# Compliance and Enforcement of AI Text Generator Usage Policies in German Grammar Schools: Insights from Teenagers

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***Abstract*—The integration of Artificial Intelligence (AI) text generators such as ChatGPT, in educational settings has led schools to develop policies governing their use. This study examines the compliance and enforcement of AI text generator usage policies in grammar schools, drawing on insights from 143 teenagers aged 14-16 years across fourteen of Germany's sixteen federal states. Through content analysis of student responses, we identified significant variations in how schools address AI technology regulation within their academic frameworks, ranging from explicit prohibitions, implicit or unofficial rules, and conditional use to a complete absence of rules. While 26% of teenagers state having clear prohibitions against using AI for assignments, tests, and other academic work in their schools, 44% report having no explicit AI-related rules. Additionally, 23% of schools rely on implicit rules or conditional allowances, often requiring teacher approval. Notably, 5% of students are unaware of AI-related policies in their schools, suggesting a gap in communication or policy clarity. Our findings reveal a diverse landscape of AI policy awareness and adherence, with significant variations in rule enforcement and student compliance. Despite explicit bans, some students continue to use AI tools, highlighting challenges in policy enforcement. The study underscores the need for comprehensive and enforceable AI policies, better teacher training, and clearer communication about AI ethics and usage. Integrating AI into the curriculum with ethical guidelines can enhance learning while maintaining the academic integrity of students. This transitional period in educational policy calls for a balanced approach to utilizing AI's benefits while ensuring a fair, transparent, and effective learning environment. This study provides valuable insights for policymakers and educators aiming to balance the innovative potential of AI with the need of maintaining academic integrity in schools.**

***Keywords*—Artificial Intelligence (AI) text generators in education, policy enforcement challenges, regulatory approaches to AI in schools, student perspectives on AI policy, ethical AI usage in education**

## I. Introduction

The rapid growth of Artificial Intelligence (AI) technologies has penetrated various aspects of daily life, including education [1]. Researchers have begun to explore the transformative potential of AI in education, emphasizing personalized, flexible, and engaging learning experiences, immediate feedback mechanisms, and automated grading [2–4]. Among these innovations, generative pre-trained transformers like OpenAI's ChatGPT have gained significant attention for their potential to assist both teachers and students with various academic tasks [5, 6].

For teachers, AI tools can facilitate the creation of lesson plans, grading, and providing personalized student support [7], while for students, these tools offer individualized tutoring and help with homework, thereby enriching the educational experience [6]. However, despite the promising benefits, the ease with which these tools can generate human-like texts also raises concerns about academic integrity and the appropriate use of this technology in educational settings [8, 9]. Additionally, there is a need to refocus education on creativity and critical thinking, skills that AI currently is unable to substitute [10].

Despite growing interest in AI's potential, there is limited research on how schools are implementing policies related to generative pre-trained transformers, especially from the perspective of students, who are directly impacted by these policies. This study aims to fill this gap by providing a comprehensive analysis of teenagers' insights on the enforcement of AI text generator usage policies in German grammar schools.

German grammar schools (Gymnasien), like many educational institutions worldwide, face the challenge of integrating these tools into their curriculum while maintaining high standards of academic honesty. So far, within the German political system, education appears to receive less attention on policy issues concerning AI, as actors tend to focus more on technological innovation than on civil rights-related topics [11]. However, clear policies and effective enforcement mechanisms are essential to ensure that students use generative AI responsibly and ethically, enhancing their education rather than hindering it.

Our study aims to answer the following research questions: "What are the current policies regarding AI text generators in German grammar schools, and how aware are students of these policies? Additionally, how effective are these policies from the students' perspective?" By analyzing teenagers' responses, we seek to understand the existing rules regarding AI text generators, the level of students' awareness, and the effectiveness of policy enforcement.

By providing a comprehensive analysis of teenagers' insights, this study offers valuable perspectives for educators and policymakers aiming to navigate the challenges posed by AI in education. It aims to inform the development of more effective policies that balance the innovative potential of AI tools with the necessity of safeguarding academic integrity in schools.

## II. Background and Context

AI text generators like OpenAI's ChatGPT have emerged as powerful tools capable of producing coherent, contextually relevant, and human-like text. These tools offer a whole range of significant benefits, such as helping in research [12],

enhancing writing skills [13], as well as providing personalized learning experiences [14]. However, they also pose substantial challenges, particularly in terms of academic integrity and the high potential for misuse and cheating.

### A. AI in Education and Academic Integrity Concerns

The integration of AI text generators and chatbots into education has been marked by both enthusiasm and caution [9, 15]. Studies have begun to investigate the use of ChatGPT to enhance student engagement and learning outcomes [6, 15].

Conversely, the ability of AI text generators to produce high-quality written work raises concerns about plagiarism and the undermining of students' critical thinking and writing skills. The ease with which students can generate essays, homework, and other assignments using these tools may potentially devalue the whole educational process [8]. For teachers it is challenging to detect whether content is generated by a person or AI [16]. Schools and universities are thus compelled to develop policies that mitigate these risks while still allowing students to benefit from the positive aspects of AI tools.

### B. Policy Landscape and AI Usage in German Schools

Technological change driven by AI can neither be stopped nor ignored, making AI a significant concern for policymakers [17]. Various ethical guidelines have been released, comprising recommendations and principles to address the negative aspects of new AI technologies [18] and proposing policy and regulatory frameworks in education [19]. Educational institutions worldwide have begun to formulate policies and guidelines regarding the AI use in academic settings to promote its ethical application while preventing academic dishonesty.

German grammar schools are no exception to this trend. As institutions that prepare students for higher education and the workforce, they are particularly invested in maintaining high academic standards [20]. Our study examines the current state of AI policy implementation and enforcement in these schools from the perspective of the students.

### C. Research Purpose

Existing research on AI in education predominantly focuses on higher education [14, 21, 22]. For example, Chan's study explored the perceptions and implications of text-generative AI technologies among 457 students and 180 teachers in Hong Kong to inform AI policy development for higher education. In contrast, research on the impact of AI policies in secondary education, particularly from the viewpoint of students, remains limited.

Understanding how teenagers perceive and interact with school policies is crucial, as their compliance and ethical use of AI will significantly influence the effectiveness of any regulatory measures. The primary aim of this study is to fill this gap by providing an empirical analysis of teenagers' perspectives on AI usage policies in German grammar schools. By capturing the insights of students who are directly affected by these policies, the study seeks to inform more nuanced and effective policy development.

## III. Methodology

This study uses a qualitative approach to gather insights into the rules governing the use of AI text generators in German grammar schools from the perspective of teenagers. Data were collected from 143 teenagers (average age 14.97, standard deviation 0.77, 58.7% female) who wrote short essays responding to the question: "Are there any rules in your school regarding the use of ChatGPT or other AI generators?" The participants were applicants to an adventure education program and represented a diverse geographic sample, coming from fourteen of the sixteen federal regions of Germany. In accordance with ethical standards for research involving minors, informed consent was obtained from all participants and their parents. Confidentiality was maintained by anonymizing the data to ensure the privacy of all respondents. Data collection was conducted in March 2024 using the online survey platform SoSci Survey. Participants were given ten days to submit their responses, allowing them the flexibility to respond at their convenience. This method ensured that participants could provide thoughtful and comprehensive answers. All responses were complete, with no missing data, indicating a high level of teenagers' engagement.

## IV. Content Analysis

The short essays were subjected to a content analysis to identify key themes and patterns related to the presence, awareness, and enforcement of AI usage policies in teenagers' schools. This qualitative approach involved coding the data and systematically categorizing responses into distinct themes, such as for instance *explicit prohibitions*, *conditional use*, *implicit or unofficial rules*, *ignorance of rules*, and *prevalence of usage despite rules*. Representative examples from the students' responses supported each theme, providing a detailed understanding of the varied landscape of AI policy implementation in German grammar schools. Each participant was assigned a unique identifier (e.g., P.19) to ensure anonymity and facilitate referencing in the analysis. Descriptive statistics were employed to quantify the prevalence of certain themes, such as the absence of rules or the frequency of conditional use, using SPSS Statistics software (Version 29). This approach allowed for a comprehensive analysis of the data, combining qualitative insights with descriptive quantitative measures.

## V. Findings

The results demonstrate a range of AI usage policies in schools, from the absence of rules to explicit prohibitions and implicit or conditional allowances. Fig. 1 illustrates the findings.

### A. Explicit Prohibitions and General Technology Restrictions

A significant portion, 27% of teenagers, stated that their schools have clear, explicit rules prohibiting the use of AI text generators like ChatGPT for assignments, tests, and other academic work. These explicit prohibitions may reflect schools' efforts to maintain academic integrity and ensure that students complete their work independently. Examples from the teenagers' responses include: *"It is not allowed at our school"(P.12), "Any artificial intelligence is forbidden for all*

*kinds of school work"(P.21).*

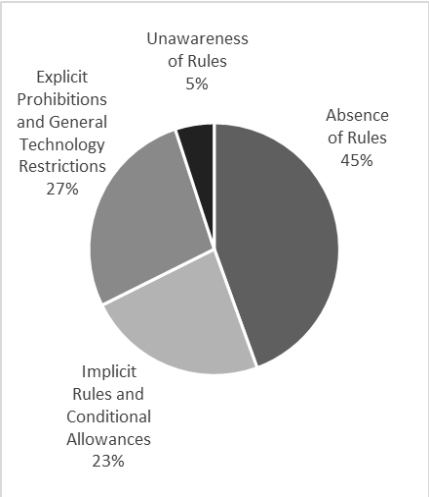


Fig. 1. AI text generators usage policies in German grammar schools.

In addition to direct prohibitions on AI usage, some schools have broader technology restrictions that indirectly affect AI usage. These restrictions often include overall bans on mobile phone usage or the absence of internet access within school premises, which naturally limits the ability to use AI text generators. Two teenagers (1.4%) specifically mentioned that AI text generator usage is part of general technology restrictions. Examples of such responses include: *"We are not allowed to use phones and we don't have Wi-Fi/Internet access" (P.32), "I attend a Waldorf school where the use of cell phones is generally not encouraged" (P.19).*

Despite these explicit rules and broader restrictions, several students admitted to using AI tools like ChatGPT regardless of the prohibitions. This highlights an issue of non-compliance and the challenges schools face in effectively enforcing these rules. Here are several examples of such non-compliance: *"Actually, it's not allowed, but many still use it" (P.27), "As far as I know, it is forbidden, but many still use it" (P.28).*

### B. Absence of Rules

A notable 45% of teenagers stated that their school has no explicit rules regulating the use of AI text generators like ChatGPT. This lack of formalized policy indicates that many educational institutions have not yet fully addressed the implications of AI in academic settings. Examples of responses indicating the absence of rules include: *"So far, there are no specific regulations or restrictions regarding AI at my school" (P.107), "No, many teachers don't even know about their existence" (P.88).*

There are mentions of anticipated future regulations or ongoing discussions about formalizing AI usage policies, noted by an additional 2% of respondents. These responses indicate that some schools are beginning to recognize the need for clear guidelines and are in the process of developing them. Example of such responses is: *"Rules will be introduced soon" (P.133).*

### C. Implicit Rules and Conditional Allowances

According to teenagers' responses, around 23% of schools have rules that are either not strictly enforced or depend on specific conditions. These schools tend to operate with a combination of implicit rules, unofficial agreements, and conditional allowances regarding the use of AI text generators.

In 9% of schools, there are no formal policies, but students understand through implicit rules or informal agreements that AI should not be used. Examples of such implicit or unofficial rules include: *"There are no explicit rules, but if the teachers find out that homework was done by ChatGPT, it can cause trouble"(P.3),* "*Most teachers find it acceptable to use it for homework, but they prefer that it is done without it. However, there are no official rules regarding this"(P.38).*

In a few cases, schools focus more on educating students about the implications and ethical considerations of using AI rather than strictly enforcing rules. For instance: *"We are informed about it, and we are not supposed to use it"(P.23).*

Only one teenager mentioned that AI tools are allowed at school.

14% of teenagers reported that AI usage is permitted under specific conditions, typically requiring teacher approval. Examples of these conditional or contextual allowances include: *"Must be allowed by the teacher"(P.33), "In class and for assignments, the use mostly depends on the teacher"(P.99), "With teachers who allow its use, it must be clearly marked"(P.16), "As long as you read the texts beforehand and understand what they are about, it is allowed. Our tests from the teachers are also made with AI"(P.83).*

Some students also mentioned specific allowances for AI use in certain contexts, such as for research or informational purposes: *"As long as it's not a complete plagiarism case, there's nothing against it" (P.47).*

These responses indicate a varied landscape where AI usage policies in schools are often flexible and context-dependent, reflecting the evolving nature of educational practices regarding emerging technologies.

### D. Ignorance of Rules

A small subset of students, about 5%, indicated that they are unaware of any rules regarding the use of AI text generators like ChatGPT in their schools. This suggests a notable gap in communication or clarity from educational institutions regarding AI usage policies. The responses from these students reflect a general uncertainty or lack of information about whether any guidelines exist. Examples of such responses include: *"I don't know" (P.56), "As far as I know, there are no rules" (P.75), "I haven't heard of any rules regarding AI usage" (P.137).*

## VI. Discussion

Our study's findings reveal considerable variation in the enforcement and awareness of AI usage policies in German grammar schools, mirroring global challenges surrounding AI integration in education. Previous research, such as Holmes *et al.* [3], has highlighted a wide range of ethical, technical, and pedagogical issues that educational institutions face from balancing AI's potential to accelerate learning with concerns about academic integrity to the need for adaptive learning models. Consistent with these concerns, our study found that while 27% of schools have implemented explicit prohibitions on AI text generators use, a significant 45% lack any formal

rules, exposing a critical gap in regulatory frameworks. The lack of clear policies is a significant obstacle to the ethical and effective integration of AI text generators in education. The results highlight several key areas for consideration.

### *A. Policy Types: Strict Bans vs. Conditional Use*

A significant portion of schools have clear, explicit rules prohibiting the use of AI text generators like ChatGPT for assignments, tests, and other academic work. These prohibitions reflect schools' efforts to maintain academic integrity and ensure that students complete their work independently. While strict bans aim to preserve academic integrity, they seem to face challenges in enforcement.

In contrast, some schools rely on conditional use policies, allowing AI tools to be used under specific circumstances. For instance, AI usage might be permitted for research purposes, creative projects, or with explicit teacher approval. These conditional policies aim to balance the benefits of AI in enhancing learning with the need to maintain academic standards. However, their success heavily depends on clear rules and active teacher oversight and guidance.

Many schools operate with implicit or unofficial rules regarding AI usage. These rules are often understood through informal agreements or cultural norms within the school community. While such an approach offers flexibility, it may potentially lead to inconsistencies and misunderstandings among students and teachers. The lack of formalized policies can also complicate enforcement and create gaps that students might exploit. There is a pressing need for schools to transition from policy of no rules or implicit rules to well-defined policies that are communicated clearly to all students and teachers.

### *B. Challenges in Enforcement*

The effectiveness of both strict bans and conditional use policies is often undermined by enforcement challenges. Despite explicit prohibitions, some students report that they have classmates using AI tools covertly, indicating a significant gap between policy and practice and indicating substantial non-compliance issues. This non-compliance suggests that simply banning AI is not sufficient; schools must also focus on understanding why students resort to using these tools and address the underlying issues.

### *C. Implications for Policy Development and Enforcement*

Schiff's thematic analysis of 24 national AI policy strategies reveals a notable gap: the use of AI in education is often absent from policy discussions [23]. While national strategies, including Germany's "National Strategy for Artificial Intelligence: AI Made in Germany," emphasize developing AI expertise and preparing the workforce, they largely overlook the direct application of AI in educational settings.

Our study finds that many educational institutions have yet to fully address the implications of AI technology. The absence of formalized policies in at least 45% of schools indicates a pressing need for comprehensive guidelines that regulate and enforce the use of AI text generators. This lack of formal policies suggests that schools are still adapting to the rapid integration of AI technologies. Consequently, there are several key areas that need to be addressed:

**Policy Development**: Schools need to create well-thought-out policies that balance the benefits of AI with the need for academic integrity and fairness. Educational institutions should assess "the fear of the failure to innovate with the fear of the ramifications of innovation" [17]. This includes establishing clear boundaries and rules safeguarding academic integrity.

**Progressive Approaches and Ethical Integration:** Since many teenagers admitted to using AI, schools should explore innovative methods for incorporating AI chat generators into the curriculum, enhancing learning experiences while setting clear ethical and practical boundaries. Some schools prioritize educating students on the ethical use of AI over strict enforcement, reflecting a more progressive approach. As one student shared: "*Most teachers are okay with using it for homework but prefer that we try without it" (P.38).* This suggests that some schools encourage responsible use of AI while allowing flexibility, a strategy that could potentially serve as a model for integrating this technology into education. By embedding lessons on the ethical use of AI within the curriculum, schools can foster a culture of integrity and responsible usage among students. As another respondent pointed out "*As long as it's not a complete case of plagiarism, there's nothing wrong with it" (P.47),* demonstrating that students themselves are considering the ethical dimensions of AI use. Nguyen and colleagues proposed a set of ethical principles that could serve as a framework for guiding educational stakeholders in developing and deploying ethical AI in education. These principles aim to balance the innovative potential of AI with the need to safeguard student autonomy and data privacy, which could inform future policies [24].

**Educator Training**: Since some teenagers mentioned that their teachers are unaware of ChatGPT, it is essential to provide teachers with training on AI technologies and their implications. Selwyn [25] argues that teachers must understand both the capabilities and limitations of AI technologies and need guidance on blending AI tools with traditional teaching methods to create a balanced educational experience. Educators can then better guide students, allowing beneficial usage of AI text generators while restricting negative impacts.

**Communication and Awareness**: In our study 5% of teenagers were not aware whether there are any AI text generator policies in their schools showing the drawbacks in communication. Schools must ensure that policies are effectively communicated to all students. Providing clear guidelines, incorporating AI ethics into the curriculum, and maintaining open channels for questions can help bridge the gap in awareness. Regular reminders and educational sessions on the ethical implications of using AI would be beneficial. "We do not only need top research. We also need broadly distributed AI competencies in society. Thus, AI should not only be taught in computer sciences, but core AI modules should also be integrated into engineering and natural science programs, and be taught at schools of applied sciences" [26]. Given the rise of ChatGPT, such awareness of AI competencies should start already at school.

**Enhance Monitoring and Enforcement**: Teenagers mentioned inconsistences in the implementation of AI usage rules, indicating the need for a multifaceted approach to address non-compliance. Understanding why students and teachers may disregard these rules is crucial to developing effective solutions. Enhancing monitoring mechanisms can include regular checks of student work for AI-generated content, implementing advanced detection tools, and training staff to recognize AI-produced assignments. Clear consequences for violations should be established and consistently enforced to deter misuse. Additionally, schools could benefit from creating a feedback mechanism where students and teachers regularly discuss the effectiveness of AI policies and collaborate in special co-creation sessions, ensuring that rules remain relevant and adaptable to constantly emerging challenges. This proactive approach may not only strengthen policy enforcement but also foster a culture of integrity and mutual responsibility within the school community.

The reasons behind non-compliance need further exploration and may include:

**Perceived High Academic Pressure:** Students might feel pressured to perform well and see AI tools as a means to achieve better results.

**Lack of Awareness**: Inadequate communication about AI policies can lead to ignorance or misunderstanding of the existing guidelines.

**Ease of Access**: The availability and accessibility of AI tools make them easy to use, even when prohibited.

**Inadequate Enforcement or Perceived Unfairness in the Prohibition**: Weak monitoring and perceived unfairness in the restrictions may encourage students to disregard the policies.

Addressing these factors is important for developing more effective AI policies in educational settings.

In conclusion, the evolving nature of AI policy in educational environments highlights the need for comprehensive, clear, and enforceable guidelines.

## VII. Limitations

While the findings of this study provide valuable insights, several limitations should be noted. First of all, the sample size of 143 teenagers may not be fully representative of the broader student population, potentially limiting the generalizability of the presented findings. Additionally, the study relied on self-reported data, which could be subject to biases such as inaccurate recall or social desirability bias. The responses may not accurately reflect actual behaviour of students or their comprehensive policy awareness.

Furthermore, the study's focus on German grammar schools means the findings might not be directly applicable to other educational contexts or countries with different educational systems or cultural attitudes towards AI. The qualitative content analysis, while thorough, is inherently interpretive and could be influenced by the researchers' perspectives.

Finally, the study has not taken into account the perspectives of other stakeholders, such as teachers, school administrators, and policymakers, whose insights could provide a more profound understanding of AI policy implementation and enforcement in schools.

## VIII. Conclusion

The analysis of AI text generator usage policies in German grammar schools reveals substantial variability and highlights the urgent need for comprehensive and enforceable guidelines. Our findings emphasize that while many schools implement strict bans, these measures often face enforcement challenges. Conditional use policies, though promising, require clear rules and active teacher involvement to be effective. The presence of implicit rules and the significant non-compliance observed underline the necessity for clear communication and consistent policy enforcement.

The study underscores the importance of developing well-thought-out AI policies that balance innovation with academic integrity. Training educators on AI technologies and their implications is crucial for effective guidance. Furthermore, integrating ethical considerations into the curriculum can foster a culture of responsible AI usage.

Future research should explore larger and more diverse samples and incorporate perspectives from various stakeholders, including teachers, school administrators, and policymakers, to enhance the robustness and applicability of findings. By addressing these areas, educational institutions can better navigate the complexities of AI integration in academic settings, ensuring fair and effective learning environments.

## Conflict of Interest

The authors declare no conflict of interest.

## Author Contributions

ZA: Conceptualization, research preparation, data analysis, and writing of the manuscript. TE: Assisted with data collection and research preparation, safeguarding respondent confidentiality, and reviewing the manuscript. Both authors approved the final version of the manuscript.

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