

CHAPTER I

INTRODUCTION

1.1. Research Overview

As artificial intelligence (AI) continues to advance, it is increasingly becoming integrated into every aspect of human life including education (Menon and Shilpa, 2023; Zawacki-Richter et al., 2019). AI applications are increasingly essential for colleges and universities, encompassing personalized learning, automated assessment, intelligent educational systems, and assistance for teaching staff (Gill et al., 2024). A significant advancement in AI research has been the development of extensive language models based on Generative Pre-trained Transformers, such as ChatGPT (Chat Generative Pre-Trained Transformer) (Choudhury and Shamszare, 2023). Chat GPT (Generative Pre-trained Transformer) is an advanced language model that simulates human-like conversation using deep learning techniques (Greitemeyer and Kastenmüller, 2023). ChatGPT surpassed 100 million active users in January 2023, less than two months after its released-on 30 November 2022, becoming the user application with the most rapid growth rate in history (Hu, 2023).



Figure 1 ChatGPT Logo

Source: www.chat.openai.com

In the field of education, teachers can use ChatGPT in their classes to personalize the learning process for their students (Javaid et al., 2023). Conversely, the use of text completion, translation, and text summarizing tools can improve students' writing skills (Javaid et al., 2023). Additionally, ChatGPT's capabilities can be utilized to detect content bias and correct issues with educational materials (Javaid et al., 2023). ChatGPT also has emerged as an innovative platform that assists scientists and researchers in the process of idea generation and surmounting writer's block (Cotton et al., 2024). Another advantage of using ChatGPT in the academic field is that it provides a platform for asynchronous communication (Cotton et al., 2024). As it enables students to post questions and discuss subjects without physically being

present, this functionality has been observed to enhance student engagement and collaboration (Li and Xing, 2021). Additionally, ChatGPT can analyze students' work and offer constructive feedback to enhance their writing skills by identifying grammatical and structural issues (Javaid et al., 2023).

Moreover, several challenges have been identified in the implementation of ChatGPT in education sector. Although ChatGPT has the capability to generate scientific research, it frequently presents an individual truth without giving sufficient proof to support it (Cooper, 2023). Utilizing ChatGPT also can readily provoke academic integrity issues, including plagiarism, contract cheating, and collusion, among others (Rasul et al., 2023). Moreover, the fundamental principles of constructivist theory, such as interpersonal exchanges, learning within a specific context, engaging in active learning, gaining real-life experience, and developing critical thinking and problem-solving abilities, would be significantly undermined by the problem of academic integrity (Rasul et al., 2023). Additionally, investigations have revealed that ChatGPT may bypass conventional plagiarism detection tools like Turnitin by generating content that appears to be original (Gill et al., 2024). This poses a significant threat to the credibility and validity of academic institutions and the fair evaluation of student learning (Kung et al., 2023). Therefore, it is essential to thoroughly analyze the influence of ChatGPT-supported education in order to maximize its advantages while minimizing any disadvantages (Gill et al., 2024).

Academic integrity has long been a concern in the academic sector, and with the widespread use of AI chatbots, it has become even more important (Bin-Nashwan et al., 2023; Dwivedi et al., 2023). Therefore, this study aims to empirically examine the factors influencing ChatGPT usage among researchers globally and incorporate academic integrity into the research model (Bin-Nashwan et al., 2023). This study builds upon the previous research conducted by Bin-Nashwan et al. (2023) But unlike previous studies, this one only focuses on the Kazakhstan region, so the respondents' diverse backgrounds are different. The primary objective of this study is to address the following inquiries (Bin-Nashwan et al., 2023):

1.2. Research Background

Modern education is undergoing profound and often revolutionary changes, largely driven by the integration of digital technologies, particularly smart technologies. These technologies either apply or simulate the functions of what is known as artificial intelligence

within educational contexts. These transformations extend beyond mere alterations in the forms and content of education; they prompt individuals to reconsider their roles as humans, partners, students, and professionals (A. Sergeenko "Basic principles of operation and possibilities of using ChatGPT, Jan. 2023).

Termed "digitalization," these changes bring about shifts and distortions in the way individuals relate to themselves and the world, resulting in significant modifications across various aspects of life. These encompass educational and occupational spheres, family and social relationships, daily routines, hobbies, sports, and recreational activities, among others. These changes attract attention not only from pedagogy and educational psychology but also from social psychology and sociology (A. Sergeenko "Basic principles of operation and possibilities of using ChatGPT, Jan. 2023).

Smart education and other forms of digital education generate outcomes that go beyond the realm of learning materials; they impact an individual's self-perception and identity on personal, interpersonal, and social levels. The modes of interaction among individuals, their collaborative and independent activities, and communication patterns are all transforming through the pervasive use of digital and smart technologies. This necessitates a socio-psychological analysis of digital education, including smart education, and other educational scenarios involving artificial intelligence. Research is essential to understand the profound changes that the widespread adoption of smart technologies and other digital tools brings to education and human life (A. Sergeenko "Basic principles of operation and possibilities of using ChatGPT, Jan. 2023).

1.3. Problem Statement

The primary challenge in smart education, which involves the use of digital technologies, devices, and programs simulating artificial intelligence for dialogue and organizational purposes, lies in addressing the didactic, methodological, and psychological aspects related to the validity of their claims. Unfortunately, this crucial issue is frequently overlooked in most studies on digital education, even in the latest research.

The terms "digital education" and "smart devices" are common but incorrect metaphors that contribute to misunderstandings about the nature of digital technologies. It is essential to recognize that these devices and technologies do not conduct training or education on their

own; it is people who develop and utilize them. Even researchers exploring "digital dialogue" as an alternative to traditional education can fall into the trap of these misleading metaphors.

The current utilization of digital technologies, particularly when replacing a real human interlocutor, can lead to distortions in the understanding of oneself and the world, especially in children, adolescents, young adults, and even older individuals. The misuse of digital technologies has raised numerous societal problems, with smart technologies often reducing human activity and independence, diverting individuals from real-life experiences into a realm of illusions and games that may disregard moral guidelines.

It is crucial for individuals, as creative, active, and social beings, to comprehend the nature of their interactions with these technologies. Understanding the construction and implementation of specific devices, technologies, and programs into social everyday life is vital for empowering individuals to bring about positive change.

Many foreign scientists express concerns about the potential creation of a "digital concentration camp" and the establishment of "global digital constitutionalism" through technologies that infringe upon human rights and moral principles. Addressing these challenges requires a comprehensive understanding of the impact of digital technologies on human behavior and society (Mitri, Floreano, Keller, 2009; Gurumurthy, Chami, 2021; Nugent, Suhail, 2021).

1.4. Research Questions.

- a) What is the rate of time-saving features, e-WOM, peer influence, self-esteem, academic self-efficacy and perceived stress of using ChatGPT?
- b) What is the rate of using ChatGPT in academia?
- c) Does e-WOM significantly and positively influence usage of ChatGPT in academia?
- d) Does Peer Influence significantly and positively influence the usage of ChatGPT in academia?
- e) Does Time-Saving Features significantly and positively influence the usage of ChatGPT in academia?
- f) Does Self-Esteem significantly and positively influence the usage of ChatGPT in academia?
- g) Does Academic Self-Efficacy significantly and positively influence the usage of ChatGPT in academia?

- h) Does Perceived Stress significantly and positively influence the usage of ChatGPT in academia?

1.5. Research Objectives:

- a) To know the rate of time-saving features, e-WOM, peer influence, self-esteem, academic self-efficacy and perceived stress of using ChatGPT.
- b) To know the rate of using ChatGPT in academia.
- c) To know time-saving features, e-WOM, peer influence, self-esteem, academic self-efficacy and perceived stress influence the use of ChatGPT in academia.
- d) To know if academic integrity influences the effect of time-saving features, e-WOM, peer influence, self-esteem, academic self-efficacy and perceived stress towards the use of ChatGPT in academia.

1.6. Scope of the Study

1.6.1. Research Location and Objects:

Location: The research will be carried out in Republic of Kazakhstan, focusing on the impact and experiences of ChatGPT users within the country.

Objects of Study: The primary subjects are individuals who have utilized the ChatGPT platform over the past two years. The study will include users aged between 15 and 30+ years old.

1.6.2. Research Period:

Period: The research will span from October 2023 to February 2024, encompassing a five-month duration.

1.6.3. Systematically Writing:

The research will follow a systematic approach to gathering, analyzing, and interpreting data. Methodologies will be structured to ensure a comprehensive exploration of the experiences and perspectives of ChatGPT users in the specified age range within the context of the Republic of Kazakhstan. Systematic writing will be employed in presenting findings and maintaining clarity and coherence throughout the research process.

CHAPTER I: Introduction

An overview of the research's contents is provided in this section in a clear, succinct, and generic manner. This chapter covers the research object, research background, problem formulation, research objectives, research advantages, research scope, and the methodical drafting of the finished project.

CHAPTER II: Theoretical Review and Research Scope

The literature theory on how marketing fits research variables and subjects such as digital marketing, peer influence, e-WOM, customer acceptance of time-saving features, academic self-efficacy and perceived stress in academia is covered in this chapter. The research framework will next be covered in this chapter, followed by a summary of any relevant and existing hypotheses.

CHAPTER III: Research Method

This part affirms the strategy, the process, and the technique that will be employed to first gather and then analyze data to generate a conclusion that should address the issues raised by this investigation. Research kinds, operationalization of variables, population, and samples (for quantitative research)/social circumstances (for qualitative research), data collecting, validity and reliability testing, and data processing methodologies are all covered in this chapter. The results of the study are described in this chapter, along with a discussion of the issues it raised.

CHAPTER IV: Research Results and Discussions

The study findings and conversations will be methodically reprocessed by the previously developed problems and objectives, and the researcher will then present them under several subheadings. The research findings are presented in the first section of this chapter, followed by a discussion or analysis of the findings in the second.

CHAPTER V: Conclusion and Suggestion

This chapter contains conclusions that are expected to answer some of the problem formulations or research questions, which are then used as suggestions for further research.