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COMMUNITY OUTREACH: ACCOMPLISHMENTS AND GOALS

My Philosophy of Life
While there is a will there is a way

NO handwritten notes except original signatures.
VOID unless bears original signatures on every page.
DATE and TIME of printing must match on every page.

Summary — **Realizing that the roots of all endeavors lie in community acceptance and support; start on what the community knows and build on what the community has to educate in numeracy, in addition to literacy, for knowledge-based and computer-oriented communities. This should create a society in which people ask for backing of a claim or a proposal on the basis of data collected according to established statistical principles.**

Philosophy To take into confidence the community (where work is being done) through involvement in the decision-making process, the planning and the implementation of various programs. To educate society about the importance of mathematics as a tool of the tools, having predictive power and as a branch of knowledge, which appreciates and cultivates beauty of nature through the use of numbers.

Methodology General public needs to be educated in terms of *numeracy* (ability to interpret numbers/data), in addition to *literacy* (ability to read/write/express). Popular articles and lectures to be used to achieve this goal. Students to be trained to generate mathematical solutions of indigenous problems. Schoolteachers to be motivated so that they pass on a positive learning attitude to their students.

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| © National Curriculum Revision Committee | ∩ The Early Talent Research Participation Program |
| ® Higher Education Commission, Govt. of Pakistan | ¶ Transparency International Pakistan |
| § National Testing Service Pakistan | * Anthromathematics Group |
| # American Institute of Aeronautics and Astronautics | \$ Department of Mathematics |
| ∩ International Brain Research Organization | ∩ National Growth and Developmental Standards for the Pakistani Children https://ngds-ku.org |
| ∩ The Abdus Salam International Center for Theoretical Physics, Trieste, Italy | ε United States (of America) |

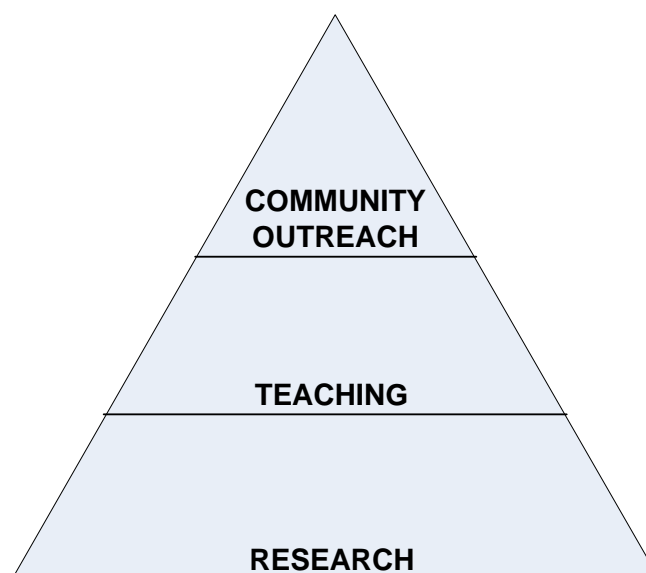
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Research meant to empower teaching for community outreach
<https://www.ngds-ku.org/Presentations/Research-Teaching-ComDev.pdf>

- Accomplishments** A six-fold approach is adopted:
- Writing popular articles for general public (please click "Articles on Science and Modeling" hyperlink appearing on my homepage to review sample work).
 - Conducting programs on local radio stations (Radio Pakistan, FM 107) and television channels (Geo TV, Aaj TV, Indus News TV, Express News TV) elaborating the importance and the applicability of mathematics.
 - Demonstrating the power of mathematics to the community in the health care of children through *the NGDS Pilot Project*, conducted in schools run by Armed Forces of Pakistan during 1998-2008 and a civilian school during 2011-2014.
 - Introducing high-school students to prominent researchers and exposing them to research conducted in universities through *the Early Talent Research Participation Program*, conducted during 2002-2010.
 - Mathematics pre-university-teacher-training through *the NGDS Workshop Series*.
 - Community involvement through training in anthropometric techniques for Department of Special Education, University of Karachi and Beacon Light Academy during 2006-2011 (good health habits to be imparted in community through educating parents about maintaining proper weight-for-height).

These efforts have proven fruitful. SUPARCO (space agency of Pakistan) started hiring mathematicians starting 2003. Engro Asahi Polymers & Chemical (Ltd) offered internship to the students of MSc (Applied Mathematics) and MIBM. A seminar *Industrial and Business Mathematics in the Third Millennium* was organized by Department of Mathematics, University of Karachi, in which economists, industrialists and mathematicians gave presentations in order to establish a dialogue between university and industry.

On a more recent note, I presided a seminar on *Drug-Abuse Prevention among Youth* jointly organized by the Ministry of Interior and Narcotics Control and Department of Psychology, University of Karachi on Thursday, April 7, 2016. Topic of my opening lecture was 'From Drug Abuse to Substance Abuse: Nip the Evil in the Bud'. The proposed program of daily morning inspection of primary-school students <https://www.ngds-ku.org/Papers/J33.pdf> to prevent bringing in of controlled substances and to spot tendencies of destructive behavior was appreciated very much by the Federal Secretary, who invited University of Karachi to submit proposals in this regard.

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Goals For the coming years priorities are arranging internships in industry for undergraduate students, founding Cyber Science Society (utilizing internet to provide students living in remote areas an opportunity to interact with renowned scientists), preparing Pre-University Integrated Science and Mathematics Curriculum as well as establishing National Center for Establishing Growth and Development Standards for the Pakistani Children.

RELATED LINKS

Colloquia, Guest Lectures, Presentations, Seminars and Short Courses/Technical Trainings

<https://www.ngds-ku.org/cv/Univguest.pdf>

Leadership Vision: Accomplishments and Goals

<https://www.ngds-ku.org/goals/Univleader.pdf>

List of Publications

<https://www.ngds-ku.org/pub/Univpub.pdf>

Pedagogical: Accomplishments and Goals

<https://www.ngds-ku.org/goals/Univped.pdf>

Profile

<https://www.ngds-ku.org/goals/Univprofile.pdf>

Research: Accomplishments and Goals

<https://www.ngds-ku.org/goals/Univres.pdf>

End of statement

Web address of this statement: <https://www.ngds-ku.org/goals/Univcom.pdf>

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