

Analysis of Student Learning Through Case-Writing

While we felt students had shown substantial growth and exhibited increasingly professional thinking about practice, we wanted to evaluate their learning more systematically. Building upon David Berliner's work on expert pedagogy, we identified five elements that appear to be characteristic of expert thinking, and added a sixth from our own experience:

- Sharing nuanced *details* about learners and their learning;
- Generating multiple *hypotheses*;
- Offering *connections* to theory and others' experiences;
- Providing *elaboration* that expands upon those connections;
- Making *qualifications* of generalizations, observations or hypotheses; and
- Including concrete *evidence of student learning*.

We conducted a content analysis of 21 of 56 cases sampled randomly from three of the five sections and representing the range of grades received in the course. Our analysis suggested that students' final cases did possess a substantial number of these six expert characteristics. In all the cases examined, students generated multiple hypotheses; offered multiple connections to theory and others' practices; elaborated and expanded upon theory, often in relation to their own practice; qualified certain statements and observations; provided specific details about learners and their learning; and shared concrete evidence of student learning. Many of the cases demonstrated a significant number of *all* of these features. Even the weaker cases demonstrated some evidence in each category of these "expert" moves.

Table 1. Analysis of a Subset of Students' Cases

Student	Section	Grade	Hypotheses	Connections	Elaboration	Qualifications	Detail	Evidence of Student Learning
1	A	Very Strong	11	6	16	6	18	23
2 (Sonya)	A	V. Strong	21	1	28	7	29	22
3	A	V. Strong	7	5	14	10	7	26
4	B	V. Strong	11	6	22	8	8	8
5	B	V. Strong	6	5	8	5	10	16
6 (Mika)	B	V. Strong	19	11	34	9	13	14
7	A	Strong	14	5	11	11	5	17
8	A	Strong	12	8	14	7	12	10
9	B	Strong	8	7	8	5	46	17
10	B	Strong	8	5	21	9	13	11
11	C	Strong	11	6	11	11	10	19
12	C	Strong	8	5	13	4	13	8
13	A	Proficient	16	8	18	8	14	17
14	A	Proficient	5	5	11	4	27	14
15	B	Proficient	11	9	18	4	18	13
16	B	Proficient	7	6	7	1	10	3
17	C	Proficient	8	3	5	5	3	22
18	C	Proficient	4	3	2	3	1	3
19	A	Weaker	6	5	11	4	17	7
20	C	Weaker	4	5	4	4	4	6
21	B	Weak	6	3	2	1	7	1

*This table is excerpted from the article “Toward Expert Thinking: How Curriculum Case-writing prompts the development of theory-based professional knowledge in student teachers” which appears in Darling-Hammond, L. & Hammerness, K. (2002) *Teaching Education*, 13(2), “The Pedagogy of Cases in Teacher Education,” [Special Issue] pp. 219-243, copyright with The University of Queensland.*

We wondered whether the strongest cases might simply have demonstrated more connections to the course readings and theories—just one element of expertise. However, as we illustrated in our analysis of the writing of [Sonya](#) and [Mika](#), the analysis found that the students were also hypothesizing, expanding upon ideas, building upon concrete examples of student learning, and adding relevant detail about students as learners. We also wondered whether our perception of the strength of the cases was influenced by writing fluency or factors like language use and length; however, two of the strongest cases were as short as two of the weakest cases, and several of the weaker cases were quite lengthy. The strongest cases contained a higher “density” of expert moves.

While this analysis revealed useful findings about the nature of student thinking as demonstrated in their final cases, we still wanted to evaluate whether these features were the result of a learning process associated with case writing. Could students' initial cases have already possessed these qualities of expert thinking? Perhaps the cases did not demonstrate any real growth in understanding or thinking. Furthermore, it's possible that the number of expert moves in a case analysis does not predict deeper understanding (Lundeberg, 1999). In order to investigate questions about the quality and development of students' expert thinking, we examined from initial outline to final draft the development of two cases that emerged as very strong analyses, and we supplemented our analysis with an examination of instructors' feedback, interviews with the two students, and a review of their reflective essays. Our goal was to understand whether the process of case writing had in fact deepened students' thinking and if so, how.

To read more about this analysis, see the [PDF version of our paper](#). Or, you can also investigate the development of students' cases by examining for yourself, the [actual drafts](#) we examined in our paper.