

Agricultural Engineering: Developments in Practice and Changes in Education Methods

Henk ROZEBOOM

Stoas Professional University of Education, Agripark 2, 8251 KH Dronten, The Netherlands
(e-mail-Hro@stoashogeschool.nl)

Abstract

The development of mechanics in agricultural equipment is growing rapidly. Machines get more complexity. So the maintenance is destined to special companies with highly skilled labourers. But also the use of complicated machines asks more know how of the workers.

Conclusion is that there is a movement in the knowledge of machines but also in the way of instruction or education.

What role has the education system in these developments? What are the changes of the knowledge of the user and in what way does he get this knowledge? Does the way of activating knowledge in companies differ from the universities or vocational schools?

Several questions are rising when you scope these developments.

In this paper we will give a sketch of the prepositions of the changes in didactics in training technical workers. But also it is interesting to see what things have changed about the content of the knowledge for workers in the chain of agricultural engineering, from factory to field. May be we can learn of changes that already passed and we can anticipate in changes for future.

We use soil tillage for creating optimal production circumstances. The plough is the most common implement. Centuries ago it was a simple hand shovel; nowadays one can use a highly developed "intelligent" plough. You can imagine that the user of a plough now has to know a lot of operating the plough, but also about the soil and how to create good structure for the culture of plants. Not only the skills of the user have changed, also the skills of the technician who has to maintain or to repair the modern plough.

Simply spoken we can divide the agricultural education in three episodes. The first episode is that the skills were learned one by one, the master-student relation, the student is working at a company and is learning by doing and gets the instructions of the master.

The second episode is the school education. Classes are formed and a teacher is educating a certain subject for all students. The questions are: is the subject relevant for every student in the class and is the teacher able to decide what subject is taught.

The third episode is the competence based learning. The student determines the subject of learning in relation with a work situation and the approach of learning is cooperation between students, teacher in a rich various learning situation. In a short description we give an overview of educating system of Stoas, but also we give some statements of modern learning in a modern time.

Key words: competence based learning, agricultural engineering, education and didactics

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