Linking Credential Test Specifications to Program Quality Standards

Terence Janicki

Background

As a policy-making body that governs the education profession in the state, the California Commission on Teacher Credentialing is legally responsible for establishing and implementing state policies related to the preparation, assessment, certification, and assignment of school professionals, including teachers. The Commission's most important responsibility is to establish and implement strong, effective standards of quality for the preparation and assessment of credential students.

On September 26, 1988, the governor of California signed legislation that strengthened the professional character of the Commission, and enhanced its authority to establish rigorous standards for the preparation and assessment of prospective teachers. As a result of this reform law, a majority of the Commission's members are professional educators, and the agency is developing new policies in collaboration with leaders and members of the profession throughout the state. In implementing the new statute, one of the Commission's goals is to define acceptable levels of quality in teacher preparation and assessment.

Darling-Hammond (1988) reminds us that standards focus in two directions. They reflect backward to teacher preparation and forward to teaching practice. In order to become operational, however, they need to be translated into preparation programs on the one hand and into testing requirements on the other. This presentation will describe both the development of standards and the translation of those standards into assessment specifications.

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Requirements and Implementation of State Laws

California law (the Ryan Act, 1970) requires an applicant for a teaching credential to demonstrate knowledge of the subject to be taught by passing an examination adopted by the Commission at a standard set by the Commission. This examination requirement may be waived if the applicant for the credential has satisfactorily completed a subject-matter preparation program that has been approved by the Commission. The agency has approved subject-matter preparation programs for prospective teachers at many public and private colleges and universities in California. The law distinguishes between subject-matter programs and professional preparation programs; only the subject-matter programs waive the required examinations.

No funds were appropriated for the development of the examinations; therefore, in 1972 the Commission contracted with an external agency for a review of all available examinations. The contractor's report indicated that no existing examinations were appropriate for the purposes set forth in the law and added that the National Teacher Examinations (NTE®) published by Educational Testing Service (ETS®) were the only available tests that approximated what was required by law. In the absence of any more appropriate tests, the Commission adopted the NTE examinations in 1973 to meet the intent of the law to the fullest extent possible.

Validity Study of Examinations Used by the California Commission on Teacher Credentialing

In September 1986 the Commission adopted a plan to conduct an extensive study of the validity of 15 NTE Specialty Area Tests that were used by the Commission in making certification decisions. In 1987–88 the Commission's staff conducted the study in accordance with the plan. During the course of this study, more than 400 secondary school teachers, curriculum specialists, and teacher educators examined the specifications of the 15 tests as well as the actual questions in each test. Each participant judged the relevance of the questions and specifications to California's K–12 curriculum and evaluated their
congruence with the curriculum of teacher preparation in California. Finally, the participants wrote extensive comments about the quality of the tests and the changes that should be made in them.

Although the results of the validity study varied from test to test, the review yielded some "parallel" conclusions about all 15 tests. The general results showed that two kinds of modifications needed to be made in the Commission-adopted testing program.

(1) In each discipline, the test reviewers recommended particular changes to the multiple-choice tests.

- Change the test outlines to make them more congruent with the California State Frameworks and Model Curriculum Standards.
- Eliminate test questions that are out-of-date or that give too much emphasis to particular domains of knowledge.
- Eliminate test specifications and questions that relate primarily to the teaching of the subject.
- Add new test questions to give appropriate emphasis to domains of subject-matter knowledge that are consistent with new trends in the field and that have recently been added to California's contemporary K–12 curriculum.

(2) In each discipline, the test reviewers also recommended that the multiple-choice test be supplemented by a performance assessment in the subject.

- Each set of test reviewers provided a general description of the type of performance that should be assessed by the additional component of the revised test.
- Each performance component should examine the ability of candidates to perform essential skills related to the subject to be taught but should not measure the candidate's ability to teach the subject.
In most cases, the performance components should consist of "constructed-response" problems or tasks, instead of "selected-response" questions in which the alternative responses are given.

When the Commission accepted the findings of the validity study in 1988, they realized that the research results had significant implications for the subject-matter examinations that had been used for certification decisions for several years.

The Commission’s Plan for Modifying Subject-Matter Examinations

Shortly after adopting the validity study report, the Commission in 1988 also adopted a plan for making changes in the assessment of subject-matter competence among credential applicants. This examination modification plan consisted of the following elements.

1) The Commission established Teacher Preparation and Assessment Advisory Panels related to each Single Subject Credential. Each advisory panel consisted of teachers, curriculum specialists, university faculty members, and teacher educators with content expertise. The Commission asked these panels to draft new specifications for the subject-matter assessments, as well as new standards of quality for subject-matter programs that substitute for the exams.

2) The Commission asked the advisory panel in each subject area to develop plans and specifications for two kinds of assessments. First, each panel was asked to create content outlines of essential knowledge that could be assessed by multiple-choice questions. Second, the Commission directed each panel to identify more complex skills and abilities that could be assessed by constructed-response problems and questions in performance assessments.

The Commission modified the subject-matter examinations in order to strengthen teacher certification decisions by broadening the information base on which these decisions are made. By expanding the scope of the subject-matter examinations beyond
the limits of multiple-choice tests to include assessments of the candidates' breadth and depth of knowledge and the ability to communicate that knowledge, the Commission wanted to ascertain that, as a credential requirement, candidates are able to perform at acceptable levels of competence in their subject areas.

### Planned Phases in the Adoption of Modified Examinations

The Commission issues Single Subject Teaching Credentials in 16 subjects. In one of these subjects—foreign language—the Commission issues credentials in French, German, and Spanish, which means there are 18 different Single Subject Credential examinations. Realizing that it would not be possible to implement an examination modification plan for all 18 credentials concurrently, the Commission decided in 1988 to modify the examinations in phases according to the numbers of candidates who take examinations for each credential. On this basis, the Commission adopted the following grouping pattern.

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<tr>
<th>Group One</th>
<th>Group Two</th>
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<tr>
<td>English Credential</td>
<td>Art Credential</td>
<td>Agriculture Credential</td>
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<td>Life Science Credential</td>
<td>French Credential</td>
<td>Business Education Credential</td>
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<td>Mathematics Credential</td>
<td>German Credential</td>
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The Commissioners understood that the development of assessment specifications (as well as program standards) and the adoption of new examinations would occur at different times for these three groups of credentials.
Establishment of Subject-Matter Advisory Panels

To appoint panels with balanced membership, the executive director of the Commission asked educational leaders to nominate men and women who reflected California's diverse population and whose educational experience and content-based expertise were extensive. Following the receipt of nominations, the Commission's professional staff analyzed the nominees' qualifications. Based on this review, the executive director selected a balanced group of panelists for each of the group one credentials (see above). One year later, the executive director repeated this process and established advisory panels for each of the group two credentials.

The Commission assigned the following major responsibilities to each subject-matter advisory panel.

- First, the Commission expected each advisory panel to draft a set of Standards of Program Quality and Effectiveness for evaluating subject-matter programs for prospective teachers. To accompany each standard, the panels were required to develop a rationale and a set of factors to be considered by evaluators who determine whether each standard is met.

- Second, the Commission directed each advisory panel to draft a set of Specifications for Assessing the Subject-Matter Knowledge and Competence of Prospective Teachers. Each panel was expected to generate a content outline and descriptions of model questions and exercises, including performance exercises in the discipline being assessed. Thus, the test specifications were to include specifications for both multiple-choice examinations and constructed-response assessments. The Commission wanted these specifications to guide the revision and replacement of the subject-matter examinations.

The Commission also wanted the advisory panels to develop program standards and assessment specifications that would be (1) congruent with the major strands and goals of the public school curriculum, and (2) as equivalent as possible with each other. The panels were asked to establish, for the first time in California, strong relationships among the three policy domains delineated in Figure 1.
FIGURE 1
Curricular Relationships with Teacher Preparation Standards and Assessment Specifications Sought by the Commission

Standards of Program Quality

In addition to being concerned with the quality of the examinations that the Commission has been using, the Commission has been concerned with the programs the candidate can use to "waive" the examination. In 1986 the Commission implemented a thorough redesign of its policies regarding the preparation of education professionals and the review of preparation programs in colleges and universities. In initiating this reform, the Commission embraced the following principles or premises regarding the governance of educator preparation programs.

1) The status of preparation programs in colleges and universities should be determined on the basis of standards that relate to significant aspects of the quality of those programs. Program quality may depend on the presence or absence of specified features, which should be reflected in the standards. It is more common, however, for the quality of educational programs to depend on how well the program's features have been designed, implemented, and practiced. For this reason, most program standards should define levels of quality in program features.
2) **There are many ways in which a teacher preparation program may be excellent.** Different programs are planned and implemented differently and are acceptable if they are planned and implemented well. The Commission's standards should be designed to differentiate between good and poor programs. The standards should not force all programs to be alike, except in their quality, which assumes different forms in different settings and institutions.

3) **A teacher education program has a curriculum that plays a central role in the program's quality.** Curriculum standards should attend to the most significant aspects of knowledge and competence. They should not prescribe particular configurations of courses or particular ways of organizing content in courses, unless professionals determine that such configurations are essential for a good curriculum. Similarly, curriculum standards should assign unit values to particular domains of study only if there is a professional consensus that it is essential for the Commission's standards to do so.

4) **Teacher preparation programs should prepare students to teach the public school curriculum effectively.** The major themes and emphases of subject-matter programs for teachers must be congruent with the major themes and goals of the school curriculum. It is also important for future teachers to be in a position to improve the school curriculum on the basis of new developments in the scholarly disciplines and in response to changes in student populations and community needs. However, it is essential that new teachers have knowledge of the subjects and topics that are most commonly taught in schools.

5) **The Commission is aware of the diverse composition of the California student population.** The preparation of educators to teach and serve an extremely diverse group of students is not the exclusive responsibility of professional preparation programs in schools of education. This preparation must begin early for prospective teachers. The Com-
mission expects subject-matter programs to contribute to this preparation and expects the advisory panels to recommend appropriate program standards and factors to consider.

6) **In addition to a curriculum, a teacher education program should have a philosophy, a set of institutional resources, a governance structure, and an array of student services and policies such as admission policies and advisement services.** These components of teacher preparation contribute significantly to its quality; they help to make the teacher preparation program educative—more than a collection of courses. The Commission expects the panels to develop standards that relate to the overall quality of significant, noncurricular aspects of preparation programs to complement the curriculum standards, which are most critically important.

7) **The Commission is concerned about the high level of attrition among beginning teachers and has successfully sponsored legislation to improve the conditions in which new teachers work.** Reality-based career exploration is also needed early in teacher preparation, to ensure that credential candidates are aware of the challenges of teaching before they invest heavily in professional training. The Commission considers subject-matter preparation programs to be occasions in which students should explore the realities of school teaching.

8) **The assessment of each candidate's attainments in a teacher education program is a significant responsibility of the institution that offers the program.** This assessment should go beyond a review of each candidate's transcript to verify that acceptable grades have been earned in required and elective courses. The specific form, content, and methodology of the assessment should be determined by the institution, but the Commission's standards should attend to the overall quality of institutional assessment of students in programs.
9) **The standards of program quality should be consistent in breadth.** The standards should be grouped in categories that are also roughly equivalent in scope. Each standard should be accompanied by a rationale that states briefly why that standard is important to the quality of teacher education. The standards should be written in clear, plain terms that are widely understood. If the standards include technical terms, these should be defined in the document.

10) **The standards of program quality should be drafted to allow quality to assume different forms in different environments (see principle 2 above).** It is not necessary (and is potentially detrimental) for standards to define all of the acceptable ways in which programs can satisfy a quality standard. Whether a particular program fulfills a standard is a judgment that should be made by professionals who have been trained in interpreting the standards. The Commission is confident that professionals can and will make these judgments. The advisory panel should draft standards that define how well programs should be designed and implemented, not ones that define specifically and precisely how programs should be designed or implemented.

11) **The advisory panels should assist in the interpretation of the standards by identifying the important factors that should be considered when professionals judge a program's quality.** Each preparation program must satisfy the Commission's standards. However, the "factors to consider" are not mandatory in the same sense. Instead, these factors should suggest the types of questions that program reviewers should ask and the types of evidence that they should assemble and consider when they judge whether a standard is met. Factors to consider should not become "mini-standards" that programs must "meet." Reviewers are expected to weigh the strengths and weaknesses of a program as they decide whether a program meets a standard. Programs are not expected to be excellent in relation to every factor that could be considered.
The Commission believes that the adoption and implementation of standards of program quality is one way in which the agency can most effectively fulfill its responsibilities to the public and the profession. While assuring the public that educator preparation is excellent, the Commission also respects the considered judgment and discretion of professional educators, and holds educators accountable for excellence. The premises and principles outlined above reflect the Commission’s approach to fulfilling its responsibilities under the law.

Preparation of Program Quality Standards and Assessment Specifications

Input from a variety of sources was sought before the final drafts of program quality standards were completed by the advisory panels. Each set includes standards related to the curriculum, the commitment of institutional resources, effective coordination, a system for internal program evaluation, and an array of student services such as advisement services and admission policies. Each standard is accompanied by a rationale for that standard and a variety of factors to consider in evaluating the quality of a program.

Figure 2 (on the following page) graphically shows the relationships among the state and national frameworks, the program quality standards, and the proposed examination specifications.

To ensure that candidates meet comparable standards whether they qualify for credentials by passing standardized examinations or by completing a Commission-approved university program, the California Commission on Teacher Credentialing would like to use examinations in which the scope and content are as congruent as possible with the breadth and depth of the program standards. Furthermore, in order to verify subject-matter competence via the examination option, the Commission would expect to use two modes of assessment:

- multiple-choice examinations, which should be designed to measure breadth of knowledge in the various disciplines; and...
constructed-response assessments, which should consist of longer questions, exercises, and problems that require candidates to write extended responses or respond verbally. Each question, exercise, and problem should be designed to measure the candidate's ability to perform competently in the discipline.

FIGURE 2
Relationship Among Frameworks, Standards, and Examinations
Conclusion

As mentioned earlier, California law (the Ryan Act, 1970) requires an applicant for a teaching credential to demonstrate knowledge of the subject to be taught by passing an examination adopted by the Commission at a standard set by the Commission. This examination requirement may be waived if the applicant for the credential has satisfactorily completed a subject-matter preparation program that has been approved by the Commission. The Commission has made considerable progress in assuring the rigor of both these options. In the near future, credential candidates will present either verification that they have completed an approved subject-matter preparation program from an institution that has implemented the new Commission standards or that they have passed an examination that is congruent with the breadth and depth of good subject-matter preparation. In either case, the students in California schools will be better served.