Kenya targets to become an industrialized country by 2030 and to become a globally competitive country. The government appreciates the critical role played by Science and Mathematics in the realization of vision 2030. This is manifested by the human and financial resources that are allocated for teaching and learning of Science subjects (Biology, Chemistry and Physics) and Mathematics at primary, and post primary institutions of learning. At secondary school level, the government has continued to provide qualified Mathematics and Science teachers through the Teachers Service Commission, construction of laboratories and provision of in-service training for Science and Mathematics teachers under Strengthening of Mathematics and Science in Secondary Education (SMASSE) project. Moreover, quite a considerable amount of the Ministry of Education's budget allocation goes towards this project in efforts to ensure effectiveness in the teaching and learning of these subjects. However, the performance of Mathematics and Science subjects which are greatly relied upon for industrialization to be realized has still been remarkably poor hence the SMASSE project, which was initiated by the Japanese International Cooperation Agency (JICA) and the Government of Kenya in 1998 when the consistently poor performance in Mathematics and Science subjects became a matter of serious concern (Waititu and Orado, 2009), and there was urgent need for improvement in these subjects. This paper therefore reviews the growth of SMASSE in terms of its contributions to upgrading the performance in Mathematics and Sciences, how it interacts with other initiatives meant to improve teaching and learning in these subjects and some of the measures that have been put in place for the proper implementation, running and sustainability of the project. The paper further seeks to determine the future prospects of SMASSE in focus to attainment of vision 2030.