



Scientific Enquiry in ASLP

Shyama S Nayak

Clinical Psychologist

Institute of Health Sciences, Bhubaneswar

Status of research in ASLP

- In early days, it was taught that mathematics and physics with absolute precision was science
- Only much later scientist did realize that living system can also be studied under science
- Development of research skill in speech and language study are much more complex than physical study
- When physical dimensions like mass, energy have been specified, a physicist can proceed with confidence that he has a control on all the factors that affect

Status of research in ASLP

- Fields like psychology, SLP/Audiology which are concerned with motivation, emotion, intellect, cognition and perception, it is difficult to control these parameters
- As behavioural science, in SLP and Audiology experiments are conducted, equipments are designed and systematic measurement are made
- To say that primary data of SLP/Audiology is psychologic is not say that other classes of data are irrelevant
- Anatomic structures and physiologic function in production of speech and hearing mechanism also provide relevant data
- Similarly acoustic characteristic of sound wave generated in speech provide physical data

Status of research

- Scientific research in the field of speech and hearing is relatively new
- Initially, the scientific data reported were just based upon single subject observation
- In the field of speech and hearing, the methods used for investigation were not so robust as those found in other field of study like Psychology
- In field of Audiology, the present tests used are based merely on word or sentence repetition and do not test the actual processes involved in a communicative situation
- However, currently with multi disciplinary research gaining prominence the research methodology in speech and hearing is becoming more robust

Scientific enquiry in ASLP

- If anything exists, it exists in some amount and the problem in general with ASLP is find ways of measuring that; e.g what is the improvement in aphasic patients? How much better is the stutterer after 3 months of therapy?
- All measurement involve comparison and discrimination
- The area of ASLP is both a science and art and it demands an unique blending of both
- the scientific method is absolutely essential to work as clinician in guiding our procedures

Scientific enquiry in ASLP

- Scientific method in ASLP directs the clinician to formulate hypothesis and to test those hypothesis to determine the validity and derive conclusion based on the hypothesis
- The method demands adherence to standard procedures, objectivity and quantifiability; e.g. Determining PTA and F_0 , determining degree of hoarseness
- As a scientific person we rely on tests of other procedures that leads to quantification
- As a scientific method we do not predict rather test findings

Scientific enquiry in ASLP

- ASLP have to be scientifically literate as we have to read and write professional literature and also to critically analyze it
- Scientific literature helps us to decide whether certain research findings are relevant or not clinically
- Scientific thinking and research skills assists us in designing clinical programs to be used clinically; VAGHMI
- As a science, we share models, methods and concepts, therefore ASLP are the branch of science
- It is also an art because many a times clinicians have to forego many formal tests depending on the situation

Scientific enquiry in ASLP

- It is obvious that there are weakness in both the approaches
- Purely as a scientist, we might fail to observe several important findings
- Sometimes more than the test results, behavior of the clients hold much more meaning and the future remediation program
- We have to develop skills to function as an effective scientific clinician

Qualities of a scientific clinician

- Must be flexible, i.e. to shift from pre-determined plans to other modes of therapy and evaluation
- Should be sensitive; i.e. able to detect subtle physical, psychological or intellectual changes in a client behavior
- Must have sufficient insight; able to quickly compare the client behavior and the norms
- Must cultivate objectivity because we are vulnerable to human errors
- Should build up good rapport; it encourages optimum performance on the part of clinician and client

Qualities of a scientific clinician

- Hence, we are not just computer collecting data nor just friends to chat
- The clinician must possess warm, compassion and scientific attitude
- All these constitute a scientific clinician