A Study of Critical Thinking Skills of Faculty Members of Agriculture and Natural Resources of the State and Azad Universities in Isfahan

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ABSTRACT

Nowadays, a large amount of information has disturbed people in decision making. In this way, human access to critical thinking is considered as an essential solution to the exodus of these confusion. The aim of this descriptive-correlation study was Study of Critical Thinking Skills of Faculty Members of Agriculture and Natural Resources of the state and Azad Universities in Isfahan. The statistical population of the study consisted of 168 faculty members, study sample were determined by Cochran's Formula of 117 individuals. In this study, stratified random sampling with probability proportionate manner was used. Research tool included California Critical Thinking Skills Test (Form B). The validity of the research tool was confirmed by the opinion of the professors of the Agricultural Extension and Education Department of the University of Tehran. To determine the reliability of the Critical Thinking Questionnaire, Kuder Richardson's formula (0.82) was used. Data were analyzed using $SPSS_{win23}$. The results showed that the critical thinking skills of faculty members at a low level. The results of critical faculty subtest tests show that the subcritical reasoning (5.47) of 16, the inductive reasoning (4.16) of 14, the evaluation (4.26) of 14, the inference (3.82) of 11 and analysing (2.75) of 9. Cluster analysis findings showed that faculty members are classified into five clusters (assessment and growth inductive reasoning, critical thinking is relatively grown, undeveloped critical thinking, growing critical thinking, critical thinking is freezing).

Objectives

Given the unavoidable importance of critical thinking in the age of information explosion, agricultural higher education, like other sciences, should give this subject more value in order to bring critical thinking graduates into the community.

Therefore, faculty members as one of the essential elements in shaping students' critical thinking status play a more prominent role than other elements. For this reason, one of the reasons for the low level of students' critical thinking skills can be found in examining the critical thinking skills of faculty members. Therefore, the purpose of this research was to study the Critical Thinking Skills of Faculty Members of Agriculture and Natural Resources of the State, and Azad Universities in Isfahan. The research questions were: 1- How Critical thinking skills of faculty members? 2-How many faculty members are divided into groups according to the components of critical thinking?

Methods

In terms of purpose, the research is applied research, in terms of the degree of control of variables, field and in terms of data collection is descriptive research. The statistical population of

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this study included all Faculty Members of Agriculture and Natural Resources of the state and Azad Universities in Isfahan. As a result, faculty members College of Agriculture and Natural Resources of Isfahan University of Technology and College of Agriculture and Natural Resources of Khorasgan Islamic Azad University were selected as the statistical population with a total of 168 individuals. In this study, stratified random sampling with probability proportionate manner was used. Research tool included California Critical Thinking Skills Test (Form B). California Critical Thinking Skills Questionnaire Form (B) is one of the most comprehensive questionnaires compared to other tools in assessing people's critical thinking skills at post-secondary levels. The validity of the research tool was confirmed by the opinion of the professors of the Agricultural Extension and Education Department of the University of Tehran. To determine the reliability of the Critical Thinking Questionnaire, Kuder Richardson's formula (0.82) was used. Data were analyzed using SPSSwin23. Hierarchical cluster analysis and discriminate analysis were used in the inferential statistics section.

Results

According to the total score of Critical Thinking Skills Test which is 64, the research findings showed that faculty members achieved a mean score of 20.48 which is less than third of the total score. Of the 64 scores, the lowest score among faculty members was 8 and the highest score was 38. The results of critical faculty subtest tests show that the subcritical reasoning (5.47) of 16, the inductive reasoning (4.16) of 14, the evaluation (4.26) of 14, the inference (3.82) of 11 and analyzing (2.75) of 9. Cluster analysis findings showed that faculty members are classified into five clusters (assessment and growth inductive reasoning, critical thinking is relatively grown, undeveloped critical thinking, growing critical thinking, critical thinking is freezing).

Discussion

Given the naming of the clusters and the number of individuals in each cluster, it is clear that the faculty members are in undesirable condition in terms of five critical thinking skills. The members of the Cluster "Assessment and Growth Inductive Reasoning "are good at judging difficult situations and general conclusions about the details. The best cluster, which has the title of "Critical Thinking is Relatively Grown" is weaknesses in information processing and its application, comparison and judgment of results with predetermined goals in the training process. Whereas the other three components of their thinking skills are more developed. The cluster of "Underdeveloped Critical Thinking" and the cluster of "Critical Thinking is Freezing " included 74 out of 113 individuals. The cluster of "Underdeveloped Critical Thinking" includes members who are likely to use traditional approaches to higher education in teaching and other educational activities. Faculty members in the cluster of" Growing Critical Thinking have the capacity and ability to develop critical thinking skills components. Individuals in this cluster are at the forefront of partial conclusions about the general issues of educational activities compared to other cluster members, and are on the right track of growth with respect to other components of critical thinking skills. Members of the "Critical Thinking is Freezing " cluster use traditional modeling and teacher-centered styles and one-way approaches in teaching and teaching processes and have very low acceptance capacity against student-centered approaches. Finally, considering the inadequate critical thinking of faculty members, it is recommended to evaluate and supervise agricultural teacher training courses and modify educational programs to improve the critical thinking skills of agricultural and natural resources educators be done. It is also suggested that by employing leading professors in the field of critical thinking in the context of educational seminars, faculty members' knowledge and understanding of the concept and importance of critical thinking in higher education will be increased.