

figure, ABCD are the Nepali word inputs at each time step and XYZ are the English word outputs at each time step. <eos> is the end of sentence tag. On the decoder side, if the output of one-time step is used as the input to the next time step, the process is called teacher forcing. So, an optimization with both using and non-using of teacher forcing will result in the state-of-the-art project.

1.1 Motivation and Significance

Machine Translation has a history way back from world war to deep learning currently. It all started with an attempt to convert Russian Language to English Language. Then, each Russian word was defined as an English word and the Russian statements were converted to English with word by word transformation. However, the invention was considered useless because the device that was used for translation did not convey any meaning on the output. In 1966, there was another attempt by the US ALPAC committee but it was also useless. So, focusing on the development of a dictionary was more taken into account. It was a different condition then. But, currently, Machine Translation has developed on an extensive level. Especially, with the use of Natural Processing techniques and Deep Learning, machine translation has become easy and also more convincing. However, it feels really bad to see that the machine translation in our own native language has not developed it. There are still very few contributions. There are still no translation datasets in TensorFlow datasets. And, Google Translate also does not provide completely accurate results. So, this really motivated us to take this project.

The significance of Machine Translations is extensive. English to Nepali machine translation can be used for simplification of conversation between people speaking different languages. The search engines are poor and do not provide accurate results. So, they can also be used for search engine optimizations. They are cheaper and better to use instead of having a personal translator to translate languages for us. They are used for marketing to communicate with customers of different natives for buying and selling of the products too. Moreover, with the advancement of machine translation, every human will have a common language to speak and communicate in a better way.