Convention on Testing and Evaluation

National Testing Service – India, CIIL, Mysore

and

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Inaugural Address: Prof. V.C. Kulandaiswamy

Mr. President, Prof. Pon Subbiah distinguished delegates, Ladies and Gentlemen.

I am really happy to participating in this convention on testing and evaluation, deliver the inaugural address and release the publications prepared by the National Testing Service India, Central Institute of Indian Languages.

As Educationists we are associated with **communication** of knowledge and **assessing** the knowledge gained by individual candidates, While we have realized the importance of instruction and have done enormous amount of research, we do not have a comprehensive understanding of the significance of evaluation. It is obvious that the objective of education is developing

- certain knowledge
- certain competencies
- certain values

in the individual. If we are not able to evaluate these accurately, our work is not complete. Our instruction does not achieve its objective. We do not fully understand the importances of evaluation; nor do we have full knowledge of the difficulties involved in accurate assessment.

You are aware that we are in what we call the knowledge era. We have been dealing with knowledge from the beginning of civilization. Why do we talk about knowledge era only now? Some 8000 years ago, an unknown genius invented the plough that initiated the agricultural civilization. It flourished till about the end of 17th century. The only event before that is the invention of printing press by Gutenberg in the 15th century. It was the invention of Steam Engine in the 18th century that brought about the industrial civilization with its full

impact. The invention of the computer in the middle of the 20th century ushered in what we now call the knowledge era.

Human beings have been using knowledge from the beginning of civilization. Why is it that we now refer to the present age as knowledge era was the question we raised earlier. A brief explanation of the development is appropriate here.

Creation of wealth in any nation depends on productivity. Every development in science and technology helps society to improve productivity.

During the agricultural civilization knowledge was only an ornament. It was not an economic requirement. If we review the history, we will find that Ashoka and Akbar were among the greatest of kings that the world has seen. Akbar was an illiterate. Prophet Mohammed, one to receive the message from Allah and communicated it to humanity could not read and write. In the agricultural civilization productivity depended on crafts. It is not the scholar who maintained the economy of the nation; but the agriculturist, the mason, the carpenter, the potter and similar manual workers sustained economy of the nation. The craftsmen are trained; not educated. They are handworkers and not knowledge workers.

In the industrial civilization science and technology helped develop tools. We know that one by one numerous roots were developed and the tools increased productivity. The society moved from craft to Technology. Technology is not accessible to an illiterate nation, therefore education became important. There has been over the period increasing use of knowledge.

Now I want to discuss the progressively increased use of knowledge in human society.

- First as I said earlier new tools were innovated and they increased productivity. **Knowledge was used to innovate tools**.
- As a next step knowledge was used to so arrange and utilize the tools that are available, that the nature of use helped to increase production with the same tools. This is what we call **industrial Engineering**. It is a question of efficiency in the utilisation of the tool; the use is so arranged that no

machine, no tool remains idle. We use knowledge to achieve this objective.

- The next stage was to consider the use of manpower. Knowledge was used to so employ the manpower, that with the available manpower you maximize product. This is again using knowledge for organising the manpower in order to get greater productivity.
- Next we come to the use of knowledge to increase knowledge itself. That is what we achieved research. In research, we use knowledge to increase knowledge.

All these four developments have taken place during the last six decades and knowledge itself has become a great resource. This has transformed higher education into a great productive force. Many developing countries are not able to provide adequate opportunities for higher education to support the emerging need of the economy. In what we call the age of science and technology, young men and women seek opportunities for higher education outside their own country. We have therefore a new category of students known as **international students.** Advanced countries offer opportunities for students from developing countries and also from some of the advanced countries for higher studies.

As of 2003-04 there were about 2 million international students in the world and the share of USA was about 6,00,000. The contribution of these international students to the US economy was around 13.5 Billion dollars. The U.K. and Australia are the other great beneficiaries. Australia a small country earn US $ 4.5 Billion in 2004, it was Australia's 9^{th} largest Export and 3^{rd} largest service Export. Taking for instance, the US universities while admitting students from abroad they have to consider their attainments of foreign students in their country before they could take them in their universities. Students come from all over the world. The standards vary form country to country and even within the same country it varies form university to university and you could see the problem of evaluating the applicants to different programmes in US Universities.

The USA has what we call the TOFEL examination for testing the abilities of overseas students in English as a foreign language. Similarly in order to test

the knowledge acquired in certain other disciplines, they have GRE as a device. Similarly Britain has ELTS, that is English Language Testing Service. So you could imagine an enormous number of students whose proficiency in language and other subjects have to be evaluated. Under these circumstances evaluation has become an extremely important activity in education.

We now come to India. Though in India we have to mainly deal with students from, one country, in terms of complexities, it is like any advanced country handling students from a large number of nations. Any test, ultimately, we have to offer in as many as 22 languages or more.

We may take for instance the Civil Services Examination of the Union Public Service Commission. Just two days back, the results of Civil Services Examination have appeared, we learn that for the whole country representing more than 22 languages and with degrees from over 400 universities, 3,18,843 candidates appeared. Among them screening was done, and 1,67,035 persons were allowed to write the preliminary examination: from among them 11,849 have written the final examination and 746 have been found successful. You could well imagine the amount of steps involved in evaluating at various levels and the confidence placed in the accuracy of evaluation. Similarly we have Staff Selection Commission for the Government of India for other services and the Institute of Banking personal Selection for the 25 Nationalised Banks.

- We have to conduct examinations: for Admission for various courses in schools, colleges, universities and other educational institutions involving enormous numbers.
- Then you have examinations for certification. You are aware of the qualifying certificates issued by any educational and evaluating institution.
- You also have to evaluate persons for employment in terms of proficiency.

In Education we have goals: In order to achieve the goals we have educational policy. To implement the policy we have the curriculum and in order to meet the requirements of the curriculum we have the syllabus.

If you take any area of knowledge there are three domains of achievement. They are:

1. Subject
2. Traits
3. Values or Social impact

- Take for Instance the profession of a Medicine. We teach the students certain subjects and reevaluate the knowledge of the students in those subjects.
- The knowledge of all the relevant subjects put together should develop in the individual certain traits or competencies like diagnosing a disease, prescribing treatment and organising rehabition.
- Now these traits will have social impact. In case of Doctor, he must be compassionate, honest, service minded and posses those qualities that are socially desirable.

So if you prepare a test paper you should so compose it, that you are able to examine the knowledge of subject he has, the traits developed in him and the social values that he has acquired. You could well see that it is strictly a highly professional job and one needs training in order to set examination papers to achieve the objectives.

What I have said so far leads to handing over the responsibility to specialists. There is a German saying that the simplest problem in the world if given to a specialist, he will succeed in making it the most complex.

If you take a language they will start with sound and then say a letter and then syllable. A few syllables make a word; a few words make a phrase and then you have a simple sentence and a complex sentence and ultimately what we call a discourse, or a discussion. There may be some more components that I have left out.

I learn that if one is to set questions in language and literature, one has to consider the following:

1. You have types; there are objective and subjective types – with five divisions in each of them.

2. Then you have techniques of administration like closed book and open book, written, oral, online etc. There are 25 techniques.
3. You have then 700 to 800 sub components
4. There are 7000 to 8000 dimensions.
5. There are nearly 20,000 operational contexts.

In order to evaluate all these aspects, you need 1.6 million questions. So the data base the language and literature must contain 1.6 million questions. You have to prepare similar data base for every subject. In which you want to administer to the text.

Only if you have a data bank of 16 lakhs of questions in language and literature he will be able to evaluate in all the aspects in that discipline. This is for one area of knowledge. As mentioned earlier you have to develop a data base consisting of questions for all the subjects that you can think of. You can well imagine what a gigantic task that Prof. Pon Subbiah has undertaken.

The National Test Service has now undertaken the preparation of data base for three languages, namely Hindi, Urdu and Tamil.

- The test service has 20 regional field units for each Language covering school education and higher education
- The test service has one zonal unit for every four field units.
- When you complete the preparation of data base for all the languages of India there will be 440 field units and 110 zonal units.
- It is estimated that for every language who may need 16000 examiners for preparing data base.

You can well imagine the gigantic task that awaits those incharge of education in order to fulfill adequately the evaluation needs of the country. It is only to undertake this great mission, those of you for assembled here have been called upon.

I have great pleasure in inaugurating this convention and releasing the books prepared for training.