**Khribi, M. K., Jemni, M., & Nasraoui, O. (2007). Toward a hybrid recommender system for e-learning personalization based on web usage mining techniques and information retrieval. Paper presented at the *World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2007,* Quebec City, Canada.**

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E-learning has become a very wide-spread phenomenon. While there are many benefits to online learning, it is very difficult to teach a varied group of online learners who all have different levels of knowledge, interest and needs. Additionally, educational resources are generally designed with the “one size fits all” model. They are not customized to each individual student. The various online learners are continuously in need of support and guidance to use these generic resources.

While other fields have begun to take advantage of automatic personalization and

recommendation, e-learning has not yet done so. The goal of web personalization is to

give a user information that is tailored to his or her specific preferences and interests.

This is done by collecting user data implicitly through web access logs or explicitly through user ratings. Today’s web personalization systems strive to accomplish this goal automatically without having to explicitly ask users to provide the necessary information. An automatic web personalization system could be used to guide individual learner’s activities and recommends links or actions that are specific to that learner’s needs.

Various different methods are available to gather the user information necessary to provide personalized service. This is done by collecting user data implicitly through web access logs or explicitly through user ratings. Various approaches can then be

applied in determining what data to return to the users. Content based filtering recommends items that are similar to those viewed by the user in the past. Only one user profile is used in each case. Collaborative based filtering recommends items that have been like by other users with similar interests. The entire community of users comes into play here. For example, if 70% of users who accessed web page A also accessed web page B, the system will recommend web site B. Hybrid systems combine both approaches and use them all together.