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Teaching Design of "Literature Retrieval and Writing" Course Based on OBE Concept

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Abstract: Literature Retrieval and writing is a fundamental course in information literacy. In the context of engineering education accreditation, this paper presents an Outcome-Based Education (OBE) teaching design for the course. The instructional content is modularized, specific student learning outcomes are articulated, and a comprehensive evaluation system is established. This teaching design aims and contributes the enhancement of students' academic competencies and foster improved learning achievements.

Keywords: Literature retrieval and writing; OBE teaching design; Student learning outcomes

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1. Introduction

The teaching design plan for the "Literature Retrieval and Writing" course based on the OBE (Outcome Based Education) concept focuses on students' learning outcomes, with reverse design of teaching objectives, content, activities, and evaluation system, emphasizing ability orientation and practical application [1–3]. "Outcomes" refers to the knowledge, skills, and attitudes that students can continuously apply after completing their studies, emphasizing observable behavioral changes [4].

2. Basic course information

(1) Course Name: Literature Retrieval and Writing.
(2) Course positioning: Information Literacy and Academic Ability Core Basic Course, serving students' research introduction, paper writing, and lifelong learning ability cultivation [5,6].
(3) Target audience: Undergraduate seniors, various majors.
(4) Credit/hour: 1 c redit/18 hours (2 hours of theory + 16 hours of practice).
(5) Textbooks: Literature Retrieval and Paper Writing, Practical Course on Literature Retrieval [7,8].

3. OBE core concept and goal design

OBE emphasizes "student-centered", "outcome oriented", and "continuous improvement". It is necessary to first clarify the expected learning outcomes (SLOs) of the curriculum and use them to reverse design the teaching process [9]. SLOs have the characteristics of specificity, measurability, and relevance to real tasks.

3.1. Expected learning outcomes (SLOs) of the course

Through course learning, students should be able to achieve the following three-dimensional SLOs [10].

3.1.1. SLO1 (knowledge)

Systematically grasp the theoretical framework of literature retrieval (such as literature types, database principles), academic writing norms (such as APA/MLA/GB/T 7714 format), and academic ethics (such as citation rules, anti-plagiarism).

3.1.2. SLO2 (capability)

Ability to efficiently obtain target literature (multi database collaborative retrieval, keyword optimization, literature screening); Be able to critically analyze literature (identify research gaps, extract core viewpoints); Independently complete academic standard paper/research report writing (the entire process from topic selection to final draft).

3.1.3. SLO3 (literacy)

Developing a research mindset of actively acquiring and integrating information; Establish a sense of academic integrity and respect the intellectual property rights of others; Capable of teamwork and communication skills (such as group literature review presentations and peer evaluations).

4. Teaching content design: reverse construction of the "achievement ability knowledge" chain

Based on SLOs, infer the required abilities and knowledge from the final outcome (such as "independently completing an academic paper in core journal format"), modularize knowledge points, adopt a step-by-step teaching content, and highlight practicality and problem orientation [11-13]. The module framework is shown in **Table 1**.

Table 1. Curriculum module framework for literature research and academic writing

Knowledge point module	Core Content	Corresponding SLO
Module 1: Fundamentals of Literature Retrieval	Type of document (journal/dissertation/patent/conference/standard, etc.); Database Principles (CNKI/Web of Science/PubMed, etc.); Retrieval language (keywords/subject headings/Boolean logic)	SLO1 (Knowledge) SLO2 (Capability)
Module 2: Efficient retrieval practice	Design of search strategy (topic selection → decomposition of keywords → combination of search queries); Database retrieval practice (CNKI, Wanfang, WOS, Elsevier) Advanced database functions (citation tracking, visual analysis); Literature screening (quality assessment: citations/publishing journals/research methods)	SLO2 (Capability)

Table 1 (Continued)

Knowledge point module	Core Content	Corresponding SLO
Module 3: Literature analysis and criticism	Literature reading skills (skimming → intensive reading → skipping); Literature review logic (research background → current status → hot topics → deficiencies → innovation points); Critical thinking training (evaluating research design, data reliability, and conclusion limitations)	SLO2 (Capability) SLO3 (Literacy)
Module 4: Literature knowledge management	Comparison and installation tips for literature management software (Endnote); Literature classification management (classification system design → metadata annotation → association network construction); Literature screening and in-depth processing (initial screening of titles/abstracts → rescreening of full texts → fine screening of core viewpoints → final screening of usable materials); Long-term maintenance and reuse of knowledge base	SLO2 (Capability) SLO3 (Literacy)
Module 5: The entire process of academic writing	Analysis of paper structure (title/abstract/introduction/methods/results/discussion/references); Writing norms for each section (e.g., the introduction should include "problem statement - literature gap - research objectives"; The discussion should include "result interpretation - comparison with previous studies - theoretical/practical significance"; Academic language expression (objective, concise, logical)	SLO2 (Capability) SLO1 (Knowledge)
Module 6: Academic ethics and norms	Citation rules (direct citation/indirect citation; avoid self-plagiarism); Utilization of plagiarism detection tools (Turnitin/iThenticate); Case analysis of academic misconduct (plagiarism/data tampering/multiple submission of the same manuscript)	SLO1 (Knowledge) SLO3 (Literacy)

5. Teaching activity design: "learning by doing" and "reflection and iteration"

OBE emphasizes active learning and real task driven learning, ensuring that students achieve learning outcomes through a closed-loop design of "case introduction → task driven → group collaboration → teacher feedback → iterative improvement".

6. Evaluation system: multi-dimensional and process-based assessment

OBE requires direct correlation between evaluation and learning outcomes, using a combination of "formative evaluation + summative evaluation", with a focus on the process of improving students' abilities and the quality of the final outcomes [14-15]. The evaluation framework was shown in **Table 2**.

Table 2. Student evaluation framework aligned with SLOs

Evaluation dimension	Evaluation method	Percentage	Corresponding SLO
Knowledge mastery	Theoretical testing (online answering, focusing on retrieval principles, writing standards, academic ethics)	20%	SLO1
Practical ability	Search task completion rate (search report for a given topic, including strategy, results, and screening criteria); Final quality of paper (structure, logic, language, standardization)	35%	SLO2
Learning reflection	Contribution to group tasks (peer rating + teacher observation); Learning log (recording retrieval difficulties, writing revision process, reflection and improvement points)	40%	SLO3
Innovative and expansion	Depth of literature review (whether new perspectives are proposed); The innovation of the paper (such as the novelty of the research question/method/conclusion)	5%	SLO2

7. Teaching support and continuous improvement

Digital resources such as database usage guides (such as CNKI advanced search tutorials), academic writing templates (universal versions for various disciplines), and instructions for using plagiarism detection tools should be provided. Course QQ/WeChat groups to provide real-time answers to students' questions should be established.

The achievement of teaching objectives through student evaluations, course feedback questionnaires, and learning log analysis such as "over 80% of students are able to independently complete core journal format papers" was prepared. Teaching content (such as updating database cases, supplementing writing standards in emerging fields) and activity design (such as adding interdisciplinary literature analysis tasks) every semester to ensure synchronization with student needs and disciplinary development should be revised.

8. Course features

All teaching activities revolve around "students being able to write an academic paper that meets the standards", avoiding "learning to search for the sake of learning" and "learning to write for the sake of learning to write".

Using students' actual needs (course papers, graduation theses) as scenarios to enhance learning motivation and application value.

Balancing basic skills (retrieval, writing standards) with advanced abilities (critical analysis, innovative thinking) to meet the developmental needs of students at different levels.

9. Conclusion

Through the above design, the course can achieve a transformation from "knowledge imparting" to "ability cultivation", truly implement the OBE concept, and enhance students' academic competitiveness and lifelong learning ability.

Disclosure statement

The author declares no conflict of interest.

References

[1] Mahrishi M, Ramakrishna S, Hosseini S, et al., 2025, A Systematic Literature Review of the Global Trends of Outcome-Based Education (OBE) in Higher Education With an SDG Perspective Related to Engineering Education, Discover Sustainability, 6(1): 620.

[2] Hossain S, 2023, A Study on Quality Assurance of Higher Education and Outcome-Based Education in Bangladesh, Open Journal of Social Sciences, 11: 72–80.

[3] Li Z, Zhu H, Liu Z, et al., 2014, Guiding the Teaching Reform of Higher Engineering Education With the Concept of Achievement-Oriented Education, Research on Higher Engineering Education, 2014(2): 29–34 + 70.

[4] Spady W, Marshall K, 1991, Beyond Traditional Outcome-Based Education, Educational Leadership, 49(2): 67–72.

[5] Han L, Wang Y, Zeng X, et al., 2023, Innovative Exploration of Information Literacy Education for High-Quality Undergraduate Talent Cultivation: Taking the Practice of Tsinghua University Library as an Example, Journal of

Academic Libraries, 41(5): 62–68.

[6] Huang Y, Zhang H, Yuan C, et al., 2023, Research on Information Literacy of Students in Independent Undergraduate Universities: Empirical Analysis Based on G University, International Journal of Technology and Human Interaction, 19(1): 1–26.

[7] Li Z, 2016, Literature Retrieval and Paper Writing, Beijing: Tsinghua University Press.

[8] Yao J, Huang J, Chen Z, et al., 2017, Practical Tutorial on Literature Retrieval, Beijing: Tsinghua University Press.

[9] Li Z, Wang Z, 2021, Results Oriented Curriculum Teaching Design, Higher Education Development and Evaluation, 37(3): 91–98.

[10] Huang H, 2014, Assessment of Student Learning Achievements: A Study on Quality Assurance of Higher Education in the United States, Beijing: Education Science Press.

[11] Li B, Jiao W, Zhu K, 2023, Reform of Classroom Teaching Mode for Water Pollution Control Engineering Based on Knowledge Modularization, College, 2023(26): 157–160.

[12] Jaganathan S, Bhuminathan S, Ramesh M, 2024, Problem-Based Learning – An Overview, Journal of Pharmacy and Bioallied Sciences, 16: 1435–1437.

[13] Bijsmans P, de Bruin J, Groen A, 2025, 'It's Like Two Different Worlds': The Multifaceted Nature of Social Support in Students' Transition From High School to a Problem-Based Learning Undergraduate Programme, European Journal of Higher Education, 15(1): 149–165.

[14] Wang H, Liu Z, Huang B, et al., 2022, Exploration of Teaching Practice of "Literature Retrieval and Scientific Paper Writing" Course Under OBE Concept, Digital Printing, 2022(04): 97–103.

[15] Bi X, 2023, OBE Research on Process Evaluation of Case Teaching, Management Case Studies and Comments, 16(1): 107–114.