

Supplementary Material S2: Student Questionnaire (Perceived Learning Gains)

Medical Case Writing Course – Learning Experience and Effectiveness Feedback (Student Version)

Part A: Basic Information

1. Gender: ☐ Male ☐ Female
2. Major: ☐ Basic Medicine ☐ Tianyuan Clinical Medicine ☐ Tianyuan Basic Medicine ☐ Tianyuan Preventive Medicine
3. Previous cumulative GPA range: ☐ Top 25% ☐ 26%–50% ☐ 51%–75% ☐ Bottom 25%

Part B: Perceived Helpfulness of the Course

4. Please rate the helpfulness of the case-writing experience for each competency on a 5-point scale (1 = no help at all; 5 = great help).

Item	Competency	1	2	3	4	5
R1	Strengthened ability to analyse complex clinical problems, synthesise information, weigh options, and make reasoned decisions	☐	☐	☐	☐	☐
R2	Developed clinical reasoning skills (e.g., differential diagnosis, decision analysis)	☐	☐	☐	☐	☐
R3	Enhanced perseverance in in-depth inquiry and systematic thinking when facing complex problems	☐	☐	☐	☐	☐
R4	Encouraged multi-perspective thinking and novel case design or solutions	☐	☐	☐	☐	☐
R5	Prompted critical appraisal of literature, questioning of assumptions, and evaluation of medical evidence	☐	☐	☐	☐	☐
R6	Improved self-directed learning and research abilities (e.g., literature searching, information evaluation)	☐	☐	☐	☐	☐
R7	Enhanced awareness of patient privacy protection and bioethics	☐	☐	☐	☐	☐
R8	Increased understanding of the physical, psychosocial, and social impact of illness on patients	☐	☐	☐	☐	☐
R9	Deepened understanding and identification with the roles	☐	☐	☐	☐	☐

Item	Competency	1	2	3	4	5
	of “physician” and “medical educator”					
R10	Strengthened sense of professional responsibility and mission as a future healthcare guardian	○	○	○	○	○

*Note: Items were grouped into dimensions: analytical problem-solving (R1), clinical reasoning and systematic thinking (R2, R3), innovative thinking (R4), critical thinking (R5), self-directed learning (R6), medical humanities literacy (R7, R8), professional identity (R9, R10), and a composite higher-order thinking index (mean of all 10 items).

Part C: Most Valued Components and Main Challenges (multiple choice)

5. Which part(s) did you find most attractive or helpful?
 - ☐ Systematic instruction on case writing theory and methods
 - ☐ Detailed group/individual guidance from faculty
 - ☐ Peer discussions and mutual learning
 - ☐ Achievement from creating a complete case from scratch
 - ☐ Pleasure of self-improvement in knowledge, abilities, and qualities
 - ☐ Other (please specify): _____
6. What were the main difficulties you encountered?
 - ☐ Difficulty organising fragmented knowledge into a logically coherent narrative
 - ☐ Difficulty calibrating appropriate difficulty levels and learning objectives
 - ☐ Insufficient literature searching and evidence- integration ability
 - ☐ Time constraints and high task pressure
 - ☐ Desire for more targeted guidance from instructors
 - ☐ Other (please specify): _____

Part D: Open-ended Questions

7. Through the role transition from “case learner” to “case writer/author”, what was your most significant gain? (e.g., changed understanding, new thinking, interests, etc.)
8. After completing your case creation, what aspects of medical knowledge or thinking skills do you realise you still need to strengthen?
9. Do you have any specific suggestions regarding course content, teaching methods, activity arrangements, evaluation, or workload?
10. What are your overall thoughts on the course?