

# Chapter 6

## The Perils and Potential Benefits of Machine Translation in Transnational Higher Education

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### ABSTRACT

*Machine translation has recently improved dramatically in accuracy, convenience, and accessibility, and while it has been widely adopted, it remains far from perfect. This chapter considers the perils and potential benefits of machine translation in English-medium of instruction transnational higher education. The perils of machine translation in this context are that it can stunt language learning and cause miscomprehension; it problematizes authorship; it facilitates novel forms of plagiarism; and it can hurt transnational higher education institutions' reputations and devalue their degrees. The potential benefits of machine translation are that it can aid reading comprehension, raise writing level, and help student retention; it provides an opportunity for critically engaging with digital technology and its appropriate use; and it facilitates instruction and research beyond instructor and student language competencies, which can broaden and transnationalize the often Americentric and Eurocentric content of transnational higher education.*

### 1. INTRODUCTION

Machine translation (MT) has recently improved dramatically in accuracy, convenience, and accessibility. What was once an inaccurate and limited technology is now a standard feature in computer and smartphone operating systems and software applications. Nevertheless, there has been little discussion of this technology in higher education outside the disciplines of translation and language learning. This chapter considers the use of MT in the context of transnational higher education (TNHE), as TNHE brings together instructors and students from different linguistic backgrounds and requires students to study in the language of the provider institution. Foreign and second language instruction contexts like

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TNHE naturally invite the use of MT, and MT has the potential to radically transform TNHE “since students may be, in the future, able to use technology to circumvent traditional language learning processes” (Mundt & Groves, 2016, p. 387).

While research on MT usage in TNHE is still in its infancy, studies in language classes portend that use in other educational contexts is likely widespread. These studies show that students are using MT to understand course materials, lectures, and university communications and to draft written assessments. Yet despite these findings, language instructors have been slow to account for and adapt to this technology (Lacore-Martin, 2019). With this likely usage and hesitance in mind, this chapter brings together research from various disciplines to ponder MT’s benefits and drawbacks for English-medium instruction (EMI) at TNHE institutions. While TNHE encompasses a broad range of modes, this chapter focuses primarily on transnational in-country providers of EMI, though the claims and perspectives put forward will also apply to distance learning, international education, and medium of instruction education in languages other than English.

The following section details the history, benefits, and issues with MT and TNHE and the relationship between language learning and educational context. The chapter then discusses the perils of MT, namely that, if used as a replacement for reading and writing in the language of instruction, MT can stunt language learning and cause miscomprehension, problematize notions of authorship, facilitate novel forms of plagiarism, and hurt TNHE institutions’ reputations and devalue their degrees. The discussion of the perils is followed by a consideration of the potential benefits of MT, namely that it can aid reading comprehension, raise writing levels in the language of instruction, and contribute to student retention; it provides an opportunity for critically engaging with digital technology and its appropriate use; and it facilitates instruction and research beyond the instructors and students’ language competencies, which can broaden and transnationalize TNHE content provision. The chapter then ends with a discussion of future research possibilities and the recommendation that TNHE institutions maximize the potential benefits of MT by rapidly developing MT policy and training students and instructors in its responsible and appropriate use.

## **2. BACKGROUND**

### **2.1 Machine Translation**

“Machine translation” is the “name for computerised systems responsible for the production of translations from one natural language into another” (Hutchins & Somers, 1992, p. 3). Practical research into computer translation began in earnest in the 1950s (Hutchins & Somers, 1992), but it was only in 2016 that MT systems became able to consider the meaning of entire sentences rather than separate words and phrases. Due to the development of MT neural networks incorporating machine learning, these new MT systems decreased translation errors by over 60% from their predecessors (Wu et al., 2016). Trained on ever-growing data sets, improved by volunteer suggestions, and optimized constantly, these systems continue to improve (Caswell & Liang, 2020; Poibeau, 2017). MT is now available through standalone websites, designated applications, and as a feature of software applications, operating systems, social networking sites, digital personal assistants, and cloud and web servers. MT can now translate text in images and audio and video files and simultaneously translate live, multilingual conversations (Poibeau, 2017). With the adoption and proliferation of smartphones, MT is mobile and can be used anywhere. By

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