

[RE]IMAGINE EDUCATION

A weekly Design·AI newsletter

LIFELONG LEARNING: NEW POSSIBILITIES WITH AI

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In Conversation with Dr. Nachamma Sockalingam, OSP



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Much of the conversation around Generative AI starts with what the technology can do. Galvyn Goh's work takes a different route: **start with the task.**

This task-based approach matters for teaching, learning and work. Instead of building a generic GPT and searching for a use, we first understand the person, the task and the need, then design the AI around that context. In previous and ongoing research, Galvyn investigates how specific work and life tasks can be augmented by technology such as CustomGPT assistants.

For lifelong learning, this is a useful shift. Learning AI does not have to mean mastering every new tool; it can mean learning how to identify a meaningful task, understand where support is needed, and create an AI collaborator for that purpose. At SUTD, this brings Design·AI back to a core design question: what is worth designing AI for?

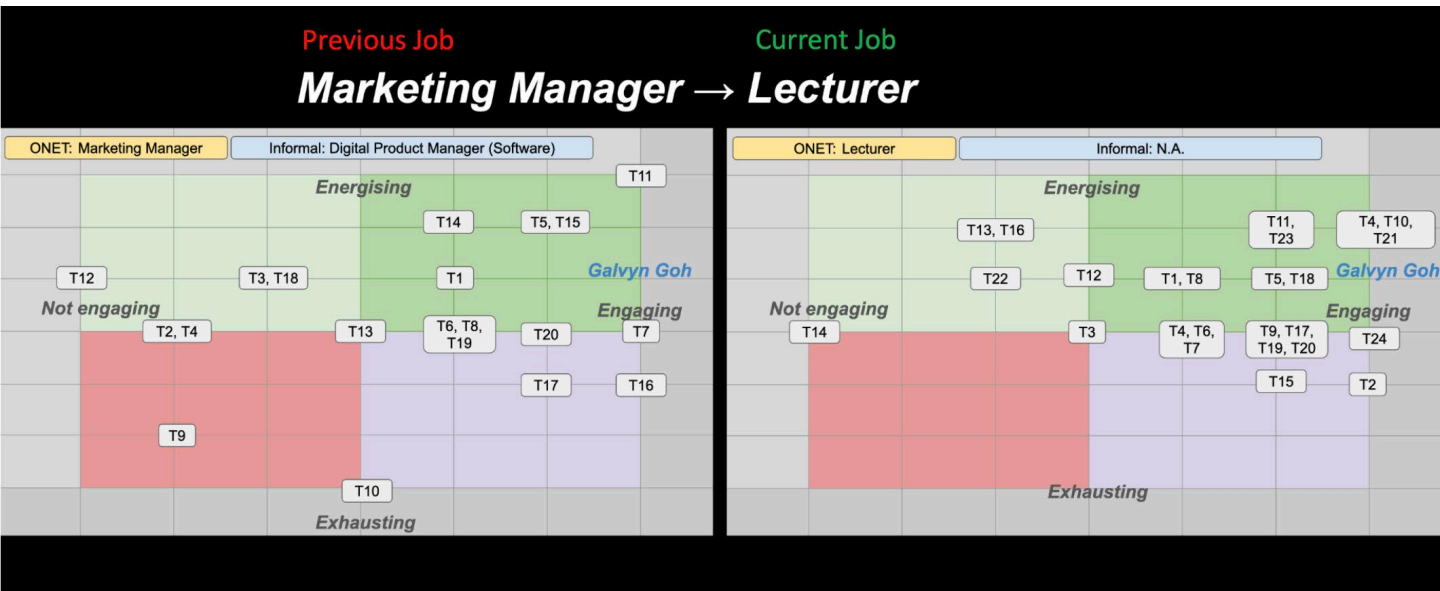
The value of a CustomGPT does not begin with the GPT itself, but with understanding the task, the human need, and how AI can improve the experience of learning and work. So perhaps the question for all of us is: **which task in our teaching, learning or work would be worth redesigning with AI?**

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Workers can undergo successful career transitions task by task. For example, a marketing manager successfully transitioned to a new role as a lecturer which had more meaningful tasks. Each rectangle (T1/T2/...) represents a specific task the worker does. To augment jobs, we need to look beyond job titles because formal job descriptions may hide the depth and complexity of the work and tasks that workers do. Real impact starts by understanding the tasks that drive outcomes, including “invisible” tasks. We can then use technology and AI to augment engaging tasks and alleviate exhausting tasks.

Galvyn, could you tell us a little about your research and how you came to look at AI through the lens of work, wellbeing and lifelong learning?

My research looks closely at the tasks people actually perform at work — not only those in their formal job descriptions, but also the “invisible tasks” they take on in practice. Through job analysis, we can identify which tasks are engaging or disengaging, energising or exhausting, and use this understanding to think more carefully about wellbeing, career transitions and the future of work (Goh, 2019, 2024; Goh & Poon, 2022, 2024a, 2024b).

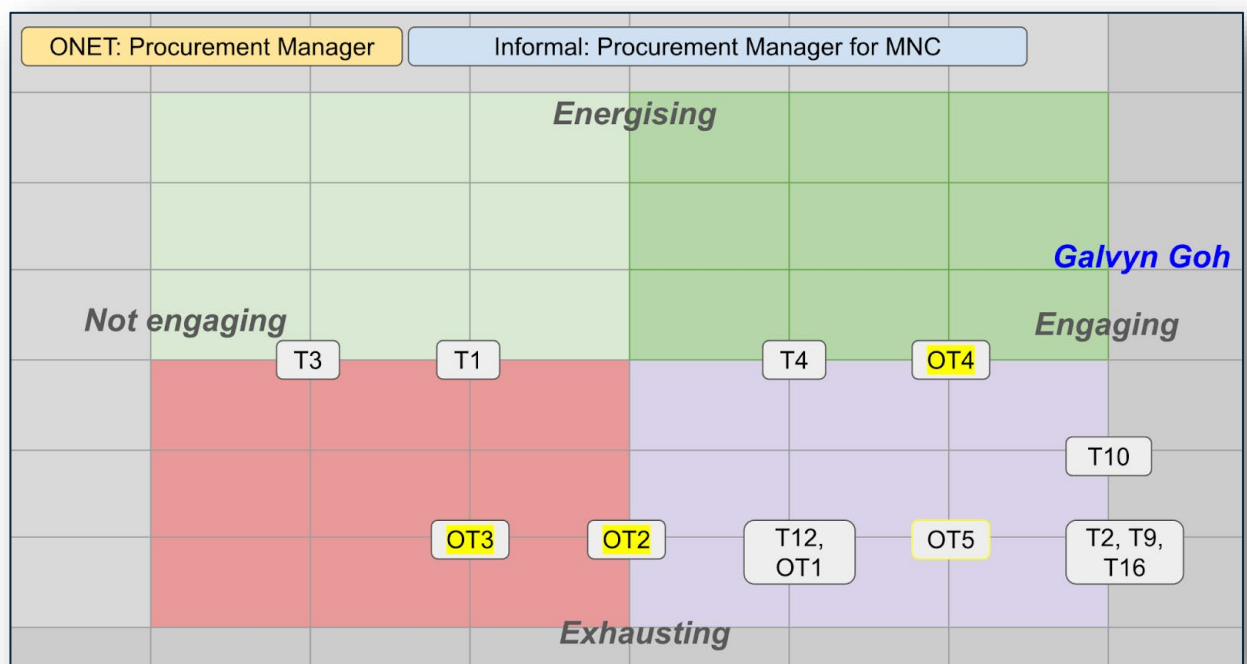
This naturally led us to Generative AI. Rather than asking broadly how AI might change a job scope, we asked a more precise question: **which specific tasks could AI augment, and what difference might that make to the person doing them?**

Could you tell us a little more about the research project and how you went about studying these tasks?

The project builds on our prior and ongoing research using **Job Analysis methodologies** and the **WellBeing × WellMeaning Matrix** to understand the specific tasks people perform at work (Goh, 2019, 2024; Goh & Poon, 2022, 2024a, 2024b), including “invisible” tasks that may not appear in formal job descriptions. These tasks are then mapped according to whether they are engaging or disengaging, energising or exhausting.

In this study, I worked with an older participant who had been a procurement manager. We identified both her formal responsibilities and additional “Own Tasks (OT)”. Own Tasks are “invisible” tasks not reflected in her formal job description. We explored which of these could potentially be augmented using Generative AI.

The next step was to move from analysis to design: selected tasks became the basis for creating bespoke CustomGPT assistants. This allowed us to examine not simply whether someone could use AI, but **how AI could be designed around a specific task, need and human experience**.



WellBeing X WellMeaning Matrix of an Older Worker

Why is it important to start with the task, rather than with the AI tool?

Our approach begins by asking **what the person is actually doing, how they experience that task, and where support may be useful**. The WellBeing × WellMeaning Matrix helps distinguish tasks that are engaging or disengaging, energising or exhausting, so AI is introduced only where there is a meaningful reason to do so.

This is different from creating a GPT first and then looking for a use case. In the study, specific exhausting or disengaging tasks such as vendor onboarding and addressing customer booking queries were identified before bespoke CustomGPT assistants were created around them.

For Design·AI, that is an important principle: **the technology should follow the task and the human need, not the other way around**.

In our study, **the job analysis revealed an important distinction between the tasks captured in the formal job description and the ‘invisible’ tasks the participant was actually performing** (Goh & Poon, 2022; Goh, 2024). Three of these Own Tasks — OT2, OT3 and OT4 — subsequently became candidates for Generative AI augmentation.

Task	Description	Engaging	Exhausting
T1	Develop and implement purchasing and contract management instructions, policies, and procedures.	3	3
T2	(Source) vendors of materials, equipment or supplies, and interview them to determine product availability and terms of sales.	7	2
T3	(Conduct project biddings and awards) Prepare bid awards.	2	4
T4	Direct and coordinate activities of personnel engaged in buying, selling, and distributing materials, equipment, machinery, and supplies.	5	4
T9	Interview and hire staff, and oversee staff training.	7	2
T10	Develop cost reduction strategies and savings plans.	7	3
T12	Resolve vendor or contractor grievances and claims against suppliers.	5	2
T16	Represent companies in negotiating contracts and formulating policies with suppliers.	7	2

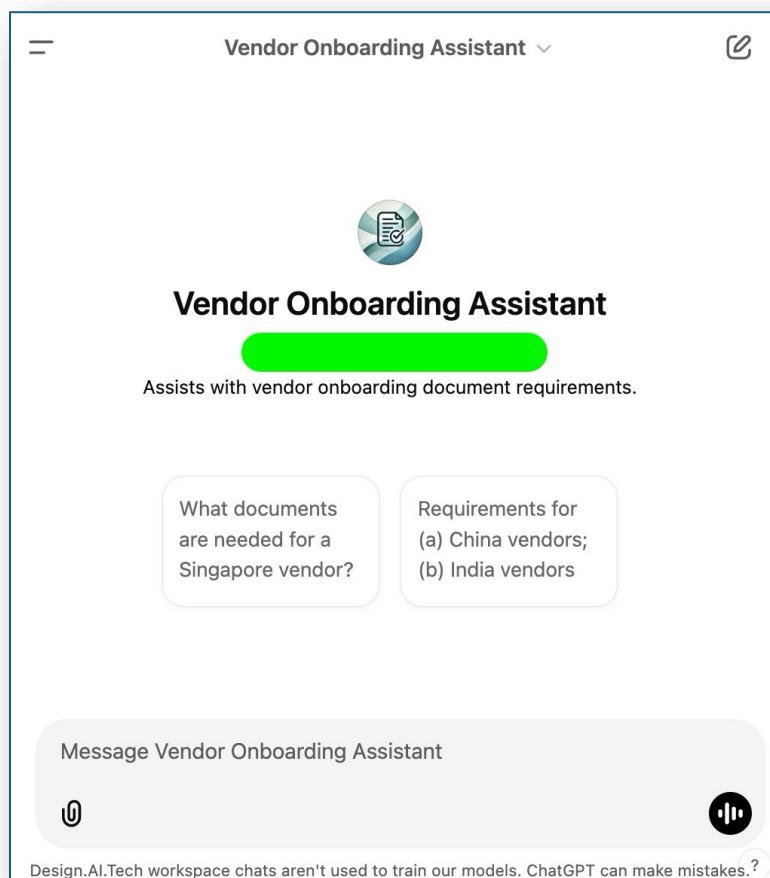
Own Task	Own Task Description	Engaging	Exhausting	Can be augmented by CustomGPT?
OT1	Negotiate contract terms with vendors	5	2	No
OT2	Collate all monthly reports from 11 countries that use different travel agents, do quality checks to ensure all required fields are completed and inputs are in consistent format, then consolidate them to prepare executive summary for business leaders	4	2	Yes
OT3	Initiate the vendor onboarding process	3	2	Yes
OT4	Address travellers and travel bookers' queries relating to travel policy	6	4	Yes
OT5	Respond to Internal Audit's queries	6	2	No

Can you show us how the workshop helped turn one of these tasks into a working AI application?

Yes. After identifying **OT3: “Initiate the vendor onboarding process”** as a suitable task for AI augmentation, the participant attended a **Lee Kuan Yew Centre for Innovative Cities (LKYCIC) SUTD CustomGPT workshop** and created a no-code **Vendor Onboarding Assistant**.

The CustomGPT was designed around a very specific need: helping new vendors understand what verification documents to submit and how to navigate the onboarding process. Instead of repeatedly answering similar queries, the worker could redirect some of these questions to the assistant.

What is important here is the sequence: **the task was identified first by the worker herself, and the GPT was then designed by the same worker around that task.** This makes the app a useful example of task-based Design·AI in practice.



Participant developed a CustomGPT app called “Vendor Onboarding Assistant”

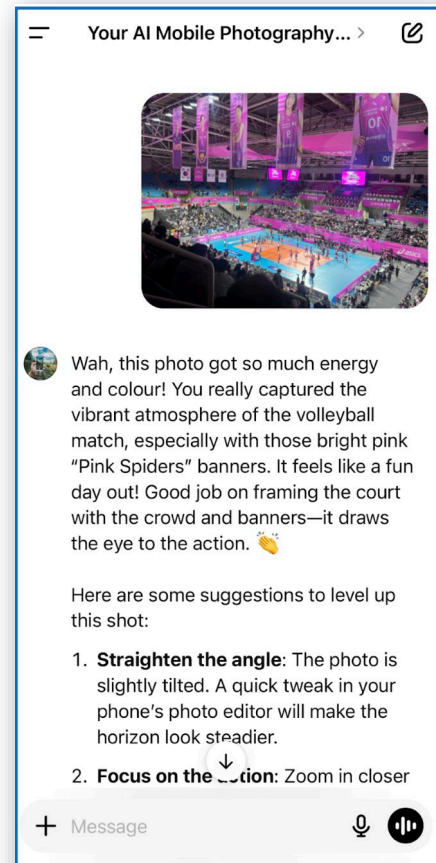
What does this tell us about lifelong learning and the ability to work with AI at any age?

One of the interesting aspects of the study is that the participant was an **older worker in her 60s**, yet she was able to learn how to create her own CustomGPTs after attending an LKYCIC SUTD workshop. The research therefore challenges assumptions that older workers may be less able to learn emerging technologies or adapt the way they work.

Importantly, the learning did not stop with one workplace application. She also created an **AI Mobile Photography Assistant** for her photography hobby, showing how the same capability could transfer from work into everyday life.

This gives lifelong learning a practical meaning: it is not only about taking another course or acquiring another qualification, but about being able to **identify a task, learn a new capability, and apply it meaningfully in different parts of life**.

For teaching, learning and work, this raises a useful Design·AI question: **how might we help people at different ages become creators of task-specific AI, rather than only users of generic AI tools?**



What would you like educators, learners and workers to take away from this task-based approach to Design·AI?

The key idea is to **start with the task, not with the AI**. Before asking what kind of GPT we can create, we should understand what people are trying to do, how they experience that task, and where AI could genuinely augment their capabilities or make the task more meaningful.

This applies across teaching, learning and work. An educator might identify a learning task that needs better scaffolding, a student might identify a recurring challenge in a project, and a worker might identify a task that is exhausting or disengaging. Each can then ask whether a task-specific AI assistant could help.

That is also where lifelong learning becomes important: people at any age can learn not only **how to use AI**, but how to recognise opportunities and **design AI around their own needs**.

Perhaps the question we should each leave with is: *What is one task in my teaching, learning or work that I could redesign with AI?*

Perhaps the most powerful idea in this story is also the simplest: **AI becomes more meaningful when we stop starting with AI and start with the task.**

Galvyn's work shows how a task can be identified, understood through the lenses of wellbeing and meaning, and then translated into a bespoke GPT that supports the person doing it. This is Design·AI in practice: not technology looking for a use, but a human need shaping the technology. For teaching, learning and work, that opens up a much bigger possibility.

Learners at any age can identify a task, understand where support is needed, and create an AI collaborator around it. Lifelong learning then becomes more than keeping up with new tools; it becomes the ability to continually redesign how we learn, contribute and grow.

So, the question for us is: how might we incorporate this task-first approach into the way we teach, learn and work?

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