INTRODUCTION

Education is essential in building the character of each individual. In general, education is a deliberate and structured endeavour aimed at facilitating students' learning processes to cultivate their potential. The Indonesian National Education System has a supra system, namely national development, which aims to realize a just and prosperous Pancasila society, which is materially and spiritually equitable, modern and has stable institutions and advanced technology, which is based on kinship in which harmony and balance take place. Education positions this generation as a paradigm for the instruction of preceding generations (Rahman, et al., 2022). It can be concluded that education is a consciously planned process that is carried out to improve a person's ability to achieve various things.

Aligned with the definition of education, technological advances become a benchmark that affects the transformation of technology-based education. The dynamics of educational reform have evolved swiftly alongside advancing technology. This may occur due to the presence of learning systems and methodologies facilitated by digital technology. This development is characterized by the educational component's influence in the era of globalization (Silfia, 2018). The swift and extensive advancement of technology demands the education industry adjust to the digitalization of the evolving educational framework.

To improve the quality of Indonesian education, the Ministry of Education and Culture of the Republic of Indonesia, launched a bilingual program to be integrated with the era of society 5.0. Bilingual learning is a trend found in schools with bilingual programs, which use two languages in the learning process. Understanding can be achieved through bilingual learning activities that involve planning, organizing, directing, implementing, monitoring, and evaluating (Sugianto, 2014). Baker (2001) defines bilingualism as the use of two languages by one individual. Bilingualism has become a concern of governments in many countries for years. Extensive discourse has occurred around bilingualism and initiatives aim to foster bilingualism in individuals. Bilingual education is a widely established program in numerous nations globally that addresses bilingualism. Bilingual education involves the use of two languages within an educational setting. Bilingual education differs from traditional forms of language instruction by integrating content subject matter with language acquisition, utilizing two languages as pedagogical tools (Garcia & Lin, 2016; Wright et al., 2015). Implementing bilingual-based schools manifested in a class or educational environment is one of the programs implemented to improve students' linguistic intelligence so that students have bilingual skills, namely foreign languages and Indonesian.

Further, Barac & Bialystok (2012) argued that acquiring and utilizing different languages fosters a more flexible cognitive system (linguistic), improving performance on tasks requiring rapid cognitive switching and manipulation. Moreover, it is expected to answer the challenges of the era of Society 5.0., where we are in an era of technology that relies on humans.

Some previous studies investigated the implementation of bilingual learning. Science students and teachers in senior high school in Palembang had a positive perspective and admitted the program's benefits (Fauziah et al., 2021). Further, Safei et al., (2023) proved that bilingual education is a good program. They found many benefits for teachers and students during the learning process. Bilingual learning also allows teachers and students to acquire new experiences. Moreover, the incorporation of English as the media of teaching in the bilingual program enhanced students' English skills.