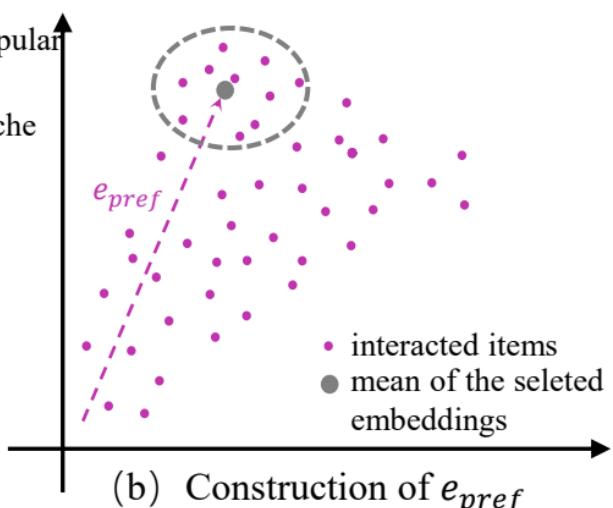
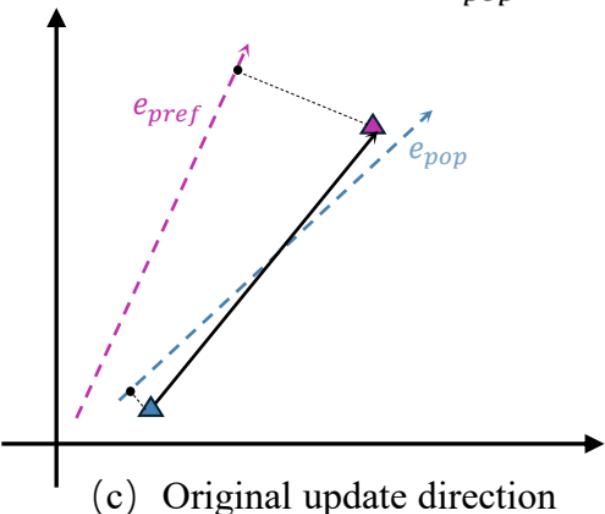


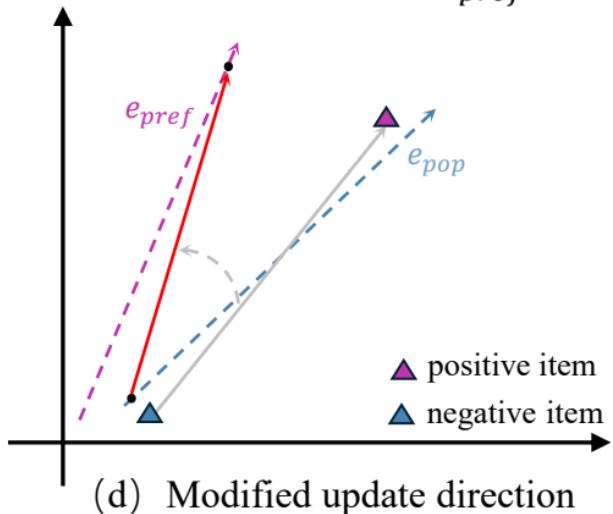
(a) Construction of  $e_{pop}$



(b) Construction of  $e_{pref}$



(c) Original update direction



(d) Modified update direction

▲ positive item  
△ negative item