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Student Credibility for Assessing Thermodynamic Course in Agricultural Engineering Program

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Abstract: Student mode and the surrounded environment affect on his credibility and trust. Student's credibility and trust for assigned thermodynamic course was evaluated in two cases; firstly, when he is in higher spirit and secondly, while he is depressed. Investigations were carried out on the Second level students of the agricultural Engineering program of the Faculty of Agriculture, Suez-Canal University, Egypt. The Course assessment was handed to students to rate the Thermodynamic course at the end of the first semester of scholastic year 2010-2011. The Total numbers of the students in this evaluation were 32. The study resulted in incredibility from the students for both approaches. It is unfair to use or accept their opinions to assess course quality assurance.

Key words: Agriculture Engineering Program % Thermodynamic Course % Student credibility

INTRODUCTION

Biosystem and Agricultural Engineering are efficient solution for technical problems involving living things and the natural environment. Students will learn about broad engineering background with various courses such as mechanics, materials, thermodynamics, electronics and circuits, transport processes, unit operations, instrumentation and design. They will study life sciences and the ways biological systems interact with the environment. This diverse background makes students capable of understanding the engineering aspects of many different facets of a project and enables them to function exceptionally on multidisciplinary teams [1].

Thermodynamics course is the fundamental course of agricultural engineering program for the enrolled students. It describes the means necessary to convert heat energy from available source such as fossil fuels into mechanical work [2].

The problem is that students quickly become impractical because of the large number of equations and proofs without obvious practical application involved in traditional thermodynamics teaching. This has been focused in several studies to develop the course to simplify the method of teaching thermodynamics. Where possible principles have been illustrated by means of calculations for real rather than idealised systems undertaken using MTDATA developed at the UK National Physical Laboratory, UK.

In a previous study, Hassanain [3] evaluated a thermodynamic course specification for Agricultural Engineering students. Due to the new rules of promotion system of the faculty members of staff, this relies on the course assessment by the students who attended the subjects.

This study aims to evaluate the study credibility and behavior at the end of the semester, under different stresses, during the student evaluation for the thermodynamics course. In addition, the study is dedicated to investigate the sincerity of the student evaluations.

MATERIALS AND METHODS

(Due to) Two emotional approaches before asking students to apply the statement, the announcement of the bad results, the low mark of the previous exam, was the first path they faced. Secondly, it is the good spirit mode under which the lecturer support them to consequently obtain good marks. This evaluation was handed on December 2010 and January 2011, within the academic year 2010/2011.

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Table 2: Questionnaire

Question No.	Statement	Good	Fair	Weak
1	Course objectives and its contents are initially and clearly stated.	O	O	O
2	The material of lectures is well organized and easy to understand.	O	O	O
3	The scientific references are obtainable.	O	O	O
4	The contents of the course enable to achieve the targeted skills.	O	O	O
5	The lectures duration is timely.	O	O	O
6	Educational aids are accessible during the lecture.	O	O	O
7	students are encouraged to participate and discuss.	O	O	O
8	Students are encouraged to the self-education (Library - Internet -...)	O	O	O
9	The existence of records on the dates scheduled office hours	O	O	O
10	The lecturer clarifies errors in students at the periodic examinations	O	O	O
11	Dates of attendance and practical lessons do not overlap.	O	O	O
12	The requirements for security and safety labs are clarified.	O	O	O
13	students conduct experiments by themselves	O	O	O
14	the demonstrator or the Assistant lecturer cooperate with the students.	O	O	O
15	Are the instruments and equipment available?.	O	O	O
16	The internet service is available to use.	O	O	O
17	The references and books along with the assistance accessible.	O	O	O
18	Scientific trips and field visits are provided to support the course objectives	O	O	O

Other Suggestions student wants to add:

Each inquiry from the 18th was checked and gave 100% in this study. This mean Σ(Weak + Fair + Good) =100%

Total applicable students involved in such questionnaire of thermodynamics course were 32. The questionnaire was designed by the faculty quality assessment unit. Evaluation statement for curriculum, Semester, Scholar Year This questionnaire is part of the overall effort to improve the educational process, so please be honest in your answers and objective.

The student emphasizes the appropriate choice in the constituency and not develops any sign of a check being statistically pool scan.

RESULTS AND DISCUSSIONS

From Table 1, under two different conditions, the percentage of each inquiry of the questionnaire is shown in Figure 1, the comparison of the student under two different approaches, the scores that were obtained from the questionnaire and specified as weak, fair and good, is shown.

From Figure 1, under higher spirit mode, the percentage of output questionnaire was given as follow 10.38226, 27.9 and 61.9 for weak, fair and good, respectively. Referring to the dispirit approach; the results were 45.91594, 30 and 24.1 for weak, fair and good respectively. This highlighted incredibility of his considerations, if the differences between the higher

Table 1: Percentage of each inquiry for the different modes

	Student mode during the applying the questionaire					
	Higher spirit			Dispirit		
Question No.	Weak	Fair	Good	Weak	Fair	Good
1	0.0	15.6	84.4	4 1.4	44.8	13.8
2	0.0	21.9	78.1	57.1	39.3	3.6
3	0.0	21.9	78.1	53.6	25.0	21.4
4	0.0	37.5	62.5	46.4	53.6	0.0
5	3.2	38.7	58.1	57.1	25.0	17.9
6	0.0	19.4	80.6	19.0	50.0	32.1
7	0.0	25.8	74.2	32.1	46.5	21.4
8	3.2	9.7	87.1	34.5	24.1	41.4
9	3.7	22.2	74.1	50.0	35.7	14.3
10	16.1	38.7	45.2	57.1	25.0	17.9
11	3.2	48.4	48.4	40.7	51.9	7.4
12	20.0	13.3	66.7	41.4	10.3	48.3
13	8.3	50.0	41.7	46.4	3.6	50.0
14	6.7	40.0	53.3	25.9	29.7	44.4
15	17.6	35.3	47.1	53. 6	14.3	32.1
16	22.6	29.0	48.4	44.8	27.6	27.6
17	0.0	23.3	76.7	37.0	33.3	29.7
18	82.1	10.8	7.1	89.3	0.0	10.7

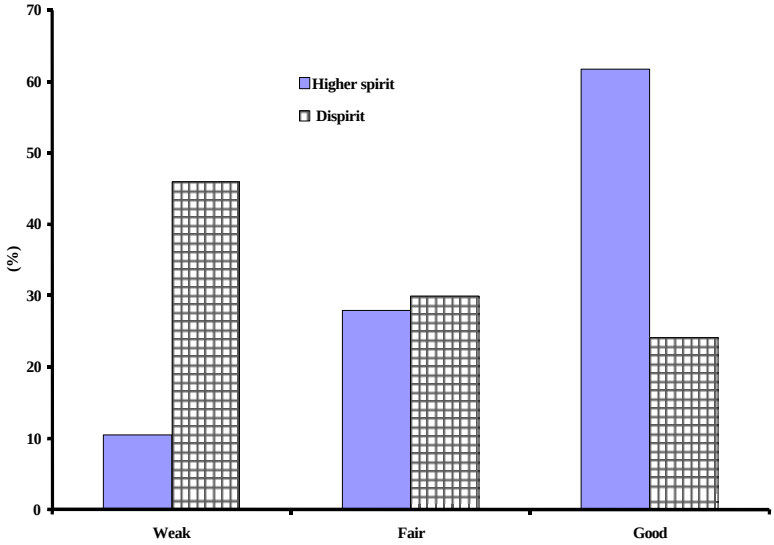

Fig. 1: Comparison between both modes of student

spirit to the dispirit (Higher spirit -Dispirit) were found as: -35.53, -2.12 and +37.65 for weak, fair and good respectively.

SUMMARY AND CONCLUSION

The Study Found That: The acceptability depends on the student mode and spirit. No matter he was irritated or annoyed; he will apply the form either carelessly or weakly.

Student under such circumstance cannot be included in evaluation and course assessment should not be done before the students finish the exams or the program.

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