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Original Paper

Assessment Reform for Introduction to Sociology from the Perspective of the Field Classroom: A Fuzzy Comprehensive Evaluation Framework

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Abstract

Assessment reform is central to turning the field classroom from an occasional activity into a durable mechanism of sociological learning. Drawing on the reform of Introduction to Sociology, this article explains how process-based field assignments and summative examination tasks can be aligned around knowledge, competence, and value formation. It then introduces a fuzzy comprehensive evaluation framework whose indicators and weights come directly from the assessment scheme. The framework converts cohort-level score distributions into membership vectors and returns diagnostic evidence to teaching. The reform shows that field-based questioning and assignments help students connect theory with everyday life, strengthen research awareness, and make value-oriented education concrete. Experiential learning, constructive alignment, and transparent evaluation should therefore be designed as one system.

Keywords

field classroom, Introduction to Sociology, assessment reform, fuzzy comprehensive evaluation, experiential learning

1. Introduction

Assessment tells students what counts as valuable learning. In Introduction to Sociology, reliance on lectures and written examinations may enable students to recite concepts without learning to observe social life, formulate researchable questions, or apply theory. This limitation is consequential for public affairs and administrative management students, whose later work requires sociological analysis of governance, communities, and social policy. (Jiang, 2024)

The reform responds to two policy requirements. National education policy has encouraged

student-centered inquiry, cooperation, and seminar learning, (Ministry of Education of the People's Republic of China, 2010) while the 2023 national call for investigation and research treated fieldwork as a basic competence for understanding reality and improving practice. (General Office of the CPC Central Committee, 2023) For sociology, these requirements converge because fieldwork is both a research method and a setting in which abstract concepts become observable.

The course team therefore redesigned assessment around the field classroom. It asked how field assignments can be aligned with sociological knowledge, how process and summative assessment can reinforce one another, and how reform quality can be evaluated without reducing multidimensional learning to one examination score. A fuzzy comprehensive evaluation framework was added to answer the third question.

2. Conceptual Basis

The field classroom treats both classroom and society as sites of inquiry. Concepts, methods, and research ethics are introduced in class, but learning extends to dormitories, associations, villages, and community networks. Students move from familiar relations toward questions about socialization, interaction, stratification, mobility, and social order. (Wang, 2008)

The rationale combines experiential learning with constructive alignment. Dewey links action, reflection, and further action; Kolb moves from concrete experience through observation and conceptualization to application. (Dewey, 1938) Constructive alignment requires intended outcomes, learning activities, and assessment evidence to support one another. (Biggs & Tang, 2011) Each field task is therefore tied to a chapter, a method, and assessable evidence.

3. Assessment Reform in Practice

The course combines ten points for classroom participation, three ten-point field assignments, and a sixty-point final examination divided between knowledge and application. The design preserves examination discipline while making learning visible and allowing feedback before the course ends.

Table 1. Assessment Structure of the Reformed Course

Module	Component	Assessment focus	Score
Classroom learning	Attendance	Participation and learning discipline	10
Field practice	Assignment 1: research methods	Problem selection and scientific procedure	10
	Assignment 2: micro-sociology	Socialization and social interaction	10

	Assignment 3: macro-sociology		Stratification and social mobility	10
Final examination	Part I: knowledge		Overall theoretical understanding	30
	Part II: application		Case analysis of social problems	30

Process assessment begins with questions that connect concepts to experience: Why is a problem worth investigating? How are group members connected? Has stratification become rigid? How can a familiar community be made analytically strange? These questions diagnose prior understanding, motivate discussion, and support timely value-oriented guidance. (Black & Wiliam, 1998)

The three field assignments form a progression: turning a phenomenon into a researchable plan; applying micro-sociological concepts to interaction; and interpreting stratification, mobility, or community change. The final examination tests systematic knowledge and applied analysis. Open-ended cases have addressed population change, inequality, housing, crime, and other public problems, rewarding coherent sociological reasoning rather than a single standard answer.

4. Fuzzy Comprehensive Evaluation

A total score cannot show which dimension is working or needs adjustment. Fuzzy comprehensive evaluation is appropriate because performance involves multiple indicators and graded boundaries. Fuzzy set theory allows performance to belong to a quality level to a degree rather than only wholly or not at all. (Zadeh, 1965)

The indicator system is derived from the existing assessment structure, so the evaluation weights are transparent and do not require an additional invented weighting exercise. Let U = {u1, u2, u3, u4, u5, u6} denote the six indicators shown in Table 2, and let V = {excellent, good, average, pass, poor} denote the evaluation set. Score intervals are defined as 90–100, 80–89, 70–79, 60–69, and below 60, respectively.

Table 2. Indicators and Weights for Fuzzy Comprehensive Evaluation

Indicator	Evidence source	Weight
u1 Knowledge mastery	Final examination, Part I	0.30
u2 Research-method literacy	Field Assignment 1	0.10
u3 Micro-level application	Field Assignment 2	0.10
u4 Macro-level application	Field Assignment 3	0.10

u5 Integrated applied analysis	Final examination, Part II	0.30
u6 Participation and discipline	Attendance and classroom participation	0.10

For a cohort of 326 students, let nij be the number whose performance on indicator ui falls into level vj. The membership degree is rij = nij / 326 The matrix R = (rij)6×5 is then combined with the weight vector W = (0.30, 0.10, 0.10, 0.10, 0.30, 0.10): B = W × R = (b1, b2, b3, b4, b5). A comparable score can be calculated as $S = B \times C^T$, where C = (95, 85, 75, 65, 50). The maximum value in B identifies the modal level, while S provides a continuous summary. (Zimmermann, 2001)

The diagnostic value of the model lies in decomposition. If membership for u2 is concentrated at "average," the problem may lie in research design rather than general knowledge; if u5 is weak, students may need more practice in integrating concepts across a complete case. Because B remains a distribution, instructors can identify weak dimensions even when S appears acceptable. The weights are not arbitrary: they reproduce the relative stakes already assigned by the course assessment scheme. Fuzzy evaluation therefore extends, rather than replaces, teacher judgment.

The source article documented the scheme and qualitative outcomes but did not archive cohort-level frequency distributions. This article therefore does not invent a retrospective fuzzy score. It specifies the protocol: record each indicator's five-level distribution, compute R after every cohort, compare B and S, and inspect weak dimensions before revising the course.

5. Observed Outcomes

Student feedback suggests that the reform made learning more meaningful. A 2024 public affairs management student reported that the course clarified social networks and stimulated social exploration. A 2023 administrative management student described the field cases as vivid and interactive. Although not substitutes for systematic measurement, these comments show that students perceived a closer connection among theory, experience, and inquiry.

The reform also changed how students selected problems and used theory. One group traced relationships within a four-person dormitory network; another studied migrant workers and older residents in a "disappearing village"; others examined continuing socialization in student associations. These projects moved learning from memorization toward observation, comparison, ethical reflection, and explanation. (Ma, 2023)

Finally, the field classroom altered teacher–student interaction. Teachers encounter questions, field notes, and incomplete reasoning during the semester, so feedback becomes more timely. Students see that their observations matter. This reciprocal visibility makes value formation less abstract: social responsibility and public concern are anchored in problems students have investigated.

6. Discussion

The reform's contribution is not the replacement of examinations by activities but the construction of an aligned sequence. Classroom questions create readiness; field assignments provide evidence of method use and application; the final examination checks systematic understanding and transfer; and fuzzy evaluation returns information about the whole system.

Several conditions remain necessary. Field tasks need explicit rubrics; teachers should calibrate scoring and preserve anonymized distributions for the fuzzy matrix. Ethical requirements—including informed consent, privacy protection, and respectful interaction—must be taught before fieldwork. (Hammersley & Atkinson, 2019) Future research should test inter-rater reliability, compare cohorts, and combine fuzzy scores with interviews or pretest–posttest measures.

7. Conclusion

Assessment reform in Introduction to Sociology works best as an integrated design: field experience supplies concrete problems, process assessment sustains inquiry, summative assessment secures conceptual rigor, and fuzzy comprehensive evaluation makes multidimensional quality visible. Grounded in the existing score structure, the framework can generate diagnostic evidence for continuous improvement while connecting theory, practice, and value formation.

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