

# **The Roles of Machine Translation in Learning Among K-12 Students at the International Schools in the Great Bay Area, China**

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## **Abstract**

Intercultural foreign language learning among K-12 students at international schools involves the cross-cultural discovery of the changing habits of people whose mother tongue might be different instructive languages at schools. Bilingual education is essential in bridging the gap between the mother tongue and instructive languages. However, it needs effective strategies that combine in-classroom language learning with new technology. Several language learning and teaching trends concerning the digital environment and innovative technologies such as machine translation or digitalization are currently challenging K-12 schools and families. This research investigates the role of machine translation in learning among K-12 students at international schools in the cities of Shenzhen, Guangzhou, and Zhuhai. It aims to identify these gaps in existing research and propose innovative strategies for boosting learning outcomes to recognize the learning habits they developed as young learners in the 21st century and their cultural motivations. Bilingual surveys are being handed out to K-12 families. These surveys are written in both English and Chinese. In total, 221 of them were collected. The data was analyzed to examine how helpful machine translation is for academic learning in both languages. The strengths and weaknesses were summarized among K-12 students using machine translation, highlighting strategies used with it at international K-12 schools.

**Keywords:** Conceptual, English curricula, Intercultural, Technology, 21st century