

Analytical Review of Pragmatism Theory Impact on Agricultural Vocational and Technical Training

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Abstract

In pragmatism training approach, ideas are considered as tools to solve problems and they are correct and real until their effects are desirable and useful, otherwise they are incorrect. Looking ahead, permanent changes, plurality of world, purposeful universe, the human relationship with nature and the human place in world improvement are features of pragmatists . Due to pragmatism approach some education experts and scholars concluded to design a system to consider the specialized sciences and also provide the required techniques to the interested individuals to do works . Due to the features of pragmatism, training Needs Assessment process, the subject- oriented against the job-oriented educational content , prevent the over training or low training , program planning process are among the differences of academic classic education and applied-scientific education . Applied Science curriculum design approach is based on profession and jobs but there is an issue centered approach in university system . Taking advantage of the knowledge and presenting it as applied includes another feature of scientific applied system . Other feature is different in target population or audiences . Unlike the classic system of higher education that responds solely to the social demand , the applied science system meets the need of market and manufacturing sector. Using feedback in review and revise of curriculum has done so that the executors, planners and authorities of scientific- allied system can resolve the failures of curriculum. Entrepreneurship is considered as another feature of applied science education. A special level is provided for each grade of applied education. Associate degree is described as a certain job level between diploma and bachelor grades. The scientific- applied expert is a person who learned the agriculture professional knowledge and skills based on job needs to perform agricultural- industrial , managerial and agricultural services planes . In recent years the tendency of Applied Science system has started the Master's level training with project-based approach (as applicable).

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Practitioners and agricultural beneficiaries are required to up to date their job skills during short term modular courses. These courses are provided in the practical form in farms, workshops, laboratories , the production pilots and agricultural services so that provide the necessary capabilities for agricultural practitioners and beneficiaries in the shortest time .

Key words: pragmatism; pragmatic; empiricist; profession & vocational and technical training; skill agricultural training; curriculum.

1. Introduction

Pragmatism word derived from the Greek word "pragma" means action. This term was used the first time by the American logician, Charles sanders pierce. He intended to use the word meaning a way to solve and evaluate intellectual matters. Pragmatism is a philosophy that emerged in the United States left the intellectual life of country a significant role. The philosophy emerged by thinkers such as William James, John Dewey and John Brodie in late nineteenth century. In some countries this approach expanded depending on the circumstances. For example Rubin zone, a German thinker of this kind of planning, applied a wide measures for the Change of Education System in Germany for skill-centered system using the theory of pragmatism.

According to these thinkers, Pragmatism was a revolution against educational idealism and pure intellectual exploration in which had no use for training people, while the philosophy of pragmatism as a practical method could solve the rational issues and was useful for human education and development[1]. This philosophy faced more fortunate in England and were known as the philosophical basis of education in England.

2. Educational characteristics of pragmatism in profession & vocational and technical training

Educational pragmatism approach use ideas as a means to solve problems, as long as their impact is efficient and desired , they are correct and true , otherwise are false and error. Accordingly, it may be effective way in one time, but the results may not be satisfactory then, so it become an error or a non-practical approach. Features of pragmatic view can be summed up below:

1) Look into the Future

All worlds are future. Since pragmatists are care of human communities and suppose community as transformation, so they pay more attention to future and suppose world as it will become . human society like other phenomena of nature and the nature is in transformation and change. This approach is seen in agriculture profession & vocational and technical training .It is so critical to train people who modify human pyramid in future and also the pioneer of agriculture production and services in rural places and also the production organization [2].

2) Permanent global change and instability

Current world is changing; there is no constant thing in the world. The world is an uncertain circumstance

because everything is changing. Shortly, the world status especially for human is complicated, messy, uncertain and insecure. The world events may be run as human like or may be caused the collapse of human. Technology plays a role in agricultural vocational and technical and skills training which cause to constant changing in agriculture knowledge and skills. No doubt this is in line with the consistency of agricultural vocational and technical training and skills to the permanent changes.

3) Incomplete, uncertain and diverse world

The world is incomplete and uncertain. The world is not a complete machine with certain status of events, but it is changing and developing. New events occur and new laws and practices to occur. Man is a natural phenomenon and his intellectual power prepares him to create a new creation and also to forward changes. In short, the world is not neither complete, nor blocked and may move toward better status. Due to this feature, the new training methods for example modular training in agricultural skills training has been considered.

4) Purposefulness of world

World goal is in its own. The value appears on the live stream. What is been not separate from what should be. Real values experienced under the influence of real circumstances. Because the world reality not exist beyond the experience and the existence will appears in the experience[3]. Dewey is one of the most famous fan of applied learning or experiential teaching, which is related to, but not synonymous experiential learning. He claimed knowledge can come from what natural things influence on us, so it is impossible to reach knowledge without these effective natural things. Dewey's ideas influenced many experimental models and their fans. Many researchers even credit project-based learning to him that puts students in the role of an active researcher. Using farms, the fields of education, laboratories and industrial and semi-industrial pilots in agricultural skills and vocational and technical education and also observing curriculums standards to 70% practical and 30% theoretical are derived exactly from this feature.

1. Human relation with nature and the world

Man is interconnected with Nature or the world. Human is evolved same as nature. Human intelligence base directs on social background (natural circumstances) and human psychic phenomena manifests in the process of social life. And because of the relationship between man and the universe, the human is not subject of what he wants. Human is not forced and captured by the events and destiny, not free in his/her activities completely. Also humans and the environment influence each other's. Intellectual aspects of man enables him to lead in scientific and social developments. Humans are not machines and not the full forecast. Using natural means to agricultural skill training and experiences of agricultural experts are derived from this feature to empower the learners skills.

2. Human important role in the reform and development of the world

The world does not guarantee progress. The world is not in favor of human desire yet is correctable and progressive and human plays an important role in this area. Humans can partially effective in controlling

events. Events may not in progressive path, so human ought to do his best effort in controlling events. In vocational and technical and skills education, two human element plays a key role. First , the learners who their educational need is the basis of developing the skill curriculum and learning methods .Second , the instructors and teachers who must use the modern teaching methods and technologies to make changes and also empower the learners so that make effective teaching, improve job processes and agricultural Entrepreneurship [4].

With this general understanding of pragmatists and their dominant view of practice rather theoretical discussions, an analysis of the agricultural applied- science educational philosophy, purposes of this tutorial, principles and framework eof educational standards are described.

Goals consistent with Pragmatic approach of skills and vocational and technical education
The ability of graduates of traditional university in the country, indicated that they faced serious knowledge and skills problems to enter the employment process. So the vocational and technical education was initiated from the beginning with skill-based approach.

The establishment of vocational and technical education system supported by comparative analysis of many skills training systems in the world. A group of training curriculum experts studied comparative analysis of countries such as Australia, Germany, the US, Canada, France, China, etc. They concluded designing pragmatic based curricula based on Competency Based Training model can provide technical training needed to perform jobs in addition to specialized training. This education act as the third pillar of higher education in country, so can correct human resources [5]. On this basis, and considering the predominant method of needs assessment based on Competency Based Training, Job & Tasks Analysis is basis of designing the skills and vocational and technical curriculum.

With a view to fundamental differences between classical higher education academic training and vocational and technical trainings, it can be said the philosophy of pragmatism ,either directly or indirectly , has the greatest impact on vocational and technical education.

In the following sections of this article we will see goals and training standards that the dominant approach of this type of training is empiricism or pragmatism of John Dewey. Emphasizing both issues of pragmatism and looking to the future growth, vocational and technical education goals especially in the field of agriculture include:

1. Appropriate background for comprehensive activities of culture and industry to promote the applied agricultural knowledge.
2. The promotion of quantitative, qualitative indices and social dignity of applied agricultural training at the community level
3. The provision of appropriate infrastructure to empower the agricultural graduates to solve practical problems of all agricultural sub-sectors.

4. The provision of appropriate infrastructure for transfer of modern technologies of cultivation, harvest as well as agricultural and complementary industries

The difference classic academic education with Vocational and technical Agriculture training

Due to pragmatism features ,regardless of the similarity of some educational grade levels , there are major differences between traditional university education system (academic) either public universities and non-governmental, and the higher education skills system , in which comes by training structures under the supervision of University of Vocational and technical, that below refers to a number of important differences:

1. The first notable difference is Educational Need Assessment aquatic country). Admission to academic programs of universities usually done based on University demands to respond to the social demands. Thus the employment purpose is not considered. But educational need assessment in agriculture skills higher education is done in regard to the principles of the audience future and the role of human resources in agricultural production and services based on needs of sector, product and prevailing production section(For example procedures related to fisheries and aquaculture cage fish farming in the country), Labor market and society. After meeting these needs, it is prevented from running again or several times a curriculum [6].
2. The second big difference, despite of the similarity of some titles, is differences in the content of the curriculum is approved by both education systems. Educational content of traditional university courses is subject-centered curriculum. But higher education curriculum educational content with regard to the principle of flexible skills and the importance of human resources in agricultural production is jobs - oriented approach.
3. Third difference is that skill Higher education curricula rely on filling the gap between the current situation and favorable situation of human knowledge and skill and tries to prevent low or high extreme training, which is the main characteristic of academic agriculture training. So the content and skills are designed in the form of at least 60% skills, applied and job application in laboratory, areas, productive pilots and educational fields and a maximum of 40% of classrooms to run basic knowledge, it is happened precisely converse in the academic system.
4. The fourth significant difference is how design the curriculum and processes. With regard to the issue-centered of the traditional university system, the university curricula are approved and implemented based solely on the structure and subject by professionals. But in skill higher education system ,the job-centered of educations is approved based on the need of program planners and agriculture sector , then Agricultural Curriculum is prepared, approved and announced using job analysis , task scheduling and core working groups composed of career experts, professionals, students, program planners and educational technologists , in other words, each specialized section is responsible for planning and responding to the needs of their vocational training field [7].

Agricultural vocational and technical training features

Except the minimal problems are result of incorrect executing of Vocational and technical courses, distinction and strength point of Vocational and technical curriculum with traditional academic curriculum (non-scientific-practical) is here . In particular mastery in the pattern of competency-based training is the key to curriculum success. Vocational and technical education consider the duties of the job analysis to precisely defined, what kind of content, to what extent and by what means should the audience be achieved in order to be successful in their job and get a new perspective of entrepreneurship. Research conducted in some organizations, higher education institutions and applied -scientific education systems, such as agriculture, industry , culture and art represent the success rate of graduates in these fields ,entrepreneurship and also creating employment. jobs analyses is a key for Need assessment of Science and Technology by each sector including agriculture, industry, culture, art and social services to create programs are strictly based on the business need to teach people , neither low nor high training.

On the other hand, unfortunately, when speak about skills this wrong association comes to mind that the output of applied scientific system should only be a person with a wrench in his hand! However, from the perspective of curriculum planners, skill is a set of objective and subjective abilities [8]. So to make job and Entrepreneurship, the activity and thought, knowledge and experience are required together, same as what is mentioned in vocational and technical education curriculum. The level of capabilities is different from one realm to another. On this basis, the objective skills of applied -scientific training in agriculture and industry higher than management, service, culture and art in regard to type and level . The same amount of attention to mental and cognitive skills that are considered in ideation, conceptualization , creativity, and designing entrepreneurship structures are interested in vocational and technical education in the field of culture , art and social services more than agriculture and industry . Higher education vocational and technical level is needed in the areas of knowledge and expertise. Techniques and skills of designing, planning, organizing, jobs directing and spheres of entrepreneurship are transferred to students. All national jobs including Agricultural, industrial, cultural and social services required the same skills.

Vocational & Technical Curriculum Developing Approach is based on job and profession. This approach is issue centered approach in the traditional university system. Unfortunately, the issue centered approach offered many scientific knowledge and information, even unnecessary issues in the form of curriculum titles to students. But skill centered Vocational & Technical system is anticipated, developed and offered scientific knowledge and information in regard to job analyses and required duties of audiences [9].

Taking advantage of proficiency aspects of knowledge and provide for application is another feature of vocational-technical system. Standards of training hours in curriculum is anticipated so that 60% of content is dedicated to Workshop activities, farm, field, and laboratory and pilot. This is included in curriculum, so Universities and vocational-technical centers will be required to set standards of practice exactly.

Another feature of vocational and technical system is a difference in purpose society or audience. in spite of traditional education system which response to social needs , the vocational and technical system is responsible for manufacturing sector and job market . The main objective of the reform of the pyramid of human resources in the field. Working scientific-practical courses target of 70% employment form. This has led to an important

condition for the acceptance of Vocational and technical applicants which has not included the adoption of a traditional university. Working definition of the relevant sections of the 70% quota intended to benefit them. For example, in the agricultural sector are working definition: Anyone who are working each agricultural sector and sub sector including governmental and non-governmental sectors. The villagers, farmers, extension agents, agricultural entrepreneurs, rural ones, graduates of the agriculture vocational courses, agriculture vocational centers, agriculture vocational and technical can meet the 70% of target population. This will provide the admission the vast majority of the agricultural sector workers and villagers to agricultural Vocational and technical courses .

Considering another important component of the skill and technology national system is the vocational and technical feature. The approach utilizes a process of feedback in reviewing, revising and modifying curricula is so that provide the possibility for executors, planners and practitioners of Applied Science system so that approved based on the continuous growth of knowledge and technology in one hand, and market need and production in other hand to fix defects of curriculum.

Another feature is the entrepreneurial approach that regarding to pragmatism theory , could be supposed the vocational technical system is considered it to target community especially 30% free quota (Those interested in the activities concerned). Vocational technical system tries to facilitate a ground to enjoy acquired skills in order to make small businesses. For example, it in some courses of Agriculture Vocational and technical such as Farming bees, breeding poultry industry, develop the production of edible mushrooms, medicinal plants, floriculture, ornamental plants, ornamental fish farming, reproduction of many aquatic education have more objectivity for such period.

A) The main framework of agricultural vocational and technical training

Technician is a person who placed in job description between diploma and bachelor levels. It represents the certain comprehension, reasoning, information, knowledge and skills. These people are responsible to perform Communication and transfer of information, organization of work (planning and control of work), recognize the work (measuring, inspection), enter the work (maintenance service, installation and commissioning), under the supervision of trained people, and supervising the practical principles. Based on the above objectives and philosophy, these trainings focused on practice than teaching only. Standard hours of theoretical and practical courses are determined such that up 30% theoretical training in classroom and 70% of practice on farms, workshops, fields, laboratories and agricultural production pilots.

B) Agriculture Vocational and technical education, discontinuous master

Vocational and technical expert is a person who is learned the necessary knowledge and technical skills in agriculture as professionally to perform activities of agricultural - industrial, agricultural and service management projects . This person is responsible for the promotion of technical knowledge in the workplace, professional analysis of the problems, practices more on the relevant field of expertise, training, supervision, using the suggestions regarding the development and transfer of technology in the field of agriculture and so on.

Standard design structure of theoretical and practical trainings in this level is performed by focusing on the presentation up to 40 theoretical training in classroom and 60% practical tasks on farms, workshops, fields, laboratories and agricultural products and services pilots[10].

C) Agriculture Training in Master of Science Degree

Agricultural Vocational and technical system due to specific functional areas of correcting the human resource pyramid through the country can follow this issue. But in recent years, thanks to achieving reform objectives of staffing pyramid, a trend toward teaching bachelor and master levels with project-based approach (applicable) began and accepting a limited number of employees. These courses aim to transfer the applied knowledge, moving in line with job problems in organizations, performing applied projects and also agricultural technology development in the fields of natural sources, water, soil, agricultural products, Fisheries and aquaculture, agriculture, animal husbandry and agro industries. Accordingly more than 80% of training structure includes practical implementation of agricultural projects.

D) Short-term modular training

Workers and agricultural exploiters required to update their knowledge of job skills or train in line with its capabilities which determine the short term effectiveness in career. This agricultural vocational -technical courses are structured from 30% classroom instruction and 70% practices in the fields, workshops, fields, labs and agricultural products and services pilots to provide the necessary job skills in the shortest time for employees and beneficiaries

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