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COMBATTING ACADEMIC DISHONESTY IN ONLINE ASSESSMENT

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Abstract

The article explores the importance of avoiding artificial intelligence (AI) misuse in university assignments, highlights the key considerations and strategies for devising effective assessment tasks in online education in order to create effective and authentic assessment tasks that circumvent the use of AI, and offers strategies to mitigate this problem. AI technologies, such as text generators, language models, and automated problem solvers, can assist students in completing assignments, sometimes to the point of undermining the purpose of assessment. The challenge lies in designing tasks that require genuine engagement and critical thinking from students, making it difficult for AI to replicate their efforts. This requires a shift towards assessments that emphasize originality, creativity, and the application of knowledge in unique contexts.

Keywords: academic integrity, AI, online education, online assessment, assessment guidelines

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Aims and Rationale

The aim of this article is to highlight the all-important component of language teaching – the process of assessment. It will be discussed in relation to avoiding "Google" answers in testing. This will firstly involve looking at the type and content of assignments that are available for examiners; namely, tasks that assess not so much knowledge, but application of knowledge in the digital learning environment, and secondly, the technical parameters of assignments that can assist in preventing the possibilities of getting ready answers from the internet. How to set tasks which cannot be performed by using generative artificial intelligence will be an important aspect to be discussed with some guidelines provided for designing assessment activities that can avoid its use. Good practices in using online platforms and avoiding AI tools in the process of teaching and learning English will be shared from my experience of online teaching in Bulgaria, Spain and the UK.

In recent years AI has become an integral part of various fields, including education. While it offers numerous benefits, such as personalized learning experiences and efficient administrative processes, it also poses significant challenges, particularly in the sphere of academic integrity. One of the most pressing issues is the potential misuse of AI in student assignments. The shift to online education in some higher education institutions has necessitated a rethinking of how assessment tasks are devised and implemented. Effective assessments in an online environment must be designed to evaluate student learning comprehensively while addressing the unique challenges and opportunities presented by digital platforms. To maintain the value of assessments and accurately measure student learning, educators must devise tasks that minimize the potential for AI misuse.

The emergence of online teaching marked a significant turning point in the history of education and can trace its roots back to the concept of distance education, which began as early as the 19th century with correspondence courses. However, the inception of online teaching as we know it today is closely linked to the rise of the internet in the late 20th century. One of the earliest instances of online teaching was the introduction of computer-assisted learning in the 1960s and 1970s, which involved using mainframe computers to deliver educational content.

The real transformation began in the 1990s when personal computers became more widely available, and the internet started to gain traction. Universities and educational institutions started experimenting with online course delivery, utilizing email, bulletin boards, and early learning management systems (LMS) to connect students and instructors, thus enabling more interactive and accessible forms of education. Early forms of online learning were limited to text-based content and asynchronous communication, but they laid the groundwork for the robust platforms we see today.

The advent of technology has revolutionized various sectors, and education is no exception. Online teaching and learning have emerged as significant developments in the educational landscape, offering new dimensions that were previously unimaginable. The rapid transition to digital education, accelerated by global events such as the COVID-19 pandemic, has also brought to light several issues.

Academic integrity is the cornerstone of education, fostering an environment where honesty, trust, fairness, respect, and responsibility are upheld. When students use AI to complete assignments, it undermines these principles, leading to several adverse consequences. The wrongful application of AI can compromise the quality of education, as students may rely on AI-generated content instead of developing their own understanding and skills. Learners who use AI tools to complete assignments gain an unfair advantage over their peers, skewing grading and evaluation processes. Relying on AI deprives students of the opportunity to engage deeply with the material, hindering their learning and intellectual growth (Naidu and Sevnarayan, 2023). Academic institutions risk damage to their reputation if widespread AI misuse is discovered, potentially affecting their credibility and the value of their degrees. All the above consequences, namely the erosion of academic standards, the unfair advantage to some students, the lack of learning and the damage to the reputation of the institution present enough grounds for an in-depth study of how to devise assessment tasks for university level whereby the use of AI could be minimized if not eradicated.

Understanding the Purpose of Assessment

Before designing assessment tasks, it is very important to understand their primary purpose. Assessments in education serve several functions. They measure learning results and determine whether students have achieved the intended learning

outcomes of a course or a module. They provide feedback to students, helping them understand their strengths and areas for improvement. Assessment results can inform faculty about the effectiveness of their teaching methods and identify areas needing adjustment and can motivate students to engage more deeply with the course material and strive for excellence. Therefore, the process of assessment is a crucial component of the learning curve, plays a pivotal role in the teaching and learning process, serving multiple functions that are essential for the development and improvement of both students and faculty. The importance of assessment extends beyond the mere act of grading; it encompasses the evaluation of student understanding, the effectiveness of instructional strategies, and the alignment of educational goals with outcomes.

Before devising the specific online assessment tasks, there are some key considerations to be taken into account. Assessment tasks must correspond to the learning objectives of the course. Each task should be designed to measure specific skills or knowledge areas that the course aims to develop. Clear alignment ensures that assessments accurately reflect student learning and provide meaningful insights. Then, using a variety of assessment methods can cater to different learning styles and provide a more comprehensive evaluation of student performance. Examples include quizzes, essays, discussion posts, projects, presentations, peer reviews. This variety helps to capture a broader range of student skills and competencies. It is important to use authentic assessments, which involve tasks that mirror real-world challenges and applications. These tasks require students to apply their knowledge and skills in practical, meaningful contexts. Examples include case studies, simulations, and project-based assessments. Authentic assessments enhance the relevance of learning and better prepare students for real-life situations.

Yet another important consideration is incorporating continuous and formative assessments throughout the course, which can provide ongoing feedback to students and instructors. Formative assessments, such as short quizzes, reflective journals, and regular assignments, help track student progress and identify areas needing improvement before final evaluations. In addition, assessment tasks must be accessible to all students, including those with disabilities. This involves ensuring that online platforms are compatible with assistive technologies, providing alternative formats for assessment materials, and allowing reasonable accommodations as needed.

Last but not least, is the issue of academic integrity. Ensuring academic integrity is a significant concern in online assessment. Strategies to maintain integrity include using plagiarism detection software, designing open-book exams, employing question pools for randomized quizzes, and incorporating oral exams or interviews. Clear communication about academic honesty policies is also essential.

Advantages and drawbacks of online assessment

Distance higher education has been growing in scope and variety even before the Covid-19 pandemic. It has experienced a significant rise in importance and frequency, driven by advancements in technology, changes in societal needs, and the ongoing quest for accessible and flexible learning opportunities. This mode of education, which allows students to pursue their academic goals without the constraints of time and location, has transformed and reshaped the educational landscape.

This process has led to the higher need for online courses or entire BA, MA and PhD programmes at universities across the globe. This is a tendency that will definitely continue into the future as more and more students enroll to study at institutions geographically far from their place of residence for a number of reasons: the university can be higher in the academic ranking, the tuition fees may be lower, perhaps the subject is specialized and not freely available locally, etc. For educators who are interested in attracting more paying students this tendency can ensure the enrollment of a larger number of students in each course/programme, as well as offer the possibility to more easily hire specialists to teach on these programmes without their physical presence at the other side of the globe.

Online education comes with online assessment. Although online assessment has recently been more often discussed from the point of view of the challenges it poses, it has to be underlined that it has revolutionized the educational landscape, offering a myriad of benefits that cater to the needs of students, faculty, and institutions alike (cf. Topping, 2023, Nikola-Richmond et al., 2024). As technology continues to advance, the adoption of online assessment methods is becoming increasingly prevalent. What follows is a discussion of the advantages of online assessment, namely its flexibility, efficiency, accessibility, and potential for enhancing educational outcomes.

One of the most significant benefits of online assessment is its flexibility. Unlike traditional paper-based tasks, online assessments can be administered at any time and from any location with internet access. This flexibility is particularly beneficial for students who may have scheduling conflicts, live in a geographically remote area, or have other commitments and handicaps that make attending in-person exams challenging. It allows students to take assessments at their convenience, reducing stress and enhancing their ability to perform to their best potential. This is corroborated by a study whose findings led to the conclusion that students' attitudes were positively affected by online learning. It also increased their motivation and decreased their anxiety, and attitudes (Jiang et al., 2022). The findings from another recent study (Slack and Priestley, 2023) on the effect of online learning and assessment on students' well-being established that although for some students it presented (for a number of reasons) a greater effort, most appreciated the flexibility afforded by online learning and assessment. For faculty, online assessments offer the convenience of automated grading systems, which can significantly reduce the time and effort required to evaluate student performance. This automation allows lecturers to focus more on instructional activities and personalized feedback, ultimately improving the quality of education.

Online assessment makes the process more efficient and timely. The use of digital platforms enables quick and accurate scoring of objective questions, such as multiple-choice or true/false items. This rapid turnaround time allows students to receive immediate feedback on their performance, facilitating a faster learning cycle. Instant feedback helps students identify their strengths and weaknesses promptly, enabling them to address any misconceptions and improve their understanding without delay. Additionally, online assessments can be easily administered to large groups of students simultaneously. This is particularly advantageous for institutions with a high number of students or for standardized testing environments. The efficiency of online assessments reduces administrative burdens and logistical challenges associated with traditional exams, such as printing, distributing, and collecting test papers.

Formative and summative assessment administered in an online form promotes accessibility and inclusivity. Tasks can be designed to accommodate diverse learning needs and preferences, offering various formats and question types, including text, audio, video, and interactive elements. This multimodal approach caters to different learning

styles and ensures that all students, regardless of their abilities, can participate fully in the assessment process. Online assessments can also incorporate assistive technologies, such as magnifiers, speech-to-text tools, provide support with reading, enhanced comprehension, visual tracking assistance, among others, to support students with disabilities. These accommodations aspire to provide equal opportunities for all students to demonstrate their knowledge and skills.

One of the most powerful advantages of online assessment is its ability to generate detailed data and analytics. Online platforms can track student performance across various metrics, such as time spent on each question, patterns of responses, and overall scores. This data can be analyzed to gain valuable insights into student learning behaviors, strengths, and areas for improvement. Educators can use these insights to personalize instruction and provide targeted support. For instance, if an online assessment reveals that a student is struggling with a particular concept, the teacher can offer additional resources or one-on-one tutoring to address the issue. This personalized approach enhances the effectiveness of teaching and helps students achieve better learning outcomes.

Online assessments contribute to environmental sustainability by reducing the need for paper, printing, and physical transportation of test materials. The shift to digital assessments minimizes the carbon footprint associated with traditional exam processes, aligning with broader efforts to promote eco-friendly practices in education. From a financial perspective, online assessments can also be cost-effective. They eliminate expenses related to printing, distributing, and storing paper-based tests. Additionally, the automation of grading and reporting reduces the need for manual labor, further lowering operational costs for educational institutions.

Therefore, online assessment offers a host of advantages that make it an increasingly attractive option for modern education. As technology continues to evolve, the adoption of online assessment methods is likely to grow, further transforming the educational landscape for the better.

While online assessment offers numerous benefits, it also comes with a set of drawbacks that need to be carefully considered when devising online assessment tasks. These challenges can affect the efficacy, fairness, and overall quality of online

assessments, and include issues related to technical difficulties, security and academic integrity, accessibility, the limitations of automated grading, among others.

One of the most significant drawbacks of online assessment is the potential for technical difficulties which can range from minor glitches to major disruptions that can impede the assessment process. Students may encounter problems such as slow internet connections, software bugs, or hardware malfunctions that can cause frustration and anxiety. In some cases, technical issues can prevent students from completing their assessments, leading to unfair disadvantages and necessitating rescheduling or additional administrative efforts. For faculty and institutions, maintaining the technical infrastructure required for online assessments can be challenging. It demands regular updates, technical support, and robust systems to ensure smooth operation. The costs associated with these requirements can be substantial, particularly for institutions with limited resources.

Ensuring the security and integrity of online assessments is another major concern. Unlike traditional in-person exams, where invigilators can monitor students to prevent cheating, online assessments often lack such oversight, making it easier for students to engage in dishonest behaviors, such as using unauthorized resources, collaborating with others, or even impersonating another student. While there are various invigilating technologies available, such as webcam monitoring, screen recording, and plagiarism detection software, these solutions are not foolproof and can, and often do, raise privacy concerns. Students may feel uncomfortable by continuous surveillance, and there are always ways for more computer literate individuals to bypass these measures. Maintaining academic integrity in online assessment remains a significant challenge that can undermine the validity of the results.

Despite the potential for online assessment to enhance accessibility, there are still significant barriers that can prevent all students from participating equally. Not all students have reliable access to the necessary technology, such as computers or high-speed internet. This digital divide can exacerbate existing inequalities, particularly for students from low-income families or rural areas. Furthermore, while online assessments can incorporate various assistive technologies to support students with disabilities, not all platforms are equally equipped to handle the diverse needs of each individual student.

The lack of standardization in accessibility features can result in inconsistent experiences and additional obstacles for some learners.

Automated grading systems, a key feature of many online assessments, offer significant time savings but also have significant limitations. While highly effective for objective questions, such as multiple-choice or true/false items, these systems often struggle with more subjective and complex tasks, such as essays or open-ended responses. Automated grading algorithms can misinterpret nuanced language, fail to recognize creative or unconventional answers, and lack the ability to provide detailed, personalized feedback. As a result, students may not receive the comprehensive evaluation they need to understand their errors and improve. This limitation can impact the quality of education and hinder the development of critical thinking and problem-solving skills.

The shift to online assessment can alter the dynamics of learning in a negative way. The impersonal nature of online assessments can reduce opportunities for meaningful interactions between students and educators. Traditional assessments often involve direct feedback and dialogue, which can be crucial for student development. The lack of face-to-face communication in online assessments can make it harder for educators to gauge student understanding and provide timely, personalized support. The focus on standardized, easily gradable questions in online assessments can also lead to a narrower curriculum. Faculty might prioritize content that is easier to assess electronically, potentially neglecting important but less quantifiable skills such as collaboration, creativity, and critical thinking.

In conclusion, while online assessment offers many advantages, it also presents several significant drawbacks. Technical difficulties, security and academic integrity concerns, accessibility issues, and the limitations of automated grading are all challenges that need to be addressed to ensure the effectiveness and fairness of online assessments. Additionally, the impact on learning and teaching dynamics highlights the need for a balanced approach that integrates both online and traditional assessment methods. As education continues to evolve in the digital age, it is crucial for educators, institutions, and policymakers to recognize these challenges and work towards solutions that enhance the benefits of online assessment while mitigating its drawbacks.

Strategies for Effective Online Assessments: Guidelines

In order to achieve effective online assessment, first and foremost clear instructions should be laid out, with well-defined expectations. Providing clear instructions and setting explicit expectations for assessment tasks is crucial in an online environment. Detailed rubrics and guidelines help students understand the criteria for success and reduce ambiguity.

Assessment can also be interactive and engaging. Interactive assessments, such as multimedia presentations, virtual labs, and collaborative projects, can enhance student engagement and participation. These tasks encourage active learning and allow students to demonstrate their understanding creatively.

Online education platforms offer various tools and features that can enhance assessment tasks. For example, learning management systems (LMS) can facilitate automated grading, discussion forums, and peer assessments. Utilizing these tools can streamline the assessment process and provide richer learning experiences.

Involving students in the design of assessment tasks can increase their engagement and ownership of their learning. This can be achieved through collaborative discussions, surveys, and opportunities for students to propose project topics or formats.

Academic misconduct has recently been the focus of academic research, leading to a serious review of existing institutional policies at universities. Undeniably, such efforts should be part and parcel of the general institutional academic integrity strategy to be designed jointly by students and faculty on the basis of common objectives and standards (Morris, 2018).

First and foremost, to maintain academic integrity and ensure that students genuinely engage with their coursework, universities can implement several strategies to avoid AI misuse in assignments which start with promoting awareness and understanding. Therefore, as a first step, at the university level, clear guidelines should be developed and communicated on the acceptable use of AI tools, specifying what constitutes misuse, i.e. lucid academic integrity policies should be established and conveyed to students, faculty and staff regarding the use of AI and other technologies in assignments and it should be ensured that students understand the consequences of academic dishonesty. A study by Stevens et al. (2022, p. 25) amongst 271 students and 70

faculty at a US southwestern university found that "the most common safeguard to thwart cheating was a statement in the syllabus about cheating".

Therefore, it is not enough for a university academic misconduct policy to be in place, it also has to be visible and easily accessible (cf. Suryani and Sugeng, 2019, Miron et al., 2021). Also, vague academic integrity policies need to materialize into clear resources for students and faculty and converted into coherent rules guaranteeing consistent and objective response to academic dishonesty (Reedy et al., 2021).

Then educational workshops should be conducted to educate students (and faculty!) about the ethical implications of using AI inappropriately and the importance of academic honesty. Such policies and practices can provide the building block of all further actions taken by specific departments or faculty. The underlying idea is to educate students and faculty on the definition of cheating.

Fostering a culture of integrity is another important component of the overall university academic integrity policy. Honor Codes need to be established and enforced. They should emphasize the importance of academic integrity and the consequences of AI misuse. Also, there is a need for role models whereby faculty and administrative staff should be encouraged to model ethical behavior and integrity, reinforcing these values through their actions and interactions with students.

Yet another significant aspect of the policy is ensuring academic support systems which can provide services such as tutoring, writing centers, and study groups, to help students develop their skills and reduce the temptation to misuse AI. Mental health resources should also be offered to combat stress and anxiety, which can drive students to seek shortcuts in their academic work (for a more comprehensive discussion of what constitutes a felicitous university policy on academic misconduct see Yankova, 2024).

There is another important factor to take into consideration when devising online courses and online assessment and that is the reluctance of some faculty members to embrace teaching and learning that happens online. There can be several reasons behind such resistance. For instance, many lecturers have spent years perfecting their teaching and assessment strategies based on traditional methods. They may feel comfortable and confident with established practices and may be reluctant to change. The familiarity and predictability of traditional assessments provide a sense of stability that can be difficult

to relinquish. Besides, adapting to new assessment methods often requires a certain level of technological proficiency. Faculty members who are not tech-savvy may feel overwhelmed by the prospect of integrating new technologies into their teaching practices. The learning curve associated with adopting new tools and platforms can be a significant barrier.

Implementing new assessment methods can initially increase the workload for lecturers. Designing authentic assessments, learning to use new technologies, and developing new grading rubrics can be time-consuming and demanding. Lecturers who are already burdened with heavy teaching loads may resist changes that they perceive as adding to their workload. In addition, some university lecturers may be skeptical about the effectiveness of new assessment methods in accurately measuring student learning. They may question whether these methods can provide reliable and valid assessment of student performance. This skepticism can stem from a lack of familiarity with the research and best practices surrounding innovative assessment techniques.

There could also be objective factors to this resistance as well – and this is where institutional policies and constraints come into play. Universities and colleges may have rigid assessment frameworks and accreditation requirements that make it difficult for faculty members to implement new methods. Additionally, a lack of support and resources from the institution can hinder efforts to adopt innovative assessment practices.

Addressing this resistance requires a multifaceted approach that includes professional development and training, highlighting benefits and success stories, providing adequate support and resources, encouraging incremental changes, fostering a culture of innovation and collaboration, and aligning new methods with institutional goals and policies. By implementing these strategies, higher education institutions can support lecturers in embracing innovative assessment methods, thereby ensuring the integrity and quality of education in the age of AI.

We as lecturers should be constantly aware of the possibilities of generative AI that change with each new generation. For instance, in a study conducted in the Netherlands (de Winter, 2023) ChatGPT was used to complete a reading comprehension exam in English and compared with the achievements of high-school students who were enrolled in one of the most academically rigorous programme (VWO) in the Netherlands. The tasks set were of the type reading for gist, interpreting words and phrases, making inferences.

Some questions were multiple choice out of three, five or six options, others were open questions or arranging answers in a specific order. The results indicate that ChatGPT-3.5's results were similar to those of the average Dutch student, while ChatGPT-4 performed considerably better than the average student, providing insights into ChatGPT's capabilities and performance compared to human students.

What follows are some strategies that may facilitate a fair assessment of tasks performed by students themselves and preclude the use of AI in one form or another. To address the challenges, university faculty need to develop and implement new strategies that promote academic integrity while leveraging the benefits of generative AI technologies such as ChatGPT. Educators can incorporate AI literacy into the curriculum, teaching students about the capabilities and limitations of AI tools like ChatGPT. By fostering a deeper understanding of AI, students can be encouraged to use these tools ethically and responsibly. Additionally, discussing the ethical implications of using AI for academic work can promote a culture of integrity.

Traditional assessment methods, such as take-home essays and assignments, are particularly vulnerable to misuse of AI tools. Educators can redesign assessments to include more in-person, supervised components, such as oral exams, presentations, and practical demonstrations. These formats require students to demonstrate their knowledge and skills in real-time, making it harder to rely on AI-generated content.

Authentic assessments that focus on real-world applications and problem-solving tasks require critical thinking, creativity, and personal reflection. By designing assessments that are context-specific and tailored to individual students' experiences and insights, educators can make it more difficult for students to use AI tools dishonestly.

If the tasks are unique, they will be difficult for AI to replicate. In order to emphasize originality and creativity, the assignments can require students to develop a project over time, incorporating research, design, and practical application, and thus students' work will be less susceptible to AI intervention. These projects can be tailored to individual student interests and real-world problems, making them distinctive and not susceptible to texts generated by AI. Any tasks that involve creating art, writing original stories or poems, or designing experiments require personal creativity and expression. These assignments are inherently individualistic and less likely to be effectively completed by AI.

In recent paper Katz et al. (2023) tested GPT-4 on the Uniform Bar Examination against prior versions and against human achievement and found that GPT-4 received better results than both the prior GPT versions and humans taking the exam, concluding that the capabilities of large language models can provide legal services to clients.

ChatGPT was also tested in the sphere of medical education. A study by Kung et al. (2023) revealed that without specialized training, ChatGPT easily passed thee three medical exams that form part of the United States Medical Licensing Exam (USMLE) and exhibited sound judgement and consistency in its answers. One step above, Thirunavukarasu et al. (2024) demonstrated that GPT-4 compared favourably with expert ophthalmologists, doctors in training and unspecialised junior doctors when they all underwent a mock examination of 87 questions. The results from these two studies of the use of GPT-4 in the medical sphere indicate that large language models are advancing to an expert-level knowledge and may soon be of benefit not only to medical education, but also provide medical help in cases when it is not easily available.

Therefore, AI poses significant challenges for educators in accurately assessing student performance and learning outcomes and devising such tasks that will truly demonstrate student's learning and acquisition of knowledge and skills.

Strategies for Devising AI-Resistant Assessment Tasks

While there has been ample research about the compromise of online exams by ChatGPT and AI in general (cf. Kerrigan et al., 2022), other research has focussed on the reexamining and rethinking of current assessment methodology (cf. Susnjak, 2022, Geerling et al., 2023, Ifelebuegu, 2023). What has become increasingly clear is that recent research findings:

> challenge prior assertions about the limitations of LLMs in multimodal reasoning and emphasise the need for robust online exam security measures such as advanced proctoring systems and more sophisticated multimodal exam questions to mitigate potential academic misconduct enabled by AI technologies. (Susnjak & McIntosh, 2024)

Therefore, assessment should be adapted to answer the requirements of the new environment and encourage cognitive processes that materialize in critical thinking,

whereby faculty should engage in assessment reform which highlights more the process of learning rather than the learning output (cf. Smolansky et al., 2023).

Another strategy that may preclude the use of AI is devising assessment tasks that apply knowledge in real-world contexts. For instance, tasks that require students to analyze and respond to complex case studies relevant to their field of study encourages critical thinking and the application of theoretical knowledge to practical scenarios. Each case study can have multiple potential solutions, making it difficult for AI to provide definitive answers. Also, designing tasks that present students with real-world problems to solve encourages active learning and critical thinking. Students must demonstrate their reasoning and decision-making processes, which are challenging for AI to emulate accurately.

An alternative way to avoid the misuse of AI by students is to set reflective and metacognitive tasks. Asking students to write reflective essays on their learning experiences, challenges faced, and personal growth encourages introspection and self-assessment. These tasks require personal insights and experiences that AI cannot easily replicate. In addition, maintaining a learning journal throughout a course, where students document their progress, thoughts, and reflections on the material, promotes continuous engagement and self-evaluation.

Collaborative and peer-assessed tasks such as group projects and peer reviews can mitigate the risk of cheating by fostering a sense of accountability and collective responsibility. With group projects that require collaboration and collective problem-solving the collaborative process itself becomes a critical component of the assessment. Incorporating peer review processes, where students evaluate each other's work, can add a layer of accountability and diverse perspectives, making it more challenging for AI-generated content to go unnoticed. When students work together and provide feedback to each other, they are more likely to engage deeply with the material and less likely to rely on AI-generated content.

Conducting oral and interactive assessments can also be a way to prevent the use of AI. Organizing oral exams or presentations allows instructors to engage with students directly, assessing their understanding and ability to articulate concepts. This method provides immediate feedback and reduces the likelihood of AI involvement. Also, incorporating live discussions, debates, and Q&A sessions into the assessment process

can reveal students' depth of understanding and their ability to engage with the material dynamically. However, that strategy can only be applied to smaller groups of students and would be unthinkable for a course with a large student body.

What is also advisable is the implementation of continuous formative assessments, where students receive regular feedback and have multiple opportunities to demonstrate their learning, and thus reduce the pressure to cheat. These assessments can include short quizzes, reflective journals, and interactive discussions that track student progress over time.

As AI-generated content becomes more sophisticated, so do the tools designed to detect it. University faculty can leverage AI-powered plagiarism detection tools that are capable of identifying AI-generated text. These tools can be integrated into the assessment process to ensure that submitted work is original and genuinely reflects the student's own understanding.

All of the above strategies that are particular to online assessment may not have the required effect unless they are performed in the context of a culture of integrity. Fostering a culture of academic integrity within higher education institutions is crucial. This involves setting clear expectations, providing education on the importance of honesty in academia, and implementing strict consequences for academic misconduct. By creating an environment where integrity is valued and upheld, students are more likely to adhere to ethical standards.

To sum up, the potential posed by ChatGPT, and similar generative AI technologies necessitates a proactive approach from educators in higher education institutions to prevent cheating in assessments. By redesigning assessments, promoting authentic learning experiences, integrating AI literacy, utilizing detection tools, encouraging collaborative learning, implementing continuous formative assessments, and fostering a culture of integrity, educators can address the challenges posed by AI and uphold the quality and integrity of education. Embracing these strategies will not only mitigate the risks associated with AI misuse but also enhance the overall learning experience for students.

Some Specific Examples of Tasks That Can Preclude the Use of AI

Ensuring academic integrity in the age of artificial intelligence requires designing assignments and tasks that inherently discourage or preclude the use of AI-generated

content. After discussing some of the strategies that can be applied when devising assessment activities, I would like to give some examples of specific tasks for university students that achieve this objective and that can be directly applied in class. I have tried these tasks with students in Bulgaria (New Bulgarian University), Spain (Universitat Oberta de Catalunya), and the UK (University of Lincoln), where I have been teaching for various lengths of time. The suitability and reliability of the activities was tested by first presenting them in class to a group of students and then setting them as online tasks to other groups of students. The study showed that both groups demonstrated similar results with the standard statistical deviation. The differences were based to a certain extent on the various abilities and knowledge of the individual students.

A. Tasks related to personal reflection and experience

Reflective Essays: Write a reflective essay on a personal experience, such as a significant life event, a volunteer activity, or an internship.

Journals: Maintain a weekly journal documenting personal progress and reflections related to a course or project.

B. Interactive and Oral Tasks

Oral Presentations: Prepare and deliver a presentation on a specific topic, followed by a Q&A session.

Oral Exams: Participate in an oral exam where you must answer questions and discuss your understanding of the subject matter in real-time.

C. Creative and Applied Projects

Creative Writing: Write a short story, poem, or play based on a given theme or prompt.

Design Projects: Create a design (e.g., a piece of artwork, an architectural model, or a product prototype) accompanied by a detailed explanation of the design process and choices.

D. Practical Assignments

Laboratory Reports: Conduct an experiment and write a detailed lab report documenting the methodology, observations, and conclusions.

Fieldwork Reports: Complete a fieldwork assignment (e.g., in environmental science, anthropology, or sociology) and write a report based on observations and data collected in the field.

E. Collaborative and Group Tasks

Group Projects: Collaborate with peers to complete a project, such as a research paper, presentation, or case study analysis.

Peer Reviews: Provide constructive feedback on a peer's assignment or project.

F. Continuous and Process-Oriented Assignments

Draft Submissions: Submit multiple drafts of an essay or research paper, showing the evolution of the work and incorporating feedback from instructors.

Progress Reports: Submit periodic progress reports for long-term projects or theses, detailing the work completed, challenges faced, and plans for future work.

G. Real-World and Context-Specific Assignments

Case Studies: Analyze a real-world case study related to the course material and provide a detailed report with recommendations or solutions.

Internship Reports: Complete an internship and write a report detailing the experience, learning outcomes, and reflections.

Concluding remarks

By designing assignments that require personal reflection, creativity, innovation, practical application, interactive engagement, and continuous assessment, university lecturers can create tasks that naturally discourage or preclude the use of AI-generated content. When the focus is on originality, real-world application, interactivity, reflection, and collaboration, educators can create assessments that accurately measure student learning and development. These types of assignments not only uphold academic integrity but also enhance the learning experience by fostering critical thinking, creativity, and personal growth. As AI technology continues to evolve, it is essential for educational institutions to remain vigilant and constantly innovative in their approach to assignment design, ensuring that students develop genuine understanding and skills. Implementing robust academic integrity measures further ensures the authenticity of assessments.

Devising effective assessment tasks in online education requires careful consideration of learning objectives, assessment methods, academic integrity, and inclusivity. By incorporating a variety of assessment types, ensuring clear instructions and expectations, providing timely feedback, leveraging technology, and involving students in the assessment process, educators can create meaningful and effective assessments that enhance learning outcomes.

Avoiding AI misuse in student assignments is crucial for maintaining academic integrity and ensuring that students gain the full benefits of their education. By promoting awareness, designing thoughtful assignments, utilizing technological solutions, implementing continuous assessment, fostering a culture of integrity, and providing support systems, universities can effectively mitigate the risks associated with AI misuse. These strategies not only uphold academic standards but also prepare students for future success by emphasizing the importance of ethical behavior and genuine learning. The ongoing evolution of online education presents both challenges and opportunities, and thoughtful assessment design is key to maximizing the potential of digital learning environments.

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