Asia Pacific Science Press

Asia Pacific Economic and Management Review
ISSN(O):3005-9275
ISSN(P):3005-9267
Vol. 3 No.6 (2026)

Research on the Application of Issue-Driven Inquiry Pedagogy in Ideological and Political Courses through Debates on the Green Low-Carbon Economy

Xuan Zhao*

Taizhou University, Taizhou, Zhejiang, 318000, China

Corresponding author: Xuan Zhao, johnzhao@tzc.edu.cn

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Abstract: The Green Low-Carbon Transition will change the structure of the economy and redistribute industrial advantages, assets, fiscal power and transitional pressures. Traditional ideological and political education often presents decarbonisation as an ethical-environmental issue and does not consider the financial trade-offs; thus, it adopts a principle-oriented, confirmatory mode of teaching that does not help students explore the distribution of conflicts among carbon pricing and incentives, border tariffs, industrial downsizing, etc. The problem this paper studies is the low-carbon political-economic tension. Distributive analysis and institutional comparison are more appealing to students than doctrinal recitation; therefore, the first step in the teaching plan will be to present some real-life economic problems and then ask students to identify the winners and losers. The flexible teaching unit provides an ethics and laworiented inquiry framework for sociotechnical governance education.

Keywords: Issue-Driven Inquiry Teaching; Ideological and Political Courses; Green Low-Carbon Economy; Political Economy; Just Transition; Distributional Justice

Published: Nov 19, 2026

DOI: https://doi.org/10.62177/apemr.v3i6.1825

1. Introduction

The general idea presented in the media around the world is that everyone will voluntarily reduce greenhouse gas emissions. Academia has proposed that the decarbonisation initiative will create new sources of carbon wealth, change government financial allocation, bring about structural adjustment in declining industries, and provide all kinds of competitive advantages for various regions and companies (Newell & Mulvaney, 2013). Carbon taxes and other green policies have not resolved the trade dispute; instead, new distribution problems have arisen. Undergraduate students of ideology and politics usually do not learn about this economic aspect. The strategies concentrate on the ethical obligation of environmental protection and the tactical value of the goals for carbon peaking and carbon neutrality ("dual-carbon"), but do not address the allocative, fiscal and industrial tensions in the implementation of these policies.

There will be teaching problems. When learners learn about the increase in energy costs and other problems in open discussions, they are often unable to differentiate between productivity claims and fairness reasons, and they cannot identify which groups in society will bear the costs of change. They may take two extreme positions: either blindly praise the renewable energy policies or, on the other hand, ridicule the concept of climate responsibility for the local people. Neither of the above can cultivate the cognitive abilities of ideological and political education. Thus, the academic exercise is not to

make students experts in energy finance, but to give them the basic economic literacy that recognises that decarbonisation is not a free ethical cause; rather, it is a systemic adjustment of assets that generates particular winners and losers, and the success of the adjustment depends on how these responsibilities are handled (Carley & Konisky, 2020).

The problems in China are more severe and urgent in practice. Coal generation is declining and solar power is rising rapidly at the same time; resource-dependent areas and maritime industrial clusters have very different financial conditions, labour structures and transition periods; export-oriented manufacturing faces the issue of foreign carbon tariffs, and the distribution of emission permits in the national cap-and-trade system is currently being reformed in practice. These are not the theoretical "growth vs. conservation" conflicts in textbooks, but the actual labor market, regional economy and industrial policy ecosystem that graduates will face after graduation. For many undergraduates, the problem of who is responsible for the reform is not an abstract ethical problem but rather related to labour in their local areas, household fuel costs and individual career prospects. An ideological and political curriculum that only presents goals but does not provide a framework will not introduce teaching materials closely related to the financial situations of students and may be regarded as irrelevant to their lives in society (Stern, 2007).

Currently, there have been no significant updates to how teachers teach Chinese students about climate and environmental problems at the high school level; for example, although new visual aids of global warming and climate change events have been added to the lessons, their presentation methods have not changed. The teaching objectives are still rote memorisation; the teaching time is short, and the discussion lacks depth; assessment is still too standardised. The above are superficial modifications that do not change the basic educational ideas. Such superficial updates cannot help the students dissect the economic tensions of the low-carbon transition, nor do they meet the institutional requirements for profound institutional reform; that is to say, we need real changes in goals, teaching methods and assessment, rather than just new resources.

A problem-oriented teaching model based on the economic problems of green transformation is constructed in this paper. It is not the usual inquiry model of algorithmic management and digital economy regulation; instead, it pays more attention to the structure of economic distribution, industrial restructuring and state-market integration.

2. The Economic Blind Spot in Principle-First Ecological Civilization Teaching

The standard ecological civilisation education is normative reasoning. The first lecture puts forward the basic ideas: human and nature are in harmony, protecting the environment is necessary, and reducing greenhouse gases helps improve people's lives. The financial mechanisms of the carbon reduction projects are considered minor operating links and are usually not taught in economics or public administration.

The two types of teaching are separated, and thus three problems in education arise. First, it does not openly oppose the low-carbonisation policies. Carbon pricing will help reduce greenhouse gas emissions, but the division of the cost is uneven. Low-income families have a smaller proportion of income left after paying for basic living expenses, so a general carbon tax will be more regressive (Klenert et al., 2018). The development of renewable energy will create green jobs, but these positions may not cover the losses from coal and heavy industries, and green capital will often go to financial investors rather than local people. These are not random leftover problems of a good regulatory system; rather, they are the expected fiscal effects of the economic structure of decarbonisation instruments (Carley & Konisky, 2020).

The structure of real carbon regulation is also a problem. China's domestic carbon trading system will use allowances, baselines and gradual reductions; its scale and allocation standards have not been established yet, green electricity trading will be linked to local fiscal support for heavy industries, and the construction of new-energy production capacity in various regions will compete for capital and jobs. Although these particular instruments are not covered in the textbooks, they are all very necessary for students' understanding of the carbon market and their discussions with their families on energy policy.

The other is that the examples are not current and have become outdated. Students are constantly exposed to all kinds of controversial low-carbon issues online, such as power outages in some areas or land-use conflicts over renewable energy projects, and thus feel cognitive dissonance between the optimistic narratives in textbooks and the complex realities they have learned from the Internet. If the teachers do not provide interpretive tools for handling this issue, the students will be either completely in denial or blindly accept the existing system of knowledge; in both cases, they will not develop the

critical economic consciousness that the curriculum hopes to foster. If equity only appears as a slogan after the conclusion of efficiency evaluations, learners will not be aware that equity determines which efficient measures are politically acceptable from the start.

The old forms of assessment are not economically traceable. Probing questions and reflective essays can help students clarify the main ideas of ecological civilisation, summarise China's dual-carbon goals, and evaluate the moral values of environmental protection. At the same time, students do not have to conduct assessments of the fiscal impact of carbon regulations, chart regional comparative advantages under carbon tariffs, or compare the distribution of financial aid and emission fees. As evaluation indicators specify what constitutes good knowledge, students tend to remember the norms rather than analysing the actual results of material economic activity. Although there is engagement, it is still not linked to the graduated responsibility of performance.

It is not to be said that the norms of ecology should be ignored altogether. Ecological civilisation sets out the general ethical ideas of the study. The problem is that the standard should not be applied to prevent financial inquiry. The old way of transmission of norms is a hurdle; thus, observations and information are chosen so as not to create fiscal friction in the desired result. The reorganisation mentioned above will not occur. First, the problems in financial allocation need to be addressed; then, the beneficiaries and opponents of the policy will be identified, and different policy options will be contrasted.

3. Theoretical Grounding: Political Economy of Just Transition and Socio-Economic Inquiry Education

The two are in agreement: literature on the just transition in the climate political economy and inquiry-based socio-economic studies in advanced civic education. These materials are different from the deliberative citizenship and legal-ethical foundation of the accompanying AI digital economy course, so they will not be included in this paper.

Research on just transition started in labour and environmental political economy, and it is no longer considered that decarbonisation is only a technical problem. It is proposed that the distribution effects of the climate policy should be analysed in light of the three intersections: changes in the industrial structure at the local level, impacts on all groups of employees, and whether corrective measures have been taken to address these issues (Newell & Mulvaney, 2013). It does not ignore the demand for emission reduction, and it has also been noted that the structure of decarbonisation will either expand or narrow the existing disparities. According to empirical data on the transition burden, communities that have been dependent on fossil fuel extraction, industrial workers and households with unstable energy prices are frequently required to bear the costs of adaptation without receiving any subsidies (Sovacool, 2021). In terms of pedagogy, this means that the main question of inquiry is not "Should we reduce emissions?", but rather "Who bears the costs, who benefits, and what institutional safeguards can change that division?".

The three parts of energy justice can be used as all-encompassing ways to conduct teaching: Distributional justice refers to who has received advantages and disadvantages; Procedural justice is about whether the harmed party participated in the discussion; Recognition justice is about whether the underprivileged community is recognised as a legitimate subject (Jenkins et al., 2016). The three parts provide an introduction and do not reduce the economic problem to a simple issue of cost-benefit analysis. Effectiveness is only one index; for a fair reform, the other are also authority, public support, etc.

The above pedagogical path is based on Dewey's idea of learning through real problems and new research in the teaching of controversial public issues. Dewey thought that cognitive development arises from people's actual experiences with difficulties in life, and ideas are only useful when they can help us solve these problems (Dewey, 1916). In practice, this means that before being given the final answer, learners should be exposed to the carbon dilemma; the problem itself will stimulate their desire to learn about the operation of carbon markets, how subsidies work, and the construction of compensation systems. Recent research on instructional controversial topics has added the necessary condition of data and morality: professors should not eliminate genuine contention, but also should not dismiss every view as merely valid; students must be motivated to support their arguments with facts and respect moral limits on acceptable positions (Hess & McAvoy, 2014). It meets the requirements of the ideological and political programme, and it can also serve as a way to prevent inquiry

from becoming aimless talk.

It is necessary to distinguish between contestable policy-making and non-negotiable values in pledges. Low-carbon economic policy instruments, such as taxes, trade, subsidies, credit allocation, regional transition plans, etc., are all structural problems that can be studied comparatively. At the same time, the general direction of ecological civilisation, the idea of shared prosperity, and the government's responsibility for social security in changing times are solid values that need to be passed down. Therefore, the research framework will only extend the institutional comparison and trade-off analysis; it will not exclude the value framework for normative obligations in the curriculum. The boundary structure will ensure that the reforms align with the value-oriented purpose of ideological and political education; thus, investigative activities will be conducted within the established boundaries and rely on the ethical commitments of the curriculum.

The second theoretical basis is pedagogy for socio-economic research of non-majors in economics. The first is that the foundational economic education for citizenship should focus on incidence assessment rather than abstractisation. Learners do not need to know advanced econometrics; they only need to be able to observe the impact of a policy on factor markets, the domestic budget and local fiscal systems (Stern, 2007). The first is an actual conflict, not a theory. The participants draw a simple causal diagram, consider all kinds of policy options, and take into account all sorts of reasons, such as emission cutoffs, fiscal costs, guarantees for vulnerable groups, administrative feasibility, etc. The goal is not to train economists; rather, we want to prevent students from seeing economic policy as a mysterious box controlled by technical experts. According to the data on the acceptance of carbon pricing, the social and political sustainability of carbon instruments is less about theoretical brilliance and more about how the funds are redistributed and whether vulnerable groups are protected (Klenert et al., 2018). Learners who have gained the ability to ask "what about the revenue?" are better equipped to judge the efficiency of policy rhetoric than those who can only repeat that carbon pricing is effective.

The two are combined to form the particular attributes of the research problem. The first type of conflict is generally about money: tax cuts, power market changes, job losses, foreign trade tariffs, etc. Ignore the purely abstract moral speculation. Second, research should consider all policy alternatives and not be limited to discussing only one. Scholars have compared carbon taxes and emission quotas with the untargeted green incentives in the local transition budget. Thirdly, after financial mapping, there will be a normative foundation; thus, the environmental and justice principles will be employed to evaluate the alternative institutional framework before concluding the economic study. This analytical framework helps avoid two major pitfalls. First, it guards against technical reductionism by requiring learners to keep the broader economicsocial context in view, rather than fixating narrowly on technical parameters. Second, it prevents value subjectivism—the stance that treats all normative values as equally valid without critical assessment.

4. The Issue-Driven Inquiry Framework for Low-Carbon Political-Economic Dilemmas

The three necessary links in teaching have been adjusted: clear learning objectives have been set; a four-step exploration process based on economic charts will be introduced; and assessment standards will require analysis rather than memorisation.

4.1 Learning Objectives: From Normative Recitation to Political-Economic Judgement

The typical results of this module are content-based; that is, students will learn the definition of ecological civilisation and the dual-carbon strategy. The original framework is still in place, and the three economic learning objectives have been added.

1. According to empirical economic research, learners are able to identify the frequency of low-carbon activities, distinguish between productivity demands and equity demands, and record the distribution of costs and benefits among families, industries and places.

2. Analysis of Comparative Institutional Effects: Learners will study all the decarbonisation policies and list the specific equity hazards, procedural requirements and carbon-reduction potentials.

3. Outcome of normative integration: Learners can evaluate the alternative policy system according to the two criteria of environmental limits and collective well-being, know that the ideal arrangement requires strategic trade-offs and is not a single standard formula.

The third result is the main difference between it and the companion digital economy module. The purpose of evaluation is

not to judge the quality of public participation, but rather to provide a reference point for institutional comparison.

4.2 Classroom Inquiry Sequence

This part is for a 90-minute lesson and can be divided into two 45-minute periods. The teacher does not explain the theoretical basis of a problem in advance.

Phase One: Presenting the Problem with Economic Data Snapshots (15 minutes). The first is not a vague moral story. The specific policy conflict is as follows: The municipal government has to choose between a general carbon tax without rebates and a small tax combined with direct cash handouts and training funds for low-income families and workers in the coal industry. Learners can see a brief introduction page and attractive, simple-to-understand charts of the logical exercises in class, such as compact regional power consumption percentages, the scope of conceptual reduction, potential fiscal charts and qualitative overviews of possible employment effects. These are teaching materials and not statistically verified forecasts. The first problem is: Which way should the administration choose, and what fiscal evidence will guide this decision? At this time, the teacher has not presented the official normative model; the students only have financial forecasts and stakeholder briefings.

Phase Two: Small-Group Occurrence Mapping (25 minutes). A team of four makes a distribution chart with three rows: winners, losers and unaddressed risks. They are the actual forecast ("this policy will raise retail energy prices") and the ethical judgement ("a price increase for vulnerable families is unacceptable"). Every team needs to identify one new measure that will address the problem of unfairness. At this time, scholars can distinguish between empirical economic effects and normative judgments, operate within the framework of energy justice, and thus the redistributive results will be in line with procedural accessibility and recognition of the affected group (Jenkins et al., 2016).

Stage Three: General Group Institutional Assessment (30 minutes). Teams show the selected model and its equity attributes. Peer inquiry has standard questions, and one is: Where does this policy's income come from? What part is still dangerous? What governing power is needed to do so? The first is to list the categories of vulnerability to non-market mechanisms that have been omitted, such as rural families without access to alternative energy and local enterprises abroad subject to carbon border adjustments. The teacher does not have an approved form at present.

Phase Four: Coached Normative Anchoring and Synthesis (20 min). Only after completing the comparative economic evaluation will the teacher introduce the relevant normative basis: the main requirements of ecological civilisation, the idea of common prosperity, and the government's responsibility for bearing the costs of just transition. The teacher helps the students learn that these norms are for assessment purposes and should not be taken as monetary standards. In short, although decarbonisation efforts have been made, the problem of institutional flaws remains, and therefore, some trade-offs among different groups need to be accepted.

4.3 A Second Reusable Task: Simulated Regional Transition Decision

A secondary unit exercise is employed to present a case of a local policy decision. Participants will form a virtual advisory board for a fictional resource-dependent city that relies on industry and is centred on coal production. Considering the three constraints above and the objective of reducing federal emissions, the committee will be forced to change its plan in light of the shortage of local revenue funds and its legal responsibilities to protect workers and the local populace. All the sub-committees have received different instructions from the stakeholders: the mining staff union, clean energy business networks, ecological NGOs, regional finance departments and local citizen associations, and are required to prepare a package containing phase-down schedules, retraining plans, infrastructure construction, indemnity systems, etc. The three parts of the three are: distribution (who will receive the transition subsidies), procedure (which clusters will be included in the bargaining round), and recognition (whether laid-off workers are regarded as allies or obstacles) (Jenkins et al., 2016). Deliberation is now a form of evaluation for political-economic reasoning; every team knows that a reform plan can only be implemented if it improves both productivity and public trust, and fair-play rules are not mere words but essential conditions for achieving any real-world results in policymaking.

4.4 Assessment Rubric: Recognizing Distributional Reasoning

The new evaluation for this section will be a short policy paper (800 characters long), not a reflective essay. The four levels of

division are:

1. Precise Tracing of Incidence and Stakeholder Distribution (40%)
2. Direct Analysis of at least two organisation options and their trade-offs (30%).
3. Consistent Integration of Ecological and Equity Norms in the Evaluation Criteria (20%)
4. Acknowledgement of Remaining Uncertainty and Implementation Limits (10%)

A memo that only repeats the slogan of green development will receive a poor grade for orthodoxy. A strong paper may believe that no single policy is perfect and that, therefore, all-round instruments and compensation should be employed. The grades are no longer about memorising fixed conclusions but rather about organising political and economic observations.

5. Limitations and Pedagogical Boundaries

The economic-centred way of thinking has certain defects and needs to be corrected. The first is economic reductionism; students will view the environmental crisis as only an issue of cost and benefit and ignore its intrinsic ecological value and harm to future generations. The first step of the teacher's work is to distinguish between market-oriented liabilities and irreplaceable environmental damage. Economic analysis is an instrument of institutional decision-making and does not embody morality.

All the numerical data in this chapter are teaching aids and qualitative concepts; they have not been collected by means of empirical investigation. It will not carry out any quantitative policy analysis, statistical modelling or preliminary data collection itself. The aim for students is not to calculate the specific figures in finance but to learn about distribution and structural trade-offs. The teacher should keep reminding us that the above diagrams only present the distribution of problems.

Large lecture halls are not suitable for conducting many small-group classes. It can be used for seminars, and during class hours, teachers can distribute organised worksheets with maps for students to do some independent research and use anonymous digital questionnaires for group collaboration.

Fourth, this module should have an all-knowing authority figure, as students are used to being taught. Some students may be reluctant to speak freely at first and believe that the teacher no longer leads the class. In this case, the guide should address this resistance directly, build the start of the inquiry stage carefully, provide solved examples of incidence mapping, verbal cues for distinguishing instruments, and informal group discussions before asking for any submitted memos.

Finally, there must be institutions that support the reform. If it can be shown that the reform has achieved good results in teaching and learning, then three types of concrete evidence need to be collected through the following channels: updated curricula and published academic results; teaching materials and operation records in the classroom; and an evaluation scale along with examples of student work before and after the program. Schools need to coordinate with the scheduling and examination offices; otherwise, due to the seminar-style form, published standards, etc., there will be logistical problems.

Finally, the above framework will be employed. It puts forward a distributive political economy, and the joint development of the AI digital economy will address legal and situated ethical problems. Neither is a typical form of issue-based teaching; rather, all the socio-economic governance problems have different starting points for analysis, and these two modules should be presented to the students as alternative perspectives rather than the same script.

6. Overview

Decarbonisation is not only an environmental problem; it is also a redistribution of economic power, risk and public funds. Educational propaganda that ignores the problem of funds cannot enable students to speak publicly. The problem-oriented investigation framework shown above will address the shortcomings mentioned above by starting with social distribution tensions, having learners conduct comparative institutional analysis and scenario mapping, and using normative ecological and fairness pledges as judgment standards rather than existing solutions.

It is not only the addition of new environmental problems to the existing system of transmission. Reorganise the goals, activity sequences and evaluations according to the mode of political economy to meet the evidentiary requirements of authentic educational progress, rather than just physical substitution. It can help to implement the plan for rights-and-law-oriented education. Together, they show that issue-focused inquiry is not a fixed mode of teaching. Adjust the angle of

analysis according to the internal contradictions in the specific problem to be solved: Distributive Political Economy of Green and Low-Carbon Transformation; Algorithmic Rights, Privacy and Legal Boundary Disputes in the AI Digital Sector. All these factors support the main idea that we need to reform ideological and political education.

Funding

No

Conflict of Interests

The authors declare that there is no conflict of interest regarding the publication of this paper.

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