Technical Report for Teaching Development Grant #T0072: AQAC-Student
Perspectives on Outcomes: Insights for Course Development within OBL and 335
Frameworks

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1. Introduction

This technical report identifies and describes the methodologies and findings associated with the TDG research project "Student Perspectives on Outcomes: Insights for Course Development within OBL and 335 Frameworks". Further, this report develops a set of recommendations that may be used to inform the improvement of the Curriculum and Instruction core course "Curriculum and Assessment" (C & A) within the Postgraduate Diploma in Education (PGDE) program at the Hong Kong Institute of Education (HKIEd).

1.1 Background

HKIEd is moving into the 334/335 curriculum and a more student-centered and outcome-based approach. Improving students' learning outcomes requires that the curriculum focuses on ensuring that the intended outcomes are maximized in students' skills, knowledge, and understanding as a consequence of the course teaching, learning and assessment. The current trend in outcomes-based teaching, learning, and assessment (EC, 2001; UGC, 2004) focuses on a curriculum design model that is learner-centered (Biggs, 2001, HKIEd, 2006a; 2006b).

Learning outcomes "encompass a wide range of student attributes and abilities (Frye, 1999, p.4)". Three domains of learning outcomes that are of special significance are:

- workplace readiness and general education skills;
- content knowledge/discipline-specific knowledge and skills;
- "soft skills" (non-cognitive skills)

<div align="right">(Dwyer, Millett and Payne 2006).</div>

1.2 Research question

In a higher education system, "the focus must move to ensure that the implicit and explicit needs of students and other stakeholders are met" (Eagle & Brennan, 2007, p. 56). Positioning students to be co-creators would, then seem to necessitate granting students some authority in designing or at least evaluating educational outcomes.

However, course outcomes are typically designed by instructors or faculty committees with little or no student input. Student "voice" in educational construction and management exists partially through student evaluations of teaching (SETs), but the implementation of such evaluation is not a guarantee of students being heard (Gravestock & Gregor-Greenleaf, 2008) or that evaluation impacts construction and revision of learning outcomes. In an outcome-oriented system even the use of SETs would not ensure the educational quality. If higher education serves the professional practice of our students and graduates in the workplace, the "outcomes of teaching" must move beyond general perceptions of quality to consider students' perceptions of the outcomes embedded in their learning.

The purpose of this research project is to explore the results of affording students the opportunity to identify and evaluate course outcomes. Our focus emerges from the

following research questions:

1. What outcomes do students identify within a course?
2. How closely do those student-identified outcomes match the instructor and program's intended outcomes for the course?
3. How useful are the student-identified outcomes for success as a teacher according to students?
4. What developments or changes might be recommended for the course as a consequence of student evaluations of the perceived outcomes?

2. Methodology
2.1 Research context

The PGDE is a one-year full-time or two-year part-time postgraduate course at HKIED, for existing bachelor's degree holders leading to become a qualified teacher. Curriculum and Assessment (C & A) is a compulsory core course for PGDE students and aims to provide students with knowledge needed to understand and contribute to curriculum development and assessment tools development in Hong Kong. The course is taught in 10 three-hour lecture blocks, with a major content focus for each week. The course outline is identical for the EMI and CMI groups, but there is leeway for each instructor to change order of content and to select activities, readings, and examples according to their own understanding of the course. Consistent with contemporary approaches to curriculum study (e.g., Goodson, 1995; Pinar, Reynolds, Slattery, & Taubman, 1995), the major emphasis in the course was that there are multiple contested approaches to defining and using curriculum and assessment and that each approach has strengths and weaknesses.

The course intended learning objectives are to enable participants to:
1. Explain key concepts underlying curriculum and assessment;
2. Analyze a range of approaches to curriculum and assessment and evaluate their applicability for classroom practices; and
3. Develop understanding that will enable them to be effective professionals in education settings.

While following the same overall curriculum, the instructor for each medium of instruction had latitude in the order and emphasis they placed on the course content. The distribution of topics by medium of instruction is shown in Table 1. On a global scale the CMI group had four sessions on assessment, while the EMI group had three sessions. The extra session in EMI was dedicated to a curriculum topic.

Table 1. Course content by medium of instruction

Session	Medium of Instruction	
	Cantonese (CMI)	English (EMI)
1	Understanding curriculum in the context	Definition of curriculum
2		Curriculum and society: HK curriculum development
3	Teacher's role in C&A	Curriculum orientations and philosophies
4	Curriculum design and organization	Curriculum management and implementation
5		The 334 academic structure and new secondary school curriculum in HK
6	Principles of assessment	Curriculum design and planning
7	Assessment strategies and practices	Assessment reform and current approaches
8		Developing assessment instruments-with new curriculum orientation
9	External assessment in HK, assessment issues and reporting of assessment outcomes	High stakes assessment and assessment issues

2.2 Research design

This study focuses on students' identification and evaluation of the outcomes imbedded in their learning. In our study, we use a mixture of qualitative and quantitative approaches to understand students' identification and perceptions. The non-experimental research design consisted of repeated administrations of a two-part survey followed by student focus groups. Student reported outcomes were content analyzed and then aggregate data were statistically analyzed for differences. Survey results were complemented with responses from student focus groups. The combination of ethnographic interview methods and quantitative surveys provide more and better information than either technique used alone (Freidenberg, Mulvihill, & Caraballo, 1993)

A survey of student perceptions was used to obtain insights into phenomena that could not be directly observed for the sake of generalisable inferences (Patton, 2002). Further, this study aimed to identify possible explanations for trends in the survey responses and so a qualitative focus group was used as a complementary method (Morgan, 1997). Hence, the survey provided data as to student perspectives on the nature and importance of the course outcomes and the focus group sought possible explanations for the trends.

This survey is a complete, multiple instances census of all students enrolled in 3 classes. Across multiple lectures, student participants were asked anonymously to provide three learning outcomes and rate each outcome for its importance for success as a teacher. The surveys and focus groups were administered in both Chinese and English. Self-reports are likely to be valid and appropriate for use in quality assurance and performance improvement systems (Pike, 1996; The Middle States Commission on Higher Education, 2003, p.38).

Although the data is self-reported, the generalisability of the data to all students in the course is valid because no sampling of course participants was undertaken, students were surveyed multiple times within the course, students were asked to provide multiple pieces of data each time, and data were collected anonymously by a research assistant rather than the course instructor.

2.3 Participants

Participants consisted of the 76 registered students, in the course Curriculum and Assessment, within the PGDE at HKIED.

Data collection took place in 2nd semester in 2009-2010 academic year. Participants were divided into three course sections, offered in two languages: Chinese (Cantonese) Medium of Instruction (CMI) and English Medium of Instruction (EMI) with 50 participants in the two EMI sections and 26 in the CMI section. The EMI and CMI sections were taught by separate instructors who taught the whole course and the one instructor taught both EMI sections.

2.4 Instruments
2.4.1 Survey form
The survey inventory consisted of two parts. Part 1 asked students to identify three outcomes they perceived as having been addressed in the corresponding lesson/lecture. The specific prompt was "Please write down 3 expected learning outcomes from your course today, including knowledge based, comprehensive based or technical based". Part II asked students to rate how useful the learning outcomes identified in Part 1 were for professional success in light of their experience as a teacher or teacher education student. Students were instructed to rate each self-generated outcome on a five-point rating scale where 0=not useful, 1=slightly useful, 2=moderately useful, 3=mostly useful, and 4=very useful. The survey was distributed in a bi-lingual form for both The CMI and EMI students.

2.4.2 Focus group interview questions and protocols
A semi-structured approach was used in each group so that the interviewers focused on facilitating discussion to cover all major concerns raised by the survey results.
The interview process was divided into three stages.
    1. Introductory Questions and Statements Stage. This stage set a relaxed, friendly

environment, framed the purpose, identified the participants, and assured all involved that this is a formal and ethically guided procedure.

2. Research Questions Stage. The focus groups began by asking participants to recall the vivid memories about the course. The interviewer went through multiple "rounds" depending on time and the depth of response by the participant(s). We utilized recognized ethnographic interviewing techniques such as grand tour questions, mini-tour questions, group discussion stimulators, and mini-member check questions to gather useful information from the participants (Spradley, 1979). Ethnographic guidelines can provide a good starting point for this research, in that they focus attention on respondent's familiar understanding of resources, an understanding other interview techniques can fail to recognize (Johnston, Weaver, Smith & Swallow, 1995).

3. Concluding Statements and Questions Stage. During this stage, the interviewer(s) revisited the purpose of the research and the ethical guidelines that would govern data handling. In addition, time was allowed for participants to ask questions and bring up any concerns. In all cases, questions and concerns were addressed to the interviewees' satisfaction.

The guiding questions in focus group interviews were:
1. In recalling the experience of the course "Curriculum and Assessment" you took, what stands out as vivid memories?
2. Why do you remember these?
3. Can you tell me anything about the learning outcomes associated with that lesson?
4. How important do you think the learning outcome is?
5. Can you remember any particular occasion when you are engaged in evaluation, when you found outcomes are specially useful or outcomes you found specially not useful?
6. Is the objective of the whole course or each lesson achieved?

2.5 Data collection
Data collection consisted of two stages: survey and focus groups.
2.5.1 Survey procedures
The students were asked to fill in a survey form after each course lecture.

The number of students providing data and the number of learning outcomes provided for each course session surveyed for each medium of instruction is given in Table 2. As can be seen, the proportion of students participating in most sessions was more than 80% of the total class, except for Session 7 of the EMI course. Due to scheduling conflicts, data were obtained from only five of the 10 sessions in the EMI section, whereas all 10 sessions of the CMI course were surveyed. Note that this means two of the three assessment sessions were not surveyed in the EMI class, indicating that a different emphasis on this topic between the languages of instruction may reflect differences in data collection.

The total number of different learning outcomes generated by CMI students was 468 and 539 were generated by EMI students. On the average, EMI students provided 2.55 learning outcomes each, while the average for CMI students was 2.23. This suggests that on the whole students complied with the instruction to write up to three learning outcomes per session. Following collection, all data were entered verbatim into a spreadsheet and each outcome was given a unique identification number as an initial code tag.

Table 2.Counts of sessions, students and Learning Outcomes (LO)

Course Session	EMI		CMI	
	Students N	LO Sum	Students N	LO Sum
Session 1			26	63
Session 2			25	41
Session 3	49	136	25	60
Session 4	43	105	22	41
Session 5	50	122	21	50
Session 6	44	112	23	47
Session 7	25	64	20	53
Session 8			22	46
Session 9			26	67
Total	211	539	210	468

2.5.2 Focus Groups
Two focus groups were created (i.e., one each for the EMI, $n=5$ and CMI, $n=4$ section) by calling for volunteers to participate in a post-course focus group. Respondents were assigned randomly to the focus groups. Due to scheduling issues, one EMI section volunteer could not join the focus group and was interviewed separately by one researcher in English using the same inventory of questions and topics. The other focus groups were conducted by two interviewers (i.e., one of the course instructors and a research assistant) using Cantonese. All focus groups discussions and the interview data were transcribed for analysis.

2.5.3 Translation
Since much of the data were collected in Chinese and two of the investigators did not speak or read Chinese, all Chinese transcripts were translated into English. Where the logical intent of the participant was clear from context, a functional equivalence approach to translation was used (Jin & Nida, 2006). This approach focuses on the intent and meaning of the original language and attempts to replicate that meaning in

a new language. Where there was not enough material to understand the full intent of the writer or speaker, a literal translation was made. While every effort has been made to capture the meaning of student expressions, sometimes participants simply wrote one or two words and while translated accurately, there is some uncertainty to the intent of those expressions.

2.6 Data analysis

Survey data analysis followed conventional content analysis protocols. First all data were coded and common themes were established by consensus discussion by two investigators. Then, frequencies of each code were found. Mean importance scores for each theme were found and statistical analysis was used to determine the relative importance of each theme between media of instruction and between themes.

Following translation, all statements generated by students were read in English and grouped according to thematic content. An initial classification was carried out independently by the project research assistant. A second round of coding was then conducted by the two English-speaking researchers, resulting in a final coding structure. This procedure was carried out for both EMI and CMI data, and both survey and focus group data.

3. Results

3.1 Survey and focus group data

Based on the coding analysis of survey data, the major content emphases identified by students were: (a) philosophic issues underpinning curriculum studies such as aims, values, and nature of knowledge; (b) principles and theories of and approaches to curriculum; (c) principles and theories of and approaches to assessment; (d) political issues to do with curriculum policy, reform, and change and the interests and power of the various stakeholders communities; (e) practices of curriculum and assessment at both the system and classroom levels. These five areas were coded into three major categories (i.e., 1.Theory and Philosophy; 2.Political Issues; and 3.Practice and Implementation).

In focus groups data, we found two additional major categories, that is, 4. PGDE Course Co-ordination (critique of course quality and instructors' pedagogical practices) and 5.Students Profession Development (issues related to students career development). There are positive, neutral and improvement-orientated statements in these two codes.

All codes are given in Table 3.

Table 3.Coding Themes of Survey Data and Focus Groups Data

Major Themes with selected quotations

1.Theory & Philosophy

1a: Philosophy, Aims, Values, Epistemology

    What is knowledge and nature of knowledge [E3S27]

    Know how to apply the constructivism theory into the teaching [E5S2]

    Aims of education and how it copes with curriculum [E3S33]

1b: Curriculum Theory & Concepts

    Knowledge about curriculum design and analysis   [E3S96]

    Different orientations of curriculum approaches   [E3S110]

    Curriculum design pattern relate to different approaches   [E3S16]

1c: Assessment Theory & Concepts

    What is an effective assessment [C8S14]

    The difference/advantage/disadvantage between formative and summative assessment [E6S35]

    Feedback and reporting are important to students [E6S44]

1d: Learning Theory & Concepts

    Instructional models of different schools [C1S25]

    Understand the importance of discovery learning [E5S3]

    Know more about learning organization activities   [E4S34]

2.Political Issues

2a: Government Policy

    Reasons for curriculum reform [C1S34]

    The reasons of the change of curriculum [E5S44]

    The processes of the government to carry out reform [E4S38]

2b: Teachers & Schools

    To know more about school-based curriculum [C3S41]

    Importance/changes of teacher's role in education [E4S75]

    School-based curriculum and teachers' role [E4S60]

2c: Multiple stakeholders (Govt, Tchrs, Families)

    Which of the following impact the educational system and decision making (such as the teachers, schools, parents, society, and etc.) [C1S57]

    The stakeholders in curriculum development and their responsibilities [E4S1]

    Curriculum needs the support of many parties   [E4S36]

3.Practice and Implementation

3a: System level comparisons

    To understand the similarities and differences in the educational systems between two regions [C1S48]

    Compare US and HK's curriculum, teaching system [E5S37]

    It enables me reflect the pedagogy of examination   in HK and US [E5S64]

3b: Classroom level

    To know how to organize a curriculum [C3S167]

    Practical example for curriculum integration [C4S16]

    To analyze assessment testing methods [C8S39]

Major Themes with selected quotations

4.PGDE Course Co-ordination

4a: Positive

We can know many about approaches and theories of curriculum. **[E1FS6]**

Assignment and presentation can urge students to read the readings. It's more effective. **[C1FS2]**

The instructor provided different school examples and we can understand easier and the classroom atmosphere is better. **[C1FS3]**

4b: Neutral

I don't mind about this (essay format assignment). **[E1FS5]**

Our group analyzed the curriculum reformation process in Japan. **[C1FS2]**

There are many PPT, 30 to 40 pages in a lesson. **[C1FS3]**

4c: Improvement-oriented

There should be some synergy among the 2 modules. **[E1FS6]**

Indeed, we can read some of the PPT content at home, before the lesson. There should be more discussion in the class. **[C1FS3]**

I think the course should include more on assessment next year. **[E1FS7]**

5. Students Profession Development

5a: Positive

How he (a principal) manning manpower is important for us to prepare ourselves. **[E1FS7]**

Since they are real examples, we can analyze the school conditions by that material in job interview. **[C1FS2]**

I chose to study and my assignment on primary school curriculum integration. I think it would be helpful in teaching. **[C1FS3]**

5b: Neutral

The instructor invited the principal in order to let us know how the school runs 334. It's special. **[E1FS4]**

The theoretical content might not be applied in teaching work. **[C1FS3]**

Let us know how to implement in classroom, not in every subject. **[E1FS7]**

5c: Improvement-oriented

Generally, the thing you got from the book was not applicable. **[E1FS4]**

Since we have some theoretical foundation, we lack how to apply. We need to know how to apply. If we know how to apply, it would be helpful to our future teaching. **[C1FS2]**

We did hear about something practical, but we did not understand things in practical. **[E1FS6]**

Descriptions of reference code for the LO cited in section 3.1

[C3S23]

C: CMI

3: the 3rd instruction session

S: survey

23: the 23rd LO generated by students

[E1FS6]
E: EMI
1: the 1st interview
F: focus group
S6: the 6th interviewee

3.2 Frequency analysis of survey data

Table 4 provides the number of learning outcomes per medium of instruction for each of thematic categories. The sum of all importance rating is also provided.

Table 4.Frequency and importance of LOs generated by students

Category	Frequency		Summed Importance	
	CMI	EMI	CMI	EMI
1.Theory & Philosophy	268	308	742	820
1a: Philosophy, Aims, Values, Epistemology	1	52	2	129
1b: Curriculum Theory & Concepts	122	123	335	338
1c: Assessment Theory & Concepts	136	115	382	308
1d: Learning Theory & Concepts	9	18	23	45
2: Political Issues	42	88	116	219
2a: Government Policy	10	18	27	46
2b: Teachers & Schools	23	39	63	98
2c: Multiple stakeholders (Govt, Tchrs, Families)	9	31	26	75
3: Practice and Implementation	158	143	414	393
3a: System level comparisons	49	55	112	132
3b: Classroom level	109	88	302	261

Since the CMI and EMI groups have different numbers of students, the mean importance rating for each category was calculated (Table 5). Then the relative difference between the two groups was calculated using Cohen's d effect size. It is worth noting that values of $d<|.20|$ are considered trivial, values up to $|.39|$ are small, absolute values between .40 and .59 are moderate, and values $>|.60|$ are large (Hattie, 2009). All mean differences were less than .20 except for a small difference for 2b. Teachers and Schools, a moderate difference for 2.Political Issues, and a large difference for 2c.Multiple stakeholders (Govt, Tchrs, Families).

Table 5.Mean Importance Ranking by Medium of Instruction

Category	CMI		EMI		
	M	SD	M	SD	Cohen's d
1.Theory & Philosophy	2.77	0.63	2.66	0.78	0.16
1a: Philosophy, Aims, Values, Epistemology	2.00	Na	2.48	0.85	Na
1b: Curriculum Theory & Concepts	2.75	0.61	2.75	0.81	0.00
1c: Assessment Theory & Concepts	2.81	0.66	2.68	0.72	0.19
1d: Learning Theory & Concepts	2.56	0.53	2.5	0.79	0.09
2: Political Issues	2.76	0.53	2.49	0.77	0.41
2a: Government Policy	2.7	0.48	2.56	0.86	0.20
2b: Teachers & Schools	2.74	0.62	2.51	0.76	0.33
2c: Multiple stakeholders (Govt, Tchrs, Families)	2.89	0.33	2.42	0.76	0.80
3: Practice and Implementation	2.62	0.76	2.75	0.76	-0.17
3a: System level comparisons	2.29	0.65	2.4	0.74	-0.16
3b: classroom level	2.77	0.77	2.97	0.70	-0.27

Based on the analytic interest in the course independent of medium of instruction and because of the general similarity in ratings between language groups, it was decide to pool the importance ratings according to sample size. Table 6 shows the pooled mean importance for each thematic category. Overall, the students judged the classroom level practices and implementation outcomes to be most important for success as a beginning teacher and the rated the system level comparisons to be the least important (effect size difference in means d=.72). In general, the theory and philosophic underpinnings of the course were ranked similarly and relatively positive, while the political issues were deemed somewhat less important.

Table 6.Pooled Importance of Student Generated LO by Thematic Categories

Thematic Categories	M	SD
1.Theory & Philosophy	2.71	0.71
1a: Philosophy, Aims, Values, Epistemology	2.47	0.85
1b: Curriculum Theory & Concepts	2.75	0.71
1c: Assessment Theory & Concepts	2.75	0.69
1d: Learning Theory & Concepts	2.52	0.70
2: Political Issues	2.58	0.70
2a: Government Policy	2.61	0.72
2b: Teachers & Schools	2.60	0.71
2c: Multiple stakeholders (Govt, Tchrs, Families)	2.53	0.67
3: Practice and Implementation	2.68	0.76
3a: System level comparisons	2.35	0.69
3b: classroom level	2.86	0.74

4. Discussion

The survey of student perceived outcomes for the course Curriculum and Assessment provided some interesting results. First, the outcomes identified by students could be easily classified into the intended thematic curriculum of the course. This suggests that students were accurately sensitive to the priorities of the enacted classroom curriculum. Second, the differences in importance rankings given by students in the Emi and CMI groups of the course suggested that on the whole there was very little difference in their evaluation of the content. This suggests that medium of instruction plays little part in shaping student perceptions of their course experiences. This should come as little surprise given that 100% of the EMI students were actually ethnic Chinese. Third, the results point to the very strong preference for curriculum content that is focused on the local context but which is NOT theory-free. This stands in contrast to the traditional portrayal of teacher education students as being eclectically theory-free in their educational thinking and practices. This emphasis is of course quite understandable given the status of the students as university graduates completing an initial pre-service teacher preparation program. These students want to understand how to implement curriculum and assessment in the context of Hong Kong classrooms and give this a high priority relative to a more global appreciation of how Hong Kong policies and practices relate to other countries and societies.

Nonetheless, the actual phraseology of student response suggests that students were less focused on "outcomes" as they might be defined in literature and more on course contents. In previous studies (e.g. Daniel & McInnes, 2007; Dwyer, Millett & Payne, 2006; Frye, 1999; OECD, 2007), content knowledge, or discipline-specific knowledge and skills, is a prevalent domain of students perceived LOs. As Lawrence, Lindemann and Gottlieb (1999) suggested, the most valued learning outcomes by students

corresponded to basic profession knowledge. Donald and Denison (1996) found that students reported that a grounding in the fundamentals of the professional program was the most important feature to their specific academic development. Perhaps the students in this course believed that course contents were the basic requirements for their academic and profession development and consequently, focused more on the course contents-oriented LO.

The student's concern about their career development also is indicated by the focus groups data. In survey data, the students identified "what they had gained" as Los, whereas the focus groups members suggested that this course would include more contents related to student's professions development.

This discrepancy may be a consequence of focus. In the Chinese survey, the students were asked "請寫出三項今天的課程希望你達成的學習成果，包含知識性的、理解性的或是技巧性的。（Please write down 3 expected learning outcomes from your course today, including knowledge based, comprehensive based or technical based）". The phrase "學習成果 xué xí chéng guǒ (good results of learning)" means "achieved good results" which may have been understood as "what did you gain from today's class that was useful for your career development". However, in the focus groups, participants were asked to recall vivid memories of the course and evaluate the classroom practices and teaching contents. The focus groups members had more chances to talk about the relevance of the course content to their workplace readiness. This may reflect the phenomenon Donald and Denison (1996) identified that most education students prefer a good mixture of theory and practice about the course contents.

The CMI and EMI groups did not express significant differences in evaluating the importance of the sub-category LOs except for "2c: Multiple stakeholders (Government, Teachers, Families)". This difference may reflect differential emphasis by the instructors. Some studies have shown that classroom teachers' pedagogical practices, the learning agendas, even the structure and organization of the course can impact on students' perceptions of their learning outcome (Davidson, Passmore & Anderson, 2010; Raupach, Anders, Pukrop, Hasenfuss & Harendza, 2009). While the course outline is identical for the EMI and CMI groups, there is leeway for each instructor to change the order of content and to select activities, readings, and examples according to their own understanding of the course. Furthermore, the incomplete sampling of the EMI course may account for this discrepancy.

5. Implications

Two implications arise from this study. First, some changes in the course content of Curriculum and Assessment may be appropriate. Specifically, reducing emphasis on international comparisons in favor of greater time on practice and implementation of curriculum and assessment theories in the Hong Kong context. This is not to say that

the international comparisons are not important but given the role of the PGDE it may make more sense to place such material in a master of education level course. Certainly, though there is no need to remove theoretical knowledge from the course, though it may be useful to reduce focus on learning theory in favor of a cleaner focus on curriculum and assessment proper. The instructors may meet the student expectations by designing classroom level learning activities that help PGDE students grasp the practical implications of the theories and philosophies, rather than extending the range of material presented.

Second, there appears to be considerable virtue in terms of institutional or departmental quality improvement in obtaining feedback from students about the effectiveness of courses in achieving their intended outcomes. The results of this study reinforce the importance of obtaining insights from students.

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