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**A Learning & Teaching Research Collaboration**

***Project Title:* A Student led exploration of productive and ethical use of AI in Business Education**

**Student Partners:** Zarah Mohmed ([w1691084@my.westminster.ac.uk](mailto:w1691084@my.westminster.ac.uk));

Maharshi – Tejas Vyas ([w1679012@my.westminster.ac.uk](mailto:w1679012@my.westminster.ac.uk)); Harpreet Mann ([w1684877@my.westminster.ac.uk](mailto:w1684877@my.westminster.ac.uk))

**Academic Partner(s):** Rachel Lander ([c.lander@westminster.ac.uk](mailto:c.lander@westminster.ac.uk)); Gustavo Espinoza-Ramos ([g.espinozaramos@westminster.ac.uk](mailto:g.espinozaramos@westminster.ac.uk)); Kamala Balu ([baluk@westminster.ac.uk](mailto:baluk@westminster.ac.uk))

**School of Management and Marketing**

**Academic Year 2022-2023**

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## Executive Summary

*(300-400 words)*

*A summary of your project including what you did, why you did it, and what the outcome was (based on your results).*

*Tip: it might be a good idea to write this section last, although it needs to be at the beginning of your report.*

### Draft

This report shows the findings from a Student Co Creators (SCC) project on the implications of ChatGPT on the student learning experience. The project focused on student and staff perceptions of ChatGPT, responsible implementation of ChatGPT in business education and the challenges of ensuring such tools are used ethically and effectively. Since the release of more freely available LLMs (Large Language Models) in November 2022 and more widespread adoption of ChatGPT, staff and students feel they are they are rapidly moving into unexplored territories in education. There is now a need for a more rapid response at Institutional level of navigating this shifting landscape to balance the benefits and challenges of using ChatGPT to enhance the student learning experience.

The importance of this project is to explore the impact of AI in Higher education, specifically on students' productivity during their studies at WBS and the identification of ethical implications of use both in learning and teaching and in assessment and the consequences of this for module design.

This is a critical contemporary issue, there is some guidance (for example see the QAA briefing on “The Rise Of Artificial Intelligence Software And Potential Risks For Academic Integrity: Briefing Paper For Higher Education Providers” available at Academic integrity (QAA, 2023). However, each institution must work on developing understanding with their own student body, in particular, to identify if there are localised issues here.

The Students as Co Creators project supports this journey to explore how we can productively and ethically use AI both through embedding in the curriculum and in student’s personal learning journeys, drawing on the principles of partnership and democratic exploration of the challenges from two significant stakeholders. Wider stakeholder involvement is needed in further work, understanding employers and their use of AI will be critical.

Our findings identified key themes in the areas below:

* Concerns when using AI
* AI as a productivity tool in HE
* AI detection tools
* Impact on assessment.
* AI Skills development

Our recommendations relate to assessment practice and institutional guidance

* Impact on assessment
* Institutional guidelines
* Pace of Change: the need to prepare for institutional capacity for rapid response to developments in this field

## Background and Aims

*(200-300 words)*

*Background: Give the rationale to the project (did it build on previous work?), was there a need for it, and why is it important. Did you make any assumptions before doing the research? What were your original ideas and what information did you have? You may need to reference relevant literature.*

* *Aims: (you should have worked on these previously) What did you want to achieve?*
* *Objectives: How did you achieve the aims?*
* *Stakeholders: Who does your research impact? Think about who participated in the research (academics, students), who will be affected (intended beneficiaries), and who will use the findings of your evaluation (Course leaders, Directors of Learning and Teaching etc.)?*

*Tips:*

* *the aim is the ‘what’ of the research, and the objective is the ‘how’. You can list your objectives with bullet points or numbers.*
* *When working out who the ‘stake holders’ are, think about who you want to respond to your findings and carry out some changes.*

### Draft

Since ChatGPT’s introduction in November 2022, numerous studies have investigated the impact and challenges this technology will present, particularly to the education sector. First (2023) explored the perceptions of scholars and students, highlighting themes such as changes in educators’ roles, assessment impacts, ethical considerations, implications for future employability. Willems, 2023; and Mhlanga, 2023 have considered the ethical implications and productive use of ChatGPT addressing themes such as, privacy, fairness and transparency. Tlili et al., 2023 stressed the importance of conscious use until clear guidelines are established. This is a critical contemporary issue and although there is some guidance (for example see QAA (2023) briefing on “The Rise Of Artificial Intelligence Software And Potential Risks For Academic Integrity: Briefing Paper For Higher Education Providers” available at Academic integrity, each institution must work on developing understanding with their own student body, in particular, to identify if there are localised issues here.

Aims:

To identify the opportunities and challenges presented by AI in business education, and how they can be harnessed in a productive and ethical way to enhance student learning and success. We will focus on discoveries concerning:

1. Insights into the effectiveness of AI in improving learning outcomes and increasing student engagement in business education.
2. Identification of ethical concerns and potential unintended consequences of using AI in business education.
3. Understanding of the level of comfort and readiness of students and staff to embrace AI tools and techniques in business education.
4. Identification of the skills and competencies that students need to develop to effectively use and interact with AI in the context of business education, and the support required for staff to facilitate this.

Objectives

* To carry out case studies to gather students and lecturers’ perception on the implication of using AI in higher education.
* To research and write a literature review about AI in higher education.

Stakeholders: students, academics, policy makers.

## Methods

*(150-300 words)*

*For this section you need to think about exactly what you did it and be able to describe it clearly. Think about:*

* *What exactly did you do (Surveys, interviews etc)?*
* *How many participants did you use and who where they (e.g 20 level 5 students studying…)? Did you take into account any ethical issues?*
* *How did you analyse your data (eg. Software, statistics)?*

*Tip: It would be useful to attach a copy of the Participant Information Sheet and questionnaire you used, as an Appendix at the end of the report.*

### Draft

The research method suitable for this explorative research study is focus groups as it involves a group interaction on which participants exchange anecdotes and comment on each other's experiences. Focus groups are aligned to social constructivism, our research philosophy as they analyse the participants experiences and evaluate their way of thinking that will help in the generation of data that will be analysed to answer the research questions. The team organised two focus groups during semester two of the 2022-23 academic year, on which the SCC team, that is composed by three MBA students and three members of staff.

The research was split into three stages.

* Preparation: Before these meetings a MS Word document was shared in 365 with the SCC team with information about AI definition, characteristics, and some free AI tools available. Participants were encouraged to read this document and practice on the free AI tools so that we can have a better understanding of the impact of these tools.
* Focus groups
  + 1st focus group: on 24th May. In this meeting, the team discussed topics including use of ChatGPT and other AI tools, advantages / disadvantages of using AI in higher education, and how we can use AI tools in an ethical way.
  + 2nd focus group: on 16th June. In this meeting we discussed topics related to ChatGPT and assessment, UoW guidelines about using AI tools, how to identify ChatGPT generated text.
* Analysis and dissemination of findings.
  + The SCC team analysed the findings from the focus groups, that were shared with the students.

To analyse the participants perceptions on the subject of study, thematic analysis was selected as the most suitable method. The staff members individually read through focus group notes of both workshops and identified patterns in the responses and then met to agree the key emergent themes.

## Results

*Present: present your data in an appropriate and analysed format (tables, graphs etc.).*

*Describe: Describe your findings.*

*Even if you don’t have any tables or graphs, you should write here a summary of your outcomes.*

*Tip: When writing this section, look at your graphs and tables and ask yourself – what does this data mean?*

### Draft

A new wave of innovation has emerged in the past decade affecting different industries. One example is seen in the rapidly increase of AI available solutions that bring new opportunities and challenges in society. Higher education has not been excluded from the impact of AI and to keep navigating in these turbulent waters, there is a need to adapt the structures, capabilities and the pedagogy according to these changes as this is just the beginning.

This SCC project endeavours to find the students and staff points of view regarding the advantages and challenges when using AI in higher education. During two focus groups with three students and three staff members, we have identified the following concerns, solutions, and recommendations from thematic analysis.

#### Concerns when using AI

Lecturers and students shared some concerns around maintaining academic integrity and the misuse of ChatGPT. This is demonstrated in different forms including:

* Privacy issues regarding the registration for ChatGPT, some students were concerned that if using the UoW email address, the university can identify students and therefore may be penalised due to its use.
* Reliability of information and concern whether ChatGPT produces unique content. Students were concerned that ChatGPT can produce similar content and if students are encouraged to use it, then it may lead to increased plagiarism and collusion cases.
* The tool may encourage surface rather than deep learning, as some students may use it to complete assessments without engaging with learning module material and undertaking additional/in-depth research.
* There was concern about the promotion of ChatGPT on social media platforms such as, TikTok, encouraging unethical practice of ChatGPT.
* The students strongly valued qualities such as, equity and fairness in relation to their studies and felt such qualities will determine the ethical use of ChatGPT. For example, using the tool as a supporting tool to generate ideas was considered acceptable, whereas using the tool to produce assessment content, with over reliance on ChatGPT, to gain a higher grade than a student who did not use it was considered very unfair.
* Student expression strong concerns in relation to equity for group work assessments where some members use AI and others do not.

#### AI as a productivity tool in HE

Despite the students and staff concerns when using this AI tools, there were some ideas about how to use it in a productive way:

* Grammar checker. Students mentioned that there were some tools such as Grammarly can help students when improving their academic writing skills especially when English is not their mother tongue. However, the university should identify a list of approved grammar checker tools. For example, Studiosity is an ethical writing feedback service that runs 24 hour/seven days and delivered by a global network of academic skills specialists. This tool was on trial from January to August 2023 and although this was not an AI tool, the university should decide if it will prefer to recommend this tool or an AI tool.
* Summary/briefing creator: Some students mentioned that ChatGPT can be used as a summary/briefing creator to support reading of long case studies. This summary provides key information and easily accessible to read for students. This practice improves students’ understanding on the case study and therefore, student engagement.
* Presentation maker: Some students mentioned that some AI tools can create visual appealing presentations that can be helpful in some assignments. However, there were concerns that the marking criteria for presentation layout should not be higher than for presentation content and quality.
* AI skills - Students mentioned the importance to have a better understanding of using AI tools as this will be valuable in the workplace and enhance employability.

#### AI detection tools

* In alignment with the equity value, some students mentioned that the university should have an internet-based similarity detection service such as Turnitin and Self-assign that can detect text / images generated by AI.

#### Impact on assessment.

* Academics to rethink assessments, focusing on authentic learning and developing higher order skills such as critical thinking/analysis, problem solving etc. However, there is a risk of missing key learning outcomes if the assessment design focuses too much on making it ‘AI-secure’ (Lupyan cited in Abramson, 2023).
* Students suggested that there could be a reduction in use of written assignments and instead use other assessment types such as presentations, debates, recorded pitches, podcasts. More importantly, the assessment should embrace the use of ChatGPT.

#### AI Skills development

* Some students mentioned that the university should reinforce the use of some tools such as PowerPoint and Canva as these technical skills can be transferable in their workplace. Here is an opportunity to embed micro credentials in modules such as LinkedIn Learning as this will improve student employability.
* Evidence of ability to use of AI itself as a productivity tool was a seen as something that employers may seek.

## Discussion

*(300-600 words)*

*Discuss: possible limitations and issues (e.g. sample size, data analysis).*

*Analyse: make comparisons, contextualise your data in light of your aims. Think about:*

* *What went well?*
* *How did your chosen methods for research help you achieve your outcomes?*

*Tip: When writing this section think about your aims. Did you achieve your aims? Were your results as expected? Are you findings consistent with other work in the literature?*

### Draft

This project remains subject to some limitations that do not detract from the quality of this qualitative - explorative study. Below we discuss these and review the analysis and the overall research approach.

Limitations

A higher number in the sample of students and lecturers could provide a different perspective regarding the impact of AI in higher education and ethical implications. This was related to the difficulty finding volunteers to participate in the focus groups.

The difficulty to balance study and work commitments had an impact on the number of meetings, number of participants. However, using online tools such as MS teams and Microsoft 365 products facilitated the coordination and contribution of the team members according to their availability.

Having three MBA students, all of whom also studied here as undergraduates as part of the SCC team provided the views of students who have a better understanding of the HE system in UK. However, having the voices of a wider variety of undergraduate students would provide a holistic view of the benefits and students’ concerns in the use of AI.

The student co-creators had limited experience of AI at the start of the project which we addressed through preparation for the focus groups. Their knowledge and experience of use of AI developed rapidly during the project as they started to use it on modules, they were studying in Semester 3.

Review of the Analysis of findings

Understanding more about the impact, advantages / disadvantages of AI in higher education has been a long process as there has been growing research on AI in higher education, the university position towards AI has been becoming clear with more time. There was an online module which helped the participants to have a better understanding of AI and some AI tools available.

The SCC team members possess diverse skills and expertise in AI that brought a variety of perspectives and solutions to the table. This diversity allows the team to identify issues and finding solutions when using AI in higher education from multiple angles.

The list of themes captures the key concerns of the students, at the start of their journey in learning about AI tools.

\*How comprehensive do we think these are

\* What went well – real interest and genuine concerns from students, embedded in their experience of learning and teaching at the University.

Review of the Research Approach

The SCC team interpreted the findings of the data analysis in the context of the research aims. The team discussed how the results were aligned with existing literature and contributed to the broader field of study.

The team agreed at the outset that due to time constraints and balancing work and study commitments, the qualitative focus group approach enabled meeting aims of the project and enabling detailed in-depth collaboration. The richness of the data collected confirmed the choice of method as the appropriate for the project.

## Conclusion and Recommendations

*(200-300 words)*

*This section should include: key messages, conclusions and recommendations including suggestions for further research or other studies you think may be required.*

*Tip: Keep your stakeholders in mind when writing this – this section needs to be specific for your audience (who will pick up on your recommendations?). You can list your recommendations with bullet points but you should remember to include a statement to conclude your report.*

### Draft

Conclusion:

* Develop policies, guidelines, and best practice for the ethical and effective use of AI technologies, such as ChatGPT, in education through continuous dialogue and collaboration among all stakeholders. Specifically focus on integrating critical thinking, creativity, problem-solving, and digital literacy skills as explicit learning outcomes and experiential competencies within course and curriculum designs. To achieve this, prioritize curricula and pedagogical approaches that better address the capabilities of AI tools. Conduct further research, including longitudinal and experimental studies, to gain a better understanding of the long-term effects of AI integration in education and its impact on stakeholders, primarily educators and students.

Recommendations

* Impact on assessment
  + Some written assignment can be tailored to a unique experience that only the students who engaged in the learning activities of the module can produce and it cannot be replicated using ChatGPT. For example, reflection on fieldtrips, group presentation experience, a unique case study. Draw upon recent literature sources that show good practice when using AI in education to engage students in new ways (Nerantzi, et al., 2023)
* Institutional guidelines
  + Student guidance: the university should provide a clear guidance on the use of AI tools such as ChatGPT, the extent of its use, limitations, and in which cases it can be considered an academic misconduct case and treated as such.
  + In addition, a list of recommended tools by the university can be provided. This explanation should not only be sent by email but included during induction and welcome weeks as well as using other communication tools such as the UoW social media channels.
* Pace of Change – keeping up with Business use of AI and incorporating practice here into the curriculum, there is a need to prepare for institutional capacity for rapid response.

## Dissemination

*(200-300 words)*

*As a team you should discuss to whom your report should be circulated. In this section you should list whom this report is being sent to.*

*Tip: Think about how you are going to get your research across to your stakeholders. Be realistic about this and consider whose help you may need in the process. You will also get help from the Students as Co Creators team with the dissemination of your project.*

This report would be useful for stakeholders in the academic community, the Co Creators/CETI website could be a possibility for publication. Circulating to other stakeholders, such as students, is most likely to come through request from Course Representatives for example, for further information on AI.

There is also a key stakeholder within our Learning innovation and digital engagement (LIDE) where continuous collaboration is needed internally, they have already produced institutional guidance.

One of our further aims is to produce a Student Guide on the productive and ethical use of AI as a digital resource in addition to this project report, the highlights of which will be communicated through our Presentation at the University Learning and Teaching Symposium.

The project team hope to also produce a blog that showcase the experience when using AI in learning activities that can be published in CETI website or in the Campus - Times Higher Education or WonkHE. In addition, this project creates an opportunity to disseminate the results in the UoW Teaching and Learning symposium.

The Symposium enable us to engage with academic stakeholders; AI continues to be a key concern for this stakeholder group. The Student guide aimed at student stakeholders requires further input from students via the Co Creators team.

The findings will provide more ideas to the community online UoW forum for discussions on the use of Generative AI tools. These ideas will support the work of a Special Interest Group at the university that is working on sharing best practices in use of GenAI and develop guidance and policy to help in building a strategy for engagement with this these tools.

### Draft

## Research Team Reflection

*(200-300 words)*

*Evaluate: What was good/effective about the research experience? What problems did you have?*

*Analyse: Why did you have those problems?*

*Plan: What would you do to overcome the problems? What would you do differently next time?*

*Tip: Think about what lessons you have learned and conclude on your project.*

### Draft

The project was effective in that rich data was collected through the focus group workshops. One issue here was participants availability when organising the meetings as students and lecturers have study and work commitments. We found to help this, it was critical to have clear definition of roles, communication channels and to set deadlines; all good practice that helped improve the team performance.

Student co-creators were only just becoming familiar with AI but did so rapidly. For the research, this was a bonus as student ideas on the challenges of AI were not biased through extensive use. Further research using experienced users should also be considered.

There is a real attempt of the university to improve digital capabilities of lecturers when understanding AI. ‘Artificial Intelligence in Higher Education: Challenges and Opportunities’ online module and additional training in module design should be part of the induction process for new lecturers and continuing professional development for all.

There is a need to create more spaces for discussion about AI implications in higher education, this can be not only in the form of Teaching and learning conferences, but research groups, continuous training, recognition to lecturers who develop authentic assessment and use AI in their modules. The challenge is to develop resources to support creativity in finding ways to develop authentic assessment.

Lastly, continued dialogue between all key stakeholders, including employers is critical to supporting our understanding of impact of AI and the implications of this for academic practice in business education.

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