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SOME OBSERVATIONS ON AGRICULTURAL ECONOMICS EDUCATION IN BANGLADESH

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ABSTRACT

It has been argued here that agricultural economics curricula in Bangladesh universities, particularly in general universities, have tended to under-represent the agricultural side and to become excessively diverse due to an open plan approach. This tendency needs to be reversed to some extent, moving from the open to a more structured approach that links up with practical post university requirements.

I. INTRODUCTION

At first glance, the impression one gets from looking at the curriculum of agricultural economics education in several universities in Bangladesh is a good one. As with many things, the broad coverage seen in these curricula can be deceiving. What could it mean? For example, we may ask the proportion of time that is set for economic compared to non-economic training. It would seem that agricultural as opposed to agricultural economic subjects are insufficiently addressed.

Again we might ask to what extent higher level courses are linked to and build upon lower level courses. In this case we are referring to such syllabi that follow a carefully structured approach. Thus one can speak of 'Economics1', 'Economics2', 'Economics 3' or quantitative Methods 1,2 and 3. And we then need to compare this to the more open and less-structured approach where there are many diverse subject matter topics few of which are related in any meaningful manner one to the other.

Without attempting to answer the larger question of whether a university education is necessary or not and should education in Bangladesh be directed at a more practical and applied level; and, assuming that our major concern is to improve the quality and

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relevance of agricultural economics education at universities in Bangladesh, then we need to consider at least the following questions :

1. Training for what purpose ? After answering this question, we can define a set of objectives.
2. How best to train ? After answering this question, we can define a method of obtaining our objectives.

II. TRAINING FOR WHAT PURPOSE

How do we begin to answer this question ? After all, we can argue that if we have 5 agricultural universities with 10 agricultural economists at each one, we than could have 50 different opinions ! This would not be very useful. On the other hand, we could try to discover :

1. What jobs agricultural economics graduates are likely to get after obtaining a degree ;
2. What sort of training is required in these jobs ;
3. How best to carry out this training.

Taking agricultural research as an example, we could say that the agricultural economist should have some knowledge of the following subject areas :

Research methodology—scientific, objective, biased and subjective ; sampling ; survey methodology ; data collection and analysis ; interpretation ; report writing.

Economic interpretation—micro & macro—economics as related to development problems.

Social interpretation—the role of agriculture in development ; socioeconomic development issues.

Quantitative interpretation—ability to carry out standard mathematical analysis related to this subject area.

Statistical interpretation—ability to use descriptive techniques as well as simple probability based statistical procedures.

Agricultural sector knowledge—an understanding of major areas of biological activity such as crops, livestock, soils, fisheries, forestry, horticulture, and of related areas such as postharvest processing and marketing.

Communication—how to present information to various sectors of the economy such as farmer, extension worker, research personnel, government personnel, academicians.

If we now consider another example, let us say, the extension service, we can again make a list of more-or-less accepted areas in which some knowledge is required. I would argue that the list is the same as for research at the B.Sc. level. At the M.Sc. level those going into research tend to be more academic as compared to those going into extension.

In any case, without getting tied up on either what might be included or excluded from our list, the end result would be some kind of average : a basic set of acceptable requirements for B. Sc. agricultural economics students.

But what about those who get into livestock economics, or fisheries economics, or marketing problems or macro-economic policy areas ? My answer would be that the B.Sc. level should be used to build up a firm foundation that is broad enough to assist the student to continue in any direction at the M.Sc. and post-university level. So our 'list' should be broad but in areas suitable and necessary for any generally accepted special area of interest.

We can then ask the question : how much of this subject area does the B.Sc. graduate need to know for this particular job. For example, the agricultural economist does not in general need to set out experiments in the field. Hence, he does not require experimental design and ANOVA. On the other hand, he needs some knowledge of econometrics to fit response curves to time series data. In this way, the range of requirements within each subject area can be defined to some acceptable degree of relevance to present conditions.

Again, one might argue micro-computers are very relevant to Bangladesh. Therefore, all students should learn how to use them. But unfortunately there are none available on which to learn. Therefore, it would be premature to put this into a curriculum at this moment.

In summary, we can develop a group of subject areas acceptable to the majority and a basic range of material in the required topics within each subject area for our B.Sc. and M.Sc. agricultural economics. To a great extent, the B. Sc. agricultural economics curriculum of Bangladesh Agricultural University satisfy the above objectives but those in other University Departments of economics do not.

III. HOW BEST TO TRAIN ?

Again we are faced with many opinions. In what order should the subject areas be presented ? What balance should there be between an open compared to the more structured curriculum ? How practical should the course be ? What should be the duration of the whole degree course ? How and to what extent should quality standards be maintained ? Should the external examiner system be used ? Should a course be only controlled by one staff member or by a committee ? Should there be several examinations each term or only a final examination at the end of the term for each course ?

I am sure there are many ways to achieve our objectives. But if we keep in mind that we wish our graduates to be able to think and to carry out data interpretation, then we should put more stress on doing and less on talking. Let us take two specific examples : *case one* in the subject area of statistics and *case two* in agricultural development.

Case One : Statistics

A common first course in statistics covers the following topics : descriptive analysis of data ; probability concepts ; normal and other distributions ; estimation & hypothesis testing ; regression ; correlation ; time series analysis ; selected non-parametric methods.

This course commonly has 3 lectures per week and one short laboratory session of possibly two hours per week. If we assume 16 weeks duration, we then have 5 x 16 or 80 hours classroom exposure in which to cover all of these topics.

Typically, using John E. Freund—*Modern Elementary Statistics*, Prentice Hall Int'l 5th edition 1979, as an example, there are 16 chapters or one chapter per week on average. We can see that two important areas, i.e. graphical presentation and measures of central tendency and spread would only receive at most one week each (3 one hour lectures and one 2 hour laboratory) or 5 hours each.

On the other hand, the Agricultural Economics and Social Science Programme at BARC recently conducted a short course in descriptive statistics of 10 days duration, for a total of some 80 hours exposure over the only 4 of the above topics or roughly 20 hours per topic in this list.

In the first case, the general method used is to have one set of short problems that can be done during the 2 hour laboratory period. In the second approach, each exercise had several sections and took the entire morning (or afternoon) session to complete.

In the first and general method, emphasis is placed on theory while in the second, greater emphasis was placed on practical application to field data. It is argued here that the present approach used in the universities is that of the first method. I would like to suggest that for Bangladesh conditions more emphasis should be placed on practical exercises using actual field data. Nobody is suggesting that there is no need for theory. However, more emphasis i.e., at least 50%, should be placed on the practical in my opinion.

Case Two : Agricultural Development

A commonly used approach in this subject area is to present a series of lectures on a wide range of topics and require students to prepare some type of term paper on one selected topic. For example, weekly lecture topics might include : Agricultural vs industrial production, Inputs, Mechanization, Land reform, Fertilizer & other chemicals, Irrigation, Credit, Services, Marketing, Education, Public and Private enterprise, Nutrition and health, Planning, Social and Political constraints, Rural development, Regional development, and so on. A typical term paper would then pick one of these topics to explore in greater depth.

I would suggest the following approach in contrast to the above :

One topic per week ; one essay to be turned in per week by each student ; one lecture session per week to be devoted to a debate where one student presents his opinions and discussion is then generated around his paper ; all papers to be graded each week. The results would be that each student must : (a) do the required reading, (b) write an essay on each topic, and (c) contribute to the discussion. This is the practical approach and is only meant to serve as an example.

IV. CONCLUSION

It has been argued here that Agricultural Economics curricula in Bangladesh universities particularly in general universities, have tended to under-represent the agricultural side and to become excessively diverse due to an open plan approach. This tendency needs to be reversed to some extent, moving from the open to a more structured approach that links up with practical post university requirements.

By defining our objectives, as determined by typical employment requirements, we can then set out a series of courses in certain subject areas to fulfil these objectives. Within each subject area, we can define generally acceptable topics that should be addressed. Finally, within each course, we can emphasize participation, practical exercises and individual progress as measures of a standard that we wish to encourage.