Standard 11: Lesson Planning

The program trains teacher candidates how to plan lessons.

Why this standard?

Planning how to adjust and enhance instruction to meet students' diverse needs lies at the heart of effective teaching. Teacher candidates should be able to demonstrate this skill in the assignments representing the culmination of their training. Good lesson plans address the needs of all students in a class, including those who are English language learners, have special needs or have already advanced beyond proficiency in a lesson objective. Teacher candidates should also learn to integrate technology to facilitate learning.

What is the focus of the standard?

Requirements for all culminating assignments, such as those pertaining to the content of lesson plans used in student teaching, are examined to ensure that elementary and secondary teacher candidates must demonstrate that they know how to adjust their lesson planning to accommodate the needs of diverse students and employ technology effectively.

Standard applies to elementary and secondary programs.

The rationale summarizes research about this standard. The rationale also describes practices in the United States and other countries related to this standard, as well as support for this standard from school leaders, superintendents and others education personnel.

The methodology describes the process NCTQ uses to score institutions of higher education on this standard. It explains the data sources, analysis process, and how the standard and indicators are operationalized in scoring.

The research inventory cites the relevant research studies on topics generally related to this standard. Not all studies in the inventory are directly relevant to the specific indicators of the standard, but rather they are related to the broader issues that the standard addresses. Each study is reviewed and categorized based on the strength of its methodology and whether it measures student outcomes. The strongest "green cell" studies are those that both have a strong design and measure student outcomes.

Standard and Indicators

Standard 11: Lesson Planning

The program trains teacher candidates how to plan lessons that enhance the academic performance of all students.
Standard applies to: Elementary and Secondary programs.

Indicators that the program meets the standard:

Lesson or unit plans completed during student teaching, for a capstone or exit project, or to obtain licensure demonstrate that the program expects the teacher candidate to meet the following challenges of instructional design for the classroom:

11.1 Identifying technology applications that will boost instruction and how they will do so.

11.2 Anchoring instruction in the state's K-12 learning standards.

11.3 Addressing the needs of English-language learners.

11.4 Accommodating students with special needs.

11.5 Extending instruction for students who have demonstrated proficiency in relevant standards.

11.6 In addition, none of the program's instructional planning assignments encourage candidates to use pseudo-scientific methods of instruction.

11.7 In addition, the program requires that throughout their student teaching experience, teacher candidates develop written instructional plans whose content follows explicit instructional guidelines.

Rationale

Standard 11: Lesson Planning

The program trains teacher candidates how to plan lessons.

Standard applies to elementary and secondary programs.

Why this standard?

Planning how to adjust and enhance instruction to meet students' diverse needs lies at the heart of effective teaching. Teacher candidates should be able to demonstrate this skill in the assignments representing the culmination of their training. Good lesson plans address the needs of all students in a class, including those who are English language learners, have special needs or have already advanced beyond proficiency in a lesson objective. Teacher candidates should also learn to integrate technology to facilitate learning.

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Requirements for all culminating assignments, such as those pertaining to the content of lesson plans used in student teaching, are examined to ensure that elementary and secondary teacher candidates must demonstrate that they know how to adjust their lesson planning to accommodate the needs of diverse students and employ technology effectively.

Rationale

Research base for this standard

No "strong research"[1] exists on the importance of training teachers in lesson planning techniques.

Other support for this standard

This standard is grounded in common sense. One of the fundamental duties of teachers is to plan lessons for their classes, and so it follows that teacher candidates should learn to produce lesson plans while in their preparation programs. Because most classes include a range of students with diverse needs, it is both a legal requirement and a modern reality that teachers must adapt lessons to a variety of students. The education community has reached a consensus that teachers should be able to plan lessons for their students.

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[1] NCTQ has created "research inventories" that describe research conducted within the last decade or so that has *general* relevance to aspects of teacher preparation also addressed by one or more of its standards (with the exceptions of the Outcomes and Evidence of Effectiveness standards). These inventories categorize research along two dimensions: design methodology and use of student performance data. Research that satisfies our standards on both is designated as "strong research" and will be identified as such. That research is cited here if it is *directly* relevant to the standard; strong research is distinguished from other research that is not included in the inventory or is not designated as "strong" in the inventory. Refer to the introduction to the research inventories for more discussion of our approach to categorizing research. If a research inventory has been developed to describe research that generally relates to the same aspect of teacher prep as addressed by a standard, the inventory can be found in the back of this standard book.

Despite this consensus, a recent survey of school staff found that just over one-third of new teachers (35 percent) were either not prepared or only somewhat prepared to select and adapt curriculum and instructional materials.[2]

While teacher preparation programs almost universally encourage teacher candidates to tailor instruction to students' "learning styles," methodologically sound research does not support the efficacy of attempts to do so.[3] In fact, Howard Gardner, who developed the theory of "mulitiple intelligences" (with which learning styles are often confused) asserts that learning styles are neither coherent nor supported by persuasive evidence.[4]

School district superintendents also support this standard.

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[2] Coggshall, J. G., Bivona, L., & Reschly, D. J. (2012, August). *Evaluating the effectiveness of teacher preparation programs for support and accountability*. Washington, DC: National Comprehensive Center for Teacher Quality.

[3] Pashler, H., McDaniel, M., Rohrer, D., & Bjork, R. (2009). Learning styles: Concepts and evidence. *Psychological Science in the Public Interest, 9*(3), 105-119. Retrieved March 3, 2013, from http://www.psychologicalscience.org/journals/pspi/PSPI_9_3.pdf

[4] Strauss, V., & Gardner, H. (2013, October 16). Howard Gardner: 'Mulitple intelligences' are not 'learning styles.' *The Washington Post*. Retrieved from www.washingtonpost.com.

Scoring Methodology
How NCTQ scores the Lesson Planning Standard

[Standard and indicators](#)

Data used to score this standard

Evaluation of elementary and secondary teacher preparation programs on Standard 11: Lesson Planning uses the following sources of data:

- Handbooks providing guidance regarding expectations for instructional planning during student teaching

- Institutions for higher education (IHEs) whole-class lesson and/or unit plan templates[1] and accompanying rubrics or templates

- Guidelines for capstone projects[2] and accompanying project rubrics--often called teacher work samples (TWS) or portfolios, and including teacher performance assessments (TPAs)[3]

- Syllabi for student teaching-related seminars

Who analyzes the data

Two [general analysts](#) independently evaluate each program using a detailed scoring protocol from which this scoring methodology is abstracted. For information on the process by which scoring discrepancies are resolved, see the "scoring processes" section of the [General Methodology](#).

Scope of analysis

The evaluation of this standard entails examination of instructional planning assignments related to student teaching, exit requirements or licensure requirements to discern an institutional commitment that teacher candidates are prepared to meet those challenges of instructional planning specified in the standard's indicators.[4] Initial [document processing](#) first ensures that all relevant sources of data are isolated.

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[1] We define the IHE's "own templates" as those clearly written by the IHE or those on which the IHE has placed an imprimatur explicitly (e.g., by attaching an institutional insignia) or implicitly (e.g., by including the template in the appendix of a student teaching handbook).

[2] Analysts evaluate any project assignment with explicit planning *requirements*, regardless of whether these projects require that candidates submit planning artifacts from earlier coursework or entail new planning assignments. *Suggested* assignments or artifacts are not considered for analysis even if the suggested assignments or artifacts are planning-related and pertain to NCTQ indicators.

[3] In **California**, **Minnesota** and **Washington**, the relevant TPA used in the state is utilized as data for all IHEs regardless of whether provided by the IHE because TPA initiatives are statewide. In **Tennessee** and **Ohio**, the relevant TPA used by the state is used as data for selected IHEs regardless of whether provided by the IHE if a state official indicated that the IHE has moved beyond isolated field tests to a full implementation. In all other states, a TPA is used as data only if provided by the IHE.

In many cases, the TPA used by the IHE is the "edTPA," a proprietary instrument that NCTQ could not obtain in its entirety for a full evaluation. However, we were able to obtain a portion of the edTPA and compare it to the Stanford PACT (the edTPA's precursor), and we were also able to confirm with a knowledgeable state education agency official that the edTPA does not substantively differ from the Stanford PACT in any of the features on which we base our evaluation.

In **Oregon**, the state's required Teacher Work Sample is utilized as a data source.

[4] Lesson planning guidance provided prior to the culminating academic term is evaluated only if it reflects institutional guidance provided consistently from the beginning of preparation through the final academic term.

While the evaluation does not require consistency among directions or requirements for instructional planning among the myriad documents generally reviewed for each program, relevant sources of data must indicate that teacher candidates are provided with coherent planning guidance and it is provided *before* planning occurs. This is not seen, for example, in cases in which the program advises teacher candidates to download any manner of lesson planning templates from the Internet. Furthermore, although many student teaching evaluation instruments contain indicators pertaining to lesson planning, these provide implicit *post facto* guidance, rather than explicit guidance *prior* to planning. Therefore these documents are also not deemed relevant for evaluation.

For Indicators 11.1–11.5, analysts attempt to identify one explicit direction or requirement that the teacher candidate develop an instructional plan addressing that indicator or a combination of indicators. We note that requirements conveyed for lesson planning are evaluated in light of expectations deemed realistic based on the context within which the teacher candidate are expected to plan: Analysts distinguish between a requirement, for example, to consider "academic performance/ability and special needs, socio-economic profile, ethnicity/cultural/gender make-up, special needs, and language" in a lesson plan designed for *daily* use and a similar requirement in a *project completed over an extended time period*. In the first case, no indicator is deemed satisfied because the unrealistic expansiveness of the requirement makes it very unlikely that teacher candidates could be providing meaningful responses on a daily basis. In contrast, the same requirement for a unit plan or work sample is deemed to satisfy Indicators 11.3, 11.4 and 11.5.

A generous interpretation using the full context for the evaluation is used by analysts to assign credit for a program's requirements if they are suggestive but not explicit. For example, if a lesson plan requires that teacher candidates adapt instruction for "exceptional students," Indicator 11.4 (relating to students with special needs) is deemed satisfied. However, if Indicator 11.4 has already been deemed satisfied by another requirement, that same requirement to plan for "exceptional students" is deemed to satisfy Indicator 11.3 (relating to English language learners) or 11.5 (relating to gifted or proficient students). If, in turn, Indicator 11.3 is deemed satisfied by another, more explicit, reference to English language learners, the requirement to plan for "exceptional students" is deemed to satisfy Indicator 11.5.
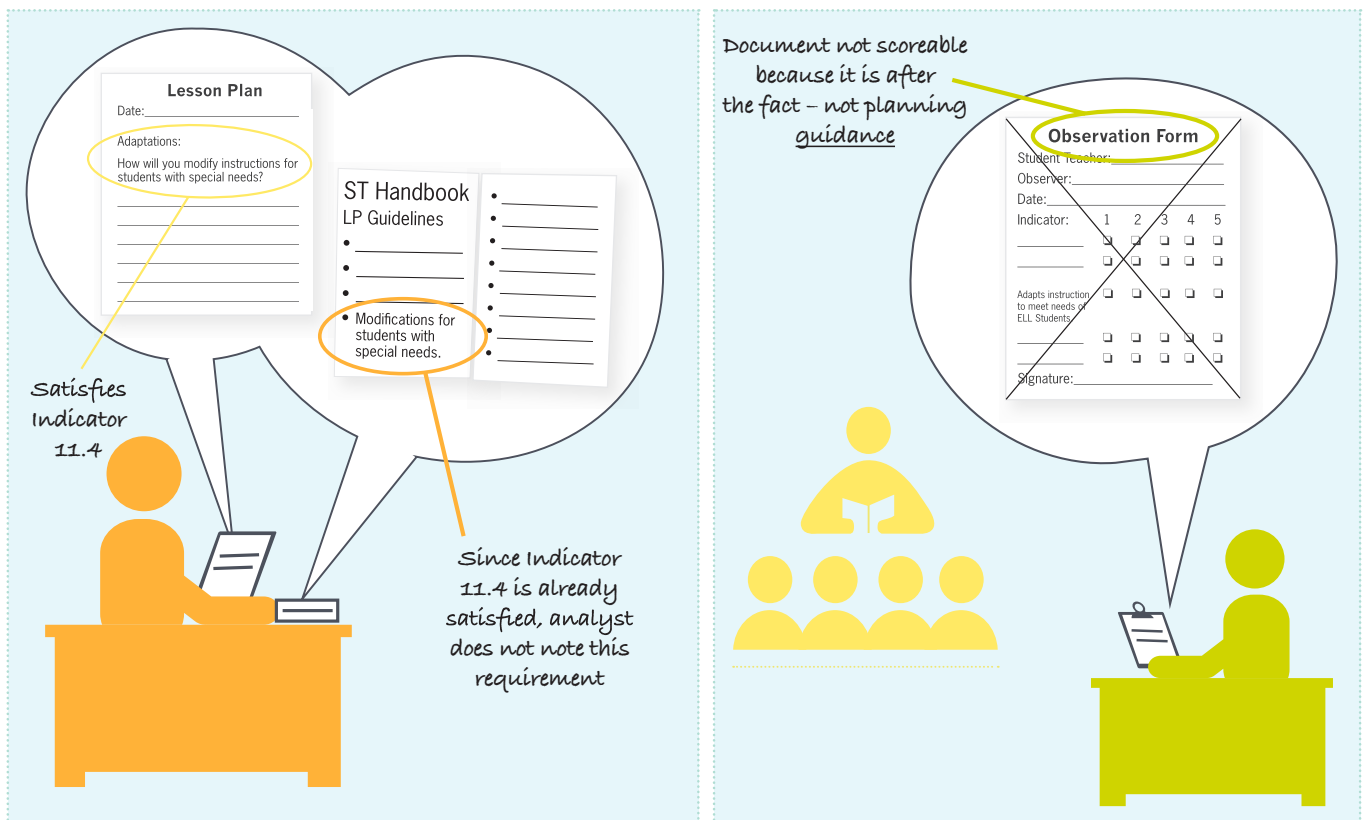
Our interpretations of terms commonly used in lesson planning, such as "differentiation" and "accommodation," are contained in a glossary. Without more explicit requirements noted, requirements to "differentiate instruction" or "plan for the diversity in the classroom" are not deemed to satisfy any indicator.[5] However, general guidance only indicating that candidates must include adaptations, with no additional directions for *whom* the adaptation applies, are credited to Indicator 11.4 (relating to students with special needs). Indicator 11.5, pertaining to students who have achieved proficiency, is interpreted to be satisfied by both requirements pertaining to students who have achieved proficiency on specific learning standards and requirements pertaining to students who have generally high levels of proficiency and are designated as "gifted."

If a rubric is used to support interpretation of instructional planning guidance, and the rubric has multiple levels of proficiency, the highest or next to highest proficiency level is generally chosen for evaluation.

Analysts note any recommendation or requirement original to the program and not simply a reiteration from other sources to consider whether teacher candidates are advised to consider pseudo-science (specifically "learning styles") while planning instruction (Indicator 11.6).[6]

Also, for reporting purposes only, analysts ascertain whether the program explicitly requires that teacher candidates produce written lesson plans conforming to its guidance (rather than that of the relevant school district or cooperating teacher) for all instruction delivered during student teaching (Indicator 11.7).[7]

Common misconceptions about how analysts evaluate the Lesson Planning Standard:

- *Lesson planning assignments in coursework completed prior to student teaching placement are considered in analysis.* Analysis for this standard does not consider, for example, lesson planning templates used in methods courses taken prior to student teaching unless they are used consistently throughout preparation (which is unfortunately very rare). Guidance relating to lesson planning done by teacher candidates in student teaching and/or culminating assignments is used as data because it is presumed to most closely reflect institutional priorities.

- *The requirement by a school district that the program's student teachers use a particular format for lesson planning disadvantages a program in evaluation on this standard.* A program's evaluation is unaffected by school district requirements providing one or both of the following is found and is relevant to evaluating the standard: 1) the program's suggestion that candidates may need to supplement their district-designed lesson plans with a few additional elements of program-designed plans, and/or 2) program guidance for lesson planning done for other culminating assignments (for example, a teacher work sample).

- *A program that recommends to its teacher candidates that "learning styles" be considered in instructional planning would automatically fail to satisfy the standard.* Advocating attention to "learning styles" did lead to a score reduction for a program, but only by one score level. If a program had its score reduced due to a recommendation to consider "learning styles" and earned a low score on the standard, its score was low regardless of the penalty for the recommendation on learning styles.

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[5] We make the case for the distinction between differentiation and, for example, the legally required accommodation of a student with special needs with this example: Even if a student with special needs is provided with instruction that has been differentiated on the basis of an assessment showing his level of proficiency to match that of a group of his classmates, he may *still* require accommodations based on his Individualized Education Program (IEP) to access additional content.

[6] The rationale for this standard provides the basis for labeling attention to learning styles as "pseudo-science."

[7] Some school districts require that the student teacher use a particular format for instructional planning. In such cases, the program could still satisfy the indicator providing its requirements for the student teacher specify features of instructional planning that are essential regardless of district policies.

Due to the burden imposed by document processing, the full sample of programs in the first edition of the *Review* was not evaluated on this standard. Instead of evaluating all programs for which any material had been provided by an IHE, we instead established a calendar deadline for analysis that would ensure that we could evaluate a sample of sufficient size to provide credible information about the nature of teacher preparation in this area. Once this deadline was established, we also prioritized evaluation of programs producing the largest number of teacher candidates each year. It was possible to evaluate all programs in the reduced sample on this standard.

Examples of what satisfies or does not satisfy the standard's indicators

Technology and its instructional rationale[8] (Indicator 11.1)

✔ · fully satisfies the indicator	✘ · does not satisfy the indicator
In at least one instance of lesson planning, the program requires that teacher candidates identify technology applications that will boost instruction and how they will do so.	The program does not guide teacher candidates to identify technology applications that will boost instruction and how they will do so, or the relevant language is inadequate.
Examples:	Examples:
■ *Identify the specific instructional technologies that you will use during the implementation of the unit. Discuss how the use of these instructional technologies has the potential to positively affect student learning.* ■ *Technology Used and Rationale for Its Use*	■ *Materials and equipment needed (list everything you need to teach this lesson): book(s), graphic organizer, overhead projector, laptop or projector, etc.* ■ *Describe how technology is integrated into the unit.* ■ *Describe how you will use technology in your planning and/or instruction. If you do **not** plan to use any form of technology, provide your clear rationale for its omission. (Emphasis added.)*

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[8] Many planning documents ask candidates to simply list the technology used in a lesson. This falls short of expecting candidates to provide an instructional rationale for use of technology and does not satisfy the indicator. Similarly, some planning guidance only asks candidates to provide a rationale when technology is *not* included. This also falls short of satisfying the indicator because it reveals an underlying assumption that use of technology is always instructionally appropriate and therefore any instance of its use need not be justified.

State learning standards (Indicator 11.2)

✔ · fully satisfies the indicator	✘ · does not satisfy the indicator
In at least one instance of lesson planning, the program requires that teacher candidates anchor instruction in the K-12 learning standards. Examples: ■ *State Standards* ■ *Common Core Standards* ■ *Standards*	The program does not guide teacher candidates to anchor instruction in the K-12 learning standards, or the relevant language is inadequate. Examples: ■ *Curriculum Goals* ■ *InTASC Standards/ Professional Standards*

ELL students (Indicator 11.3)

✔ · fully satisfies the indicator	✘ · does not satisfy the indicator
In at least one instance of lesson planning, the program requires that teacher candidates address the needs of English language learners (ELL). Examples: ■ *Accommodation: What changes might I make to accommodate the unique learning needs of ELL students?* ■ *Identify specific ESOL (English for Speakers of Other Languages) strategies that you will incorporate into the lesson according to the needs of the ESOL student and the content to be learned.* ■ *Indicate the accommodations required to support the learning of exceptional students, including gifted students, students with disabilities (having 504 plans or IEPs) and students for whom English is their second language (ESL).* *Note: This requirement satisfies both Indicators 11.4 and 11.5.*	The program does not guide teacher candidates to address the needs of English language learners, or the relevant language is inadequate. Examples: ■ *How many ELL students are in your class?* ■ *Accommodation: What changes might I make to accommodate the unique learning needs of students with special needs or English language learners.* *Note: Of necessity, this is deemed to satisfy only one indicator, and analysts are instructed to award credit to Indicator 11.4 (special needs) of the two that could be chosen. However, if Indicator 11.4 were satisfied by a requirement elsewhere, this requirement would satisfy Indicator 11.3.* ■ *How will you adapt the **assessment** for your English language learners? (Emphasis added.)*

Students with special needs[9] (Indicator 11.4)

✔ · fully satisfies the indicator	✘ · does not satisfy the indicator
In at least one instance of lesson planning, the program requires that teacher candidates accommodate students with special needs.	The program does not guide teacher candidates to accommodate students with special needs, or the relevant language is inadequate.

Examples:

Examples:

Left column:

- *Step-by-Step Procedures Activities....In this section note one strategy you will do during this part of the lesson that will benefit ESOL **and** ESE (Exceptional Student Education) students. (Emphasis added.)*

  Note: This requirement also satisfies Indicator 11.3.

- **Adaptations***/Individualization: Include a description of the modifications that you plan to make during this lesson to meet the individual needs of your students. (Emphasis added.)*

- *Accommodations: List any special accommodations used for the following: Special education students.*

- *Modifications/ Accommodations*

  Note: This general language defaults to satisfying only 11.4.

Right column:

- *The setting: Write a brief description of the group or class for whom this lesson is planned (number of children, gender, children with special needs, special conditions that might influence how lesson is taught, etc.)*

- *How did you differentiate instruction?*

- *Reflection: How did your lesson go? What modifications would you make to the lesson next time?*

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[9] Our definition of "students with special needs" encompasses "resource students," students with Individualized Education Programs (IEPs) or 504 plans, and "inclusion students."

Proficient/gifted students (Indicator 11.5)

✔ · fully satisfies the indicator	✘ · does not satisfy the indicator
In at least one instance of lesson planning, the program requires that teacher candidates address the needs of students who have demonstrated proficiency in the relevant standards. Examples: ■ *Accommodation: List any special accommodations used for the following: Academically talented (gifted) students.* ■ **Extension:** *Problem/activity to further thinking about concept. (Emphasis added.)* ■ *Differentiated Instruction: Meeting the Needs of All of Your Learners/Gifted Students: More challenging tasks, extensions that require in-depth coverage, extended investigation into related topics of the learner's choice, open-ended tasks or projects. NOTE: Make sure to list the projects and/or readings.*	The program does not guide teacher candidates to address the needs of students who have demonstrated proficiency, or the relevant language is inadequate. Examples: ■ *What extension will you provide to students who finish early?[10]* ■ *After Lesson: What opportunities will you provide for practice and extension?* ■ *Closure Activity/Extensions/Homework: How will you tie up the lesson? How will you give students an opportunity to practice the skill or show what they know? How will you ask students to reflect? How will you ask students to extend what they learned in the lesson? How will you know if the students understood the lesson and can apply the skills or content you taught?* ■ *Alternate plans with additional approaches: What will be done if technology doesn't work according to the original plan.*

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[10] The extension planning required here is focused on activities for students who complete their work early; it is not an extension that begins at the start of instruction for students who have already mastered the content objective of the lesson.

No references to pseudo-scientific methods of instruction (Indicator 11.6)

✔ · fully satisfies the indicator	✘ · does not satisfy the indicator
None of the program's instructional planning assignments encourage candidates to use pseudo-scientific methods of instruction.	One or more instructional planning assignments encourage candidates to use pseudo-scientific methods of instruction.
Examples:	Examples:
■ *No references to learning styles found in any document.*	■ Context-Related Factors: Classroom *Learning styles*/modalities
	■ The Instructional Block Plan provides a clear and detailed overview of the instructional activities for the unit. The activities are varied, *focus upon diverse learning styles*, and impact student engagement and motivation.

Lesson planning during student teaching (Indicator 11.7)

✔ · fully satisfies the indicator	✘ · does not satisfy the indicator
The program requires teacher candidates to develop lesson plans following explicit instructional design guidelines throughout student teaching.	The program does not require teacher candidates to develop lesson plans following explicit instructional design guidelines, or the relevant language is inadequate.
Examples:	Examples:
■ *Present daily, weekly and long-range plans for pre-approval by your master teacher and make them available to university staff and school administration at all times.*	■ *Anytime a student teacher teaches a lesson, a lesson plan is required. The lesson plan requirements are based on the discretion of the school-based, cooperating teacher.*
■ *Keep a daily lesson plan book with lessons written in the approved college format, available for review by the cooperating teacher… Always have a written lesson plan available for each observer at the beginning of all formal observations.*	■ *Phase Two: Student teachers who have been approved to move to Phase Two planning will use a format developed in collaboration with the classroom teacher and student teacher.*
■ *Be prepared. Each student-teaching intern is expected to prepare lesson plans for each day of teaching.*	■ *Written lesson plans will be addressed during each visit. You must fill out a lesson plan for every formal observation; it will serve as an outline for our pre-conference discussion.*

Research Inventory

Researching Teacher Preparation:
Studies investigating the preparation of teacher candidates in the various areas of <u>planning instruction</u>

These studies address issues most relevant to Standard 11: Lesson Planning

Area of Research	Total Number of Studies	Studies with Stronger Design		Studies with Weaker Design	
		Measures Student Outcomes	Does Not Measure Student Outcomes	Measures Student Outcomes	Does Not Measure Student Outcomes
Utilize Technology	31	0	1 Citation: 1	0	30 Citations: 5, 6, 8, 9, 17–19, 21, 27, 30, 33, 36–40, 42, 44, 49, 50, 52, 53, 58, 60–62, 66, 69, 74, 75
Accommodate for English Language Learners	8	1 Citation: 47	0	0	7 Citations: 11, 20, 22, 29, 56, 59, 76
Accommodate for Special Education Students	31	0	2 Citations: 72, 73	0	29 Citations: 2, 10, 12–14, 23–26, 28, 31, 32, 34, 35, 41, 43–45, 46, 48, 51, 55, 57, 63–65, 67, 68, 70, 71
Extend for Poficient Students	6	0	0	0	6 Citations: 3, 4, 7, 15, 16, 54

Note: Citation 7 is cross-listed with RI 15: Secondary Methods; Citation 15 and 37 are cross-listed with RI 5: Elementary Mathematics; Citation 31 is cross-listed with RI 9: Content for Special Education.

Citations for articles categorized in the table are listed below.

Databases: Education Research Complete and Education Resource Information Center (peer-reviewed listings of reports on research including United States populations).

Publication dates: Jan 2000 – June 2012

See *Research Inventories: Rationale and Methods* for more information on the development of this inventory of research.

1. Angeli, C., & Valanides, N. (2009). Epistemological and methodological issues for the conceptualization, development, and assessment of ICT-TPCK: Advances in Technological Pedagogical Content Knowledge (TPCK). *Computers & Education, 52*(1), 154–168.

2. Avramidis, E., Bayliss, P., Burden, R. (2000). A survey into mainstream teachers' attitudes towards the inclusion of children with special educational needs in the ordinary school in one local education authority. *Educational Psychology: An International Journal of Experimental Educational Psychology, 20*(2).

3. Bangel, N. J., Enersen, D., Capobianco, B., & Moon, S. M. (2006). Professional development of preservice teachers: Teaching in the Super Saturday Program. *Journal for the Education of the Gifted, 29*(3), 339–361.

4. Bangel, N. J., Moon, S. M., & Capobianco, B. M. (2010). Preservice teachers' perceptions and experiences in a gifted education training model. *Gifted Child Quarterly, 54*(3), 209–221.

5. Barnett, M., Houle, M., Mark, S., Strauss, E., & Hoffman, E. (2010). Learning about urban ecology through the use of visualization and geospatial technologies. *Journal of Technology and Teacher Education, 18*(2), 285–313.

6. Bates, A. (2008). Learning to design WebQuests: An exploration in preservice social studies education. *Journal of Social Studies Research*, *32*(1), 10–21.

7. Berg, D. E. (2010). Creative mathematics for all? A survey of preservice teachers' attitudes. *International Online Journal of Educational Sciences, 2*(2), 309–318.

8. Berlin, D. F., & White, A. L. (2012). A longitudinal look at attitudes and perceptions related to the integration of mathematics, science, and technology education. *School Science and Mathematics, 112*(1), 20–30.

9. Birch, A., & Irvine, V. (2009). Preservice teachers' acceptance of ICT integration in the classroom: Applying the UTAUT model. *Educational Media International, 46*(4), 295–315.

10. Brown, K. S., Welsh, L. A., Hill, K., & Cipko, J. P. (2008). The efficacy of embedding special education instruction in teacher preparation programs in the United States. *Teaching and Teacher Education: An International Journal of Research and Studies, 24*(8), 2087–2094.

11. Buck, G., Mast, C., Ehlers, N., & Franklin, E. (2005). Preparing teachers to create a mainstream science classroom conducive to the needs of English-language learners: A feminist action research project. *Journal of Research in Science Teaching, 42*(9), 1013–1031.

12. Burke, K., Sutherland, C., (2004). Attitudes toward inclusion: Knowledge vs. experience. *Education, 125*(2), 163–173.

13. Burstein, N., Sears, S., Wilcoxen, A., Cabello, B., & Spagna, M. (2004). Moving toward inclusive practices. *Remedial and Special Education, 25*(2), 104–116.

14. Campbell, J., Gilmore, L., & Cuskelly, M. (2003). Changing student teachers' attitudes towards disability and inclusion. *Journal of Intellectual and Developmental Disability, 28*(4), 369–379

15. Chamberlin, M. T., & Chamberlin, S. A. (2010). Enhancing preservice teacher development: Field experiences with gifted students. *Journal for the Education of the Gifted, 33*(3), 381–416.

16. Chamberlin, S. A., & Moore, A. D. (2006). Cognizance of gifted education among elementary-education professors from MCREL member states. *Roeper Review, 29*(1), 49–54.

17. Chen, R. (2010). Investigating models for preservice teachers' use of technology to support student-centered learning. *Computers & Education, 55*(1), 32–42.

18. Cleaves, A., & Toplis, R. (2008). Pre-service science teachers and ICT: Communities of practice?. *Research in Science & Technological Education, 26*(2), 203–213.

19. Dawson, K. (2007). The role of teacher inquiry in helping prospective teachers untangle the complexities of technology use in classrooms. *Journal of Computing in Teacher Education, 24*(1), 5–12.

20. DelliCarpini, M. (2009). Dialogues across disciplines: Preparing English-as-a-second-language teachers for interdisciplinary collaboration. *Current Issues in Education, 11*(2).

21. Devlin-Scherer, R., & Sardone, N. B. (2010). Digital simulation games for social studies classrooms. *The Clearing House, 83*(4), 138–144.

22. Durgunoglu, A., & Hughes, T. (2010). How prepared are the U. S. preservice teachers to teach English language learners?. *International Journal of Teaching and Learning in Higher Education, 22*(1), 32–41.

23. Eva, A. L., & Walker, B. (2010). Leveling the playing field: Preparing teachers for equitable instruction in diverse, inclusive classrooms. *AILACTE Journal*, 715–32.

24. Florian, L., & Linklater, H. (2010). Preparing teachers for inclusive education: Using inclusive pedagogy to enhance teaching and learning for all. *Cambridge Journal of Education, 40*(4), 369–386.

25. Florian, L., Young, K., & Rouse, M. (2010). Preparing teachers for inclusive and diverse educational environments: Studying curricular reform in an initial teacher education course. *International Journal of Inclusive Education, 14*(7), 709–722.

26. Forlin, C., Earle, C., Loreman, T., & Sharma, U. (2011). The Sentiments, Attitudes, and Concerns about Inclusive Education Revised (SACIE-R) Scale for measuring pre-service perceptions teachers' perception about inclusion. *Exceptionality Education International, 21*(3), 50–65.

27. Fraser, V., Garofalo, J., & Juersivich, N. (2011). Enhancing lesson planning and quality of classroom life: A study of mathematics student teachers' use of technology. *Journal of Technology and Teacher Education, 19*(2), 169–188.

28. Gao, W., & Mager, G (2011). Enhancing preservice teachers' sense of efficacy and attitudes toward school diversity through preparation: A case of one U.S. inclusive teacher education program. *International Journal of Special Education, 26*(2).

29. Gatbonton, E. (2008). Looking beyond teachers' classroom behaviour: Novice and experienced ESL teachers' pedagogical knowledge. *Language Teaching Research, 12*(2), 161–182.

30. Gronseth, S., Brush, T., Ottenbreit-Leftwich, A., Strycker, J., Abaci, S., Easterling, W., & … van Leusen, P. (2010). Equipping the next generation of teachers: Technology preparation and practice. *Journal of Digital Learning in Teacher Education, 27*(1), 30–36.

31. Grskovic, J. A., & Trzcinka, S. M. (2011). Essential standards for preparing secondary content teachers to effectively teach students with mild disabilities in included settings. *American Secondary Education, 39*(2), 94–106.

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