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From Policy to Practice: Unpacking the Politics and Realities of Environmental Education Policy in Chinese Primary Schools

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Abstract

In recent years, China's strong commitment to the political agenda of ecological civilisation has increased the presence of environmental education (EE) in the policy arena. Using the waste classification policy as an example, this research explores the implementation of EE policy in two Chinese primary schools. Through the use of a policy enactment framework, the findings reveal that contextual factors such as school enrolment, infrastructure and external influences from the District Bureau greatly influence the schools' policy capacity. By exploring the internal policy flow and school artefacts, it was found that although the waste classification policy was enacted similarly in the selected primary schools, the outcomes differed significantly. These variations highlight the complexities and challenges of implementing an EE policy under ecological civilisation and contribute to the understanding of the tension between localised adaptations and the nationally politicised EE policy mandates.

Keywords: China; environmental education; policy; primary school; waste classification

Introduction

Environmental education (EE) is increasingly recognised as a critical component of educational agendas worldwide, reflecting broader societal concerns about ecological degradation. In China, this recognition is embedded in the policy agenda of ecological civilisation. The concept of “ecological civilisation” is a strategic initiative of the Chinese Government that aims to weave environmental awareness into the fabric of social development. This initiative reflects a shift towards sustainability beyond economic growth and emphasises the integration of ecological principles into all sectors, including education (Li et al., 2022). Thus, EE in China is not just an academic subject but also a vital element of national identity and policy that aims to cultivate a generation that is ecologically aware and actively engaged in sustainable practices (Hansen et al., 2018; Hung, 2019; Zhou, 2024). This approach seeks not only to raise awareness among younger generations but also to encourage habits and values. The introduction of the waste classification policy in primary schools in 2018 is a prime example of this initiative, which aims to promote a culture of recycling and sustainable waste management from an early age.

Despite the importance of such a policy, the details of how the waste classification policy is implemented and the outcomes of the policy remain underexplored (Huang et al., 2021; Zhang et al., 2023; Zhou et al., 2019). This gap highlights the need for a closer examination of the mechanisms through which EE is operationalised in schools, particularly under the ambitious

political agenda of ecological civilisation. This study therefore seeks to evaluate the enactment and implications of the waste classification policy in China's primary education sector. By examining the implementation of this policy in two primary schools, this research provides insights into the factors that influence success and the challenges faced by educators and administrators. Through this lens, the study aims to contribute to the ongoing dialogue on how best to integrate EE into the Chinese primary education system, thereby ensuring its alignment with both local and national educational goals under the ecological civilisation.

This article begins with an overview of the current policy landscape in China, followed by a discussion of the policy enactment framework and the methodology used to collect and analyse the data from the case study schools. The findings highlight the schools' approaches to waste classification policy enactment and the policy outcomes in both schools. Finally, the discussion and conclusion draw on these insights to propose new insights for policymakers, educators and researchers involved in EE that could inform future policy adjustments and pedagogical practices aimed at enhancing the effectiveness of EE in China.

Understanding environmental education policy through China's environmental governance

EE gained political attention in the late 2000s when Hu Jintao, the former president of China, introduced the concept of "ecological civilisation" (Sheng Tai Wen Ming) at the National Congress of the Chinese Communist Party (CCP; Huan, 2016). Ecological civilisation is a policy agenda that seeks to realign China's economic development with environmental considerations. The concept supports environmental sustainability while promoting economic and social development based on eco-socialism (Gilley, 2012; Jiang et al., 2019). When he came to power in the early 2010s, Xi Jinping, the current president of China, took the political importance of ecological civilisation to a new level by dramatically increasing spending on environmental policies (Geng & Lo, 2023). The concept has since become one of the hallmark policies of Xi's administration and has quickly gained traction in China's domestic socio-economic development policy, foreign policy and education policy.

Characterised as "coercive environmentalism," China's mode of environmental governance is a centralised system formed in a hierarchical structure that allows for the uniform implementation of orders, policies or instructions related to environmental development (Li et al., 2019; Li & Shapiro, 2020; Lo, 2015). This model reflects China's broader governance style, which focuses on the consolidation of power through central planning and coordination (Lo, 2020). Such authoritarian governance emphasises top-down, non-participatory decision-making, excluding aspects of public inclusion and participation and even lower-level officials (Lo, 2020), "making environmental programmes part of a much larger authoritarian agenda of state control and power [re]centralization" (Li & Shapiro, 2020, p. 18).

Ecological civilisation serves as a process of power recentralisation beside its policy narratives. It was created to reform central-local relations in the Chinese Government in an attempt to mitigate the consequences of the historical decentralised administrative structure: "poor regulatory enforcement, delayed policy implementation and widespread shirking of environmental laws at sub-national levels" (Kostka & Nahm, 2017, p. 568). Traditionally, the Chinese central government has mandated top-down control over the promotion and appointment of lower-level officials, allowing them to autonomously exercise delegated power to achieve socio-economic, environmental and other goals (Schubert & Ahlers, 2012). This delegation of power, however, has led to a tournament-like regional competition among local officials over performance, often resulting in the prioritisation of economic development over environmental conservation (Qi & Zhang, 2014). With the new political agenda and the introduction of stringent new mechanisms such as the "lifelong responsibility system," local officials are now required to strategically

prioritise environmental development goals set by the national government, resulting in the recentralisation of power and environmental governance (Zhang et al., 2022).

Following the emergence of ecological civilisation, several education policies were introduced to build around the basic EE policy, which officially integrated EE into the primary and secondary education curricula established in 2003 (Zhou & Lee, 2022). For example, one of the new national education priorities in the *Outline of the 13th Five-Year Plan for the National Cause of Education* in 2017 was to improve students' ecological civilisation competence, such as energy-saving awareness. According to the policy, ecological civilisation competence goals are as follows:

To extensively carry out education for sustainable development; deepen water, electricity and food-saving education; guide students to practice strict economy and combat waste; establish an ecological civilisation consciousness of respecting, conforming to and protecting nature and, therefore, form sustainable development concepts, knowledge and competences; practice a thrifty, green and low-carbon, civilised and healthy lifestyle; and lead the green trend in society. (People's Republic of China, 2016, translation by the author)

Building on the emerging trend, the Ministry of Education issued the *Notice on Promoting the Classification and Management of Domestic Waste in Schools* to promote recycling awareness and behaviour in schools the following year. In 2019, the *Notice on Implementing Xi Jinping's Ecological Civilisation Thought in Primary and Secondary Schools and Enhancing Ecological Environmental Awareness* was jointly issued by the Ministry of Education and three other ministries to further catalyse the concept of ecological civilisation in the education system, providing a new monitoring system and policy support for the development of EE in primary schools.

The policy-driven approach, based on ecological civilisation, to EE in China, as evidenced by these policies, is indicative of a model of policy innovation in which state-led directives shape the educational landscape at the local level. This top-down implementation not only reflects the central government's commitment to embedding ecological civilisation in the education system but also highlights the unique integration of political ideology with EE (Winter et al., 2022). However, the recentralisation trends under the ecological civilisation initiative have not significantly enhanced the effectiveness of regulatory enforcement in mitigating environmental problems while fostering economic growth (Rooij et al., 2017). In particular, with overlapping goals for economic and environmental development, local officials have considerable "room for manoeuvre" to continue to exert significant economic influence over environmental regulatory enforcement (Harrison & Kostka, 2018; Kostka & Nahm, 2017).

Disparities in the implementation of ecological civilisation are also evident in the education sector, where local authorities have adopted different strategies to integrate EE policies (Luova, 2019). This variation is largely due to the significant "room for manoeuvre" that the municipal level has to contextualise EE within local parameters (Luova, 2019). Described as "variegated," Luova (2020) conducted a comparative study of EE implementation in three municipal districts in Tianjin, China: Heping District, Hedong District and Dongli District. The study revealed that local officials' reasons for pursuing EE were primarily administrative and aimed at achieving municipal development goals across the three districts, albeit with different intentions (Luova, 2020). The Heping District, which has a relatively better socio-economic status, wanted to maintain its leading position in the municipal education ranking system to strengthen its bargaining position for additional resources and policy support. In contrast, the Hedong District, which is predominantly working class, viewed EE as a tool to generate external funding opportunities and gain more bargaining power for educational resources due to financial constraints. Dongli District, a more affluent rural area, merely wanted to fulfil its obligations and meet the expectations of the local government, which was attributed to a misunderstanding of the importance of EE in rural China, resulting in weak support for EE in the region (Luova, 2020). Although all three districts have around 20 "green schools" — a whole-school approach to

improving the school environment and integrating EE into the curriculum — the quantitative performance does not translate into promising qualitative outcomes. Only the Heping District has been “able to arrange coherent education for an environmentally friendly lifestyle throughout the district” (Luova, 2020, p. 503).

The introduction of ecological civilisation reveals a dynamic in which EE is not just a conceptual or pedagogical tool but also a means of aligning with national political ideologies. This politicisation has resulted in a multifaceted approach to EE, reflecting a balance between overarching national directives and the nuanced realities of local implementation. Given the tension between educational objectives and political imperatives, the question arises: how have individual schools navigated and achieved the new EE policy goals in China? Faced with the dual pressures of complying with national EE policy and meeting local political and educational needs at the municipal level, schools confront significant challenges.

Despite the broad outlines provided by policy documents and the apparent enthusiasm for ecological civilisation at the local level, the actual implementation of EE policies in schools, the approaches adopted by educators and the impact on student engagement and policy outcomes remain underresearched. Therefore, using the 2018 EE policy, *Notice on Promoting the Classification and Management of Domestic Waste in Schools*, as an example, this study aims to explore how EE policy, driven by national ideals of ecological civilisation, is adapted, resisted or embraced in primary schools, thus contributing to a comprehensive understanding of the policy interplay between the national, local and school levels in China.

Policy enactment

Ball, Maguire, and Braun (2012) describe “policy enactment” as a dynamic and non-linear process of policy implementation in schools, which requires a holistic and heuristic approach to interpret such processes. A three-dimensional approach was created to investigate how schools enact policies: the material, interpretive and discursive dimensions. These three dimensions are not discrete but interconnected; together, they form a systematic approach to uncovering the process of translating a policy from paper to action in schools.

The material dimension encompasses the contextual setting of the school, recognising that schools differ significantly in terms of culture, background, infrastructure and management style. These differences manifest themselves in varying capacities to accommodate policies. Braun et al. (2011) highlight that these capacities are crucial for the recontextualisation of policies within school settings. Furthermore, capacity differences between schools not only indicate their ability to adopt policies but also reflect the complex relationships — whether oppositional or supportive — between an educational policy and school commitments (Ball et al., 2012). Thus, Ball et al. (2012) propose this dimension to forge connections between policy objectives, school practices and contextual factors, focusing on the school’s location, intake, professional culture, infrastructure and external influences.

The interpretive dimension focuses on the policy roles of school stakeholders and their interactions during policy enactment. Ball et al. (2012) point to two interrelated processes, interpretation and translation, to explain how policy is understood and enacted in schools. The interpretation process refers to the initial reading and understanding of policy texts, while translation refers to shifting policy understanding into specific actions. Ball et al. (2012) identify eight policy actors who are directly or indirectly involved in the interpretation and translation processes (Table 1):

These eight policy actors are not exclusively or specifically assigned to any individual teachers. Teachers may move from one policy actor to another or take on multiple policy roles simultaneously during policy enactment (Ball et al., 2012). Teachers with potentially contested and conflicting interests, values and positions often position themselves differently in relation to

Table 1. Policy actors and roles (adapted from Ball et al., 2012, p. 49)

Policy actors	Roles
Narrators	Interpretation, selection, and enforcement of meaning
Entrepreneurs	Advocacy, creativity, and integration
Outsiders	Entrepreneurship, partnership, and monitoring
Transactors	Accounting, reporting, monitoring/supporting, facilitating
Enthusiasts	Investment, creativity, satisfaction and career
Translators	Production of texts, artefacts and events
Critics	Union representatives, monitoring of management, maintaining counter-discourses
Receivers	Coping, defending and dependency

policy (Ball et al., 2012). Ball et al. (2012) therefore suggest investigating these relationships and the social networks between teachers to understand how policy is enacted in schools.

The discursive dimension focuses on the discursive formations of policy, such as handbooks, websites, newsletters and school-based activities (Ball et al., 2012). They recommend not only analysing the role of these discursive formations but also understanding the meanings that these artefacts have in schools. Drawing on Foucault's concept of "governmentality," the internalisation of one's own discourse, Ball et al. (2012) argue that the internalisation of discourses created through the translation of policy in schools — and manifested through the creation of artefacts — creates a sense of "governmentality" in teachers and students. Consequently, teachers and students internalise these values and behaviours and naturally align their actions with prescribed artefacts (Ball et al., 2012).

This study employs the policy enactment framework to explore the multifaceted process of implementing the 2018 EE policy, particularly the *Notice on Promoting the Classification and Management of Domestic Waste in Schools*, within the primary school context. The policy enactment framework allows for a holistic exploration of how educators engage with and operationalise the policy's mandates. Key to this investigation is the recognition that policy enactment is not a straightforward or uniform process. Schools, with their unique resources and challenges, navigate policy requirements in ways that are both creative and constrained. This study therefore seeks to illuminate such complexities in primary schools and to provide insights into the conditions under which policy objectives are most likely to be realised and the factors that may hinder or facilitate their implementation. Through this lens, the study contributes to a deeper understanding of how EE policy is shaped and enacted under EE politicisation in China. The research questions are as follows:

1. To what extent do Chinese primary school principals and teachers enact the waste classification policy?
2. In what ways do such policy enactments contribute to the national ecological civilisation agenda?

Methodology

The waste classification policy was jointly enacted by the Ministry of Education and five other ministries in 2018 and was rapidly disseminated to all educational institutions in China. The policy's objectives were to educate learners about waste classification, encourage recycling activities and proper waste storage and collection and establish a long-term waste management system in educational institutions with the aim of achieving a 100% knowledge penetration rate of

domestic waste classification by the end of 2020 (PRC, 2018). This case study focuses on the enactment of the waste classification policy in two public primary schools in the same district of a Chinese city. By collecting data from primary schools within the same district, research findings can be compared with minimal contextual differences. School 1, with approximately 1,400 students, is located near working-class community with a large number of migrant workers. School 2 is surrounded by middle-class communities with about 800 students.

Principals and teachers were invited to participate in the study, as they are the main educational practitioners in schools. According to the principal accountability system established by the Ministry of Education in China, the school principal has administrative autonomy and is responsible for the school's academic performance, policy implementation and internal personnel management. Therefore, school principals can influence the extent to which policies are enacted in schools. Teachers were the other key stakeholders in this study. They are the educational practitioners and enforcers of policy in schools. Their perspectives can provide further details about policy enactment in schools, as well as the feasibility and practicality of EE policies in actual practice. They are also well placed to discuss the challenges, barriers and successes of EE in primary schools. A total of 18 interviews were conducted with principals and teachers from both schools. The data collection took place between June and July 2020.

The interviews were accompanied by additional field observations and documentary research. In line with the policy enactment framework, photography was used to capture the policy artefacts produced in schools, such as posters, slogans and news on the bulletin board. Documentary research was conducted on school newsletters and school archives to provide additional data on policy outputs. These were obtained from the school website and the school's official public information dissemination platform.

This study followed Bryman's (2016) 6-step thematic analysis for the collected data. Bryman's (2016) thematic analysis involves rereading the data, coding, elaborating the codes into themes, evaluating the codes and themes, linking the themes and writing them down. Coding in analysis provides the flexibility to adjust to different levels of specificity and generality (Cohen et al., 2018). This flexibility allowed me to adapt the coding process to fit within the policy enactment analytical framework. The qualitative data were coded in accordance with each dimension of policy enactment. For example, the qualitative data were coded and analysed according to these categories: Teacher A's statement about their role in ESD policy implementation was categorised in the interpretive dimension, while Teacher A's statement about school infrastructure was coded in the material dimension. Once themes had emerged from the codes in each dimension, analysis followed after NVivo had been used to organise and code the interview data.

Enactment of the waste classification policy

The material dimension: School contexts and constraints

School infrastructure and enrolment capacity are important policy indicators and were identified as one of the key factors that set the upper limit of policy capacity in both schools. School 1 was originally designed for 1,200 students, and most aspects of the school infrastructure were built to meet this expected capacity. However, because of the number of migrant workers living in the community, School 1 enrolment has exceeded its designed capacity as a result of overallocation by the District Bureau of Education. In order to better accommodate the additional students at School 1, some classrooms that were designed for specific purposes have been converted into general classrooms. For example, School 1 has a classroom called the "activity room for environmental protection," which was originally intended for extracurricular activities related to EE and student EE policies. However, as the number of students in the school population increased, the equipment in this room was removed and converted into a space for other teaching-related activities. The overflow of students has reduced the school's capacity to effectively host academic and extracurricular activities.

The interview findings from School 1 also revealed the disadvantages of the intake compared to other schools in the district: parents with a migrant background lacked the time and commitment to support their children in school activities. The lack of support was also reflected in the students' academic performance, with all participants from School 1 expressing concern about the students' underachievement. According to Teacher G,

[The quality of students] will affect the class progress; how you teach your class, yes, it will certainly be different, you know. For example, compared with other schools, our progress will be slow, and the curriculum teaching will certainly be slower.

In this context, China's exam-oriented education system placed performance pressures on teachers and school principals, who relied on student exam performance for career advancement or financial rewards. Given the quality of school admissions, 8 out of 10 interviewees reported that exam preparation had become increasingly central in School 1, despite Principal A's description of promoting quality education as the core of School 1. Such an academic approach has a direct impact on the waste classification policy in schools. Like many other EE policies in schools, the waste classification policy is activity-based and implemented through extracurricular activities, which can be time-consuming. In order to promote the waste classification policy in schools, students and teachers were given lectures on the general knowledge of waste classification, and the school community was then asked to classify waste on campus. Activities such as poster competitions, drawing competitions and community trips to distribute leaflets on waste classification followed. However, due to the intense pressure of exams in School 1, teachers have tried to use most of the school time to prepare students for examinations, such as by providing students with an excessive number of exercise sheets, textbook reviews and mock exams instead of involving students in extracurricular activities for the waste classification policy. In the words of Teacher G,

If you say that you always have to take the district unified examination and compare the exam performance with other schools, I don't think the teacher has time to do [these]. Because you always want to compare exam performance, no one wants to be at the bottom of the table.

Under these constraints, the enactment of the waste classification policy has not been contextually optimal.

The infrastructure of School 2, on the other hand, has created more capacity for the waste classification policy than that of School 1. Although the school building was also designed for a student population of 1,200, School 2 has only enrolled around 800 students; meanwhile, the physical campus of School 2 is larger than that of School 1. Given these advantages in terms of space and student numbers, School 2's facilities are more diverse. For example, the school has a robotics laboratory designed to host robotics classes and activities, a classroom designed specifically for carpentry classes and even a fountain with a rocky landscape in one corner of the campus. These facilities were built to support students' academic and extracurricular interests.

In contrast to School 1, stakeholders in School 2 expressed mostly positive perceptions about school admission. Parents at School 2 were relatively active in school activities and often showed more awareness of their students' education than the parents of children at School 1. Given the active status of parents at School 2, family-school connections have been established, focusing not only on improving students' academic performance but also on providing opportunities for extracurricular activities. In addition, parents at School 2 can provide external resources and opportunities to support the enactment of the waste classification policy. For example, a parent employed by the District Environmental Sanitation Bureau helped organise school field trips to

sanitation stations that allowed students to hear a presentation and interact with the facilities and staff of the Bureau (Teacher Q).

Parental support is also reflected in support for students' academic development. Students in School 2, who come from more affluent families, often receive after-school academic assistance to enhance their academic performance. Therefore, compared to School 1, exam pressure in School 2 seemed less extreme, although the importance of exam performance was also highlighted in the interviews. According to Teacher O,

Environmental education is, first of all, not without academic oppression. I mean, it is possible that environmental education cannot be equal to the importance of our Chinese, math and English teaching, but it should not be said that environmental education is totally not worth teaching.

With a spacious and advanced school infrastructure and strong parental support, School 2 demonstrated a higher capacity for the implementation of the waste classification policy compared to School 1.

Aside from internal contextual factors, external influence also played a key role in shaping the policy in school. Several interviews pointed to the influential role of the District Bureau of Education ("the Bureau") in introducing the waste classification policy in both schools. The Bureau had two direct impacts on the enactment of the waste classification policy in both schools: policy evaluation and policy overflow. For the waste classification policy, the Bureau scheduled routine inspections to evaluate the schools' performance. When the inspections were conducted regularly, the schools performed well in carrying out the required activities and teaching students about the subject. Both students and teachers followed the school policy regulations and recycled waste in accordance with the policy. On the other hand, when the inspection schedules were loose or interrupted, such as during COVID-19, policy outcomes were often unsatisfactory (Teacher A).

"Policy overflow" refers to a scenario in which schools are required to implement multiple educational policies over time, which can also lead to policy inconsistency in schools. For example, the waste classification policy was at the centre of the school agenda at the beginning of data collection for this study. However, due to a recent accident in the district in which a student drowned, a safety education policy was immediately distributed to schools throughout the district, including the two schools in this study. School activities were quickly changed to reflect this new theme. As a result, the waste classification policy received lax supervision. The results indicate that the Bureau's ability to shift orientation from one policy to another in the schools raises concerns about the effectiveness and consistency of existing EE policies in the schools when new policies are introduced.

The interpretive dimension: Policy roles and internal policy flow

Principals and teachers assume different policy roles and responsibilities in waste classification policy. In general, school principals in public primary schools in China are more like civil servants who obey orders and protect the government's interests and policies while having primary responsibility for school operations (Chan & Du, 2007). Principal B from School 2 described their job as follows:

We should adjust our working ideas to follow the above-mentioned guidelines [from the Bureau]. We are not completely on our own. . . . We change some of our teaching and education strategies according to the requirements of the Party and . . . the government. . . . [The Bureau] will have stages of goals and then put these goals in school. We break down [these goals] . . . and then complete part of our own work.

When the waste classification policy was introduced by the Bureau, both school principals described the managerial nature of their policy role. Principal A described themselves as the “manager, educator, organiser and promoter that advocates for policy and provides resources,” and Principal B used the words “lead, organise, assign, break down, give and plan and the generally responsible person in charge of the whole activity.” These roles demonstrated the school principal’s overarching responsibility for enacting the waste classification policy at the school.

These responsibilities correspond to the policy narrator (who is responsible for narrating and interpreting the policy), entrepreneur (advocating for the policy among teachers), and transactor (taking responsibility for facilitating the intended policy outcomes) defined in Ball et al.’s (2012) framework. After receiving the policy document, both principals assigned the policy to a subordinate office, the student development centre, which consisted of key staff, including the vice principals, a counsellor for the Young Pioneers (an agent who was sent by the CCP to monitor students’ ideological and political development) and a group of senior teachers, to interpret the policy and develop a detailed and feasible plan for waste classification according to the school’s setting. Principals also provide additional policy coordination within the school, such as liaising with the logistics department to provide waste bins for the policy.

The class teacher (*Ban Zhu Ren*) is a key policy actor in both schools. Like regular teachers who are responsible for implementing the curriculum and assessing student performance, among other tasks, the class teacher plays an additional role that is similar to that of a tutor in the UK or a homeroom teacher in US schools, although the class teacher usually has much more responsibility (Gu, Yin & Li 2015). All teaching, learning and school activities are usually carried out in each class unit. The teacher often “accompanies the same class for multiple years and is responsible for the management and development of the student’s daily lives” (Gu et al., 2015, p. 103). Of the 18 teachers interviewed in this study, 11 were class teachers. These class teachers’ self-recognised roles in policy enactment were as activity organisers, policy evaluators and connectors between senior management and students:

I feel like I’m a bridge between the policy and the students. . . . Because after the policy is arranged, if all the children are required to implement it, they must pass it on to the class teachers. . . . Yes, so if there is anything wrong with the children’s waste classification [behaviours], the school will also report it to the responsible class teacher first. (Teacher T, School 2)

Class teachers played a connecting role in policy enactment, as they received policies from management and then enforced them on students, guided by the policy document, the school implementation plan and orders from the top. The work of class teachers shows a high degree of policy dependency and compliance, as they are required by management to carry out numerous activities to implement the policy. In addition to organising policy activities, such as student presentations on recycling and waste classification, class teachers are also responsible for writing policy reports and press releases, monitoring student policy responsibilities and additional policy responsibilities assigned by the senior level. They are required to report back to the Student Development Centre, which then collates all records and progress and reports back to the principal. These associated policy roles, according to Ball et al.’s (2012) work, corresponded to the policy transactor (who takes responsibility for facilitating intended policy outcomes), the policy enthusiast (who acts as a policy model), the policy translator (who translates and processes policy into practice), and the policy receiver (who relies on guidance from senior teachers).

Teachers who are not class teachers may also be involved in the policy and take on different policy roles. For example, Teacher H from School 1, an art teacher, reported their role in helping students participate in the poster competition on school waste. Teacher P from School 2 is a music teacher who also worked for the Student Development Centre in School 2 and helped with policy dissemination activities at the school. In short, a systematic policy flow has been created in the

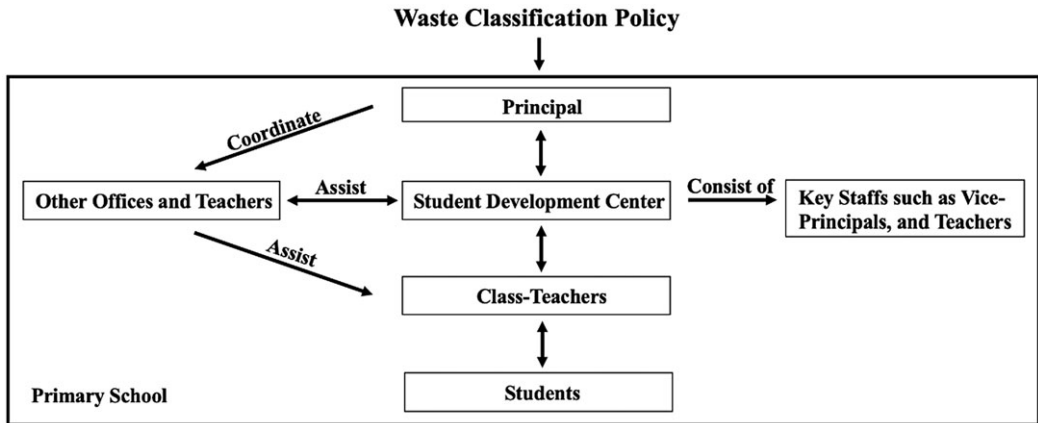


Figure 1. Policy flow within the schools.

school (Figure 1). This internal policy flow confirms the top-down policy structure between principals and teachers in policy enactment.

The discursive dimension: Waste classification artefacts and policy outcomes

There are two main types of policy artefacts produced in schools. The first type is posters published by the school, often displayed on campus announcement boards and on corridor walls. These artefacts officially demonstrate a school’s policies and document that the school has made an effort to promote waste classification. School 1 displayed the waste classification policy poster shown below on the announcement board.

A direct translation of the text in the poster (Image 1) is presented below.

Protecting the environment is everyone’s responsibility

Waste Classification

Green environmental protection

recycling waste, cyclic utilisation, protecting the environment, conserving the resource

You and I work together · To become environmental protection activists

Waste classification refers to a series of activities that transform waste into a public resource by classifying, storing and transporting the waste according to certain regulations and standards. The aim of waste classification is to increase the resource value and economic value of waste and to make the best use of it. (Translated by the author)

The waste classification poster encourages students to classify waste and raises their awareness of environmental protection. Keywords such as “responsibility” and “activists” were used to raise students’ environmental awareness and encourage recycling behaviour on campus. These keywords imply that students need to act as role models and promote waste sorting and environmental protection for their families and the general public. The poster also connects waste classification with environmental protection, emphasising the importance of environmental conservation. Both campuses display additional posters on their walls, providing specific instructions on waste disposal, including which waste belongs in which bin. For example, the blue bins are for recyclable waste, such as wastepaper, cardboard and plastic. The black bins are for other waste, including contaminated waste, nonrecyclable paper and disposable utensils. These posters reinforce students’ knowledge of waste classification when they see them (Image 1).



Image 1. Waste Classification Poster in School 1 (photo by the author, June 2020).

The second type of poster is made by the students and is called a hand-copied poster (*shou chao bao*; Image 2). Each hand-drawn poster is A4 in size. When making them, the students had to research waste classification and copy or improvise writing and drawing. According to Teacher D, the students “make a hand-drawn poster and . . . embody the knowledge . . . learned in class and present it in various ways.” Both schools often hold school or class competitions for hand-drawn posters on the policy and display the winning posters on corridor walls or at the back of classrooms. These posters aim to encourage learning about waste classification in the process of making them.

In addition to the artefacts produced, collective activities were also arranged to enact the policies with the students. The class theme meeting is the most important collective and organisational activity that takes place in the schools. Class teachers organise these meetings to give lectures on knowledge and behaviour related to waste classification and to conduct small-scale activities with their students during the session. In addition, small-scale in-class activities are used to teach students more about waste classification. For example, group discussions were held so that students could summarise their progress on waste classification and report back to the class. Classroom teachers also often use innovative strategies and methods to deliver the required policies during class theme meetings.

For example, after holding class theme meetings, Teacher B from School 1 distributed a waste classification questionnaire to the students and their parents to remind them how to classify waste at home. Teacher R from School 2 encourages the students to conduct their own field research in the community by photographing potential or existing problems related to waste classification over the weekend, reporting their findings and suggesting possible solutions for the next class meeting. Through documentary research, a total of 38 waste classification activities were carried out in School 2 between 2018 and 2021, compared to 16 in School 1.

Overall, the policy had mixed results in the selected schools. Both school principals were satisfied with the policy outcomes, as they have seen improved student behaviour, while some



Image 2. Hand-copied posters made by students from both schools (photos by the author, June 2020).

teachers in both schools have different views. A common concern that emerged from both schools was the lack of parental environmental awareness. There has been a lack of consistency between school and home to further enhance students' awareness and encourage recycling behaviour; students may follow the policy at school but not at home. Teacher R from School 2 described such inconsistency as a “ $5 + 2 = 0$ ” situation: the waste classification learning during five weekdays at school is corrected by the two-day weekend, which returns to the starting point again on the following Monday. Parental awareness and family education seem to be the hidden factors that have shaped the results of the waste classification policy outside the two schools. More than half of the teachers interviewed from both schools said that they felt parents' civil and environmental awareness needed to be improved.

The challenges in School 1 mainly focus on policy inconsistency — the correlation between the promotion of the policy in the school and the monitoring and inspection schedule of the Bureau. The higher frequency of school inspections often creates incentives for School 1 to fully implement the waste classification policy, while the lower frequency of school inspections, especially after COVID-19, makes both students and teachers less inclined to follow the policy. A similar situation also exists within the school. Although Principal A has appointed a teacher to monitor students' recycling activities, students tend to find countermeasures, particularly when supervision is lax. This situation highlights a disconnect between policy enactment and sustained behavioural change, as compliance is often driven by the presence of supervision rather than intrinsic motivation or an understanding of the policy's importance. Teacher H highlighted this dissatisfaction with the policy:

I feel like a lot of things (the waste classification artefacts and activities) are perfunctory, like a show. . . . I mean the green environmental protection activities, like waste classification, and what I need is just to see the records of their class theme meetings. I want to see the hand-copied posters in the archive. That's all. . . . The class teachers keep a record of the meeting, and then they all take pictures during the activity, so it proves that we did this thing, we recorded it, and then we just hand in the records [to the superior]. It would be okay. And then it's done and over.

Teacher H thought that events were organised and posters created for the sole purpose of upholding the policy. They believed that these activities and posters were merely evidence of the school's efforts to promote the policy and were mainly used as evidence during school inspections to show that the school had fulfilled the tasks set by the Bureau.

In comparison, the interviews from School 2 revealed mostly positive policy outcomes. According to Teachers P, R, U and T, the waste classification policy has improved the environmental awareness and behaviours of both students and teachers. School inspections by the

local Bureau, as noted by Teacher U, also promote positive incentives for the school so that the policy can be fully implemented as planned. One obstacle to the policy is the waste collection lorries that mix the waste after it has been correctly classified in the bins.

Some students are aware of this issue and often question the teachers about it. Both students and teachers in School 1 observed this problem. Overall, both the principal and the teachers agreed that waste classification is a long-term process that requires sustained efforts to raise awareness and encourage habit formation. Consistency is key to the long-term implementation of the policy.

Discussion and conclusion

This case study aimed to examine the implementation of a waste classification policy in two Chinese primary schools and its contribution to ecological civilisation. The waste classification policy provided an EE opportunity for both students and teachers to enhance their environmental awareness and promote environmentally friendly behaviours under the overarching national agenda. The schools in this study followed a similar policy path but showed different levels of policy enactment. In School 1, the quantity and quality of students, combined with an overburdened infrastructure, led to increasing academic pressures, which ultimately reduced the policy enactment as originally planned. In School 2, the benefits of enrolment and additional parental support strengthened the school's performance in implementing the waste classification policy.

This study reveals a vertical mode of policy implementation, which contrasts with Ball et al.'s (2012) findings. Ball et al. (2012) suggest that Western schools operate in a more complex power structure as they recognise the inherent incoherence between school actors and networks. This complexity sometimes leads to contradictory actions as teachers attempt to meet the various interests and expectations of different actors. In this study, however, political flux prevented the fluid power negotiations and transitions commonly observed in Western schools (Huang et al., 2019). These dynamics, as found in this study, prevent or minimise the incoherence and inconsistency often observed in Western schools. Principals and teachers are assigned certain fixed roles and tasks in policy implementation, which reflects a unified and consistent awareness and action in policy enactment in schools. These contextual differences hinder policy actors in both schools from carrying out their designated roles in the policy enactment framework, as some of their policy roles and functions are exaggerated or weakened.

Within the policy flow, the policy roles of school teachers, such as transactors and translators, are weakened. Teachers, including classroom teachers with limited policy autonomy, acted as a link to convey policy messages to students. Their influence on policy enactment, which, according to Ball et al. (2012), is mainly based on their personal interests, cultural attentiveness and social influences, is negligible, as all these possible influences are determined and replaced by the Bureau or the school principal. The policy roles of the principal, including policy narrator, entrepreneur and translator, are exaggerated within the school. In their managerial positions, both principals can easily change policy agendas, alter policy work and shift policy focus within the school.

However, this dynamic remains vulnerable to the Bureau, which played a crucial role in influencing schools' implementation of the waste classification policy by organising student enrolment, imposing academic performance requirements and influencing policy priorities in schools. In fact, one of the Bureau's functions is to regulate school enrolment within the district and to "scientific[ally] and reasonabl[ly] define [the] school enrolment zone" (PRC, 2023, p. 1). Uneven enrolment, in terms of the number of students in both schools, indirectly affected the school's ability to manage resources and implement the policy effectively. With over-enrolment in School 1, the pressure on existing infrastructure and resources led to challenges in the consistent application of the waste classification policy. The overcrowding not only strained physical resources but also

diverted administrative focus to addressing immediate policy concerns rather than fostering long-term support for waste classification. Conversely, School 2, with a lower target enrolment, was able to allocate sufficient resources to facilitate a more subtle enactment of the policy.

Academic pressure on schools also comes directly from the Bureau, which relies predominantly on “hard indicators” for competition at the municipal and even the provincial levels (Tan & Chua, 2015). Indeed, “students’ schoolwork results do not just determine the students’ future and destiny, they also determine the success and failure of the teachers, the school and even the district’s education standards [or reputation] (Tan & Chua, 2015, p. 697). These performance requirements often prioritise traditional academic performance metrics over other school assessments. During the data collection period, the Bureau created a hidden league table, which was not made public, ranking all 32 public primary schools in the same district based on their district-wide exam performance. The winners of the league table do not receive any awards, but schools with unsatisfactory examination results are penalised, which is reflected in the salaries of principals and teachers as well as in promotion opportunities. Schools were therefore faced with the dual challenge of academic excellence on the one hand and meeting policy objectives, such as the waste classification policy, on the other. At School 1, this pressure led to lax policy implementation, resulting in inconsistent results over time. In contrast, School 2, which benefited from its contextual factors, showed greater resilience and continued to engage students in waste classification, even under pressure.

The waste classification policy provides an opportunity for EE under the national ecological civilisation agenda. The findings suggest that parental support is essential to increasing student awareness and fostering behavioural change. Although waste classification and recycling are mentioned in the ecological civilisation agenda, such knowledge distribution has not been widely popularised among urban communities (Huang, Law, Geng, Niu & Kettunen 2021; Xiao et al., 2017). Within the education system, the waste classification policy focuses primarily on the severity and consequences of waste problems rather than exploring specific methods to mitigate them (Huang et al., 2021). A holistic educational approach that integrates social learning for adults with a waste classification policy in schools is needed, as children can be catalysts for enhanced environmental awareness and encourage behavioural change within families (Deng et al., 2022).

Another key concern arising from the findings is the long-term impact of the policy. How do disadvantaged and advantaged schools contribute equally to ecological civilisation in a way that achieves the intended policy targets rather than being a “political show,” as Teacher H put it? Or, how do schools manage to implement the waste classification policy in a way that truly reflects the goals of ecological civilisation rather than simply complying with the policy for the sake of appearances? This study suggests that School 2, with its sufficient resources, may be better equipped to enact the ecological civilisation agenda effectively, while disadvantaged School 1 often struggles with the basic requirements.

This disparity leads to unequal opportunities for students to engage with and benefit from EE. This inequality undermines not only the potential impact of the policy on student learning but also on long-term societal change towards sustainable development. Therefore, to avoid the risk of policy being nothing more than a performance, targeted efforts must be made to truly integrate policy into educational practice. This includes ensuring that primary schools receive appropriate contextualised support and access to resources. Such an approach will not only fulfil the immediate goals of the policy but will also contribute to the long-term development of an ecologically civilised society.

Overall, this case study has several limitations. This study’s findings may not be representative of the broader landscape of primary education in China as a whole, as schools, districts and even municipalities have different policy priorities and interpretations of the political agenda. The data were collected in 2020, and new relevant policies have been issued by the Ministry of Education, such as *Opinions on Further Reducing the Burden of Homework on Students in Compulsory*

Education and the Burden of Out-of-School Training (the double-reduction policy), which may potentially provide in-school support for the waste classification policy. Further research is encouraged to update the waste classification policy and its implications in light of these new educational directives.

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