



Preparing Students for the Rapidly Changing, Generative AI-assisted Workplace through Survey-informed Dialogue

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Abstract

Over the past few years, generative AI has had an increasing impact on society, including an impact on how people learn and work. As a part of preparing students, at AP and bachelor levels, for the generative AI-assisted workplace, small-scale surveys were conducted and subsequently used as parts of task descriptions and structured dialogue with the students. Findings suggest that students see generative AI as a useful tool in their education. However, dialogue with students also indicates a need for further guidance on how to use generative AI in learning processes. Just as more guidance is needed to develop insights into generative AIs understanding of key concepts like relevance, as well as limitations to generative AIs ability to be helpful in more complicated workflows in the workplace. This said, exact answers from surveys are probably less important than using the questions to spark dialogue with students about the assumptions, biases, and implications of using generative AI in education and in the workplace. Any final conclusions at this stage would likely be premature anyway. However, the dialogue with students about generative AI's role in education and in the workplace is seen as essential to question, analyze, understand, and set future directions.

Keywords: Generative AI, students, education, workplace

1. Introduction

1.1. Generative AI in Education and in the Workplace

As generative AI now performs various forms of text processing at a human-like level (OpenAI, 2023), it is increasingly affecting both education and the workplace.

Education has seen students using generative AI for tasks ranging from writing help in assignments to teaching assistance for understanding difficult subject material, among many other uses (Bowen & Watson, 2024). Many of these developments have been quite impressive. But have also raised concerns among educators that excessive reliance on generative AI may

hinder the development of foundational skills, creating a tension between efficiency and the risk of overdependence.

Generative AI's impact on workplace practices has been equally substantial. Studies have found that access to AI assistance can increase worker productivity. Generative AI can help users process emails faster, provide useful inputs to coding tasks, just as generative AI can play a useful role in supplementing existing on-the-job training programs (Brynjolfsson et al., 2025) etc. But, as generative AI emerge as a powerful tool in the workplace, people have also voiced concerns that generative AI might eventually lead to layoffs. And, unsurprisingly, studies have also found that generative AI collaboration, in certain circumstances, can increase work alienation, leading to a sense of disconnection from work, that compromises work standards (Hai et al., 2025).

Incorporating generative AI into organizations is likely to require not only employee upskilling and reskilling, but also deeper organizational changes, potentially challenging underlying assumptions and strategies. Necessitating a form of “double loop” learning, where “double-loop learning occurs when error is detected and corrected in ways that involve the modification of an organization’s underlying norms, policies and objectives” (Argyris & Schon, 1978), (Smith, 2001).

It follows that preparing students for active roles in the changing landscape of generative AI assisted workplaces is a complicated matter, as teaching always is, that needs to deal with more than just acquiring knowledge and skills about specific generative AI tools.

1.2. Using Surveys and Dialogue to Think About one's Own Thinking

Based on small-scale survey data (185 responses, collected through Google's survey tools) from Danish economics and IT students, academy profession (AP) and Bachelor levels at Business Academy Aarhus, combined with practitioner observations, the aim here is to use surveys as a starting point to explore, and later enrich, student perspectives on generative AI and potential workplace implications.

The surveys and subsequent dialogue are the primary focus here. However, in classroom practice they only functioned as the initial stages of a broader learning process, where they provide a foundation for cooperative learning exercises (Kagan, 1994), larger assignments and assessments (only addressed briefly here). It should also be noted that surveys and dialogue can provide valuable information for identifying students' zones of proximal development (Vygotsky, 1978), that can be used to guide construction of exercises and assignments.

As generative AI tools can easily provide answers without requiring learners to fully understand the underlying concepts, it becomes important to be mindful of one's own thinking processes in order to critically evaluate AI-generated output, recognize limitations or errors. In short, metacognition (Wilson & Conyers, 2013), thinking about one's own thinking, such as how well one understands a topic or judging confidence in an answer is important when using generative AI, as it helps learners use the technology appropriately and identify areas where further learning is needed. Surveys and dialogue are used here as tools to bring this into focus and raise students' awareness of the need for critical and reflective use of generative AI. Notice also that the use of surveys and dialogue is seen as part of a broader teaching approach aimed at strengthening frequent feedback to promote learning gains (Black & William, 1998).

1.3. Using Surveys to Provide a Mechanism for Student's Voice

Survey questions (see appendix) and answers weren't designed as research instruments or opinion polls, or to produce fully reproducible responses, but as pedagogical elicitation tools

used to stimulate dialogue, reflection, and formative learning in the classroom. Consequently, questions were not intended to meet standards for empirical survey research (e.g. validity testing, inferential statistical analysis, or subgroup analysis). Instead, surveys were used to activate student engagement, providing a mechanism for student's voice (Kapoor, 2023), and as a tool to surface class wide perceptions. I.e. the surveys allowed students to express their own thoughts, just as surveys enabled students to view the anonymized aggregated responses of their peers, thereby increasing their awareness of diverse perspectives. In the classes, survey data served as an empirical anchor in dialogues with the students. Themes from these discussions were later incorporated into assignments to further support the students' preparation for the generative AI-assisted workplace. The survey was voluntary and anonymous (without identifying emails). Still, in classes, a clear majority of students chose to complete the survey as a part of their engagement with course materials. Students could skip any question they found problematic, and no identifying data were collected, thus upholding ethical standards and consent.

From spring 2023 to spring 2025, all in all, a series of 12 small-scale surveys were conducted (This produced the 185 responses). Drawing on backgrounds in education, AI practice, and consultancy, this practitioner inquiry combines insights from these surveys and dialogues with reflective analysis based on professional experience with generative AI in learning and workplace contexts. The aim is not to produce definitive conclusions, but to provide a starting point for student reflection and formative dialogue with students that supports a reflective approach to generative AI in education and the workplace, thereby enhancing student agency in preparing for a future generative AI-assisted workplace. This can then be further developed through exercises and assignments.

2. Descriptive Patterns and Observations from Surveys

The survey data presented here are not intended to be statistically representative, but rather to provide insight into descriptive patterns within a sampled group. I.e. the aim is not to support population-level generalizations, but to highlight tendencies and variations that can initiate dialogue about the appropriate use of generative AI and the identification of areas, where further learning is needed, using cooperative learning, assignments etc.

2.1. Perceptions of Generative AI Ability

In IT classes clear majorities thought that ChatGPT was very good when it came to generating useful Python code. Indeed, when asked to compare their own programming skills with ChatGPT, most students stated that ChatGPT was likely better. Even when it came to larger and more complex changes to computer programs, most students still felt that ChatGPT was a useful tool. When it came to studying long texts, most students expressed a clear preference for asking ChatGPT instead of reading the material themselves. Still, a slight majority acknowledged that reading the full text offered better overall comprehension. In short, a majority of the students seemed convinced that generative AI is indeed a useful tool.

2.2. Using Generative AI in Projects

Asked about making computer programs in the future, IT students seemed convinced that generative AI will be an integral part of future software projects. And not just on small trivial tasks, a majority was also convinced that generative AI would be a valued assistant working together with humans on larger, more complex projects. Just as a majority of students were convinced that help from generative AI would increase productivity significantly. Asked if

generative AI collaboration would make software more error-prone, most students were hesitant to label generative AI assisted projects more error-prone.

2.3. Generative AI in education

Asked about whether it matters who teaches you a certain skill, most students seemed indifferent to whether a learned skill was acquired from a human or a machine.

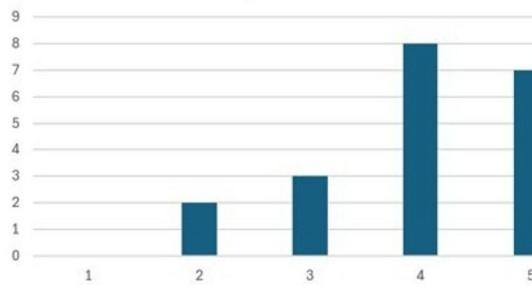


Figure 1a

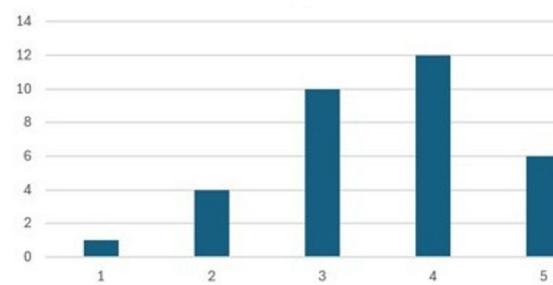


Figure 1b

Figure 1: Two selected results from classroom surveys.

- 1a: “Skills that I get from chatGPT are just as valuable as skills I get from human teachers”. Listed are numbers of students giving each reply. From 1 (Skills coming from machines are not very valuable) to 5 (Skills are skills).
- 1b: “Does the rise of generative AI necessitate substantial changes in IT education”. From 1 (No) to 5 (Yes, many).

Still, when asked about the potential of AI fully replacing human teachers in the future, students were divided. And a majority of students felt uneasy about being graded by AI after a course. Even though a majority also indicated that feedback from AI could be valuable. Overall, a majority of students felt that the rise of generative AI necessitates substantial changes in IT education. More economics students than IT students agreed that generative AI would allow them to focus on the essential elements of their studies, rather than being caught up in technical details.

2.4. Generative AI in the Workplace

Clear majorities in the classes surveyed were convinced that generative AI is used in the workplace. Most were also convinced that AI will go beyond assisting in office tasks, and saw it taking on roles such as shop assistants, and more, in the coming years. Certainly, a clear majority were convinced that staying updated with new technologies, like generative AI, is essential for professionals.

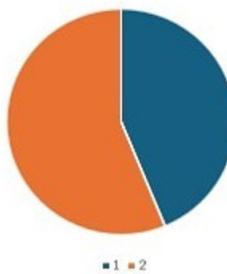


Figure 2: How many think Ehsan and Helga should be let go? Example of share of students in a typical class saying 1 (No) and share saying 2 (Yes).

Faced with a, fictional, detailed and emotional scenario in which generative AI could replace long-serving, loyal employees, students were split on whether staff like Ehsan and Helga should be let go. Still, most students were not personally worried about generative AI's impact on the job market. Indeed, regarding generative AI in real-life use, most students felt that generative AI solutions would generally work well and, while some had reservations, the majority did not express significant distrust in what companies and professionals might develop or implement.

3. Dialogue with Students on the Usefulness of Generative AI as a Thinking Partner

A majority of students viewed ChatGPT as a useful tool. Which automatically create numerous starting points for dialogue with students that explores how generative AI can be used as a thinking partner. Useful, in what way, one might wonder? Where it would require a deeper analysis of the students' work to fully understand how they have engaged with generative AI. To what extent did generative AI influence the students' thinking processes and sense of agency? Did they spend time refining solutions, demonstrating critical engagement, or did they primarily rely on AI for direct answers? The latter approach would likely concern educators, who would stress the importance of preserving a high degree of student agency in interactions with AI. Clearly, generative AI can be a valuable tool, when it comes to individualized learning, e.g. by adapting learning materials for students with special learning needs, but it should obviously not come at the cost of hindering the student's development into becoming independent learners (Humble & Mozelius, 2022). Here, it is also worth noting that, although media reports often highlight advances in generative AIs reasoning capabilities, with new multimodal models or similar, studies seem to suggest that most people focus more on seemingly simpler everyday use cases, like using generative AI as a smarter, more user-friendly search engine (Adobe, 2025).

When it comes to writing an essay, it appears logical that our brains are more actively engaged when we are not using generative AI. Finding your own words, opinions, and appropriate expressions are harder than "swapping out your brain for generative AI". Indeed, using electroencephalography (EEG) to record brain activity, cognitive engagement and cognitive load, to gain a deeper understanding of brain activation, a study seems to confirm this. As well as confirming that if you have previously worked on a topic or assignment yourself enhance your cognitive activity, when you afterwards begin to use generative AI (Kosmyna et al., 2025). Dial down activity and you risk missing out on learning, does seem to follow along nicely with other neuroscience findings: Use it or lose it, mental abilities come by activity and deteriorate when not actively used. To understand something, you need to see the problem from different perspectives, struggle with it, instead of just being shown a solution. Without struggle the lasting insight isn't there to the same extent.

Most students also indicated that generative AI would be a helpful assistant on larger, more complex projects. Indeed, we should certainly remember that outsourcing details of our thinking can allow us to focus more on what is important to us. I.e. given that short-term memory typically holds only 4–7 chunks of information at a time (Miller, 1956), (Cowan, 2001), the use of generative AI can help alleviate cognitive load by offloading routine processing tasks, thereby allowing us to focus more effectively on higher-order thinking. In IT, using AI tools like Cursor (Cursor, 2025) can help you automate tasks like generating code snippets and refactoring existing code, offering significant productivity gains. But the adoption of these tools also presents challenges, especially when it comes to areas like code quality, security vulnerabilities and ethical concerns about biases in algorithms. Indeed, small errors

(hallucinations) may be of minor concern in some domains, while in other domains it is entirely unacceptable.

Most students were also convinced that generative AI is used in the workplace. Forcing everyone to raise questions concerning the implications of what it means to keep pace with generative AI and automation, and the broader challenge of sustaining long-term employability in a rapidly changing professional landscape. Followed by questions about what kind of problems generative AI will actually help us with. In public debates, opinions vary. Some voices tell us that most jobs are about to be automated, while other voices tell us that to certainty that generative AI is replicative. Only able to help with repetitious tasks. Stifling creativity by endlessly recycling existing knowledge, in a feedback loop that can only add poorly creative copies of itself into the global knowledge base (Peschl, 2024).

Given the ubiquity of generative AI, it can come as no surprise that control over the technology yields power. But there is, of course, also power in framing the narrative over the use of generative AI in society, and what it means for what we, as a society, finds valuable. According to political scientist Steven Lukes “Three Dimensions of Power”, power is not only about being able to make decisions, but also, more subtly, controlling which issues are publicly debated, and, even more subtly, shaping beliefs and desires such that circumstances are accepted without recognizing alternative possibilities (Lukes, 1974). When students are asked to compare their own programming skills with ChatGPT, and answer that ChatGPT is likely the better programmer, this raises fundamental questions about the nature of programming competence. Specifically, to what extent are understanding of the real world, awareness of one’s actions and of how programs are applied in real-world contexts, also something a programmer is expected to know about? Given the current state of generative AI, students could have argued that they are the better programmers, or that the question was formulated in such an overly simplified way as to render it unanswerable. Still, the students, among them IT students, answered that ChatGPT is likely the better programmer. Indeed, in relation to the application of generative AI, societal debates often reveal built-in implicit biases or value-laden assumptions, raising the possibility that the questions themselves could have been questioned. E.g. the philosopher of technology Shannon Vallor has warned about biases in discussions about intelligence, where it is implicitly assumed that a generative AI’s ability to outperform humans in economically valuable tasks demonstrates high intelligence, equating intelligence with economic performance. According to Vallor, this framing should be questioned, as it makes human beings’ ability to act with wisdom, discernment, courage, and commitment to justice, no more than poetic license (Vallor, 2024).

4. Dialogue on Making Sense in Collaborations with Generative AI

Most students felt uneasy about the prospect of being graded by AI after a course. Understandable, given the broadly worded phrasing of the question, one might add. Defining human intelligence is inherently difficult, given that individuals possess different skills and that performance levels for many skills vary considerably. So, precisely what human skills do we want to measure? Defining the sophistication of a generative AI system’s intelligence level also becomes difficult, when we do not have a widely accepted and publicly understood standard measuring system that clearly communicates to the public the sophistication of a given generative AI system’s intelligence level (Gignac & Szodorai, 2024). So, given a scenario, where it is not precisely specified what skills we want to grade and there is no assurance that the evaluation system actually possesses the capability to perform an accurate assessment, students should indeed feel a little uneasy about such a grading process. Indeed, clarifying

when collaborations with generative AI are meaningful, and when they are not, also seems to be a natural starting point for a dialogue with students.

Generative AI systems trained on text have obviously not “felt” what it is like to be out in a physical environment, an experience humans take for granted. Text based generative AI predicts and understands the world (i.e., texts) in only one dimension. Still, in the surveys, students may have been indifferent to whether a skill was acquired from a human or a machine, but it should be noted that AI systems can only teach skills they possess. Where the actual experience of living in the world, and being guided by that, is conspicuously absent in current AI systems. Given that we don’t know what capabilities future AI systems might have and given that we don’t know how new capabilities will impact our trust in these future systems, it wasn’t all that surprising that the survey found that students were divided on the prospect of replacing teachers with AI systems in the future.

Certainly, you can hardly be a good teacher, if you don’t know what is relevant and what is not. A good teacher must be able to prioritize. What is important to learn, and what is less important. In terms of Stevan Harnads thoughts about the “symbol grounding problem” one can argue that words and symbols defined in terms of other words and symbols, disconnected from lived experience in the actual world, are ungrounded. Without deeper meaning. Words and symbols only begin to have actual meaning when they are grounded, connected to something that can be perceived or interacted with, like a sensory experience (Harnad, 1990). Where it follows that todays (text based) generative AI still has some way to go before they really understand what is important and relevant in the world, and what is less so. I.e. AI systems might excel when it comes to reckoning (doing calculations) but still be lacking when it comes to “judgment” and understanding relevance.

As there is no limit on what can be relevant, it follows that asking a symbol-based AI system, without sensory perceptions, to list everything that might be relevant to consider in a situation could potentially lead to endless calculations. For biological beings on the other hand, living in the world, relevance comes built in. Biological organisms need to engage with an environment and know what is relevant in terms of staying alive. What has positive or negative value, and what is neutral. Organisms have emotions that help them cope with objects and situations that are potentially dangerous or advantageous. And feelings to amplify the impact of a situation, and help guide action in comparable situations (Damasio, 2001). A capacity to be guided in a certain direction by emotions (that humans have, and generative AI does not have) makes it easier to understand what is relevant and what is not.

In leadership, at all levels, you must be able to differentiate between a healthy process and a pathological one. But telling them apart is only possible, if you have a firm grasp of what is relevant and what is not. Indeed, in complex situations, it often takes time and occasional painful setbacks to determine what is relevant and what is not. And yes, when it comes to students’ decision-making during the learning process, educators can be concerned that students aren’t prioritizing appropriately.

Certainly, looking at the survey, educators can wonder what it means when students say that generative AI allows them to focus on the essential elements of their studies? Have the students fully understood what is relevant and what is not? Maybe they don’t have the right motivation, emotions, and volition to learn all of the material they are asked to learn? Maybe the social context of the classroom or workplace, or the broader societal context, isn’t supportive for learning (Illeris, 2002). Learning is never easy, and can be obstructed or derailed, in schools, at workplaces, or in new life situations that a learner’s personal identity might have difficulty adjusting to.

Still, in the end, the students act on their own behalf. Based on their understanding, they will have to decide what is relevant and what is not. They must act towards their own ends. And learn to do so as they transition into the workplace, with new challenges concerning sustaining their professional viability in precarious conditions. For machines it is different. The purpose or function of a machine is extrinsic. To be decided by a maker or a user. And without feelings, and perhaps only guided by symbols and words that are not grounded in perceptions, determining what is relevant versus irrelevant will continue to be an uphill battle for machines.

5. Dialogue on Generative AI in the Workplace

In the surveys, most students were optimistic that generative AI solutions generally work well and did not express significant distrust in what companies and professionals might develop or use. Where the relatively small amount of critical engagement in these surveys was somewhat puzzling. Isn't this the same generation Z who, from a young age, has endlessly been exposed to questionable algorithms on social media platforms? Algorithms that potentially create addictive forms of media consumption and drain users' attentional resources in endless loops of social comparison, outrage and sense of urgency? Potentially being the cause of increased levels of anxiety and depression in that generation (Haidt, 2024). Surely, it shouldn't be too difficult to imagine even more troubling scenarios, where unregulated versions of generative AI will not only be able to subtly steer users towards certain kinds of content, but may be able to engage in even more cleverly deceptive or manipulative behavior? Still, possible concerns about algorithms on social media platforms did not appear to diminish students' general optimism toward emerging generative AI solutions. Perhaps, implying an underlining belief that prevailing workplace norms in Denmark regarding ethics, regulation, and quality control will remain unaffected by the types of questionable algorithms documented in media reports on social media platforms.

Concerns about inappropriate or complacent use of AI, including generative AI, in the workplace could also have been more prominent in the students' considerations. Studies have certainly shown that employees report having observed or heard of others using AI tools inappropriately, as well as acknowledging quality issues, such as reduced effort in work due to over-reliance on AI (Gillespie & Lockey 2025). Still, students were asked to provide an overall assessment, balancing positive and negative aspects, rather than focusing solely on specific negative issues. And there are, of course, many positive narratives that may also have influenced students, such as improved efficiency and information access, along with claims that generative AI can enhance employee creativity (MIT Sloan School of Management, 2025).

When office and desk employees have been surveyed, employees have expressed numerous concerns regarding the adoption of AI in the workplace. Ranging from fears that AI could potentially be used in carrying out cyberattacks, to worries over negative impacts on salaries, to worries over plagiarism, intellectual property rights, biases and discrimination etc. Notably, a majority also report anxiety about the possibility of AI taking over their jobs (EY, 2023). Indeed, not surprising that concerns about AI's impact on the workplace are numerous, given that generative AI could potentially be involved in all sorts of processes, from who is hired (Anzenberg et al., 2025) to who is fired (CBS, 2025), and everything in between.

Still, in this survey, most students were, apparently, not personally worried about generative AI's impact on the job market (or perhaps, eager to adjust to the job market, not particular willing to entertain thoughts about potential troubles ahead). Even so, a majority did agree that being updated with new technologies, like generative AI, is essential for professionals. On the key question about productivity, most students were convinced that help from generative AI would increase productivity significantly. Which again brings "double loop" learning into

focus. Sure, generative AI can make productivity go up in many tasks, such as programming and writing, but the introduction of new technologies in organizations will likely result in organizational changes that evolve modifications to underlying norms, policies and objectives (Argyris & Schon, 1978), (Smith, 2001).

Where it is essential that students, as they enter the workplace, not only look at initial benefits, but also systematically evaluate and work through the broader implications. I.e. generative AI can deliver initial productivity gains, but it can also potentially foster passivity and diminish situational awareness in organizations. Potentially causing serious problems in production situations because of over-reliance. Debugging generative AI generated code can become very difficult without intuition about where the bug might be, which could necessitate that generated code is abandoned entirely. In cognitively demanding tasks, such as organizing a workload into smaller tasks, input from generative AI may function more as an interruption than as a helpful contribution (Simkute et al., 2024). Particularly as the generative AI might lack a deeper understanding of what is relevant in the situation and fail to provide adequate feedback on its actions.

In order to highlight potential dilemmas between the unstoppable rise of “unfeeling”, “soulless” automation with generative AI and ethical commitments to uphold human dignity and the promotion of individuals’ well-being and economic security, students were given a fictional, detailed scenario in which generative AI could replace long-serving, loyal employees, Ehsan and Helga. Deciding between emotions and rationality was apparently not easy, even if you are an IT or economics student. So, there was no clear majority for letting the loyal employees go or letting them stay. Which, certainly, could serve as a starting point for further dialogue with students. Cynics would obviously question the students’ understanding of the harsh realities of life. Still, with further automation seemingly inevitable in the coming years, there are obvious consequences to automation that will affect and change society in various ways worth reflecting on.

It should also be noted that questions about the impact of automation are answered within a certain cultural frame. Our minds are nested minds living inside a certain culture. A Scandinavian perspective on how to deal with the impacts of automation is likely to vary from what is seen in other parts of the world. And our ability to influence our own working conditions is obviously also important. Where the famous Whitehall study from 1991 confirmed that individuals in lower employment grades suffered worse health outcomes, because of more perceived workplace stress, lack of control, and social support in shaping long-term well-being (Marmot et al., 1991). In control, getting a little generative AI automation help might be perceived as helpful in getting your work done. With less control, generative AI automation help might be perceived as adding stress to situations already perceived as stressful.

6. Conclusion

The aim of using surveys and dialogue to enhance student agency in future generative AI-assisted workplaces was achieved for at least one student, as the student noted in a discussion: “I did not think our perspectives mattered in a world of big tech, but I now see that we help shape what makes sense in practice.” When a student suggested it had been a waste of time filling in the surveys, when a generative AI could have done it instead, another student noted: “Sure, it would have been faster, but then it wouldn’t be us reflecting on how to use generative AI, it would be the start of generative AI deciding for us.”

Indeed, experiences from using surveys and dialogue about the use of generative AI across 12 classes suggest that these activities can support students’ reflection on their own learning and

contribute to a sense of agency in how they understand and approach generative AI in practice. It is not suggested that students were unfamiliar with generative AI prior to the activities. Rather, it is here noted that after the activities students were able to recall and build on arguments from dialogues with the teacher and peers, problematize previous assumptions, and articulate possibilities for action.

Importantly, here it should also be noted that the surveys and the following dialogue are only seen as two initial steps in the process of preparing students for the generative AI assisted workplace. In an educational context it makes sense to follow up with exercises and assignments about generative AI abilities and its application in projects, education, and the workplace. Together, these elements would form the overall design of the learning activity, including the use of surveys, dialogue, exercises, and assignment assessments.

It should also be noted that generative AI will, obviously, be able to help with idea generation for exercises and assignments (Bowen & Watson, 2024). Just as it is possible to use generative AI to help create grading rubrics for evaluating student exercises and assignments. Indeed, based on the survey categories, we might want to evaluate aspects such as knowledge about a) what generative AI is, how it works, and its capabilities/limitations (conceptual) b) identifying relevant and concrete examples c) benefits, risk (evaluation) d) implementation (practical integration) e) relevance and understanding (oversight). Levels could be set to basic, competent and advanced. See Table 1 for an example of this.

Table 1. Grading rubric created by generative AI, based on input about surveys and dialogue.

	Basic	Competent	Advanced
Gen AI ability	Limited understanding	Capabilities and limitations described	Nuanced understanding
Gen AI examples	Generic examples	Relevant examples	Critically selected examples
Gen AI benefits, risk.	Superficial without clear explanations	Balanced and context relevant explanation	Nuanced evaluation
Gen AI integration	Limited explanation of task support	Purposeful integration	Strategic and reflective integration
Gen AI relevance	Limited review of generated output	Appropriate oversight	Strong agency, continuous oversight

Students may likewise seek generative AI assistance, when working on exercises and assignments given to them by their educators. Where such use of generative AI can be appropriate given suitable task design and assessment methods. The key is that the learning activity as a whole promotes meaningful learning and supports student engagement.

Working on shaping the future workplaces, that we would all like to be part of, should in itself be an engaging activity for most students, as purpose is the key to engagement (Bowen & Watson, 2024). A well-designed survey followed by dialogue with students could, in many cases, be just the right steppingstone needed to ensure that the process also gets started in an engaging way.

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Appendix

Examples of survey questions intended to surface patterns for classroom dialogue and inform formative teaching decisions.

Scale:

Responses are typically given on a five-point Likert scale (1–5), unless otherwise specified.

Perceptions of generative AI ability; Programming and code generation:

- ChatGPT generates Python code that I find immediately useful for my coursework.
- In many programming tasks, ChatGPT performs better than I do on my own.
- I feel confident evaluating whether the code produced by ChatGPT is correct.
- ChatGPT is useful when making changes to larger or more complex programs.
- I could complete most programming tasks without ChatGPT if required.

Using generative AI in projects; Generative AI in future software projects:

- Generative AI will be an integral part of most future software development projects.
- Generative AI will mainly be useful for small or trivial programming tasks.
- Software developed with the help of generative AI is more likely to contain errors.

Generative AI in education; Assessment, feedback, and grading:

- When studying long or complex texts, I prefer asking ChatGPT rather than reading the full material.
- ChatGPT helps me identify the most important points in a text.
- I would feel comfortable being graded by an AI system after completing a course.
- Feedback generated by AI can be valuable for improving my learning.
- Grading decisions should primarily be made by human teachers.
- Generative AI helps reduce time spent on technical details that are not central to learning goals.

Generative AI in the workplace:

- It is acceptable to replace long-serving employees with generative AI if productivity increases significantly.
- I am personally worried about generative AI negatively affecting my future job opportunities.
- Generative AI will take on customer-facing roles, such as shop assistants or service representatives.