The study investigated the implementation of "Senayan" – an open source library automation system – in the madrassa library. It is important to know the effectiveness of the system as one of materials in "The Human Resource Development Program for Madrassa Library. The program was held by Ministry of Religious Affair Republic of Indonesia (MORA) collaborates with UIN Jakarta, UIN Yogyakarta, and UIN Makasar. It was involved 750 staffs from three provinces in Indonesia. The approach used in this research was TAM model that was based on the constructs of knowledge & skill (KS), perceived ease of use (PEOU), perceived usefulness (PU), attitude toward behavior (ATU), behavioral intention (BI), and actual use (AU). Questionnaires of 89 samples collected with the cluster approach were analysed using SPSS version 22. The result showed that the mean score for all of the constructs was 3 (high) out of maximum score obtainable of 4 (very high), except to the actual use (AU) was still low (2.3). T-Test analysis indicated that there was positive and significant effect for each construct, except the perceived usefulness (PU) to the attitude toward behavior (ATU) with effect value of 11.9%. Meanwhile, the most occurred in the perceived ease of use (PEOU) to the attitude toward behavior (ATU) with effect value of 64.3%. Thus, the easiness becomes more important than usefulness in providing training for madrassa library staff. In addition, the provision of a computer after the training is also taken into consideration, so that the staffs can implement their knowledge and skills in the library as soon as possible.