

Designing Packages of Practice to Increase Home Garden Crop Production in Sri Lanka

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Significant interruptions in the food supply system caused by the novel COVID-19 pandemic have worsened the severe problems of malnutrition and nutritional deficiency. As a lesson learnt from such crises, home gardening is a cost-effective option to handle food and nutritional insecurity and supply sufficient food for the growing population. Nevertheless, all gardeners are not farmers, and the lack of an easy mechanism to find gardening instructions causes beginners to do away from gardening. Therefore, a study was conducted to provide useful information *via* a mobile app named “*Govi-Nena*” (for Android and iOS platforms). The design science research (DSR) approach was used to develop packages of practice (PoP) workbooks for home garden crops. The DSR methodology consists of 3 basic cycles; Relevance, Rigor and Design. The study was started with the rigor cycle and gathered information from reliable and publicly available sources to create initial artefacts. Additional requirements were collected from domain experts in the application domain of the relevance cycle. The PoP workbooks have been verified and validated by experts during a number of field visits and enhanced the artefact in the design cycle. In order to test the PoP knowledge satisfaction on a 5-point Likert scale method, a pre-tested Google form-based questionnaire was distributed among 32 *Govi-Nena* mobile app users and analyzed using Wilcoxon one sample signed-rank test. All users were delighted ($p < 0.05$) with the information provided in the app, especially agro-climatic zone-based crop variety selection, choosing fertilizer types, amount, quality, accuracy and user-friendliness of information, and other pre-planting, growing and harvesting practices. Obviously, this potentially useful tool provides context-specific, complete, and actionable information through the convenient app that assists home gardeners in making informed decisions on crop production, eventually support to meet the growing demand for food security in the country.

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