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## The Design-actuality Gaps in Icts Implementation in Agriculture Extension Organisations: Case of South Wollo Zone, Ethiopia

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### Abstract

Given the high amount of investment allocated to Information Communication Technologies (ICTs) in the agriculture sector, it is important to draw lessons on the implementation of such programs. While benefits of ICTs in agriculture are not disputable, there are several concerns about the realisation of their full potential and the best-fit strategies of adoption in developing countries like Ethiopia. By taking the case of four agricultural extension organisations in South Wollo Ethiopia, this study assessed the implementation of ICT-based initiatives called Agricultural Knowledge Centers (AKCs). Data were collected on the elements of the ICT initiatives design by an internationally funded project and its implementation in the local conditions of agricultural extension organisations through interviews with project implementers, decision makers and employees of the extension organisations. Drawing on the concepts of contingency theory and the design-actuality gap model, the data were analysed and gaps were identified in the design of the ICT initiative and its implementation in the local conditions. The findings showed that the AKC initiatives were a partial failure due to the differing context of the designer to the local conditions in the extension organisations of South Wollo zone. A mismatch between the designer and the extension organisations on the dimensions of information, staffing, skills, values and objectives, management systems and structures were identified as design-actuality gaps. The model was also useful in explaining the existing constraints in the implementation of ICT initiatives in local conditions of South Wollo zone, which included local capacities, infrastructure, and decision support system. The practical implication of the findings is the importance of country context and reduced design-actuality gap for implementing successful ICT initiatives in public agricultural extension organisations in developing countries.

**Keywords:** Design-actuality gap, Ethiopia , ICT implementation, iCTs for agriculture, Public agriculture extension organisation