Most Effective Practices in Lesson Planning

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Published February 3, 2015

Abstract

In a previous study with 130 undergraduate teacher candidates from all licensure levels, data on candidate effectiveness were examined using factor analysis. Four factors were found in effective teaching, those being lesson planning, teacher and student reflection, safe school environment, and teacher professionalism The present study followed the 2012 one and was done to (1) determine whether the lesson planning factor was unitary or could be divided into any further factors, and (2) to identify subcomponents of lesson planning in terms of impact upon teaching effectiveness.

Keywords: teaching effectiveness, lesson planning, diversity, parent-guardian communication, instructional time, clear learning objectives

In a previous study, Womack, Hanna, and Bell (2012) discovered four main factors in teaching effectiveness for Arkansas Tech University interns: Lesson planning, teacher and student reflection, safe school environment, and teacher professionalism. This study attempted to (1) determine whether the lesson planning factor was unitary or could be divided into further factors and (2) identify subcomponents of lesson planning in terms of relative impact upon teaching effectiveness.

Lesson Planning and Time Demands. People who have the dispositions to become teachers want to be effective in producing positive changes in learners. But how much lesson planning is enough planning? How much emphasis should be placed upon the written plan, compared to the emphasis on the dynamics of the classroom, as the lesson unfolds? Which elements of lesson planning should be most emphasized?

It is not uncommon among teachers in our geographical area to find public school teachers who are writing 10 to 15 pages of lesson plans to document the classroom instruction of one single day. That is a tremendous amount of writing. Can we blame our public school colleagues for getting weary of their profession if those are the demands? Even if it was only 15 pages per *week*, that would be quite a bit of writing. The present study sought to determine a reasonably level of written documentation without sacrificing pedagogical effectiveness. Which parts of lesson planning lead to the greatest increases in teacher effectiveness?

It is difficult to argue against the efficacy of lesson planning. An ERIC electronic search on June 6, 2012 with the words “lesson planning” in any searchable field disclosed no less than 3408 entries. Much has been written about the importance of lesson planning, the inclusion and use of behavioral objectives of lesson planning, including assessments in lesson planning, the developmental appropriateness of lesson plans, and more. Our pre-service interns are told that to

attempt a formal observation of a lesson without a written lesson plan is likely to result in the equivalent of a zero on a major test. Philosophically, lesson planning to some level of completeness is regarded as sacrosanct.

"A person cannot teach what he or she does not know," declared Danielson (2007, p. 44). Lesson planning includes but is not limited to selecting content, organizing content, selecting assessments, and determining pedagogy (Danielson, 2007, p. 45; Popham, 2011).

We referenced two recent studies, both by Womack, Hanna, and Bell. The study was presented at the American Institute of Higher Education's 7th International Convention in Williamsburg, Virginia, in March of 2012, and was published in *The Journal of Administrative Issues* in 2012. These studies broke ground in finding relationships between lesson planning and teacher effectiveness, at least among pre-service teachers.

The previous factor analysis study of effective teaching by interns. As is likely the case in most teacher education units in the United States, our college of education uses an observation form for assessing teacher intern performance and for giving feedback. When the *Formative Observation and Intervention Form* was created several years ago, it was constructed so that items and domains had a great resemblance to the Pathwise evaluation (ETS, 1996). We obtained written permission from the Educational Testing Service before beginning to use it with our candidates out of respect for intellectual property rights. This form has become useful not only for assessing intern performance, but also for identifying the most salient elements of effective teaching. Put another way, "What is *really* being identified as being effective in my teaching?"

The effectiveness of teachers during classroom settings is rated as a category one, category two, or category three, depending upon very specific scoring criteria (ETS, 1996), with

a category one denoting an unacceptable level of effectiveness. The assessment of teaching competency is thus a very authentic portrayal of teaching performance since a very minimal level of subjectivity is employed. In addition to the 19 heavily research-based items related to the Pathwise system, two items were added locally for administrative and pragmatic reasons: one under Domain A to denote total preparedness to teach, and another under Domain D about the candidate meeting professional responsibilities. Table 1 depicts the content of the Pathwise-like observation form.

Table 1

Item specification and split-half reliability for a performance-based assessment of teacher effectiveness.

Item
Subscale: Domain A, Organizing Content For Student Learning
A1. Demonstrates knowledge of students' backgrounds, awareness of diversity in planning lessons
A2. Prepare clear learning objectives appropriate for all students
A3. Connect past, present, future content
A4. Vary methods and materials for learning . . . developmentally appropriate
A5. Align learning goals with assessments . . . systematic, monitoring, diagnostic
A6. Total preparedness for teaching
Subscale: Domain B. Creating Environment for Student Learning
B1. Models and promotes fairness with and among all students
B2. Generates a working rapport with all students
B3. Establishes high realistic expectations for all students
B4. Exercises consistent, appropriate behavior management
B5. Construct safe environment beneficial to learning for all students
Domain C: Teaching for Student Learning
C1. Clear Goals & Instructional Procedures
C2. Makes content Comprehensible, Meaningful Engagements, Connections
C3. Encourage all students to Extend thinking, Questioning, Critical thinking, Creative thinking
C4. Monitor understanding, give specific Feedback, and Adjust for all students
C5. Use instructional time effectively, Effective pacing, Time on Task
Domain D: Professionalism
D1. Reflect on extent of goals met

D2.	Initiates modifications, accepts responsibility, efficacy
D3.	Build professional relationships, collaborates
D4.	Parent/guardian communication
D5.	On time, professional appearance, meets deadlines, follows policies
Odds-Evens correlation	0.967, N=416 obs.

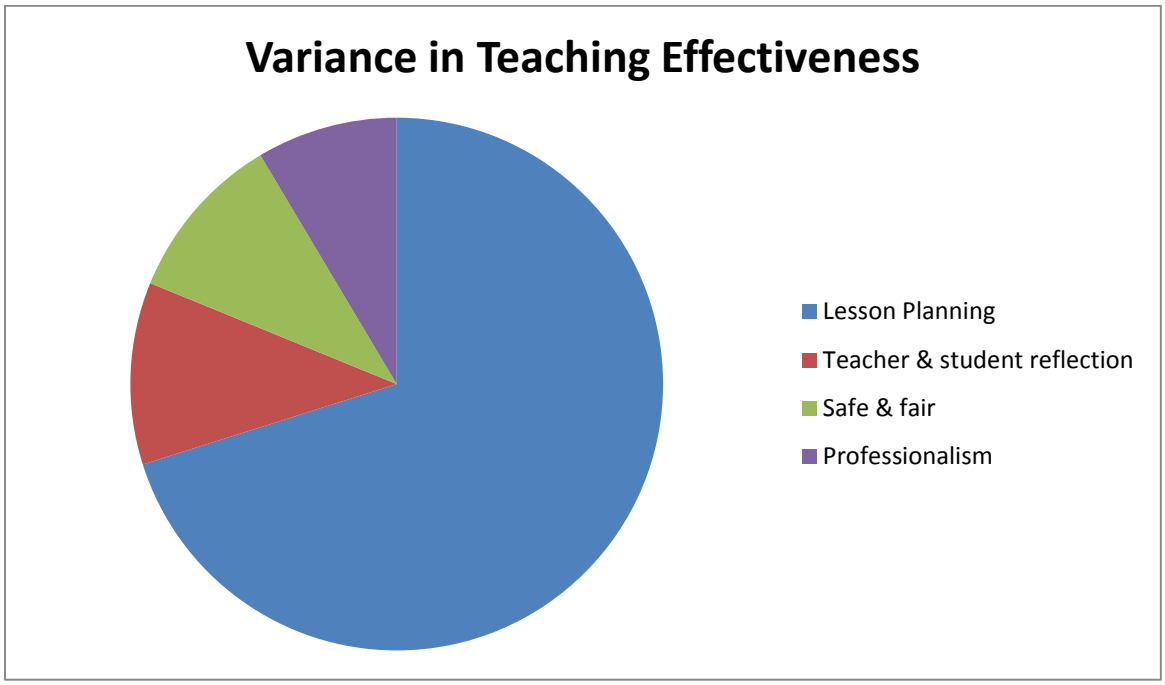
Note. Categories for each item were 1=Insufficiently motivated and insufficiently knowledgeable to perform in classrooms unless assisted 2=Sufficiently motivated and knowledgeable to perform and performs adequately appropriately in most classroom situations, meeting most learners' needs 3=Very well motivated, very knowledgeable about performance, and performs capably and flexibly in varied classroom situations with all learners

Participants were 63 early childhood, 9 middle level, and 58 secondary education interns, a total of 130 senior intern candidates. They were assigned to school campuses in the Western part of Arkansas, particularly along the I-40 corridor from Morrilton westward to the Arkansas-Oklahoma state line. All were assigned to accredited public schools and in content areas appropriate to their majors and expected licensures.

The observation form was used to collect data on 21 research-based items of teacher performance. Those 21 areas were grouped into four domains of (A) Organizing Content for Student Learning (B) Creating an Environment for Student Learning (C) Teaching for Student Learning (D) Teacher Professionalism. The initial factor analysis found four factors, but the four factors were not reflective of the domains by which the Formative Observation and Intervention form had been organized. Instead, the data from 416 observations of the 130 candidates of Spring 2010 indicated four factors: Lesson planning (41% of variance in teacher effectiveness scores), teacher and student reflection (6.5%), safe school environment (6%), and teacher professionalism (5%). Other communalities fell below the study's minimum Eigen value of one.

Figure 1

Four largest factors in teaching effectiveness (Womack, Hanna, & Bell 2012)



Results

In the present study, a second factor analysis was done, using the same data, to determine whether the *Lesson Planning* factor could be divided any further. The Statistical Analysis System calculations suggested that there might be two sub-factors in lesson planning. The first, with a Eigen value of 6.79, accounted for 45 percent of the variance. The second accounted for only 8 percent of the variance and had an Eigen value of 1.2, barely above the Mineigen cut-off of 1.0.

Detailed regression analysis of effective planning practices by interns. Since *lesson planning* was the largest factor in our interns' effectiveness in teaching, we used stepwise regression to determine, using the language of the *Formative Observation and Intervention* form, which items of lesson planning were most associated with our interns' effectiveness in the classroom. The

41% of the first analysis became the new 100% for this analysis. We used stepwise multiple regression in this second study to determine this (Table 2). Although the teacher effectiveness data might have appeared to be nominal or ordinal, they were treated as continuous (interval) for this analysis, given the admonitions of Kerlinger (1973, pp. 159, 181, 440-441) that overly strict adherence to conventions about calculative methods might result in an unnecessary loss of variance. The data set of well over 100 participants was deemed sufficiently large to permit the assumptions inherent in stepwise regression, and SAS did not generate any error messages.

Table 2

Summary of Stepwise Selection of Praxis III-like items for Predicting Performance on Lesson Planning

Step	Variable entered	# vars. In	Partial R^2	Model R^2	F	Pr> F
1	D2	1	0.5974	0.5974	261.12	<.0001
2	D4	2	0.1776	0.7749	138.04	<.0001
3	C5	3	0.0766	0.8515	89.77	<.0001
4	A2	4	0.0413	0.8928	66.65	<.0001
5	A6	5	0.0239	0.9167	49.35	<.0001
6	C4	6	0.0199	0.9366	53.67	<.0001
7	C2	7	0.0137	0.9503	46.98	<.0001
8	A1	8	0.0133	0.9636	61.90	<.0001
9	C1	9	0.0087	0.9724	53.22	<.0001
10	B3	10	0.0064	0.9788	50.66	<.0001
11	B5	11	0.0056	0.9844	59.88	<.0001
12	A3	12	0.0042	0.9886	60.00	<.0001
13	A5	13	0.0054	0.9940	145.95	<.0001
14	B2	14	0.0028	0.9968	144.72	<.0001

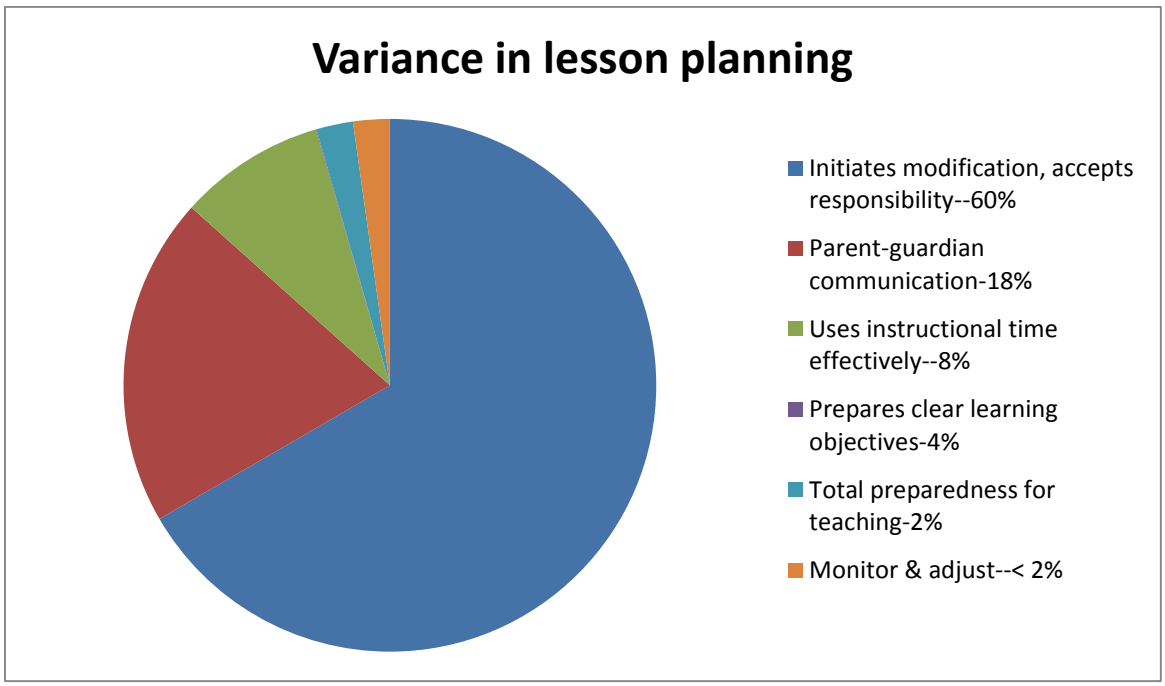
15	A4	15	0.0032	1.0000	Infty	<.0001

Several reflections were made after reviewing the data in Table 2. Specification of a second factor within the *Lesson Planning* one seemed spurious since 100% of the variance in intern teaching effectiveness was accounted for by the items correlated with Factor One. Lesson planning is a global and indivisible factor, although specific items used to asses lesson planning were identified.

Referencing the *Formative Observation and Intervention* data in Table 2, (1) accepting responsibility for initiating modifications stemming from knowledge of the learners, (2)parent – guardian communication, (3) using instructional time effectively and wisely, (4)preparing clear learning objectives, and (5) being globally prepared for teaching, were each more efficacious than monitoring and adjusting (Figure 2).

Figure 2

Factors in effective lesson planning



Initiating modifications, accepting responsibility, efficacy (Item D2) was the first and most substantial correlate (60 percent of the variance) with the lesson planning factor . Interns must know their learners well if they are to initiate modifications for them. They must be well grounded in the professional literature about diversity and must be able to recognize diversity in the classroom. They must accept responsibility for initiating modifications for atypical learners. Effective teachers must demonstrate the "I can make a positive difference" disposition.

Parent-teacher communication, accounting for 18 percent of the variance in the lesson planning factor, demonstrates the overall forward-looking dimension of the intern teacher. The intern who has planned adequately in terms of her learners and the content will have little reason to dread contact with parents. Teachers who know where they are going in the subjects they are teaching will be much more likely to enlist support from parents than teachers who lack that sense of direction. The confidence that comes from adequate planning spill over into parent-teacher communication as well as into a number of other areas.

Uses instructional time effectively, effective pacing, time on task as a third correlate (R^2=8 %) is a natural outgrowth of adequate lesson planning. Teachers who are well prepared for the instructional moment will lead their diverse learners into the content almost all of over moment. There will not be substantial delays due to the teacher's lack of knowledge of the subject matter. There will be no delays from not having handouts, web pages, Power Points, or other learning aids ready. Students will be less likely to wander off task or to create time delays because they will be able to sense that the activities of the classroom are purposive and objective-driven.

Prepares clear learning objectives appropriate for all students (4 percent of variance in planning) is essential to focusing lessons. At first glance, the preparation of objectives might appear to be time-consuming and a mostly clerical exercise. Objective-writing is much more than a paper-work exercise. Clear learning objectives, once decided upon, determine the nature of assessments that will follow the exposition of new content. Clear learning objectives suggest a method or methods for teaching. Clear learning objectives determine the level (Bloom's) of cognitive thought expected from students.

Total preparedness for teaching is a descriptor that was prepared locally rather than being an item that was part of the original Pathwise-like instrument. The fact that it accounted for only two percent of the variance in overall lesson planning is reflective of the fact that the other items enumerated above had already taken about 96 percent of the variance. *Total preparedness for teaching* is an item that helps in assessing a candidate's overall preparedness to teach on any given day.

Monitoring and adjusting, the sixth correlate with the planning factor, may be more highly esteemed by pre-service interns than experienced teachers. These data seem to bear out that dichotomy. Experienced teachers seem to rely less on their reflexes to solve problems and more on systematic, overall, global planning to keep them away from problems.

Discussion

The most productive way for our interns to demonstrate effectiveness and efficacy is to do an adequate job of lesson planning. If the planning isn't there, the old stand-by of "monitor and adjust" will be only one-thirtieth as effective as having accepted responsibility for planning and for making modifications for learners with diversities would have been. Preparation does not have to be long and arduous; it just has to *be there*.

How extensive does lesson planning have to be to "be there?" To obtain a qualitative perspective on this, we reviewed an English lesson plan from a finalist in the Arkansas Teacher of the Year competition. Then we reviewed a lesson plan from her intern (student teacher) who had been assigned to her and who was about to teach the same material about a contemporary Black author. What the experienced teacher noted in three sentences took the intern 2 ¼ pages, singled spaced, in Taskstream format. The intern's lesson plan received almost all perfect scores, and her lesson went well. The level of detail for her 30-plus year veteran supervisor was a lot less. Along with teaching experience comes the ability to "chunk"—to combine extensive and very detailed information into descriptive, very short titles.

The key issue for lesson planning is certainty—not exhaustiveness. The plan has to "be there," but it doesn't have to be unnecessarily lengthy. One assessment of whether lesson planning is adequate is to check whether the lesson can be delivered without halts or breaks in the delivery. The lesson plan exists to help the teacher know what to do next if there is a hesitation. If that goal is being met, and there is evidence that students are meeting the objectives, lesson planning is adequate.

Referencing the data in this study, lesson planning is most effective, and teaching is most effective, when the planning addresses the five items noted above: (1) accepting responsibility for initiating modifications stemming from knowledge of the learners, (2)parent –guardian communication, (3) using instructional time effectively and wisely, (4)preparing clear learning objectives, and (5) being globally prepared for teaching,

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