Evaluating Research Capacity Building Program in Bio-Medical Research

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Introduction

Building research capacity in health services has been recognized as a priority in developing countries in order to produce a sound evidence base for decision-making in policy and practice. There is currently little evidence on how to plan & measure progress in research capacity building, or agreement to determining its ultimate outcomes. The paper adapts a framework for 'planning change and measuring progress, based on six principles of capacity planning' to critically analyze effectiveness of National capacity building program (JRF) in India thereby drawing lessons for improving JRF & other programs, further stimulating strategic thinking & ultimately developing a customized framework for JRF

First framework adapts post few modifications is based on 6 principles of Research Capacity Building, which have been generated through analysis of literature. Each principle is represented by an arrow (figure 1), which indicates activities & processes that contribute towards capacity building. Arrows cut across structural levels suggesting that each principle operates at individual, team, organization & inter-organizational levels

Figure1. Two Dimensional Framework

Principle 1: Building skills and confidence

Structural	Examples of exhibited criteria
Individual	Qualifying criteria is PG in Bio-Medical sciences & National Exam Every year wider & more complex spectrum of research topics selected 559 different topics in 7 yrs, evidencing new research areas explored
Org	Program budget was increased from 2 MM INR in 2001 to 130MM in 2007 indicating an exponential increase. On an average 75 projects funded every year
Supra-Org	Collaborating institutes assign a guide to enable independent execution. Annual progress reports reviewed by institutional committees

Principle 2: Close to practice

Individual	Experts panel certifies that methodologies are action oriented ,Preferred research areas inclined towards areas which help in reducing countries disease burden
Org	Annual expert to provide feedback regarding effectiveness of approach, cost etc Institutional research 'culture' positive with committed budget, ethics committee
Supra-Org	Close co-ordination of research program between health organization Selective research questions taken up for National Level studies

Principle 3: Linkages, collaborations and partnerships

Individual	Fellows work with guide & expert panel Research findings presented in national & international conferences
Org	Regular & close collaborations with top Indian Institutes (Figure 2) Co-ordinate with different agencies to conduct Annual National Research Fellowship exam. Work with national funding bodies
Supra-Org	Funding provided by Ministry of Health. Fellows undergo International trainings Wider research collaboration with other Institutes/Colleges along with ICMR's own resources guarantees efficient access to electronic & other resources

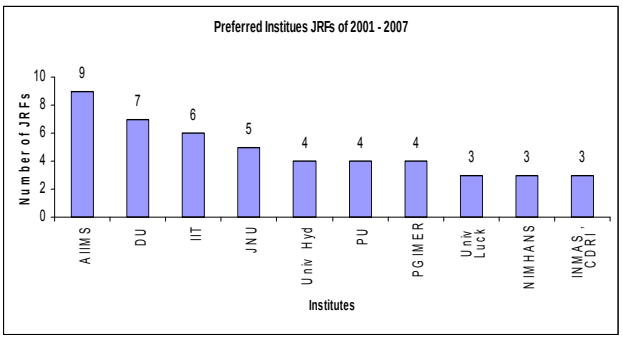

Figure 2

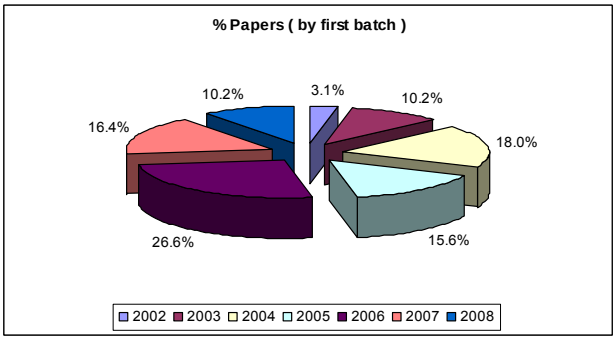

Figure 3

Principle 4: Appropriate dissemination and impact

Individual	- Out of 54 fellowships in 2001, 40 fellows were awarded with PhD. - 128 publications in 90 different journals made by first batch of 2001 (figure 3). - Journal Impact Factor shows an increasing trend
Org	- Annual progress reports available for ease of access to research. Regular funding provided to disseminate findings .Successful patents applications
Supra Org	- Effective communication channels with policy makers needing to plan & budget evidence-based strategies to improve clinical outcomes and health indicators - Lab-to-Land approach followed to ensure quick & cost-effective dissemination - R&D support to 559 JRFs from total 70 institutions

Principle 5: Continuity and sustainability

Individual	- Successful completion of 2 years automatically qualifies one to become Senior research fellow with enhanced remuneration for 3 additional years - Exponential increase in fellows joining in 2007 as compared to 2001, leading to more leaders with ability to conduct independent research
Org	- Continued collaboration for funding & research in biomedical sciences. Set research priorities and mission statement of ICMR, funding provided for 5 years.
Supra-Org	- Continuum of funding opportunities available to researchers resulting in a fundamental long-term career structure & remuneration

Principle 6: Infrastructure

Individual	- Evidence of project management through goal setting at beginning - Good Mentorship & supervision structures through guides
Org	- Examination details & curriculum available on-line. Awareness being spread through leading news paper publications, guaranteeing efficient access to information - Research part of annual appraisal for jobs. Weight-age given to guide & fellow for their research publications and research in priority areas
Supra-Org	- All publications co-authored by guide - Regular Inter-Organization level information exchange meetings

Conclusion

There is currently little evidence on how to plan & measure progress in research capacity building, or agreement to determining its ultimate outcomes
The framework applied could be the basis by which interventions could be planned, and progress measured. It could act as a basis of comparison across interventions, and could contribute to establishing a knowledge base on what is effective in research capacity building in healthcare

References

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