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Understanding STARA Awareness and Its Impact Among University Professors: A Qualitative Inquiry in the Nepalese Context

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Abstract

Purpose: *This study aims to explore the awareness and perceptions of STARA among university professors in Nepal, focusing on how these emerging technologies may impact their professional roles and the broader university system.*

Methods: *A qualitative research design has been employed, using semi-structured interviews to collect data from a purposive sample of 35 academics of three major universities: Tribhuvan University, Kathmandu University, and Pokhara University. Quirkos software 2.5.3 is used for thematic data analysis, allowing for an in-depth understanding of the participants' insights.*

Results: *The analysis reveals a complex mix of optimism, concern, and uncertainty among the professors regarding the integration of STARA into the academic sector. While some participants expressed enthusiasm about the potential benefits of STARA, such as improved efficiency and new teaching opportunities, others voiced concerns about job security, the devaluation of traditional academic roles, and the preparedness of the university system for these technological shifts.*

Conclusion: *The study highlights the need for proactive policy-making, curriculum updates, and faculty training to address the challenges and opportunities presented by STARA in the higher education sector of Nepal. The findings underscore the importance of preparing university professors for future changes while fostering a balanced approach to integrating these technologies into academic practices.*

Keywords: Emerging technologies, Future career, Job replacement, Nepali University system, STARA awareness

JEL Classification: O33, I23, J24

I. Introduction

The term STARA represents the integration of Smart Technology, Artificial Intelligence, Robotics, and Algorithms, driving the rapid advancement of the Fourth Industrial Revolution

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and significantly altering global lifestyles (Brougham & Haar, 2018). The fusion of these technologies has accelerated Industry 4.0, with STARA serving as its fundamental framework (Vaidya et al., 2018). While artificial intelligence presents immense opportunities (Ivanov & Webster, 2017), it also poses challenges to traditional industries (Ivanov & Webster, 2019). Employees are now required to develop technical skills and adaptability (Ruel & Njoku, 2021), as AI could displace human roles, prompting businesses in tourism and hospitality to restructure for efficiency (Ivanov & Webster, 2017; Prentice et al., 2020). STARA awareness refers to employees› recognition of how technology could potentially replace their jobs (Oosthuizen, 2019). The rapid pace of innovation and shifting societal demands have intensified debates about the influence of STARA (Brougham & Haar, 2018; Parker & Grote, 2020). Estimates suggest that these technologies may displace around 30% of current jobs (Yudiatmaja et al., 2021) while assuming nearly double the workload currently handled by humans (Ding, 2022). By 2025, the evolving division of labor between humans and machines may affect 85 million jobs (Oosthuizen, 2022). Nevertheless, this transition is expected to create over 90 million new roles, better suited to the dynamic partnership between humans, machines, and algorithms (Brougham & Haar, 2018). Prominent figures like physicist Stephen Hawking and entrepreneur Bill Gates have warned about the disruptive impact of Smart Technology, Artificial Intelligence, Robotics, and Algorithms (STARA), predicting substantial workforce displacement (Bort, 2014; Lynch, 2015). Research suggests that up to 30% of current jobs could be automated by 2025 (Frey & Osborne, 2013; Thibodeau, 2014), fueled by rapid improvements in robotic agility, artificial intelligence, and affordable automation systems that may outperform humans in both physical and cognitive functions (Frey & Osborne, 2013). Studies indicate that robots and AI are increasingly capable of handling diverse manual and service-oriented tasks across sectors such as manufacturing, agriculture, construction, and maintenance (Frey & Osborne, 2017; Schommer et al., 2017; Webster & Ivanov, 2020). The expansion of STARA has also accelerated the shift toward self-service retail models, including cashier-less stores (Park & Yoo, 2022; Park & Zhang, 2022; Rinta-Kahila et al., 2021; Sharma et al., 2021). However, some analysts argue that many displaced jobs may not be offset by new opportunities (The Economist, 2014). According to Brougham and Haar (2018), STARA awareness reflects employees' concerns about job displacement, representing their assessment of how technological advancements may reshape future career prospects. In this paper, the researchers aim to address the questions: do you think your job is going to be replaced by STARA? Will ChatGPT devaluate your job's importance in next 5 years? Do you think STARA is going to change the present University system of Nepal? How STARA has affected your current job? How STARA might affect your future career prospect?

II. Reviews

The evolving landscape of work raises profound questions about humanity's role in an increasingly automated future. As STARA (Smart Technology, Artificial Intelligence, Robotics, and Algorithms) continues its relentless advancement, we must confront fundamental uncertainties: How will these technologies transform our workplaces and work methods? Will traditional employment remain necessary? While many experts concentrate on automation's potential job displacement, the reality involves deeper complexities the true challenge lies not in the technology itself, but in how society chooses to implement it. The workforce of tomorrow will emerge from a dynamic interplay of competing factors, some visible today while others remain unpredictable in their timing and impact. Legislative frameworks, governmental decisions, and shifting public attitudes will collectively shape this transition to automated workplaces. As noted by Kojm (2012), these converging forces will ultimately define the nature of careers by 2030. Given this multifaceted transformation, straightforward projections prove inadequate. All stakeholders - from institutions to individuals - must prepare for multiple potential scenarios, including improbable ones. In the Nepalese context, one study undertaken by Bhattarai and Shukla (2025) found that STARA has significant effect on professors' depression and organizational commitment level which means that failure to cope with technology largely affects psychological status of individuals and impacts commitment towards one's job. The subsequent sections will provide a more comprehensive examination

of STARA's conceptual framework (Stubbings, 2018).

Smart Technology

According to Durães et al. (2018), advancements in wireless communication and smart sensing technologies have facilitated the creation of intelligent learning environments capable of monitoring workplace conditions and assessing employee focus levels. Within computer science, smart environments refer to digitally enhanced physical spaces where interconnected, sensor-equipped devices operate continuously to improve human comfort and efficiency. In recent years major developments in various technological domains including smart devices, mobile networks, sensor systems, pervasive computing, artificial intelligence, robotics, middleware solutions, and human-computer interaction have transformed this vision into practical reality. Cook and Das (2005) explain that the term "smart" implies autonomous knowledge acquisition and application, while "environment" refers to an individual's immediate physical surroundings. This technological transformation has significantly altered employment opportunities and workplace dynamics. One notable consequence has been the introduction of monitoring metrics like attentiveness tracking, which in severe cases may negatively impact worker health and wellbeing. Even under normal conditions, such monitoring can affect concentration, cognitive performance, and overall work output. These developments particularly affect office-based professions where employees typically remain seated for extended periods exceeding eight hours daily (Durães et al., 2018; Liao & Drury, 2000).

Artificial Intelligence

The transformative potential of digital platforms and artificial intelligence in reshaping the workforce is virtually limitless. These technological foundations enable the creation of digital value chains while automating and commoditizing back-office operations, though not without significant risks. While fostering dynamic digital marketplaces, such platforms could eventually dominate entire financial ecosystems, with their widespread adoption introducing vulnerabilities to cyber threats and systemic manipulation (United Nations Department of Economic and Social Affairs, 2010). The power of these systems lies fundamentally in data i.e. how governments, corporations, and individuals choose to collect, share, and utilize information will profoundly impact even the most human-centered aspects of society. AI applications, ranging from digital assistants to sophisticated machine learning algorithms, demonstrate increasing capacity to interpret information, learn from it, and take appropriate actions. Current AI capabilities can be categorized into three evolutionary stages. The first, assisted intelligence, enhances existing human activities through technologies like GPS navigation systems that adapt to changing traffic conditions. The emerging second stage, augmented intelligence, enables previously impossible feats - exemplified by ride-sharing platforms that rely on complex algorithmic coordination. The developing third stage, autonomous intelligence, will feature self-directed machines such as fully operational self-driving vehicles. Some futurists envision AI amplifying human potential by processing overwhelming data streams, thereby freeing people to focus on creative problem-solving and strategic decision-making (Stubbings, 2017, 2018). As key drivers of big data innovation, AI and machine learning present unique interdisciplinary challenges for implementation and evaluation. Unlike conventional HR domains, these technologies require collaboration among engineers, data scientists, and technical specialists, creating knowledge gaps for traditional organizational experts. Despite rapid market growth for HR-focused AI applications, the overwhelming emphasis on technological development risks marginalizing crucial behavioral science perspectives, particularly the valuable contributions of industrial-organizational psychology in ensuring ethical and effective implementation (Putka & Dorsey, 2018). This technological dominance presents both unprecedented opportunities and significant challenges for maintaining balanced, human-centric approaches to workforce development.

Robotics

The evolution of robotics has reached a critical juncture, transitioning from human-controlled

tools to increasingly autonomous agents. While historically robots have served as obedient tools under human direction, modern developments are granting them unprecedented independence, raising important questions about effective human-robot collaboration (Richards, 2017a). This technological progress has understandably generated apprehension, with media reports frequently speculating about widespread job displacement in heavily automated industries. Such concerns are not entirely unfounded, as evidenced by the 29% global increase in robot sales during 2014, reaching 229,261 units. However, it's important to recognize that robotics primarily removes humans from repetitive, difficult, or hazardous tasks rather than replacing workers entirely (Richards, 2017a). Contemporary robotics is advancing toward sophisticated agent-based models (ABMs) capable of integrating not only with other machines but also within broader networks involving human participants. These applications are already operational in various settings, from space exploration to everyday services like museum tour guides and hospital assistants. The near future will likely see ABMs assisting elderly or vulnerable individuals in domestic environments while collaborating with human workers in industrial facilities (Richards, 2017a). Traditional team dynamics research has focused on human interpersonal relationships, but these findings may not directly apply to human-robot interactions. Human teams rely heavily on nuanced verbal and non-verbal communication patterns, along with established social norms that currently elude robotic systems. Trust remains a fundamental component of effective teamwork, presenting unique challenges for human-robot collaboration. Currently, most robotic systems operate as predictable tools with clearly understandable functions, making integration relatively straightforward. However, as robots gain greater autonomy, teams will require more sophisticated frameworks for authority delegation and interaction protocols. Two primary approaches have emerged for structuring human-robot teams: a bottom-up model maintaining robots as subordinate tools serving human objectives, or a top-down approach treating robots as equal team members with defined roles and behavioral standards (Richards, 2017b). Increasing robot autonomy necessitates careful monitoring systems, particularly in safety-critical applications where human supervisors must verify robotic operations. In less sensitive contexts, robots may operate with greater independence. Richards (2017b) explores more advanced scenarios where ABMs could assume managerial roles over human teams, though this raises significant implementation challenges. Many workers may resist robotic supervisors, and human team members would likely question assigned tasks in ways robotic counterparts would not unless specifically programmed to do so. Evaluating human-robot team effectiveness requires consideration beyond quantitative metrics to examine long-term impacts on group dynamics, trust levels, and workplace attitudes. Initial productivity gains might eventually give way to increased errors as team relationships evolve. However, as artificial intelligence continues advancing, robots may achieve status as genuine social agents within teams. Ultimately, human-robot teams could develop into cohesive units with shared "bounded rationality," potentially rendering current concerns about human-robot interaction less relevant over time (Richards, 2017b). This evolutionary perspective suggests that while current challenges are substantial, they may represent transitional issues rather than permanent barriers to effective human-robot collaboration.

Algorithms

The digital revolution initially fostered optimism among economists and policy experts that reduced search costs would optimize labor market efficiency. Modern digital platforms have evolved beyond basic information sharing to provide sophisticated, algorithm-driven recommendations about potential transactions and employment matches (Resnick & Varian, 1997; Adomavicius & Tuzhilin, 2005; Horton, 2017; Varian, 2010). These intelligent systems aggregate user preferences, define viable options, and solve complex optimization problems by synthesizing data beyond any individual's capacity. With negligible marginal costs and improving returns to scale, such recommendation engines demonstrate particular advantages in consumer markets, though their application in labor markets remains limited. The potential extension of algorithmic matching to employment contexts raises important considerations. While these systems might theoretically streamline hiring processes, fundamental differences

exist between product recommendations and personnel selection. Effective recruitment often requires evaluating intangible human qualities that resist quantification, and the existing costs of candidate screening may not justify algorithmic intervention. More concerning are the potential systemic effects - by design, recommendation systems focus employer attention on select candidates, potentially creating exclusionary dynamics. Historical evidence from traditional job placement programs demonstrates how such "crowding out" effects can diminish overall social welfare (Crépon et al., 2013). Research by Horton (2017) confirms that while employers do act on algorithmic recommendations with measurable hiring impacts, these systems primarily serve organizational needs rather than worker interests, creating an inherent asymmetry in labor market interventions. This imbalance reflects deeper structural differences between employers and job seekers. Companies exercise considerable discretion in creating and eliminating positions, while workers face more constrained participation decisions. As labor markets become increasingly digitized, platform operators gain unprecedented influence through their control of information flows and behavioral data. This centralized mediation power carries significant implications for global market efficiency and equity, presenting both opportunities for optimization and risks of systemic distortion in employment ecosystems. The transition toward algorithm-mediated labor markets therefore requires careful consideration of how technological capabilities interact with fundamental market dynamics and human factors.

III. Methodology

A qualitative research design has been employed, using semi-structured interviews to collect data from a purposive sample of 35 academics i.e. including Professors, Associate Professors, Assistant Professors and Teaching Assistants from three major universities specifically Tribhuvan University, Kathmandu University, and Pokhara University. The interview questions addressed five key areas: (1) the likelihood of job replacement by STARA, (2) the potential devaluation of academic roles by tools like ChatGPT within the next five years, (3) the expected changes in the Nepali university system due to STARA, (4) the current impact of STARA on professors' job responsibilities, and (5) the influence of STARA on their future career prospects. Quirkos software 2.5.3 is used for the thematic data analysis, allowing for an in-depth understanding of the participants' insights. Additionally, the Technology Acceptance Model (TAM), introduced by Davis in 1989, is well-suited for this research. TAM explains that a person's intention to use technology is largely shaped by two factors: perceived usefulness, which is the belief that technology will enhance job performance, and perceived ease of use, meaning the belief that using the technology will require minimal effort. These factors influence attitudes toward technology adoption and ultimately predict actual usage. TAM's strength lies in its ability to reliably forecast technology acceptance in various contexts, making it particularly useful for examining how Nepalese university professors might embrace STARA technologies in their academic roles (Davis, 1989; Davis et al., 1989).

Furthermore, this research follows the interpretivist paradigm, which assumes that reality is socially constructed and that knowledge emerges from the meanings individuals assign to their experiences (Creswell & Poth, 2018). Under this paradigm, the goal of research is not to predict or generalize but to understand and interpret the subjective world of human experience. In this case, the focus is on how university professors in Nepal understand, interpret, and make sense of STARA's presence in their professional environment. The interpretivist stance is particularly suitable for this study because awareness of emerging technologies such as AI or robotics is influenced by personal beliefs, institutional culture, social exposure, and contextual constraints. Professors' interpretations of STARA are thus embedded in their lived realities shaped by Nepal's technological readiness, infrastructure, policy frameworks, and pedagogical traditions. From an epistemological standpoint, the researcher plays a co-constructive role in knowledge creation, interpreting participants' narratives rather than imposing external meaning. This aligns with the study's qualitative and exploratory character, where understanding diverse perspectives and lived experiences is more important than quantifiable measurement.

Finally, this study has adopted a phenomenological approach, which seeks to understand and describe the essence of participants lived experiences concerning a particular phenomenon (Moustakas, 1994). The phenomenon explored in this research is the awareness and perception of STARA technologies among university professors in Nepal. The phenomenological approach is well-suited to this inquiry because it allows participants to express their own interpretations, reflections, and emotional responses to technological change without constraining them to predefined categories. In this study, phenomenology serves to reveal how professors experience and interpret the technological shift within the Nepalese university system. Through semi-structured interviews, participants shared their personal insights about STARA's effect on job replacement, job devaluation, university system, present job prospects and future job prospects. Thematic analysis was then used to extract shared meanings and structural descriptions of these experiences, capturing the common essence of professors' perceptions toward STARA. The phenomenological approach complements the interpretivist paradigm by emphasizing understanding rather than explanation and giving priority to human experience as the source of knowledge.

Table 1

Demographics of the Participants Who Participated in the Interview

Characteristics	Percentage (%)
Age	
26-35	17
36-45	57
46-55	23
≥56	3
Designation	
Teaching Assistant	29
Assistant Professor	57
Associate Professor	11
Professor	3
Education	
Masters	49
M.Phil.	34
Doctorate	17
Experience	
1-10	51
11-20	37
21-30	11
Gender	
Male	94
Female	6
Marital Status	
Married	100
Unmarried	0

Permanency Status of the Job	
Permanent	71
Visiting (part-time)	29
University	
Tribhuvan University (TU)	83
Kathmandu University (KU)	3
Pokhara university (PU)	14

IV. Results and Discussion

This section attempts to thoroughly describe the themes that emerged from the semi-structured interview questions. The themes were arranged under five dimensions or categories: STARA and Job Replacement; STARA and Job Devaluation; STARA and University System of Nepal; STARA and Current Job Prospect and STARA and Future Career Prospect.

STARA and Job Replacement

In this analysis of data, the major theme that emerged is STARA no replacement to human characteristics. This theme has fourteen quotes and can be more explored as per the views of below mentioned participants.

1…. Not right now. STARA lack emotional components. Human mind cannot be

replaced by STARA, rather STARA are built to assist human activities so as to make

their efforts more efficient and effective.

Source: Survey 6

Age: 36-45; Designation: Asst. Professor; Education: MPhil; Experience:

11-20; Gender: Male; Marital Status: Married; Permanency Status of

the Job: Permanent; University: Tribhuvan University

2……Not at all because STARA lacks emotions and feelings but my job demands for

emotions, feelings, understanding abilities and human guidance with love and

affection.

Source: Survey 13

Age: 36-45; Designation: Asst. Professor; Education: Doctorate;

Experience: 11-20; Gender: Male; Marital Status: Married;

Permanency Status of the Job: Permanent; University: Tribhuvan

University

3...I do not think so because STARA is technology or machines and my job is associated

with feelings, care, love and affection

Source: Survey 14

Age: More than or equal to 56; Designation: Professor; Education: Doctorate; Experience: 21-30; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

4....I do not think so because STARA does not have a capability to replace human mind and its thinking capabilities

Source: Survey 15

Age: 46-55; Designation: Asst. Professor; Education: Doctorate; Experience: 11-20; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

5…No, because STARA doesn't have that competent ability to replace humans in university system as of now

Source: Survey 16

Age: 36-45; Designation: Teaching Assistant; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Visiting (Part-Time); University: Tribhuvan University

6…. I don't think my job is going to be replaced by STARA. Idea formation and knowledge creation is that which only humans can do. Machines are ultimately the processors of information and knowledge and not the creators of knowledge.

Source: Survey 17

Age: 36-45; Designation: Asst. Professor; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

7…. I think my job is not going to be replaced by STARA as STARA doesn't have human qualities like sensing, feeling, understanding, empathizing, sympathizing and all of above making queries and solving it by working alone and in group.

Source: Survey 19

Age: 36-45; Designation: Asst. Professor; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Pokhara University

8…. No, because human beings are essential to operate and give direction to students inside classroom rather than STARA technology because technology is mechanical in nature and lacks human characteristics. STARA can just facilitate not replace the jobs carried forward by professors in Nepalese university system.
Source: Survey 22
Age: 36-45; Designation: Asst. Professor; Education: Master's;
Experience: 1-10; Gender: Male; Marital Status: Married; Permanency
Status of the Job: Permanent; University: Pokhara University

9…. No, because STARA aren't developed in an advanced form yet to replace humans especially in teaching learning context. In Nepal, it's still at its inception because our country is one of the poorest and implementing STARA at workplace takes great amount of time.
Source: Survey 25
Age: 36-45; Designation: Asst. Professor; Education: Doctorate;
Experience: 1-10; Gender: Male; Marital Status: Married; Permanency
Status of the Job: Permanent; University: Tribhuvan University

10…. I don't think so because STARA help me with teaching materials and even in accomplishing my tasks in time but it lacks or cannot accommodate interactions in the class.
Source: Survey 27
Age: 46-55; Designation: Asst. Professor; Education: MPhil; Experience:
11-20; Gender: Male; Marital Status: Married; Permanency Status of
the Job: Permanent; University: Tribhuvan University

11…. No, I don't think that my job is going to be replaced by STARA because in technology enforced teaching or work there is no sense of intimacy, feelings, friendliness, affinity, emotions etc. and these things are also very important for the customers/students despite the service they purchase
Source: Survey 28
Age: 36-45; Designation: Asst. Professor; Education: MPhil; Experience:
1-10; Gender: Male; Marital Status: Married; Permanency Status of the
Job: Permanent; University: Tribhuvan University

12…. While STARA can automate information retrieval and basic response generation, my current ability to synthesize information, understand complex questions, and adapt to new situation makes full replacement unlikely. In the future, I see STARA working alongside me to further enhance response quality and efficiency
Source: Survey 32
Age: 26-35; Designation: Teaching Assistant; Education: Master's;
Experience: 1-10; Gender: Male; Marital Status: Married; Permanency
Status of the Job: Visiting (Part-Time); University: Tribhuvan University

13…. I do not think that my job's going to be replaced by STARA because I believe in my capability that I can do much better and adapt to it accordingly to technology demand. STARA cannot deliver as human they can regarding teaching practices within the classroom setup.
Source: Survey 34
Age: 36-45; Designation: Asst. Professor; Education: Master's;
Experience: 1-10; Gender: Male; Marital Status: Married; Permanency
Status of the Job: Permanent; University: Pokhara University

14…. STARA cannot replace humans as teachers in universities because STARA is a system developed to assist mankind it is not supposed to replace humans from their workplaces. As in the case of academics, machines cannot develop good citizens for the society we need people with intellect and wisdom that machines they lack therefore I think my job is not going to be replaced by STARA.
Source: Survey 35
Age: 46-55; Designation: Assoc. Professor; Education: MPhil;
Experience: 11-20; Gender: Male; Marital Status: Married;
Permanency Status of the Job: Permanent; University: Tribhuvan University

The analysis reveals a dominant theme across responses that STARA (Smart Technology, Artificial Intelligence, Robotics, and Automation) cannot replace human characteristics. This finding underscore participants' belief that while STARA can assist human activities, it lacks core human attributes such as emotional intelligence, empathy, creativity, and the ability to form meaningful relationships. Moreover, the thematic analysis reveals that participants overwhelmingly agree that STARA cannot replace human educators, especially in Nepal's socio-educational context. While STARA has potential as a tool to assist in administrative and routine tasks, it lacks the emotional intelligence, creativity, and ethical grounding necessary for teaching. This theme emphasizes the enduring value of human characteristics in education, positioning technology as a complementary rather than substitutive force.

STARA and Job Devaluation

In this analysis of data, the major theme that emerged is Negative on Job Devaluation. This theme has fourteen quotes and can be more explored as per the views of below mentioned participants.

1…. Probably no because technology can't replace human mind.

Source: Survey 2; Age: 26-35; Designation: Teaching Assistant; Education: MPhil; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Visiting (Part-Time); University: Tribhuvan University

2…ChatGPT will not devaluate my job's importance but provides so many ideas that makes my job effective and efficient. I don't think ChatGPT is going replace professors in Nepalese universities in next 5 years.

Source: Survey 5; Age: 36-45; Designation: Teaching Assistant; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Visiting (Part-Time); University: Tribhuvan University

3…No, because ChatGPT lacks emotional intelligence. Professors' job demands understanding students and tailoring the study needs of the students at an individual level which ChatGPT does not address therefore ChatGPT is not going to devaluate my job's importance in next 5 years.

Source: Survey 6; Age: 36-45; Designation: Asst. Professor; Education: MPhil; Experience: 11-20; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

4…. No, I believe that rather than devaluating jobs, it can actually enhance my job.

Source: Survey 9; Age: 46-55; Designation: Assoc. Professor; Education: MPhil; Experience: 21-30; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan

University

5…ChatGPT will not devaluate rather it will evaluate the importance of my job by helping me in executing my duties and responsibilities towards my students.

Source: Survey 11; Age: 36-45; Designation: Asst. Professor; Education: MPhil; Experience: 11-20; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

6…ChatGPT will not devaluate my job's importance. It will assist my job by providing helpful and accurate information with less effort and time.

Source: Survey 12; Age: 36-45; Designation: Asst. Professor; Education: MPhil; Experience: 11-20; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

7…No, ChatGPT has its boundaries so a human being and his/her job's importance

must be valued as per his/her contribution.

Source: Survey 14; Age: More than or equal to 56; Designation: Professor; Education: Doctorate; Experience: 21-30; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

8…No, because ChatGPT cannot think, feel and understand as humans they do in the classroom setting. Moreover, ChatGPT is an AI algorithm whereas humans are living beings with ability to generate queries and answer them therefore ChatGPT is not going to devaluate the importance of my job in next 5 years.

Source: Survey 16; Age: 36-45; Designation: Teaching Assistant; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Visiting (Part-Time); University: Tribhuvan University

9…. No, ChatGPT will not devaluate my job's importance as teaching is not only sharing of information. Beyond, it is transfer of skills, ideas and expertise as well.

Source: Survey 17; Age: 36-45; Designation: Asst. Professor; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

10…. I don't think ChatGPT will devaluate my job's importance in next 5 years because ChatGPT cannot overrun human capabilities.

Source: Survey 19, Age: 36-45; Designation: Asst. Professor; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Pokhara University

11…. No, I believe its usage may increase but resources availability depends on the knowledge of the teachers.

Source: Survey 24; Age: 26-35; Designation: Teaching Assistant; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Visiting (Part-Time); University: Pokhara University

12…. No, I don't think so. ChatGPT can upgrade people by providing good ideas and knowledge which can enhance their performance but devaluating their job is presently not possible.

Source: Survey 25; Age: 36-45; Designation: Asst. Professor; Education: Doctorate; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

13…. I do not agree with the statement rather the ChatGPT will be a help for the faculty as well as students to get things done in a better way provided they learn to use it positively.

Source: Survey 29; Age: 46-55; Designation: Assoc. Professor; Education: Doctorate; Experience: 11-20; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Kathmandu

University

14…. ChatGPT has an ability to deliver answers to the asked questions but it lacks human touch and love that students they need while teaching inside the classroom. Therefore, it can be said that ChatGPT is not going to devaluate my job within next 5 years.

Source: Survey 34; Age: 36-45; Designation: Asst. Professor; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Pokhara University

The overarching theme "Negative on Job Devaluation" reflects the participants' shared belief that ChatGPT and similar STARA technologies are unlikely to undermine the value of university professors' roles in Nepal. This perspective is supported by a range of qualitative insights, where the collective views of participants underscore that ChatGPT does not threaten the inherent value of university professors' roles in Nepal. While its utility in enhancing efficiency and access to information is recognized, its lack of emotional intelligence, human adaptability, and capacity for nuanced teaching ensures that human educators remain central to the academic process. The participants envision a future where AI and humans collaborate, with the latter continuing to lead in shaping meaningful educational experiences. This analysis reinforces the belief that technology complements rather than replaces the deeply human aspects of teaching.

STARA and University System of Nepal

In this analysis of data, the major theme that emerged is Change in Curriculum, Teaching and Assessment. This theme has eleven quotes and can be more explored as per the views of below mentioned participants.

1…. In Nepalese scenario, STARA can in the future to some extent change the teaching learning activities as well as administrative activities in a positive way. Moreover, STARA can scale up the productivity of the institution to a greater scale if used.

Source: Survey 1; Age: 36-45; Designation: Asst. Professor; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

2…It may change the way of delivering the content to the students.

Source: Survey 2; Age: 26-35; Designation: Teaching Assistant; Education: MPhil; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Visiting (Part-Time); University: Tribhuvan University

3…. STARA will change the university system in a positive way. STARA implementation will definitely change a lot in the areas of academics and administration. I think STARA if implemented will make enhance the productivity of the university.

Source: Survey 3; Age: 46-55; Designation: Assoc. Professor; Education: MPhil; Experience: 21-30; Gender: Female; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

4…. STARA could bring changes about the various aspects, such as curriculum design, teaching methodologies, assessment practices and even positive changes in administration practices and structures.

Source: Survey 9; Age: 46-55; Designation: Assoc. Professor; Education: MPhil; Experience: 21-30; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

5…. I do expect few changes like lecture delivery, students' performance evaluation patterns, linking classroom to the job market and teaching pedagogy in Nepali university if STARA is implemented as a policy for operating higher education institutions in Nepal

Source: Survey 14; Age: More than or equal to 56; Designation: Professor; Education: Doctorate; Experience: 21-30; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

6…. STARA is going to definitely change the present university system of Nepal by changing some modules of teaching, pedagogy and classroom arrangements.

Source: Survey 17; Age: 36-45; Designation: Asst. Professor; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

7…. Yes, I think STARA is going to change the present university system of Nepal to some extent by changing the teaching system, curriculum design, teaching pedagogy and university administration.

Source: Survey 19; Age: 36-45; Designation: Asst. Professor; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Pokhara University

8…. STARA will change the present system as the present system is quite manual and traditional in nature therefore if STARA is able to get into the system, then university system of Nepal will change in terms administration and resource management, teaching pedagogy, curriculum design and student evaluation.

Source: Survey 23; Age: 46-55; Designation: Asst. Professor; Education: Master's; Experience: 11-20; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Pokhara University

9…. If STARA is implemented well and accepted, it could bring significant improvements like updating the curriculums and teaching methods to better meet the needs of society.

Source: Survey 26; Age: 36-45; Designation: Teaching Assistant; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Visiting (Part-Time); University: Tribhuvan University

10…. It will bring to design creating creative pedagogy in university system of Nepal because all the information is available in AI tools.

Source: Survey 30; Age: 26-35; Designation: Asst. Professor; Education: MPhil; Experience:1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

> 11…. STARA's influence in Nepal's universities will likely be seen in providing supplementary lectures with personalized learning materials and potentially automating some grading tasks.
>
> *Source:* Survey 32; Age: 26-35; Designation: Teaching Assistant; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Visiting (Part-Time); University: Tribhuvan University

The theme "Change in Curriculum, Teaching, and Assessment" highlights participants' recognition of the transformative potential of STARA technologies in the Nepalese university system. This perspective is based on expectations for innovation in curriculum design, teaching methodologies, assessment practices, and administrative functions. Moreover, the participants' insights reflect a strong consensus that STARA will play a transformative role in shaping the future of higher education in Nepal. Key changes are expected in curriculum design, teaching methodologies, and assessment practices, alongside enhanced administrative efficiency. While participants are optimistic about these changes, they also underscore the importance of thoughtful implementation to maximize the positive impact of STARA on universities. This analysis suggests that STARA has the potential to modernize Nepal's education system, creating opportunities for personalized learning, innovative pedagogy, and efficient institutional management.

STARA and Current Job Prospect

In this analysis of data, the major theme that emerged is supported current job. This theme has sixteen quotes and can be more explored as per the views of below mentioned participants.

> 1…. My job could not be affected or replaced but STARA will help me to increase my work efficiency.
>
> *Source: Survey 5; Age: 36-45; Designation: Teaching Assistant; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Visiting (Part-Time); University: Tribhuvan University*

> 2…. Till now, it has supported me positively. It has supported me for finding teaching materials more easily and effectively.
>
> *Source: Survey 8; Age: 26-35; Designation: Teaching Assistant; Education: Master's; Experience: 1-10; Gender: Female; Marital Status: Married; Permanency Status of the Job: Visiting (Part-Time); University: Tribhuvan University*

> 3…. STARA has helped me in answering the queries which are not available in books, journals and articles therefore I can say that there is a positive effect of STARA in my job.
>
> *Source:* Survey 9; Age: 46-55; Designation: Assoc. Professor; Education: MPhil; Experience: 21-30; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

> 4…. Using AI I can get support in my teaching and research in many ways like designing slides for teaching, assigning students work, supporting students in their academics and project works and for identifying problem statements for the research purpose in my desired topics.

Source: Survey 10; Age: 46-55; Designation: Asst. Professor; Education: Doctorate; Experience: 21-30; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

5…. STARA has not affected my current job at all. However, it has affected my job in terms of teaching learning activity.

Source: Survey 11; Age: 36-45; Designation: Asst. Professor; Education: MPhil; Experience: 11-20; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

6…. STARA has affected my current job in the following ways and are access to educational resources and research papers and save my time and effort in searching required journal, articles and book summaries.

Source: Survey 12; Age: 36-45; Designation: Asst. Professor; Education: MPhil; Experience:11-20; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

7....STARA paves the new way and we are fruitfully using it as a supplementary technique in our jobs.

Source: Survey 14; Age: More than or equal to 56; Designation: Professor; Education: Doctorate; Experience: 21-30; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

8…. STARA has affected my current job to some extent. It has made my job easier and more simplified for teaching my subject contents to the students.

Source: Survey 19; Age: 36-45; Designation: Asst. Professor; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Pokhara University

9…. STARA has supported my job by making my job more simplified by helping me in tracking right information regarding various literatures and subject specific theories to be shared among students. Moreover, STARA has guided me in finding newer ways to teach students in 21st century university system.

Source: Survey 23; Age: 46-55; Designation: Asst. Professor; Education: Master's; Experience: 11-20; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Pokhara University

10…. Presently, STARA has eased my job with making and creating positive impact in my day-to-day work.

Source: Survey 24; Age: 26-35; Designation: Teaching Assistant; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Visiting (Part-Time); University: Pokhara University

11…. STARA has significantly influenced my role by enhancing the capabilities of my

job.

Source: Survey 26; Age: 36-45; Designation: Teaching Assistant; Education: Master's; Experience:1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Visiting (Part-Time); University: Tribhuvan University

12…. It has certainly helped me with some complicated issues in language teaching. It provides information instantly if asked appropriately however, I need to be careful about its authenticity at the same time.

Source: Survey 27; Age: 46-55; Designation: Asst. Professor; Education: MPhil; Experience:11-20; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

13…. So far it has not highly affected my way of working, however using the LMS, getting support from AI supported tools and plagiarism tools are some of the key functional interventions.

Source: Survey 29; Age: 46-55; Designation: Assoc. Professor; Education: Doctorate; Experience: 11-20; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Kathmandu University

14…. STARA has impacted our jobs by both automating repetitive tasks and increasing efficiency through assisting with research and information processing.

Source: Survey 32; Age: 26-35; Designation: Teaching Assistant; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Visiting (Part-Time); University: Tribhuvan University

15…. For me since we work and prioritize more on skill development and placement before graduation we do use STARA and till date the effect is there. In overall there is a positive and promising effect of STARA in my job.

Source: Survey 33; Age: 36-45; Designation: Asst. Professor; Education: Master's; Experience: 11-20; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

16…. STARA has just played a secondary role in my teaching journey. STARA has not affected my job negatively. I have been able to take advantage out of this technology. STARA hasn't overpowered my job and decreased its effectiveness rather has increased my caliber and competence.

Source: Survey 34; Age: 36-45; Designation: Asst. Professor; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Pokhara University

The theme "Support for Current Job" reflects how participants perceive STARA as a supplementary tool that positively impacts their professional responsibilities. Participants emphasize the ways in which STARA enhances efficiency, supports teaching and research, and improves day-to-day job functions without causing any significant negative impacts. The

participants' responses indicate that STARA plays a supportive and empowering role in their professional lives. It enhances productivity, provides easy access to resources, simplifies teaching and research tasks, and supports the integration of innovative practices in higher education. While STARA is largely seen as a supplementary tool, its positive contributions are significant in shaping modern teaching and administrative practices. This analysis reflects that STARA's influence on current jobs is overwhelmingly positive, fostering efficiency, resourcefulness, and innovation while enabling educators to adapt to evolving academic demands.

STARA and Future Career Prospect

In this analysis of data, the major theme that emerged is challenging due to STARA. This theme has eleven quotes and can be more explored as per the views of below mentioned participants.

> 1…. STARA will make my job more challenging as I may have to put more effort to remain up-to-date with the latest technology for delivering my services to the students. For growth in my profession, I have to work even harder than today.
>
> *Source:* Survey 7; Age: 36-45; Designation: Asst. Professor; Education: Master's; Experience: 11-20; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

> 2…. STARA may affect my future career prospect where physical classes would be transformed to virtual classes, presence of foreign experts virtually could make the students more motivated. In more clearer sense AI would be prominent as a result my career opportunities would be more competitive and challenging as machines would overcome humans as professors in the universities.
>
> *Source:* Survey 13; Age: 36-45; Designation: Asst. Professor; Education: Doctorate; Experience: 11-20; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

> 3…. My future career will be affected gradually by STARA and its significance will be seen more prominently in the future.
>
> *Source:* Survey 15; Age: 46-55; Designation: Asst. Professor; Education: Doctorate; Experience: 11-20; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

> 4…. My future career will be moderately affected because in the future is of technology and if I don't start learning it now may be my importance in the classroom will not be viewed as important as I am today.
>
> *Source:* Survey 16; Age: 36-45; Designation: Teaching Assistant; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Visiting (Part-Time) ; University: Tribhuvan University

> 5…. Future is of technology therefore if university professors do not accompany themselves with the latest teaching technologies inside and outside of the classroom as well as in their research works, definitely in the long run career might get adversely affected.

Source: Survey 18; Age: 36-45; Designation: Teaching Assistant; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Visiting (Part-Time); University: Tribhuvan University

6…. STARA might affect my future career prospect since it is based on technology which might deliver more advanced information to the students and ultimately lead to lesser requirements of teachers within the university system.

Source: Survey 19; Age: 36-45; Designation: Asst. Professor; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Pokhara University

7…. If things go as anticipated, in the long run may be between 5 to 10 years would affect both positively as well as negatively.

Source: Survey 20; Age: 36-45; Designation: Teaching Assistant; Education: Master's; Experience: 11-20; Gender: Male; Marital Status: Married; Permanency Status of the Job: Visiting (Part-Time); University: Tribhuvan University

8…. First of all, as an educator we must acquire new skills to stay relevant and take advantage. There will be more AI driven platforms for personalized learning for study. Robotics and AI can provide new tools for data collection and analysis. Our job might get enhanced.

Source: Survey 21; Age: 36-45; Designation: Asst. Professor; Education: Master's; Experience: 11-20; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

9…. In future, STARA is supposed to help professor adopt new techno skills. Teaching jobs will survive if professors are able to adopt the changing technological environment. Knowledge is nothing but skills are important in future.

Source: Survey 22; Age: 36-45; Designation: Asst. Professor; Education: Master's; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Pokhara University

10…. In the workplace where I currently work implements STARA system of functionality, and then only it may affect my future career prospect. It is because till the date in my workplace it is not implemented. In case, it is implemented, it of course affects my future career because I am not familiar with Artificial intelligence, smart technology, robotics and algorithms much.

Source: *Survey 28;* Age: *36-45;* Designation: *Asst. Professor;* Education: *MPhil*; Experience: *1-10;* Gender: *Male;* Marital Status: *Married;* Permanency Status of the Job: *Permanent;* University: *Tribhuvan University*

11…. Future career will be completely depended on AI and Robotics. It will make our work easier and data will be available very easily. Due to this reason, it might affect our future career prospect.

Source: Survey 30; Age: 26-35; Designation: Asst. Professor; Education: MPhil; Experience: 1-10; Gender: Male; Marital Status: Married; Permanency Status of the Job: Permanent; University: Tribhuvan University

The theme "Challenging Due to STARA" emerged as a dominant concern among university professors. Across 11 coded excerpts, participants consistently highlighted the challenges posed by the adoption of Smart Technology, Artificial Intelligence, Robotics, and Automation (STARA) in academia. Their views underline the transformative impact of technology on teaching practices, career security, and the evolving role of educators. Furthermore, the integration of STARA presents a complex mix of challenges and opportunities for university professors in Nepal. The participants' reflections highlight a pervasive sense of urgency to develop new skills and adapt to emerging technological trends. While STARA promises to enhance certain aspects of academia, such as personalized learning and efficiency, it also introduces uncertainties related to job security and the evolving role of educators.

Comparative Analysis based on Demographic Variables

Demographic Differences in Perceptions: The demographic differences based on age, designation, educational background, experience and permanency status of the job are explained as under:

Age:

- **Younger Age Group (26-35):** Respondents in this group exhibited a high level of awareness about STARA's dependency and impact. They viewed technology as both a necessity and a potential threat to job security. The **focus is on** future career dependency on AI and robotics, requiring early adaptation.
- **Middle Age Group (36-45):** The majority of participants belonged to this age range. Their responses were mixed, reflecting both optimism about skill enhancement and concerns about job relevance. The **focus is on** pressure to adopt technological skills to sustain careers.
- **Mature Age Group (46-55):** Few participants fell into this category. They tended to emphasize the gradual and long-term impacts of STARA on academic roles. The **focus is on** slow but inevitable integration of STARA in academic settings.
- **Older Age Group (≥56):** The participant in this age group believed that ChatGPT is not going to devaluate their job. Furthermore, the participant think that STARA has supplemented their jobs rather than substituted and has been fruitfully using AI in their job. Moreover, participant has expected few changes like change in lecture delivery, students' performance evaluation pattern, change in pedagogy and change in linking students from classroom to the job market if STARA is implemented through policy in higher education institutions of Nepal. In addition to that, the participant firmly believes that professors need to upgrade themselves with the latest developments in STARA so that they won't get replaced 100% in the classroom. Finally, professor's job is related with exchange of knowledge based on feelings, care, love and affection such that academics are no replacement due to STARA.
- Designation:
- **Teaching Assistants (Part-Time):** This group voiced anxieties about the long-term effects of failing to adopt new technologies. The focus is on loss of relevance without skill development.
- **Assistant Professors:** Representing a significant portion of respondents, Assistant Professors expressed concerns about competition from AI and virtual learning. The

focus is on competitive challenges and reduced dependence on human professors.

- **Associate Professors:** This group assumed that their jobs won't be devaluated due to STARA. Moreover, participants of this group agreed that STARA has supported their job. Furthermore, academics of this group believed that STARA is going to change the university system of Nepal in the future. Moreover, training in STARA is taken as an important tool for increasing efficiency of teachers. The focus is on the dependency of technology in future for conducting academic work in the context of Nepal.
- **Professors:** Though participant in this group is the smallest but they believed that STARA is not going to devaluate their jobs, STARA has supported their current job, change in university system is necessary due to STARA and there is a pressure to upgrade for professors. The focus is on the supplementary use of STARA in academics.

Educational Background:

- **Masters Holders:** Respondents with a Master's degree were often more concerned about the effort required to keep up with STARA advancements. The focus is on Staying updated with technological trends.
- **Doctorate and MPhil Holder:** Participants with higher degrees tended to have a broader perspective, linking STARA adoption to global trends in virtual learning and academic competition. The Focus is on Strategic adaptation to emerging challenges.

Experience:

- **Early Career (1-10 years):** These respondents showed greater concern about job displacement and the necessity of acquiring new skills. The focus is on Dependence on technology for career survival.
- **Mid-Career (11-20 years):** Participants in this category emphasized balancing technology adoption with professional growth. The focus is on sustaining careers amidst technological transitions.
- **Late Career (21-**30 years): Perception of STARA by this group of participants revealed that STARA has helped them to find the queries not easily available in the published sources like books, journals and articles. They agreed STARA has helped them to work effectively inside the classroom but also agreed on feasibility to be replaced if failed to change according to the technology in the field. The focus is on the change that STARA can bring in the university system of Nepal therefore in order to survive one needs to upgrade themselves.

Permanency Status of Job:

- **Permanent Employees:** Respondents with permanent jobs viewed STARA as a competitive challenge but believed their positions provided some stability. The focus is on long-term career impacts and adapting to global academic shifts.
- **Visiting/Part-Time Employees:** This group expressed greater vulnerability, often viewing STARA as a threat to their limited job security. The focus is on Increased pressure to adopt technological competencies.

Gender:

- **Male:** This group is the highest in this research and has believed that STARA cannot devaluate their job, is going to support their day-to-day work, not a replacement in the classroom, challenging in the future if not used for information exchange with

students, feasibility for job devaluation if not upgraded in STARA skills. The focus of this group is to extensively use STARA in future for sustainability in one's profession.

- **Female:** This group is the lowest in this research and has believed that STARA cannot replace them, currently has helped me in increasing work efficiency and positive on job devaluation because knowledge is on a click of mouse away. The focus is on the positive impact of STARA at present and in the future therefore university teachers need to adopt the technology in a rational way.

Figure 1

Canvas View of Coded Themes in Quirkos Software

Figure 1 illustrates the canvas view generated by Quirkos software 2.5.3 during the coding process. Each circle (bubble) represents a theme derived from participants' responses. The size of each bubble is proportional to the number of coded excerpts associated with that theme, indicating its relative prominence in the dataset. For instance, the themes "STARA and Job Devaluation", "STARA and Future Career Prospect" and STARA and Job Replacement appear as larger bubbles, suggesting that participants frequently discussed concerns related to job devaluation and career uncertainties. In contrast, themes such as "STARA and University System of Nepal", "STARA and Current Job Prospect are represented by smaller bubbles, indicating less frequent but still meaningful references.

V. Conclusion and Implications

The analysis highlights that university professors perceive the adoption of Smart Technology, Artificial Intelligence, Robotics, and Automation (STARA) as a double-edged sword. While they acknowledge its potential to enhance academic work, they also view it as a challenge that necessitates continuous learning and adaptation to stay relevant. Responses indicate that perceptions of STARA's impact vary based on age, designation, education, experience, and job permanency. Younger faculty and part-time employees tend to feel more vulnerable to job displacement, whereas older and permanent faculty focus on long-term career sustainability. A recurring theme is the necessity for professors to acquire new technological skills. Participants recognize that their future career prospects hinge on their ability to adopt STARA, as technological competence is increasingly valued over traditional knowledge-based roles. The integration of STARA is seen as a potential disruptor in higher education. Many

participants expressed concerns that virtual classes, AI-driven platforms, and the global reach of technology could reduce the need for human professors, leading to increased competition and uncertainty in academic careers. Despite concerns, some respondents viewed STARA as an opportunity to innovate and enhance their teaching and research methods. They highlighted the potential for AI and robotics to simplify data collection, enable personalized learning, and improve efficiency in academia.

Universities need to develop policies that address the integration of STARA in teaching and research. These policies should emphasize balancing technological advancements with human-centric education, ensuring that professors retain their relevance. Continuous professional development programs are crucial. These should focus on equipping professors with the skills needed to use AI-driven tools, robotics, and other technological innovations effectively. Part-time faculty and those in the early stages of their careers are more likely to feel threatened by STARA. Universities should provide targeted support to these groups through mentorship, training, and opportunities for skill enhancement. Technological adoption should be a core component of professional evaluations and academic rewards. Encouraging professors to integrate STARA tools into their teaching and research will help bridge the gap between traditional and modern academia. To prepare for global trends, universities should promote collaborative projects and virtual learning platforms. Exposure to international standards of technology-driven education will help professors adapt more effectively. Institutions must clarify the complementary roles of humans and technology in education. By emphasizing areas where human expertise is irreplaceable such as mentoring, ethical guidance, and critical thinking professors can maintain their unique contributions despite technological advancements. Finally, fostering a mindset of adaptability and lifelong learning among university professors will help them view STARA not just as a challenge but as an opportunity for growth and innovation in their academic careers.

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