

Better to Divert Rather than Block: Exploring the Roles of ChatGPT in Student Assessment within Management Education

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Introduction

Artificial intelligence is known as the fourth industrial revolution. Artificial intelligence has already had a significant impact on human work in almost all industries, especially in knowledge-intensive industries. Management is one of the most typical knowledge-intensive industries. Artificial intelligence and the core associated technologies or terms, in management research, are usually big data and machine learning, which have been widely used before by managers in decision-making, forecasting, and analysis.

ChatGPT, which is a tool that is “a type of artificial intelligence (AI) model developed by the company Open AI and has been designed to generate human-like text,” has gained attention in recent months (Biswas, 2023). Due to the diverse functions of texts that can be generated by ChatGPT, scholars are particularly interested in research authorship, education, medical writing, and science communication (Buriak. 2023; Han et al., 2023; Liebrezn et al., 2023).

In management education, one of the most common assessments is writing-based essays, reports, and case study/essay-based exams. Especially during the pandemic period, many traditional exams have been moved to online exams, which is still the case in post-pandemic times. This creates rooms for students to use Chatgpt in their writing process or even directly produce their writing and be pasted into the answering areas. Teaching staff were concerned that the use of ChatGPT would lead to adverse consequences, such as stating wrong arguments in a decent way, students not putting effort into writing, and fundamentally, students not learning. Universities such as University of Hong Kong have banned students from using ChatGPT in their coursework¹. Within the authors' research group, colleagues raised the issue that the rules and standards regarding using ChatGPT are in need. These have shown the potential worries and willingness to treat ChatGPT as poor or even malpractice in assessment. However, the trend of technology development cannot be stopped, and the number of ChatGPT-like tools will increase, and the barriers of using it will be lower. There are also guidance and tutorials produced by technologists and tech enthusiasts to guide people on how to make the most of ChatGPT.

Thus, in management education, it might be better to defer rather than block. To better channel students in this AI trend, we first need to understand how students are making sense of ChatGPT. However, current research in education is mostly in medicinal research, while management as a ‘text-rich’ discipline is under-researched. Thus, this paper aims to propose research that explores the roles of ChatGPT among management students during their assessment. By identifying this, management educators can better channel the students to adopt ChatGPT in a professional and ethical way.

Brief literature review

Assessment is an integral part of management education that provides feedback to both learners and instructors. One approach to assessment is formative assessment, which focuses on providing learners with feedback on their progress and areas for improvement. For instance, Gikandi et al. (2011) argued that formative assessment can improve students' engagement and motivation and enhance their learning outcomes. Another approach is summative assessment, which is used to evaluate learners' performance at the end of a

¹ <https://news.rthk.hk/rthk/en/component/k2/1689362-20230224.htm>

learning period. According to (Giles & Gilbert, 2013) summative assessment can be used to determine whether learners have met the learning objectives of a course. However, the use of traditional assessment methods, such as multiple-choice tests and essays, has been criticized. For example, Boud and Falchikov (2007) argued that these methods do not adequately measure students' practical skills, critical thinking, and creativity, which are important in the management discipline.

To address these limitations, alternative assessment methods have been proposed in the literature. For example, team-based learning and experience-based learning are widely used in modern management education. In the process of finishing assessment, students need to access various supports and sources of feedback. Apart from support from instructors, students need to assess themselves before they finally submit the coursework, such as making sure they have understood the marking rubric, learning objectives, and performance requirements (Black et al., 2021). advocate for the use of peer assessment, which involves learners evaluating each other's work. With the development of information technology, students may seek learning and assessment support from technology use (Dean & Fornaciari, 2013). However, in such processes, different mindfulness levels and moral levels might lead to different cognitive levels, ethical practice levels, and performance differences (Dean & Fornaciari, 2013; Roberts et al., 2018).

In management teaching, the main concern of malpractice is plagiarism in writing (Hrivnak, 2019). Further, it is not a new thing that management educators are concerned about 'hi-tech' cheating among students, such as using phones to check or message each other during exams, finding contract writers, and purchasing exam papers beforehand (Campbell et al., 2000; Hrivnak, 2019). Such malpractice might be due to the fact that the definition of 'intellectual property' is perceived differently by students, and some students find it hard to understand what should belong to their work, or there is a lack of support in individual coursework procedures (Napier et al., 2002). It is asserted that support such as making principles clear, enhancing alignments of assignments, and learning objectives, promoting learner-centered culture, and sufficient formative feedback should be provided by management schools and educators (Hrivnak, 2019).

Management assessments have been tightly discussed with the future ethical performance of business professionals by McCabe and Trevino (1995). Though in management teaching procedures, there are yet rules to prohibit the use of ChatGPT. In management practice, the usage of ChatGPT has been discussed, such as providing some statistics, generating reports, and plans (Hayward, 2023; PARM, n.d.). One of the main advantages of using ChatGPT is cost-saving (Chaudhary, 2023). However, it is concerned that the accuracy of the answers provided by ChatGPT (Hayward, 2023). Thus, when making decisions, the usage of ChatGPT was considered as a requirement of monitoring.

Moving the professional areas back to teaching, rather than treating ChatGPT as a threat to students' moral and ethical learning, diverse roles of ChatGPT during students' learning and assessment need to be explored. Based on such, management lecturers can provide proper guidance.

Research method and future proposal

To explore the potential roles played by ChatGPT in managing students' coursework procedures, with the aim of guiding lectures and setting professional support standards, this research will employ a two-stage focus group approach. A focus group is a research method that facilitates group discussion among participants and enables researchers to gain comprehensive insights into a phenomenon or object (Herrman, 2017). Focus group, as a qualitative data collection method, is suitable for eliciting people's understandings (Wilkinson, 2014). Thus, it is suitable in this case, as ChatGPT is a relatively new tools in education.

The first focus group will be conducted with management students, and the coacher will be one or two of our PGR researchers, to eliminate any power imbalance between the authors (lecturers) and the student participants. The themes to be discussed will cover the following questions: a) What are the primary challenges during essay/coursework/dissertation writing? b) What support have you received or would you like to receive for these challenges? c) Have you used ChatGPT? Why or why not?

Subsequently, the outcome of the first focus group will be studied, and the authors will define the different roles that can assist students with writing challenges by analyzing the responses to the first two questions, such as supportive peers, reading tutors, and secretaries (as found in the pilot study; see Table 1). The different roles will be compared with ChatGPT's motivation or concerns to determine the potential roles of ChatGPT. Using the outcome from the first focus group, the second focus group will be conducted with management lecturers to identify guidance, support, or standards for each role that ChatGPT could have.

Pilot study

The authors conducted an informal discussion with academic advisees (students studying in postgraduate level, in management discipline and have essay writing experience) regarding three themes. Since this is a pilot study, the researchers used convenience sampling methods, selected the students who have usual interactions with us. The initial outcomes of this pilot study are presented in the following table 1:

Challenges during assessment writing:	Supports wanted (had) during assessment writing	Usage of ChatGPT in assessment
Time management: other coursework, busy daily life	Supportive peers to do brain storming	Have not used:
Struggling to find new ideas that is meaningful to research	Guidance from teaching staffs about academic reading	Worried ChatGPT will reduce ability of innovation Might try to use it for brainstorming only
It is not easy to read literature		Have used:
Concerning of English writing		Only used for non-academic purpose to save time for academic activities

Conclusion

The development of AI has brought about great changes in the world, especially with the recent introduction of ChatGPT. Its ability to imitate human language led to it rapidly gaining popularity in many fields. However, this trend triggers more discussion of ethical discussion of its use in both professional and academic writing (Buriak. 2023; Han et al., 2023; Liebreznz et al., 2023). Because written communication is part of the daily work of professional managers, assignments in management generally focus on the language-dependent form, such as essay writing. As educators, we cannot stop the development of technology and block students from the technology, rather, we should help regulate student ethics and prevent cheating. This paper has explored, through informal interviews, the difficulties students may encounter in the writing process, the help they need, and their willingness to use ChatGPT. In future research, firstly, we will provide a more in-depth overview of students' ethical choice behaviours in doing their assignments; secondly, we will explore normative guidance on AI use in management realities; thirdly, we will conduct further conduct focus groups to interview a broader group of management students and educators to summarise the difficulties students might encounter in management writing, their needs, and generalise their behaviours patterns in academic writing. Thus, we hope that we can conclude how we should allow the technology represented by ChatGPT to help management learn and adapt to professional practice, rather than become a tool for academic misconduct.

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Buriak et.al (2023)Best Practices for Using AI When Writing Scientific Manuscripts Caution, Care, and Consideration: Creative Science Depends on It. (n.d.).
<https://doi.org/10.1021/acsnano.3c01544>

Black, S. L., DeGrassi, S. W., & Sweet, K. M. (2021). Multisource Feedback as an Experiential Learning Enabler in Large-Format Management Classes. *Journal of Management Education*, 45(3), 479–517.
<https://doi.org/10.1177/1052562920987292/FORMAT/EPUB>

Boud, D., & Falchikov, N. (2007). Aligning assessment with long-term learning. <https://doi.org/10.1080/02602930600679050>, 31(4), 399–413.
<https://doi.org/10.1080/02602930600679050>

Campbell, C. R., Swift, C. O., & Denton, L. (2000). Cheating goes hi-tech: Online term paper mills. *Journal of Management Education*, 24(6), 726–740.
<https://doi.org/10.1177/105256290002400605>

Chaudhary, M. (2023). ChatGPT in Human Resource Management - Spiceworks.
<https://www.spiceworks.com/hr/future-work/articles/chatgpt-can-be-a-game-changer-in-hrm/>

- Dean, K. L., & Fornaciari, C. J. (2013). Creating Masterpieces.
[Http://Dx.Doi.Org.Manchester.Idm.Oclc.Org/10.1177/1052562912474894](http://Dx.Doi.Org.Manchester.Idm.Oclc.Org/10.1177/1052562912474894), 38(1), 10–42. <https://doi.org/10.1177/1052562912474894>
- Gikandi, J. W., Morrow, D., & Davis, N. E. (2011). Online formative assessment in higher education: A review of the literature. *Computers and Education*, 57(4), 2333–2351.
<https://doi.org/10.1016/j.compedu.2011.06.004>
- Giles, T. M., & Gilbert, S. (2013). ‘Do students want and need written feedback on summative assignments? Engaging students with the feedback process - a topic review activity,. *The Journal of the Education Research Group of Adelaide*, 3, 15–22.
- Han, Z., Battaglia, F., Udaiyar, A., Fooks, A., & Terlecky, S. R. (2023). An Explorative Assessment of ChatGPT as an Aid in Medical Education: Use it with Caution. *MedRxiv*, 2023.02.13.23285879. <https://doi.org/10.1101/2023.02.13.23285879>
- Hayward, E. (2023). How will ChatGPT change product management? - Mind the Product.
<https://www.mindtheproduct.com/how-will-chatgpt-change-product-management/>
- Herrman, A. ed., (2017). *The SAGE Encyclopedia of Communication Research Methods*. Vol. 4. Thousand Oaks, CA: SAGE Publications
- Hrivnak, G. A. (2019). The Increasing Importance of Curriculum Design and Its Implications for Management Educators. <https://doi.org/10.1177/1052562918822068>, 43(3), 271–280.
<https://doi.org/10.1177/1052562918822068>
- Liebrenz, M., Schleifer, R., Buadze, A., Bhugra, D., & Smith, A. (2023). Generating scholarly content with ChatGPT: ethical challenges for medical publishing. *The Lancet. Digital Health*, 5(3), e105–e106. [https://doi.org/10.1016/S2589-7500\(23\)00019-5](https://doi.org/10.1016/S2589-7500(23)00019-5)
- McCabe, D. L., & Trevino, L. K. (1995). Cheating among business students: A challenge for business leaders and educators. *Journal of Management Education*, 19(2), 205–218.
<https://doi.org/10.1177/105256299501900205>
- Napier, N. K., Hang, N. M., Mai, N. T. T., van Thang, N., & van Tuan, V. U. (2002). Bicultural team teaching: Experiences from an emerging business school. *Journal of Management Education*, 26(4), 429–448. <https://doi.org/10.1177/105256290202600408>
- PARM. (n.d.). How ChatGPT can help in project management | Parm AG. Retrieved March 4, 2023, from <https://parm.com/en/chatgpt-in-project-management/>
- Roberts, F., Thomas, C. H., Novicevic, M. M., Ammeter, A., Garner, B., Johnson, P., & Popoola, I. (2018). Integrated Moral Conviction Theory of Student Cheating: An Empirical Test. *Journal of Management Education*, 42(1), 104–134.
<https://doi.org/10.1177/1052562917710686/FORMAT/EPUB>