

**SUBTHEME 7: Innovative Pedagogies in
STEM/STEAM Education amidst Global Crises**

**62. Determinants of students learning competencies in
agriculture through hands-on experiences**

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Abstract

The overall goal of this study was to assess the implementation of curricula for agricultural courses aimed at equipping students with the requisite emerging competencies that should make them self-reliant after training. Most technical and vocational colleges lack infrastructure such as agricultural laboratories, agricultural tools, equipment and farms for teaching the courses. In Kenya, there is currently no data indicating whether or not students study agricultural courses due to personal interest and conviction or because it was the only option available. The study sought to establish: ways in which teaching methodologies used by teachers' impact the practical competencies gained by learners through hands on experiences, and find out the perceptions of learners towards pursuing further studies and activities in agricultural disciplines. The study observed 89% of those who had two practical lessons in a term indicated that they can practice agriculture on their own. It is concluded that, most teachers engage resource persons in their teaching. Majority of the teachers do not also embark on field trips with their students to places where students can have a real experience of certain concepts or materials that cannot be made available in their school environment for studies. More studies should be carried to explore ways of infusing value based learning employing modern online techniques that enhance learners' competencies in their careers. However, the determinants of students learning competencies in agriculture through hands-on experiences during the changing pedagogies global.

Keywords: *teaching, learning, methodology, practical, competency hands-on-experiences*