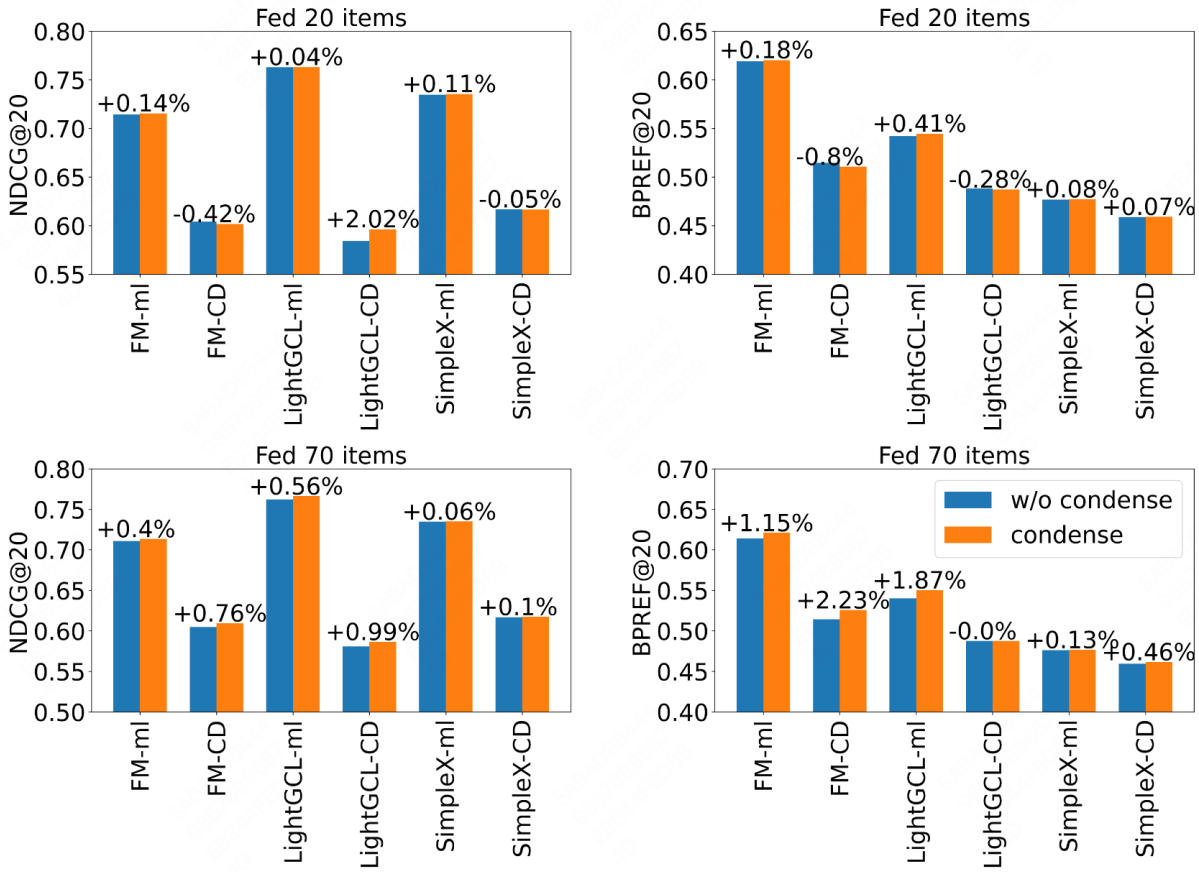

Figure 5: Performances of three backbone models on user group 5 with and without condensing module on both two datasets on two checkpoints. Percentage values above the bars indicates the improvement rate of including the condensing module in UPLLM, "ml" represents MovieLens-25m dataset, and "CD" represents Amazon-CDs and Vinyl dataset.

4.5 Impact of the Condensing Module

In the user profile learning process, it is worth investigating what the role the condensing module plays in UPLLM. Addressing this question, we conduct experiments on users in group 5, since they have the most abundant rating histories, and thus can unleash the maximum potential of the condensing module. We remove the condensing module, and conduct the same experiments in the same settings to obtain recommendation results. Figure 5 depicts results of three backbone models on two datasets on two checkpoints, when 20 items and 70 items are fed into LLM, respectively. Conclusions on other models and datasets are similar. It can be discovered that the performance of UPLLM with the condensing module is better than the performance without the condensing module during the profile learning process, especially in the 70 item checkpoint, where several condensing processes have been done in UPLLM. This means that the condensing module can effectively distill the user profile into a more refined one with higher quality.