie) Models problem solving and provides guided and independent practice (Beesley & Apthorp; Hattie; Kyriakides) Facilitates student synthesis of information through summarizing and note-taking (Beesley & Apthorp) Previews and reviews content, emphasizing main ideas (Kyriakides) Provides graphic and nonlinguistic representations of content (Beesley & Apthorp; Kyriakides) including concept-mapping (Hattie) Uses technology for instructional purposes (Kyriakides) Prompts students to identify similarities and differences (Beesley & Apthorp) Engages students in generating and testing hypotheses (Beesley & Apthorp) Facilitates student meta-cognition through self-assessment, goal-setting, and reflection on learning (Hattie; Kyriakides) Conducts formative assessment (Hattie; Kyriakides) Differentiates content by providing scaffolding and acceleration (Hattie) Sets lesson objectives (Beesley & Apthorp; Hattie; Kyriakides) Provides rationale for lesson (Hattie; Kyriakides) Provides feedback (Beesley & Apthorp; Hattie) Facilitates classroom discussion (Hattie) and poses critical questions (Beesley & Apthorp; Hattie; Kyriakides) Promotes student collaboration and cooperation (Beesley & Apthorp; Hattie) including small-group learning (Hattie)

APPENDIX B: PARTICIPANT RATING RUBRIC

Prerequisites: (a) experience working with beginning teachers; (b) experience working in low-income schools

Academics

	3	2	1
Research Focus and Expertise	• Primary research focus on teacher effectiveness or teacher education **and** educational equity/diversity	• Primary research focus on teacher effectiveness, teacher education **or** educational equity	• Primary research focus on general educational practices or related field (e.g., literacy)
Experience and position	• Tenured/tenure-track (or equivalent) faculty position in teacher education	• Clinical or other non-tenure track faculty position in teacher education or tenure/tenure-track in other education-related fields	• Adjunct faculty in teacher education

Practitioners

	3	2	1
Expertise	• Expertise in beginning teacher effectiveness **and** educational equity/ diversity	• Expertise in beginning teacher effectiveness **or** educational equity	• Expertise in general educational practices or related field (e.g., literacy)
Position and Seniority	• National, state, or district administrative leadership position in education organization	• School-level senior administrative leadership position (e.g. principal)	• School-level leadership position (e.g. instructional coach)

APPENDIX C: ROUND ONE SURVEY INSTRUMENT

In round one, consider competencies important for all teachers, not just beginning teachers.

In round one, I am asking:
Should we include these on our list? What is missing? Are they worded clearly?

If you agree the competency should be included, please click on the competency. When you select a competency, it will be displayed in red. Select all that apply. At the end of the list, you may enter up to five additional competencies. You may also include comments below the competency (optional).

Select all that apply.
Communicates clearly and effectively with students
_____
Reinforces student effort and provides recognition
_____
Engages students in generating and testing hypotheses (i.e., claims and evidence)
_____
Demonstrates value for diversity _____
Creates safe physical environment with access to learning materials
_____
Provides rationale for lesson (i.e., real-world connections)
_____
Differentiates content by providing scaffolding and acceleration
_____
Prompts students to identify similarities and differences (e.g., Venn diagrams)
_____
Supports student autonomy (i.e., student voice and choice)
_____
Provides clear explanation of content and expectations
_____
Models problem solving and provides guided and independent practice (i.e., gradual release of responsibility) _____
Builds and maintains positive teacher-student relationships
_____
Facilitates student synthesis of information through summarizing and note-taking
_____
Previews and reviews content, emphasizing main ideas
_____
Creates student-centered learning environment
_____
Provides graphic and non-linguistic representations of content (e.g., concept-mapping)
_____
Creates and sustains a positive learning environment
_____

Uses technology for instructional purposes
_____
Communicates high expectations for student learning
_____
Demonstrates content knowledge _____
Incorporates hands-on materials and manipulatives
_____
Connects content to student interests and culture
_____
Provides and enforces rules and guidelines for student behavior
_____
Facilitates student meta-cognition through self-assessment, goal-setting, and reflection on learning _____
Conducts formative assessment _____
Communicates lesson objectives _____
Efficiently organizes and manages classroom environment
_____
Provides feedback _____
Facilitates classroom discussion and poses critical questions
_____
Promotes student collaboration and cooperation including small-group learning
_____
Facilitates inquiry-based instruction _____
Other, please describe _____
Other, please describe _____
Other, please describe _____
Other, please describe _____
Other, please describe _____

APPENDIX D: REVISED COMPETENCIES AND CODES

Revised Competencies and Codes

Code	Competency
Learning Environment	
LE1	Creates a student-centered learning environment by incorporating student voice and choice.
LE2	Builds and maintains positive teacher-student relationships.
LE3	Establishes a culturally responsive and inclusive learning environment by honoring diversity inside and outside of the classroom (e.g., ethnicity, language, ability, gender identity, etc.).
LE4	Creates a safe and organized physical environment with efficient access to learning materials.
LE5	Clearly and consistently implements guidelines for student behavior.
LE6	Recognizes student effort and provides positive reinforcement.
Instruction	
I1	Clearly and accurately presents content, including previewing, reviewing, and emphasizing main ideas.
I2	Differentiates content by providing challenging yet accessible learning opportunities (e.g., scaffolding, acceleration, and enrichment).
I3	Provides graphic and non-linguistic representations of content (e.g., concept-mapping).
I4	Provides rigorous learning experiences that allow all students to meet and exceed content standards.
I5	Designs lessons that are aligned to state standards and incorporate evidence-based instructional practices.
I6	Incorporates student interest and culture into lesson design.
I7	Uses clear and concise language to communicate lesson objectives and academic expectations.
I8	Provides rationale for lesson (i.e., real-world and/or practical connections).
I9	Engages students in generating questions and providing evidence to support or refute assertions (i.e., claims and evidence and inquiry-based instruction).
I10	Facilitates student critical thinking (e.g., analyzing, predicting, synthesizing, problem-solving, etc.).

I11	Models strategies and provides guided and independent practice (i.e., gradual release of responsibility).
I12	Actively engages students by employing strategies that deepen understanding of the content (e.g., hands-on materials, manipulatives, technology use).
I13	Facilitates student meta-cognition through self-assessment, goal-setting, and reflection on learning.
I14	Frequently checks for understanding, provides timely and effective feedback, and uses data to inform instruction.
I15	Provides scaffolding for students in need of additional support (e.g., modified, small group or individualized instruction).
I16	Facilitates classroom discussion and poses critical questions.
I17	Promotes student collaboration and cooperation including small-group learning.
Professionalism	
P1	Analyzes and continuously improves one's own instructional practice based on feedback and evidence of student learning.
P2	Effectively collaborates with colleagues, families, and other educational specialists.

APPENDIX E: ROUND 2 RESULTS SUMMARY

Learning Environment: Positive classroom culture and climate				
Teaching Competency	Importance Mode (IQR)	Difficulty Mode (IQR)	Importance Low Income Mode (IQR)	Difficulty Low Income Mode (IQR)
Creates a student-centered learning environment by incorporating student voice and choice.	3 (1)	3 (1)	4 (1)	4 (1)
Builds and maintains positive teacher-student relationships	4 (0)	2 (1)	4 (0)	3 (1)
Establishes a culturally responsive and inclusive learning environment by honoring diversity inside and outside of the classroom (e.g., ethnicity, language, ability, gender identity, etc.).	4 (1)	3 (1)	4 (1)	3 (1)
Learning Environment: Effective classroom management				
Teaching Competency	Importance Mode (IQR)	Difficulty Mode (IQR)	Importance Low Income Mode (IQR)	Difficulty Low Income Mode (IQR)
Creates a safe and organized physical environment with efficient access to learning materials.	4 (1)	2 (1)	4 (1)	2 (1)
Clearly and consistently implements guidelines for student behavior.	4 (1)	3 (1)	4 (0)	4 (1)
Recognizes student effort and provides positive reinforcement.	4 (1)	2 (1)	4 (1)	3 (1)
Instruction: Content delivery				
Teaching Competency	Importance Mode (IQR)	Difficulty Mode (IQR)	Importance Low Income Mode (IQR)	Difficulty Low Income Mode (IQR)
Clearly and accurately presents content, including previewing, reviewing, and emphasizing main ideas.	4 (1)	3 (2)	4 (1)	3 (2)

Outlier Comments:
Difficulty for Beginning Teachers Rating: 1 If courses are thorough in covering the importance of big understandings and essential questions, candidates are more likely to keep the main ideas of the content in mind as they create lesson plans. Especially for secondary candidates, content knowledge is generally less an issue than developing practical skills such as classroom management. If admission standards include academic standards, the content of elementary subjects should not be an issue for elementary candidates.

Difficulty for Beginning Teachers Rating: 1 I'm assuming in my response here that candidates go through a program that is reputable and that includes clinical practice. If neither of those is true, then my rating is off. But then that's not a challenge for the beginning teacher; it's a challenge for the preparation system in my view. So if my assumption holds true, then the amount of focus on lesson planning and all the modeling of pre-planned curricula, etc. should make this kind of very rote content presentation one of the easiest things to do. It's the most basic "teaching" side of the "teaching and learning" duo. I should also say that if a beginning teacher can only do this thing, I personally do not believe that the outcomes for children will be aligned with what we need. This is very much an example of an emphasis on the banking model of education, where teachers put stuff into children's brains. There is no evidence that this, alone, is indicative of good teaching. It's necessary, yes, but should be the very, very basic skill set of a teacher and should be easy. If this is difficult, I can't imagine what we think the really complex work is.

Differentiates content by providing challenging yet accessible learning opportunities (e.g., scaffolding, acceleration, and enrichment).	4 (1)	4 (1)	4 (1)	4 (1)
Provides graphic and non-linguistic representations of content (e.g., concept-mapping).	3 (2)	2 (1)	4 (1)	2 (1)
Provides rigorous learning experiences that allow all students to meet and exceed content standards.	4 (1)	4 (1)	4 (0)	4 (1)
Designs lessons that are aligned to state standards and incorporate evidence-based instructional practices.	4 (1)	3 (2)	4 (1)	3 (2)

Outlier Comments:
Difficulty for Beginning Teachers Rating: 1 If courses are thorough about covering these aspects through lesson planning, candidates will find this easier than other competencies that require a great deal of practice, such as classroom management.

Difficulty for Beginning Teachers Rating: 1 Same assumption about program and clinical practice. There are SO many resources that model lesson designs that link to state standards and "evidence-based" instructional practices. If novice teachers have not learned what their local resources are, then programs are not doing their jobs. It might take novice teachers a lot of TIME to do this work, but it's not intellectually demanding if they have come to understand lesson design in their programs--which they should have.

Incorporates student interest and culture into lesson design.	3 (1)	2/3 (1)	4 (1)	2 (2)
Instruction: Instructional strategies				
Teaching Competency	Importance Mode (IQR)	Difficulty Mode (IQR)	Importance Low Income Mode (IQR)	Difficulty Low Income Mode (IQR)
Uses clear and concise language to communicate lesson objectives and academic expectations.	4 (1)	2 (1)	3/4 (1)	3 (1)
Provides rationale for lesson (i.e., real-world and/or practical connections).	3 (1)	3 (1)	3 (1)	3 (1)
Engages students in generating questions and providing evidence to support or refute assertions (i.e., claims and evidence and inquiry-based instruction).	3 (1)	3 (1)	3 (1)	3 (1)
Facilitates student critical thinking (e.g., analyzing, predicting, synthesizing, problem-solving, etc.).	4 (1)	4 (1)	4 (1)	4 (1)
Models strategies and provides guided and independent practice (i.e., gradual release of responsibility).	4 (1)	3 (0)	4 (1)	3 (1)
Actively engages students by employing strategies that deepen understanding of the content (e.g., hands-on materials, manipulatives, movement, technology use).	3 (1)	3 (1)	3 (1)	3 (1)
Facilitates student meta-cognition through self-assessment, goal-setting, and reflection on learning.	3 (1)	4 (1)	4 (1)	4 (1)
Frequently checks for understanding, provides timely and effective feedback, and uses data to inform instruction.	4 (1)	4 (1)	4 (1)	4 (1)
Provides scaffolding for students in need of additional support (e.g., modified, small group or individualized instruction).	4 (1)	4 (1)	4 (1)	4 (1)
Facilitates classroom discussion and poses critical questions.	4 (1)	3 (1)	4 (1)	3 (1)

Promotes student collaboration and cooperation including small-group learning.	4 (1)	4 (1)	4 (1)	4 (1)
Professionalism				
Indicator	Importance Mode (IQR)	Difficulty Mode (IQR)	Importance Low Income Mode (IQR)	Difficulty Low Income Mode (IQR)
Analyzes and continuously improves one's own instructional practice based on feedback and evidence of student learning.	4 (0)	3 (1)	4 (0)	3 (1)
Effectively collaborates with colleagues, families, and other educational specialists.	4 (1)	2/3 (2)	4 (1)	3 (2)

Outlier Comments:

Difficulty for Beginning Teachers Rating: 4 What I am noticing is that new teachers are not prepared for the level and amount of collaboration that is expected of them. They can get frustrated by the number of meetings, expectations for co-planning, PLC's etc. They have a vision of being more in control of their day and their time and their planning, but our practices have shifted and we no longer see it as a job of isolation. So they are burdened by the number of people they feel are pulling on them- parents, colleagues, leaders, etc., and they struggle to see that this IS A HUGE PART of the daily work, not a distraction from it or additional duty. We also are needing to teach millennial some skills for communication and advocacy on their teams. We want them to be change agents- to come in with huge ideas and advocate for them. However, they do not understand the need to "earn the right to be heard" or listen to and respect their veteran colleagues and their experience. Often, our new teachers DO have a better way to do it, but they get frustrated if their older colleagues don't catch on quickly, OR they feel dismissed, shut down and give up. They can be perceived as arrogant, but really our veterans are experiencing a huge change process when they have a novice teacher as a colleague- perhaps just as much adjustment as the new teacher! So there is a need for empathy from both sides.

Difficulty for Beginning Teachers Rating: 4 I believe my rating for this item is based on my experiences of observing beginning teachers struggle to appropriately address the many things that they must balance early in their careers. I think it can be especially difficult for beginning teachers to collaborate with colleagues and/or other educational specialists simply because of the many things they must do on a daily basis (create lesson plans for the first time, create and carry out an effective classroom management plan, communicate with parents, etc.). Collaborating with parents can be difficult for all teachers, but may even be more difficult for beginning teachers who have to learn how to be effective communicators and may be hesitant to communicate with parents for a variety of reasons.

Difficulty for Beginning Teachers Rating: 4 I have found that beginning teachers find it extremely challenging to collaborate effectively at their new schools. While there are meetings, parent nights, etc. that require participation and collaboration, beginning teachers struggle with planning and "keeping their heads above water." Even when the beginning teachers are assigned a mentor, they don't always meet frequently enough to be helpful with supporting their collaboration with others at the school and families.

Difficulty for Beginning Teachers Rating: 4 It's likely that my score here is an outlier because of the word "effectively." I have no doubt that beginning teachers are, by and large, accommodating in their interactions, but that does not necessarily mean collaboration. If I'm going to collaborate with colleagues and/or other education specialists as a beginning teacher, I'm going to have to focus on some goals outside of my own particular classroom--something that I don't think most beginning teachers have time to do. I certainly hear over and over (and have no reason to doubt it) that new teachers who are not of the communities of the children they serve are not very good at working with families; they are often patronizing is what I hear most frequently.

Difficulty for Beginning Teachers in Low-Income Schools Rating: 1 This competency is oftentimes highly dependent on the disposition of the teacher. The enthusiasm that new teachers bring to the school context can create unique forms of collaboration with families and educational personnel.