

AI and Job Security in the University of Oklahoma Research Paper

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Abstract

Many artificial intelligence (AI) models, such as ChatGPT, DeepSeek, Claude etc., are on the rise in use around the world. More specifically, they have a place in educational institutions in how students use them for help with their coursework. In some instances, one could say that these AI models perform the duties of teachers and professors in aiding students. The rise of this technology could potentially leave many educators uneasy or insecure in their jobs right now or in the long term. This study explores how AI models affect the professional tasks of professors at the University of Oklahoma and their perception of the impact of AI reliance on their job security. The study uses a mixed methods approach of qualitative and quantitative analysis through surveys and interviews. Data was collected through surveys and semi-structured interviews with 5 professors. The data highlight how pertinent AI use is amongst students to do their coursework in relation to what professors can help them with. Survey and interview questions were informed by a combination of the job characteristics model and technological determinism theoretical frameworks. The study was guided by the following research question - *“to what degree does AI usage impact professors’ job security?”* Emerging results suggest that while professors feel rather secure in their jobs at the moment, the effects of AI use by students disrupt significant aspects of their work, particularly connection to their students. The paper concludes by suggesting further points of research on this. These insights contribute to a holistic picture of understanding instructional security in an evolving age of tertiary education.

1. Introduction

1.1 History of AI

Artificial Intelligence (AI) models have seen a major surge in the early 2020s [1]. There are many definitions of AI that exist in the literature. NASA asserts that computer systems are considered AI if they are able to do varied tasks under unpredictable circumstances, learn and improve on performance without significant human oversight [2]. AI is operationalized in this paper as a computer system's ability to perform tasks that normally require human cognitive skills [2]. The history and the evolution of AI models is a fascinating subject. Some of the oldest existing models date back to the 1950s. British mathematician Alan Turing imagined a machine that could go beyond its programming to perform tasks it was originally meant to [1]. The 1990s saw the radical popularization of chess-playing computer programs such as Deep Blue (1996), which gained its notoriety for defeating a world champion in tournament chess [1]. The 2000s introduced voice assistants on smartphones like Siri and Alexa that were capable of understanding spoken language, responding, and performing tasks asked of them [1]. All these AI models use cognitive skills to do complex tasks that normally should be done by humans. For the time, these thoughts and achievements were strong signs of an advancing society. Yet, these complicated tasks that earlier AI models could perform are indubitably tame compared to the AI surge of the 2020s.

1.2 AI Surge and Education

AI popularity hit a massive spike with the release of ChatGPT in late 2022. It marked the "AI Surge," which rose in the use of Generative AI models like ChatGPT, Sora, and Google's Gemini [1]. Generative AI refers to AI models that can generate text, images and various content based on data that it has been trained on [3]. The AI surge demonstrates drastic improvements in the capabilities of AI. Generative AI models are capable of assisting individuals with their coding by detecting bugs in large blocks of code offer clever suggestions to make the code more efficient, which improves the quality of life for those learning it [4]. Business leaders lessen their workloads by automating their advertising content, training employees, and enhancing their decision-making processes all at the typing of a prompt [5]. AI can also just help you write your grocery list and schedule out your day if you ask it to.

The most pertinent aspect of this paper is how generative AI can assist students in education. Similarly, generative AI can perform many of the tasks they are expected to do that help it learn [6]. They can help in writing essays, doing equations, explaining concepts, and completing assignments [6]. Students get immediate feedback and direct answers from AI, which allows them the opportunity to do a lot of their learning independently [6]. The opportunities are almost endless for what AI can do for a student to help them do their work.

While this may seem rather positive, it is important to understand the implications this has for teachers and professors. One of the main tasks of a professor is to be an educator at the college or university in a specialized academic field [7]. They are meant to provide foundational skills for

undergraduate and graduate students for their future careers and lives as adults [7]. For this to happen, professors and students need to build a mentor-student relationship to some degree to improve academic engagement and build connections [8]. A study was published in 2020 that measured the degree of success of students based on the student-faculty relationships they have in a public university. These students notably had financial and personal challenges that negatively affected their academic performance [9]. The study concluded that professors who created a space for students to be more open and actively pursued stronger relationships with them facilitated the learning and better success of the students [9]. Additionally, Arizona State University researcher Victoria Theisen-Homer asserts that student-faculty relationships assist in “student-compliance” [10]. Students are more willing to engage in academic content because an authority figure that they have a good connection with asks it, so it is a great benefit of student-faculty relationships [10]. Building a connection can help achieve success because it is an academic motivator [11].

A study done in National University of Science and Technology POLITEHNICA Bucharest with students found that using AI to conduct their learning limited their “human interaction,” which detracted from their overall learning experience [12]. The study also found that AI made students passive learners who rely on AI heavily, which inevitably contributes to the lack of human interaction [12]. AI evidently has the capability to be a barrier to student-faculty relationships if students put their faith in it for their academic careers. There are undoubted implications for professors in this case.

1.3 Job Security and Implications for Professors

We are guided by the inquiries by such as professors’ perceptions, sentiments, worries and concerns regarding the inclusion of AI in academic settings. More specifically, one can say that if AI can perform the basic and necessary tasks of a professor for a student, could it lead to job displacement or create job insecurity?

Job security can be defined in slightly different ways for various industries. Generally, job security can be considered as an assurance that an employee’s job is stable and not likely to be lost for reasons beyond their control [13]. Job security among professors is largely set through tenure, meaning that they have been at the academic institution for a significant amount of time and have certain privileges like more academic freedom as well as the guarantee that they will not get fired outside of certain university violations [14], [15]. This paper will go out of this scope and focus on professors that do not all have that luxury. A 2025 research article found that many scholars feel precariously employed and unsure of how safe or stable they are in their jobs [16]. The main causes that brought up these feelings were “(1) exclusion or disconnection, (2) feeling undervalued, (3) stress and (4) anxiety” [16]. Given how AI can destabilize the relationship and student-faculty dynamic, it is a fair assumption that AI can contribute to the sentiments these professors hold. Professors can feel uneasy in their employment status and Generative AI should be considered on of the contributing factors to that discomfort. Thus, the paper operationalizes the *job security* to be the earlier stated definition as that is appropriate for the case.

For the purpose of this paper, the focus lies on professors at the tertiary institution, University of Oklahoma (OU). Consequently, we are guided by inquiries such as professors' perceptions, sentiments, worries, and concerns regarding the inclusion of AI in academic settings. As per the university's own policy, it is the faculty's responsibility to communicate to the students their expectations of how AI can be used in the class [17]. The policy directly from University of Oklahoma states "...while some potential uses of AI will have significant pedagogical benefits, other potential uses will detract from learning experiences" [17]. It acknowledges the potential benefits of AI for students in their learning while also understanding the potential issues with it in the grander scheme of their education among other concerns like plagiarism. Professors have some agency in how AI can be used within the university, though that cannot always be guaranteed. That is why it is important to understand how comfortable professors at the University of Oklahoma are with AI in the academic system.

The goal of this study is to answer the research question question *"To what degree does AI's impact on professors' jobs affect their perceived job security?"*

2. Theoretical Framework

The theoretical framework that is being used to develop the research is a combination of the Technological Determinism Theory, originally by Thorstein Veblen, and the Hackman and Oldham Job Characteristics Model (JCM). Technological determinism theory is defined by the idea that new technologies reshape and evolve society [18]. A recent example of how technology drove social change in education can be seen through the rise of online classes during the COVID-19 lockdown [18]. The use of online mediums such as Zoom, Google Classroom and Canvas in schools drove social change and adjusted the dynamics of educational systems. The same can easily be said with AI. With its wide use from students across the world, it now has a new place in academic institutions and its own system of management. It is a significant driver of social change.

The JCM identifies five key factors of a job that give employees job satisfaction. They include skill variety (how much a job requires a different skills and talents), task identity (how much the job requires and identifiable completed piece of work), task significance (how the job impacts the lives of other people), feedback(amount of communication about the), and autonomy (amount of independence and freedom in the workspace) [19]. The crucial factors in the model that relate to this study are task significance and task identity. For the purpose of this paper, Task significance (TS) is the idea that professors may understand the importance and "bigger picture" of what they are doing [19]. For a professor, that includes training the future workforce, instilling sensible habits in future employees, and building competent members of their industry who can think critically. Task identity (TI) is related to identifying the completion of a whole notable piece of work from start to finish [19]. In this case, it would be the academic success of the students. This allows a professor being able to connect with a student on a certain level. A successful student should reflect a professor's capability to reach a student with the academic material. A professor who watches a

student attend all their lectures, do well on the assignments, and get an A in the class is a very direct way for a professor to get a real sense of TI.

One should argue that this new technology can infringe on TI and TS, which in turn hurts job satisfaction. Beyond that, it arguably gets into the act of job replacement. It is possible that if a professor cannot feel like their task has significance or feel they are partly responsible for the success of a student because AI can do their job instead, that theoretically lead to the feeling of job displacement and job security infringement. Figure 1 below demonstrates this part of the framework where TI and TS are arguably very crucial aspects in giving purpose to work as a professor due to how they connected they are to the students. If AI is changing or doing these core aspects of their work, it could be perceived as a substitute for students for what should be professors' responsibilities. The technological determinism theory supposes that AI will shift the work of a professor.

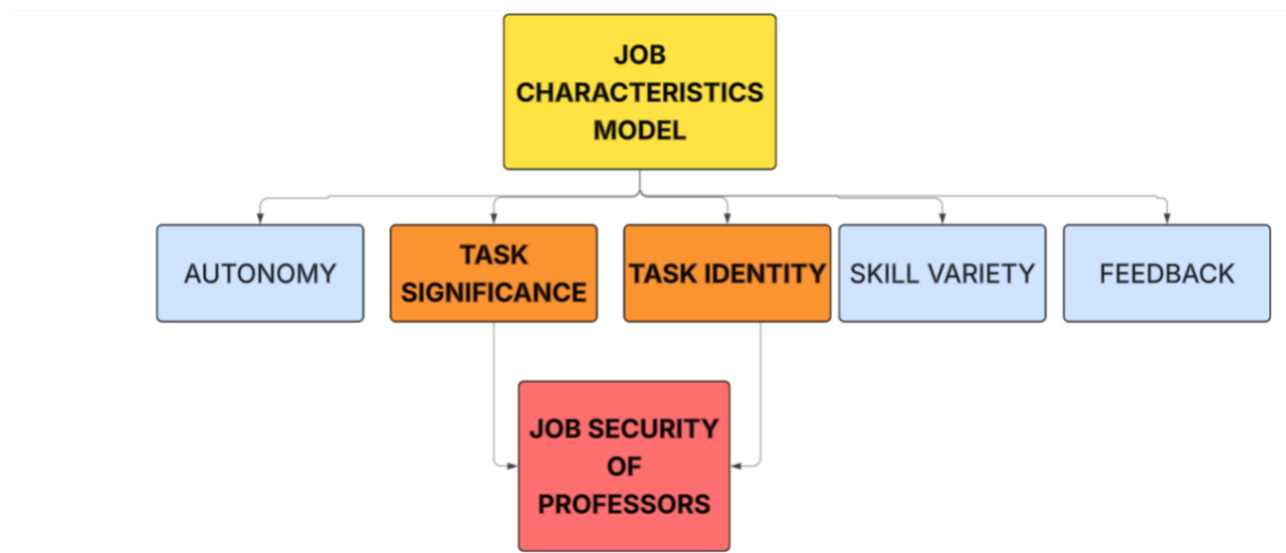


Figure 1: Five core aspects of the Job Characteristics Model

How would AI infringe on those aspects of their work? TI infringement implies that professors miss out on seeing the natural progression and success of a student. Professors could feel less responsible for the academic success of a student if they AI gets in the way of them engaging with them. TS gets undermined for similar reasons in that professors lose out on the opportunity to prepare their students. Their grand purpose is subverted by the fact that generative AI could fulfill their duties instead of them.

The established framework can be simply put: *The shift brought on by generative AI models in tertiary education can potentially impact the perceived job security of professors by undermining their TS and TI.*

3. Literature Review

3.1 Similar study

Looking at previous studies on the topic, there is one that has directly answered how educators feel. M. Pikhart and L.H. Al-Obaydi interviewed professors from the Czech Republic and Iraq. They were interviewed and asked about how AI could change the job of professors and whether AI could lead to job displacement. The general conclusion to the question states “[There is] a mix of concerns and hopes. Many respondents believe that while AI might change the role of teachers, it won’t completely replace them” [20, p. 4]. The use of qualitative data is a major plus, as fewer assumptions or inferences are made from the conclusions. This is one of the more analogous studies in terms of approach and setting of the study. It was also made available in May 2025, which is more recent than much of the other reviewed literature. This should have similar outcomes to the outcome of this study, given the similar research design and time frame.

3.2 Improving Job Security

Other studies look at how AI performance could improve job security if they improve the task performance based on the assumptions of employees with more recent evidence in an Indian IT company [21]. Information for the study was collected by employees who have a certified understanding of how to use AI for their job [21]. They were questioned whether or not AI can make completing their professional duties better. Essentially, as long as good AI performance and utilization correlate to good job engagement in the context of workers in an IT company, then job security is improved with AI [21]. The study states, “AI performance is associated with greater levels of job engagement, job security, and job performance” [21, p. 218]. In this case, it seems that there is an agreement with the idea that job engagement leads to job security. Though it should be acknowledged that job engagement looks different in academia compared to the IT industry. This study exemplifies how AI used by the employee can improve job engagement, as AI tools in that industry greatly improve the efficiency of their work [21].

This is consistent with another study that took place in Tehran, Iran, with manufacturing organizations that implement AI in their systems to improve efficiency [22]. It happens within the manufacturing sector across multiple firms. Again, the text agrees with the same idea that AI can improve efficiency, increase job engagement, and bring more job security, which complements the industry [22]. Leaders in PWC agree with the sentiment that AI is going improve job security for similar reasons on efficiency [23]. Furthermore, the study conducted with PWC with over 50 000 workers in 48 major economies/countries showed that employees who use AI more have an overall higher sense of job security [24]. The countries include India, Japan, Hungary, Vietnam, and China, to name a few. Some of these sectors also include finance, government/public, health, consumer, industrial, and tech [24], [25].

With these studies, there is a clearly established field of thought that AI is not a threat to job security, but rather a tool to improve job engagement, which subsequently improves it in many sectors and places around the world [21], [22], [24]. Furthermore, this field of thought tends to lay focus on how employers using AI can greatly benefit themselves and their workflow [21], [22], [24]. There is no significant acknowledgement of how the third-party use of AI in their work can impact these sectors.

3.3 Worsening Job Security

On the other hand, there are a few studies that have a more pessimistic view of AI and job security. Taib et al. conducted a quantitative study of about 300 workers across different industries, and this study concluded that job security is decreased with exposure to AI [26]. Although this is mainly reduced to lower-skilled labor. Additionally, there is a point made that the need to keep up with the ever-evolving AI tools to do work and the uncertainty of their jobs can take a toll on the mental health of the workers [26]. This works within the scope of academic professors, where the introduction of AI in general can contribute to weird learning curves and the need to adapt to the new technology. Eric Dahlin conducted a study that concluded white-collar workers in professional office-based jobs are likely to lose their jobs due to automation [27]. Dahlin then counters this by stating that with the rise of AI, there are likely to be more AI-related jobs that resolve that issue at the same time [27].

Researchers Huang and Rust asserted in a paper that with the rise of AI, jobs that rely more on empathy will be in higher demand and jobs that require mechanical/ analytical intelligence will decline [28]. It should be noted that the study by Huang and Rust was released in 2018, which is right before the great surge in AI in the early 2020s, so many points made in the paper do not operate in a similar framework to the rest of the literature [28].

Another study conducted with hotel employees looks at the intimidation employees experience from procedures that could potentially be replaced by AI [29]. This study does not ignore the undoubted benefits AI could have, but rather lays emphasis on educating the workforce on it and gradually bringing it into the workplace [29].

The majority of the negative views on AI pertaining to job security and AI share a sentiment that AI can generally bring a sense of discomfort to employees [26], [27], [30]. The uncertainty surrounding AI and what it brings is worrisome for some of the labor force [29]. Studies also tend to bring counterpoints or resolutions to this discomfort, like educating employees on the benefits of AI in the workplace and the ease of finding new jobs that involve AI [27], [29]. Again, these examples primarily focus on how employees use AI, much like the optimistic side of the literature, instead of it being used by other parties.

4. Hypothesis

With the theoretical framework in mind, it is doubtful that professors and faculty at large feel like they will be replaced at any moment. Understanding that parts of their job will be altered to a

detriment that leaves them slightly insecure is a likely possibility. This will happen through their TS and TI.

Professors may feel that AI threatens the bigger purpose of their work and gets in the way of their TS, with the significance here is training engineers who can think critically through their work. Their TI could be at risk where AI becomes a barrier to student-professor relationships, and the overall reliance a student should have on a professor. Through this, we can gather a little bit of insecurity. The hypothesized outcome will likely be very similar to M. Pikhart and L.H. Al-Obaydi's study with Czech and Iraqi professors in that professors concern themselves more with navigating their work than stressing about potential job loss.

5. Research Gap

Several studies speak generally about how AI can impact job security. They tend to speak on how jobs can benefit from it, but there is a clear gap in the research: academic institutions. The significance of AI in academic institutions, professors, and students alike is apparent [6]. Student reliance on AI, how professors have altered their jobs, and how that impacts their perceived job security. Beyond that, AI in academia is at a constant point of controversy due to claims of plagiarism and non-ethical student work [31]. The pertinence of AI in these spaces makes it a crucial area of research. The study by M. Pikhart and L.H. Al-Obaydi is one that adequately answers this question. It benefits the world to contribute to this perspective with STEM professors and students in mind.

One can consider how AI tools could improve the quality of life for professors. If AI can make the work for a professor quicker and more efficient then it is reasonable to assume that it also improves job security. This is how many other studies view AI in the workplace: how an employee can use it for their own benefit. However, that fails to acknowledge how the use of AI from a 3rd party affects job security of employers. In this case, how the use of AI from students interrupts the work of professors. It is important to understand that this and many studies either cannot or do not view that as a perspective on the topic.

6. Methodology

6.1 Measurement Instrument

A Qualtrics survey was used to collect data from students and professors, each with their own set of questions. Professors in the Gallogly College of Engineering at the University of Oklahoma were asked about (1) how they perceive AI [comfort], (2) how it impacts their work [student interaction], and (3) whether they feel it replaces certain aspects of their job [job security]. All questions were asked on a five-point Likert Scale, the opposite ends of the spectrum being agree and disagree. The questions were meant to understand their overall comfort level with AI in their workplace, and the current and long-term impact it has on their job (see Table 1). The results were

used to understand how significant the infringement on the TI and TS AI is on the work professors do and thus their job security.

The questions were placed in a sequential order to allow respondents to think of many scopes of their job and work before answering more important questions regarding how secure they were towards the end. Importantly to note is that two prompts that are very similar in phrasing and meaning are asked at two separate points in the survey, in beginning and the end. These prompts directly ask the professor their job security concerns regarding AI usage by students to test for consistency.

6.2 Sampling

We used random sampling in the survey distribution. Of the approximately 180 staff members in Gallogly College of Engineering, 13 responses were received.

6.3 Analysis

The data points in the Likert scale were numbered from 1 to 5 based on the agree-to-disagree scale. A mean value based on how much professors positively view AI in their industry is calculated for each question. Based on the question, the way the points were numbered may be reversed. Ultimately, a closer value to five indicates a more negative perception of AI. The closer the value is to one, indicates a more positive the perception of it relative to the question. The order of the questions being asked and how they are answered is also taken into consideration during the analysis.

7. Quantitative Data Results and Discussion

7.1 Survey Data

Of the faculty respondents, all are professors or assistant professors who work in various disciplines of the Gallogly College of Engineering. The disciplines included in the responses are Computer Science, Environmental Science, Aerospace and Mechanical, Biomechanical, and Industrial and Systems engineering. All professor respondents either host scheduled office hours, offered them by appointment or both. All faculty respondents also had at least one class at the time of taking the survey.

Table 1: Results of Faculty Respondents

Prompt	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Mean Value
<i>1. Professor's comfort with students using AI in their work</i>						
[A] I encourage my students to use AI to help with their coursework***	4	3	1	1	4	3.15
[B] Students using AI to get their assignments done bothers me	3	1	1	2	6	3.54
[C] I find it important that students can understand the content and do the work without using AI	0	0	1	2	10	4.69
[E] I am concerned about how AI progresses in the long term with how students do their work	4	3	3	3	0	3.69
<i>2. How much AI gets in the way of direct student contact with the professor</i>						
[A] I worry/suspect that students use AI in place of attending office hours	1	1	3	4	4	3.69
[B] I prefer that students use my office hours instead of using AI to understand a concept	2	1	2	3	5	3.61
[C] Students using AI instead my or my TA's office hours is fine/insignificant to me***	5	2	2	2	2	3.92
[D] I am comfortable with students using AI to support them in cases where I or a TA could have done so***	3	3	1	3	3	3.00
[E] The use of AI by students may possibly compromise my relationship with them	1	1	5	4	2	3.38
[F] I worry/suspect that students rely on AI more than they do their professors or teacher's assistants	2	1	0	3	7	3.92
<i>3. How secure professors are with their work now and in the future.</i>						
[A] I worry/suspect the University of Oklahoma may embrace AI in a way that negatively affects how I do my job in the future	2	2	3	5	1	3.08
[B] I have no real worries regarding AI and how I do my job in the long term***	4	3	1	2	3	3.46
[C] I worry about AI taking important aspects of my job now or in the future (<i>asked earlier in the survey</i>)	4	3	3	3	0	2.38
[D] I have no real worries of AI replacing certain aspects of my job*** (<i>asked towards the end of the survey</i>)	3	1	2	3	4	3.00

Notes:

The value of the mean was calculated by having Disagree having a value of 1 and Agree having a value of 5.

*** Scale was reversed. The last two prompts in section three are very similar but yield slightly different results. The last question was asked much earlier in the survey but was placed in the appropriate category.

7.2 Professor's comfort with students using AI in their work

Addressing the first category, it is clear that professors have a concern over how their students do their work. Respondents are generally neutral on students using AI, as the number of them who encourage their students to use AI to complete their coursework is quite balanced. The mean for 1.A is about 3.15. There is a mix of professors who want their students to use AI. More of the answers are on either end of the spectrum, which suggests polarizing views on the issue. However, using AI as a tool is not completely out of the question to enhance the learning of students for some professors.

The other questions do indicate overall that respondents are concerned about how much students rely on AI as a tool to do their work. The mean for 1.C being 4.69 indicates that professors of course deeply care about course content being understood without relying on AI. TS is at play here and is clearly important to professors. Looking at the bigger picture of professor goals, rather than getting an A on an assignment, engineering students need to be able have a grasp of the concepts at play for their career. The mean values are all above 3, so there is a moderate overall concern about how students are doing their work.

7.3 How much does AI get in the way of direct student contact with the professor

There is an apparent preference that professors have for students utilizing them for help with course content. Prompts 2.A, 2.B and 2.C all have a mean value above 3. Respondents are not of the view that AI can get the job done for students. They want to have more of a hand in students receiving help from them and understanding the work. There could be multiple reasons for this:

Firstly, there could be a distrust in how competent AI is in assisting the student. In STEM education, repeated AI use by students can result in students regurgitating equations and procedures into their work, and uncertainty could be masked by those summaries [32]. Active learning is under attack, which could be their concern. That is a direct attack on their perceived TS in the fact that their future engineers do not fundamentally understand their discipline. Critical thinking is not prioritized when getting help from AI versus being assisted by a professor.

Secondly, there is less student-professor contact. Professors lose out on the opportunity to see the steady progression of their students, which TI speaks to. A student who develops themselves in isolation instead of letting a professor do their job has occurred long before the popularization of AI models. However, the significant leaps that AI has made make this a very real reason why AI could be an issue. It provides more incentive for students to avoid direct assistance from their professors. Having said this, 2.E has a mean value of 3.38, indicating slight concern, but leaning more neutral on the issue of a student-professor relationship. Thus, the first reason could have more viability than this. TI could take less of a hit because of AI, or a relationship just may not be as important to professors.

Prompt 2.F demonstrates that, as much as there is a preference for students to get help from their peers, professors do not feel like the first option.

7.4 How secure professors are with their work in the future.

The data suggests that professors are mainly concerned with how their work is going to be impacted, as opposed to direct fear of not having a job.

Prompts 3.A and 3.B align with the idea that how the work of a professor is going to be done is under slight contention at the moment, but nothing to be concerned about for a while. The mean values for these prompts are 3.08 and 3.46, which seemingly show they do not have major concerns about AI substantially shifting how they do their jobs.

The major question at hand is whether they feel AI is going to replace certain aspects of their jobs. When 3.C was asked earlier in the survey, the only below-three mean value at 2.38 occurred regarding AI taking aspects of their work. This being asked earlier is a very initial reaction from the professors. The assumption here is that professors just did not linger on the long-term impacts of AI prior to taking the survey. 2.38 is not a complete lack of concern, but the topic of feeling replaced did not occur to be significant to them before this. After going through the rest of the survey, respondents may have been more primed when answering a very similar question. They were pushed to a 3.00 in mean value for prompt 3.D. One could assume that there are mixed concerns, but there is a sense of neutrality on the idea of replacement. What is more likely is that at the moment of writing, professors do feel truly replaced by AI. While they can acknowledge that students may use them in some circumstances, sentiments about AI do not push professors to a legitimate sense of being replaced. This speaks to their TI being in place.

7.2 Qualitative Data Results

Interview data was collected and categorized based on the theoretical framework and any standout patterns of responses. The five categories that the interview data is divided into are Technological Determinism, Task Significance, Task Identity, Job Security and the Incompetence of Artificial Intelligence. These five categories encapsulate the key points of professors' responses.

The Technological Determinism category demonstrates an overall awareness that professors have of AI by students, instructional adjustments they may have had to make, or lack thereof. A quote from a professor states "it became clear to me that the students were relying on AI to answer exam questions. I give take home exams." This evidence shows that professors are aware of students using AI to complete their work and notice when it happens. Respondents notice a shift in the workflows of students due to this new technology. Consequently, some professors have brought about some change in their teaching and homework assignments as one professor stated "I no longer ask questions that would, that would involve an essay response. I ask questions, draw a diagram, draw a picture, make a drawing. AI can't do that." The technological shift has made a direct impact on how some professors educate and test their students to maintain student

engagement. Though it should be noted that not all professors admitted to that. Some respondents choose to stick to their own pedagogical methods that they feel work with their students. On this front, there is no significant difference AI has in the work they do. To some degree AI could be considered more of a disruption when looking at this category.

Task Significance as a category looked to responses that allude to what professors feel is the grander importance of their work in relation to educating students. The main key point of this is that professors understand they want to train students that can think and critically engage with the content of their courses as opposed to AI doing all the work for them. A respondent quote states, “if AI is doing that for you, solving problems, then I think it makes the human being less capable to solve much bigger problems than AI is capable of doing.” Other responses in a similar vein where professors feared the bigger disadvantages of AI were linked to students offloading major cognitive work onto AI which is a major disadvantage to their capabilities within their industry in the future. Additionally, professors understand the enduring importance of human connection in education as part of a bigger purpose as why they are there. There is a sentiment that human connection is important to the overall educational experience of a student. A student overly relying on AI may lose out on that and it is important that aspect of education is kept intact.

The Task Identity category identifies responses where professors acknowledge or observe points of students progressing academically and the pride or joy they find in that. It may also show points where respondents prefer students to come to them for help as opposed to using on AI. One respondent states, “trying to or having an opportunity to actually visibly see these things, experience the small moments of joy that students are, something that always keeps me excited.” It is evident here that professors connecting with students is important to the respondents. It is important to the professors to be able to see their students thrive in an academic environment and that keeps them invested in their work. Another respondent states that with their undergraduate and graduate research students they “just sit around the table and present and discuss ideas, and that that's, I think, very essential for my work and my engagement.” Respondents expressed that professor student relationships are crucial to their work as a professor as their TI in the JCM model.

The Job Security category demonstrates the respondents current perceived job security status in the wake of AI. For one, interview responses suggest that AI and professors are inherently different or have different roles in education. A respondent stated “we're not here to derive a certain thing. I think a lot of this information is already available online. Having them guided to the right direction is really important, facilitating those conversations,” in reference to the responsibilities they have versus AI. Professors are facilitators of information, not direct sources of it. Their responsibilities as educators are something that AI is not really made to do which improves perceived security within their work. While their work may sometimes be subverted by AI, job displacement is not a major concern amongst respondents. AI is perceived to be a tool to assist students, almost like a dictionary that has all the words and their definitions. Professors

connect the pieces together for a student so they can use the words in their appropriate contexts. The responsibilities are just not the same.

Additionally for this same category, respondents attest that AI is also just not capable of doing their work. A respondent states “So I see that's my job, advancing knowledge and disseminating it. Disseminating, I can't see AI advancing knowledge, so it's not a threat to people whose jobs are to advance knowledge.” This quote characterizes the overall sentiment that professors have: AI is not at the level to which professors feel threatened by it potentially replacing them. The responsibilities they have lay beyond the capabilities and overall purpose of AI. Other statements include “I feel fairly secure and that I think. I think professors’ roles will be needed hopefully,” and “Can AI do my kind of job now teaching? I don't think so.” This further indicates clear security regarding AI and their work.

The last category that goes hand in hand with Job Security is the Incompetence of AI which went outside of the theoretical framework. This category encapsulates the feeling that AI could be misleading for students or just cannot help students. A respondent states, “It's really important for them to understand what's happening in the back end, because not everything that comes out of generative AI is correct.” This is indicative of a sense of mistrust that professors have for the technology. As much as it is a helpful tool, noticing times where it may be inconsistent or inaccurate was a clear theme. Responses suggested that the sentiment about AI is that right now it is not good enough to fully meet the desires of students. This puts more insight into the apparent security that professors have over their jobs because professors do not view AI as proficient enough at what it is generally known to do. Furthermore, responses spoke about the humanity that AI lacks which gives them the upper hand over technology. A respondent says “[AI] cannot replace human intuition” and “I don’t think AI can understand the empathy, the empathy that I can bring in my class.” There is a humanity that is important in education that AI lacks. Qualities that educators bring to the table are essential to the long-term success of students that AI cannot replicate at this point in time according to responses. This further solidifies the strong sense of perceived job security the interview responses demonstrate.

8. Conclusion

8.1 Key Findings

AI makes an evident, but not drastic change to the work of professors. Respondents in the surveys and the interview data acknowledge the change that AI makes in their workflow. The data suggests it is more of a disruptive influence on the work of professors is accounted for by some professors to some degree. Others acknowledge

Looking at all the data based on the theoretical framework, TS is mildly at risk to professors while their TI is rather safe. The survey data and the interview have demonstrated concerns from the respondents about the subversion of the greater purpose of their work. Concerns of students going to AI for work instead of them is at the concern of the student’s educational wellbeing. TI

is not something that AI negatively impacts in a noticeable way to the respondents. There is no significant barrier placed between students and respondents that makes AI an issue for them on this front. Even though TS is impacted, it is not drastic. AI's lack of an effect on these two aspects of work of respondents, according to the theoretical framework, has led to no significant effect on the job security of professors.

Part of the reason the perceived job security of professors is still strong is linked incompetence of AI respondents expressed. While of course AI technology is not always consistent or strong in certain academic areas, there is reason to believe it could get better in the future in many of those aspects. The major conclusion from these responses is that professors generally feel there is a necessary humanity that is required in education. AI lacks human qualities educators have that make up the overall learning experience. Humanity is at the core of this, and AI simply lacks it.

Potential job displacement due to AI is for the most part not the biggest concern to professors. There is a sense of anxiety over how their work is set to change, however their work as educators is so significant for an AI to have any major effect on their perceived job security. AI for now is just a new technology to get used to.

8.5 Limitations and Points of Further Study

Firstly, a major point of improvement could be based on the types of professors approached. Adjunct professors do not have full time status and may have been more appropriate for the study. Curating the survey and interviews to them could have highlighted a group that generally is more insecure and yielded more meaningful results.

There are some limitations to this study. Many of the prompts in the survey were worded negatively against AI use by students. Framing them this way could have led to respondents skewing their answers a certain way. This could logically extend to prompts 3.C and 3.D. The structure of the survey may have made the answers of professors biased.

Furthermore, the study only gathers information from the school of engineering at one institution. There are different implications in other disciplines in the humanities or the pure sciences on how professors navigate AI and how that impacts their perceived job security. Additionally, University of Oklahoma has their own policies on AI that could differ from those of other institutions as well. Those policies may or may not offer protections to professors in a way that affects their job security and eases their anxieties in this evolving world.

Lastly, the sample size could have been bigger. The sample size being limited to 13 survey respondents and 4 interviewees may not fully reflect the overall views of the 180 professors in the Gallogly College of Engineering.

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