



**Faculty: Business School**

**Module name: AI ventures**

**Programme name: Global Online MBA (with some computing students)**

**Level: Masters**

**Approximate number of students: Varies, approx. 70**

**Module ECTS: 20**

**Module type: Elective**

## Embedding AI into assessment

### Assessment overview

This case study involves a project based assessment where groups of MBA students are working together in teams to build the first part of a business plan for a start-up with the domain of Artificial Intelligence. During the 5 week module the students are scaffolded through a series of shorter written exercises that build towards their capstone submission. The use of AI is embedded into one of the written exercises where students are asked to critique an AI generated output of their business strategy.

### Design decisions

#### Overview of the assessments on the module

The aim of the module is for students to explore applications of AI in finance, health and other markets and to build new business models, products or technical concepts. The purpose is therefore to lay down scaffolding for students to start a company with aspects of the business plan they created for the module. The final product of the module is a pitch of a new AI venture that they wish to launch in either a corporate setting or as an independent start-up. The module addresses the following ILOs:

- Describe the principles of AI and the “Five Tribes of Machine Learning” theory of Pedro Domingos, and relate the principles of AI to a specific area of interest to the student;
- Examine the ethical and risk management implications of AI+human systems, and the new regulations and guidelines that are emerging around them, including the new EU framework, the OPAL project and the Trusted Data framework;
- Assess real world case examples of AI in business, including ethical implications and potential paths for resolution;
- Create an application of AI to a particular commercial domain space, including (for technical students) creation or elaboration of a functional AI project or (for nontechnical students) rudimentary no-code/low-code prototyping, while applying innovation ideation and launch methodologies such as Outthinking and Lean Startup;
- Argue the merits of their AI venture including what problem it solves, and how it is unique, applying techniques of literary and dramaturgical theory (Joseph Campbell, Marshall Ganz, Barbara Minto).

Such an assessment approach is more [authentic](#) as it provides students with an opportunity to produce a piece of work that has meaning and value beyond the purposes of the assessment itself, hence making for a more authentic experience. [Watch this video on designing authentic assessments.](#)

### Insights colour key

Educational Developer

Inclusivity

Learning Designer

Registry

Careers

AI

The module is purely based on coursework which comprises of the following:

- The final report of 10-20 slides of a written submission and the final presentation on the group output (that resembles a verbal pitch) - those two components together form 50% of the grade and are the main outputs of the module. The presentation is a good simulation of speed pitching events, which occur in entrepreneurship conferences resembling therefore an authentic skill of being concise that anybody willing to build a start-up should possess. This is followed by a

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**Role: Professor of Practice**



Dragon's Den style question and answer session delivered to a panel of venture capitalists. In terms of presentation students are encouraged to nominate the best presenters in the group and task them with delivering the pitch, however they are not prohibited from doing a team presentation. How they go about dividing that part of the task is also a measure of social intelligence and their ability to collaborate as a team because even if one person is presenting the idea, everyone was involved in helping prepare the idea.

- Written individual assignment elaborated on below where students are asked to use AI to critically evaluate its output about the originality of their business idea. This directly feeds into the final report.
- Peer evaluation and group project contribution that are graded
- Quizzes that are more formative in nature yet have a small credit attached to them. The purpose of the quizzes is to ensure that students are doing the required work and engaging in class. The quizzes are structured in such a way that it is impossible to get a perfect score in the quiz without coming to class. They are deliberately structured to be 'easy' if the required pre-reading has been done and students show up to class. The quizzes therefore provide some reinforcement of the material and serve as a subtle verification of attendance and an incentive to engage. There are 5 quizzes and each quiz contains approximately 5 questions.
- Class participation

### **Rationale for the inclusion of an AI component**

One of the coursework assessment, the individual written assignment, was redesigned in response to the rise of large language model systems like ChatGPT. Before the popularisation of Chat GPT the task read:

Following your problem identified in Written Assignment 1, please write a short essay of 200-500 words on the topic of "what is unique about your solution". As before, you may potentially (but are not required to) describe the same unique attributes that differentiate your solution from others that might exist, but you should provide your own individual perspective on the answers.

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This task was changed once ChatGPT became widely used to include a deliberate use of an AI tool (students weren't exclusively restricted to using ChatGPT but ended up choosing it as their preferred tool):

Following your problem identified in Written Assignment 1, you will again be collaborating with your LLM-AI. You will be submitting 2 items in this written assignment:

1. Instruct your LLM-AI of choice to generate a 250-word explanation of what is unique about your AI solution. Your written assignment is to critique this output (250 words +/-). What was good about the result? What did not work well? What would you do differently?
2. Submit the venture description output that the LLM-AI itself generated. Please identify which LLM-AI you used.

The focus of the redesigned task was therefore on critically examining the AI output and considering what students would do differently in order to have it be useful for their final assignment. The final submission was still the same. It was still a pitch and a more detailed business outline.

While ChatGPT component was deliberately embedded into the individual submission, no such instructions were given for the final report submission. If Chat GPT or other AI software was uncritically used for the final group output it would be easily identifiable and it is unlikely that the submission would be of high quality. If the students successfully created a compelling venture pitch using AI then that would not incur any penalties as being able to use AI tools skilfully is a skill that needs to be taught and mastered. As the final submission is followed by the Dragons Den style presentation in front of a panel of experts, while students could use AI tools to write a business plan, they still had to be prepared for it to be judged by real venture capitalists.

A lot of discussion of AI focuses around the potential for misconduct. From educational perspective AI also offers a lot of opportunities. Here the fact that AI is an integral component of the task allows students to demonstrate their criticality towards the output helping students' develop skills that will be useful for their future careers.



Employers currently don't have a blanket approach to the use of generative AI in business however many are adopting elements of it in varying ways. What employers do agree on is that generative AI uses and developments need to be constantly monitored and evaluated so assessments that help students understand how to do this are useful. Some industries, especially those with regulatory bodies such as some areas of finance, are very cautious about generative AI. As educators we are not going to be able to teach our students about every technical advance, they will encounter in their future however we can teach them how to critically evaluate and communicate their evaluation regarding new products. This is a transferable skill that is very attractive to employers.

### Rationale for the group component

[Group component](#) is the fundamental learning design for this type of module. [Most of the learning that that students will gain from particularly an entrepreneurship and business plan focused class is peer learning](#). Therefore figuring out how to operate as part of a team where you have to take a complex task and subdivide it into smaller tasks, navigate domains of status and control, authority, expertise, ability to work with others is what's necessary to succeed in running a start-up. [Watch this video on leadership and followership](#).

### Fit with other modules

This is an elective module that interacts seamlessly with another elective module - Entrepreneurial Journey. Students who take the AI ventures module can pick up their work on their business plans in Entrepreneurial Journey and extend it. They'll get a more rigorous and in depth look at the topic and also more rigorous and in depth set of feedback at end of term.

### PRACTICALITIES

#### Preparing students for AI use

Prior to undertaking the assessment the students were shown how use a LLM. This was done through composing AI poetry in class, i.e. the students used AI to compose short poems about AI ventures that were then read in class. The reason for it was making sure that every student had an account set up to enter prompts and generate an output. Through

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this, students learnt how to use the tool in a non-threatening format.

Next year's module will include a unit on prompt engineering as part of the preparation. This means that ahead of the work, students are going to be taught how to engage in prompt engineering to improve the output. If someone does that to the point where they generated business plan that looks like a human created business plan then the purpose of this teaching has been achieved because of the amount of higher order thinking that's necessary to instruct AI.

If AI is an integral component to the task, or if participating in assessment activity draws on the ability to use AI then it is important to help students develop AI literacy. AI literacy is a relatively new concept in education but it is broadly defined as "a set of competencies that enables individuals to critically evaluate AI technologies; communicate and collaborate effectively with AI; and use AI as a tool online, at home, and in the workplace" (AI Unplugged (Georgia Tech University)). This involves getting students familiar with capabilities of the tool as well as how to make the most of it. [This case study](#) contains a very useful PPT presentation that includes student briefing on AI which is a very good base for thinking about developing students' AI literacy.

### Preparing students for group work

Students are told in advance that this project based class is based around team work so successful participation requires good team work. Students at the start are asked to sign an honour code of agreement where they agree to contribute to group work. Outside of that there is no preparatory work done to ensure students are well prepared to work in a group. This is because of the nature of the students who tend to have some working experience before going into the MBA. Additionally, group work is a heavy component of the overall programme. This means that when students come to choose electives they already have strong experience of group work so they are expected to apply the same principles and ethos learnt in other modules to this one. The groups, however, are supported throughout through at least one meeting a week with the teaching team.

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In this case the cohort comprises of mature professionals studying on a degree with a very heavy group work component hence it is justifiable that no time was carved out to discuss group working. In any other circumstances, working with undergraduates, it is important to make time for students to form their groups and to discuss how to work in a team. It can be a useful to incorporate a small task into the assessment, whereby students either reflect on how their group worked together and/or they produce a short document detailing how each member contributed. By making this explicit as part of the assessment, this can help to set expectations from the outset and stimulate some discussion about what constitutes a 'good' team.

With any type of assessment it is important that the students understand what they are expected to do and this is also the case with any kind of group work. It is crucial to outline to students how the team is expected to work together, especially in environments where students need to successfully work together under time pressure. Getting students set the ground rules in advance is sensible so that they can establish a way forward. See this case study for ideas how this can be successfully achieved.

When introducing group work some consideration needs to be given to how students with specific learning needs can be successfully participating in group interactions. All students involved should benefit from inclusive practice this means that inclusivity considerations can be embedded within standard practice around preparing students for group work. This can be done through discussion around the allocation of roles and better understanding how others, including those with specific learning needs such as dyslexia, autism, dyspraxia etc learn and communicate. Individuals should be mindful of that and think about the delegation of individual tasks that are appropriate to what individuals can do. Therefore part of preparation for group work is considering how others can be mindful and empathetic towards other group members.

### Assigning groups

Groups are assigned according to interests. A Google sheet is created with students' ideas for businesses and others interested in a similar idea can sign up and form a team together. This helps to ensure students are driven by their interests and are passionate about the business, which assigning students to groups would not help to achieve.

The ability to choose own area of interest is a great example of inclusivity in action; according to Universal Design for Learning principles, students should be presented with the opportunity to integrate their own interests or their own unique problems to be solved.

Purely from a disability perspective it is best if group allocation is random, i.e. it is not advisable to specifically groups students with learning difficulties together if they do not self-select to do it themselves. Students should be allocated randomly and if necessary reasonable adjustments should be made for those individuals in these groups.

### Peer marking and feedback

Having a peer assessment component helps to manage the free rider issue and keeps the system honest, making sure the work is distributed equitably amongst the 3-5 members of a group. This way the group self regulates without the need to implement top-down interventions.

There is no formal preparation for peer feedback and peer marking, again due to the nature of the programme and the students. The students are given a marking form used across the programme to assess others against that includes:

- Contribution and what percentage of the task was contributed to the final submission by which student
- A negative call out of, i.e. Was anyone particularly destructive?





- A positive call out where students can nominate someone out of their team for being exceptionally meritorious in their contribution to the group

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The encouragement to reward particularly good performers within a group is an interesting idea. It forces students to look beyond the competition and teaches students to recognise and value exceptional contributions.

The students who are positively nominated get a distinction. This ability to give a positive call out works well as students are able to objectively reward contributions in relation to exceptional leadership

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in organisation and management, impact on teams' motivation etc.

When including peer feedback it is important to ensure that students are in a position to provide meaningful feedback to their peers and if grading is involved, they fully understand assessment criteria against which they are marking their peers. This requires an element of formal discussion around what effective feedback is and what good, average and pass quality work in the context of this assignment looks like. This is especially important for students working at an undergraduate level who might be new to the Higher Education context and are still developing a variety of skills linked to professionalism and feedback and assessment literacy.

### Marking arrangements

Each component described in assessment overview has weighting attached to it and is formally marked. The distribution is as follows:

Final report and the pitch	50%
Written individual assignment	10%
Peer evaluation and group project contribution	20%
Quizzes	10%
Class participation	10%

Class participation is assessed according to class contributions during discussions and questions to guest speakers who deliver talks on the module. The purpose is to have students engage and to encourage them to show up to lecture. The quality of participation is not assessed as due to the nature of the MBA students being often more mature and competentive, the social pressure of inadequate contribution prevents students from gratuitously just posing a question for the sake of it being acknowledged.

The final presentation – the pitch is assessed by the instructor. The panel for the pitch is composed of experienced entrepreneurs who had previously built a company taking it public or corporate VCs who run strategic venture funds. They are not involved in marking but provide feedback on the presentations.



Student who used prompt engineering were given additional points as they were extending critical thinking into synthesis, demonstrating higher order learning.

Some considerations should also be given to how the presentation questions (if included in the assessment) are organised. For example one strategy could be pausing after a presentation and ask other to write down the questions to the presenters so that they have some time to prepare. This helps with the auditory processing side of things, i.e. not being able to recognise what needs to be done quickly by impeded understanding of what's being said; that is often present in a lot of disabilities. Speed of response is something which is part of a lot of neurological conditions. A combined approach of training/ practice before the presentation and an adjusted response system to questions that is put in place can really help students.

With presentations, especially in cases where every student is expected to present, some considerations have to be given to adjustments for students who might not feel comfortable to present. A short presentation shouldn't be challenging to many students yet, some students, for example those with severe autism might struggle. Having an alternative such as a short video, or as in this case a viva would enable the student to deliver something which didn't mean they had to stand up in front of the group and do it. Such alternatives could potentially take the stress out of presenting. Providing students with choice is providing them with the option that suits their learning best or limits the impact of their disabilities.

### Online adaptations

This assessment could easily be implemented both in an Online class setting or in person.

When trying to deliver a learning experience online, oftentimes the challenge is opening one's thinking beyond the mere face-to-face context. Widening the horizon and rethinking the learning experience within an online environment can help to see opportunities that might be missed otherwise – online and face-to-face are different environments and just 'moving' teaching from face-to-face to online without considering the different context would result in a bad learning experience and design. A recommended starting point would be to think of what you would like students to achieve and work with a learning designer to design journeys that can support students achieve such learning outcomes. It's all about breaking down how different components of online environment – synchronous, asynchronous – can work together and create a journey that can help students achieve these learning outcomes.

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Having appropriate equivalents is very important to allow for mitigation. What needs to be considered is ensuring that the same skills are being assessed. If this is not possible then the marking scheme needs to be adjusted to account for any differences in the mode of assessment.

### Provision of feedback

Feedback on the individual written assignment was provided in the form of a sentence or two. The students tended to fall into patterns of response so it was easier to generate feedback that can apply to more than one student. The individual answers were different, but they bucketed nicely into handful of categories - did the student understand that ChatGPT was repetitive and superficial? Did they just spot that it was superficial and not repetitive? Did they just spot that it was repetitive and not superficial? Did they fail to extend the analysis of the output into something they would use in their final submission? Even though there was only one

Student disengagement with feedback is quite a big problem across the HE sector. Our understanding of what feedback is and what constitutes good quality feedback is also changing. The sector is moving away from considering good quality feedback in terms of quantity but rather thinking of it in terms of actionability and timeliness defined as feedback delivered in time to be applied to the next task. Focusing feedback on short action points has the potential of lowering feedback burden for staff and making it action orientated and more usable for the students.



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Loss of presence of the teacher can be quite a big issue in online settings. Ensuring a stronger lecturer/teaching presence in online courses is important. The facilitator's presence can be strengthened through design, with a clear narrative, and/or with a strong presence of the teaching assistant throughout delivery just to mention a few examples

When moving a presentation component online, a decision has to be made as to whether it is best done in a live session or as a pre recorded material or even if it could be rethought altogether as a different activity. It is important to consider how the dynamics of a face to face session might affect the task in an online setting. It is important to remember that a direct translation from face to face to online will rarely be appropriate; the task should be revisited in light of the different context and modality. Other things to consider when deciding whether a presentation should be pre-recorded or live is the nature of the task and the ILOs that are being assessed. In other words, the suggestion is to have learners at the core and think of what they would need to achieve and master as a result of the learning experience. This would then guide designers to the best approaches to suggest in the different environments and modalities (face-to-face, online and blended).

### Advantages of assessment type

- The authenticity of the assessment has the potential to engage the students
- The connectivity between the modules allows students to develop ideas generated in this module further
- Having active investors providing feedback to students allows for a more diverse feedback and gives students a 'sanity check'. This different set of perspectives is important because venture capital as an asset class doesn't tend to have great returns as venture capitalists don't have consistency or commonality in their ability to pick good companies. A variety of feedback from people who are actively working in the field is crucial.
- Students are going to be using AI tools just like they use the scientific calculator. Rather than prohibit it, we as educators should embrace it, and we should figure out ways to turn it into a set of teachable moments. This means designing curricula that incorporate these tools and teach the students how to use them better.
- It is aligned well with professional practice. Students are going to have to work in a group no matter what they do. There are hardly any job descriptions that do not equivalent a group working collaborative element. Being able to work in a group helps students develop related transferable skills;

### Limitations of assessment type

- Some of the students thought that they were only supposed to critique ChatGPT and they didn't connect the dots between how the individual exercises/ assignments were building towards their final assignment. The instruction around 'What would you do differently' had an implicit dependent clause that said, in order for this to be useful in your final written submission which was missed by some students.
- [In terms of group work, not having any insight into what is happening in group work can be an issue](#), however due to the nature of the students no monitoring mechanisms were adopted
- Working within the constraints of the time that is allocated for assessing can be difficult

### Advice for implementation

- Make the language of the brief clear to ensure students understand what they are required to do and how the work done in one task informs their final submission. This is especially important if you're inducing a critical thinking model, make sure it is clear as to what you want your students to critically think about. Sometimes [exemplars](#) can be a good way of explaining expectations to students. Watch these video's on [pros and cons](#) and [strategies for using exemplars](#).
- A lot of students who enrol on the module have some knowledge of what a business plan looks like, but in even if that is not the case, scaffolding is provided in the form of structure. What students need though is a little bit of training on prompt engineering that should be included in preparation for the tasks. Teaching these skills will allow students to make good use of AI tools in the long run.



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- Prompt engineering should become a part of helping students to develop AI literacy which can be an integrated part of assessment briefing
- As the number of AI tools is growing rapidly it is useful to look at the current set of tools available on the market and then recommend to your students a couple that you think are most suitable to help them navigate that part of the task. In doing so make sure that all students will have access to the suggested tools.
- Preparation for working in a group is key and it should include some discussion of how students with different learning needs might respond to group work. It is always useful to negotiate ground rules based on group participants' working patterns and preferences;
- When conducting oral assessments it is important to consider how question will be asked to ensure all students have an equal opportunity to answer them to their best advantage. This might involve strategies such as pausing to give students time to think or writing the question down so that it can be more easily processed.
- Ensure that assessment is designed in such a way that reasonable adjustments can be made and there is enough time to allow for mitigation if necessary;
- Self or peer review / assessment of exemplars could be an effective means of formative assessment and / or preparation / helping to manage students' anxieties relating to approaching assessments. It might also help to give clearer guidance / a breakdown structure to show how long they are expected to spend on each part of this.
- Give consideration to how groups should be created. There are different approaches that could be followed, it is important to have a clear rationale for why you think your chosen approach works best given the circumstances.