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Multidisciplinary Research in the Social Sciences: Breaking new grounds

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Abstract

This article is a commentary on the importance and inevitability of multidisciplinary research (MDR) in academia and in everyday life. The current epidemic, natural disasters, and human-induced crisis scenarios throughout time and space have presented both obstacles and possibilities to recover, re-strategize, and reinvent how each global citizen reacts to and lives through these events. The study is an attempt to comprehend the dynamics of multidisciplinary research, which has quietly established itself across disciplines in recent decades, as well as the concerns and challenges confronting the social sciences.Multidisciplinary research is still in its infancy.

Keywords: Research, collaboration, myriad settings, strategy, change, efficiency, qualitative, participatory

The Social Sciences have a critical contribution to make, in helping us understand, imagine and craft a more sustainable future for all. Social science is the science of understanding people's needs and their unique relationship with art, literature, history, music, work, philosophy, community, technology and psychology. Science is intimately integrated with the whole social structure and cultural tradition. Parsons, the dominant social theorist in the United States until about 1969, views values as the heart of culture, as they give meaning to what individuals do, guide their lives, and unite people. Thus, these "cultural characteristics" contribute to the functioning of society (Parsons 1966). Parsons believed that all lasting social systems strive for stability or equilibrium while maintaining a strong sense of social order and interdependence among institutions. He argued for an objective external world that can be empirically understood through concepts generated by the subjects' ideas, beliefs, and actions.

'Research is nothing but a blind date with knowledge', said an anonymous social scientist. It has always been the basis for innovation, initiatives, policy decisions and more across academia and in public and civic life. Research and researchers, over across different disciplines have made important contributions in every sphere of human activity, through sharing of their findings in many ways. In recent years, research has evolved and changed keeping pace with the context and needs and issues of the time. As the world grapples with the COVID-19 pandemic and its changing manifestations, the research sector has seen a mushrooming and collaboration of information and knowledge sharing in diverse areas as medicine, therapy, sociology and more. This collaboration has manifested in several thought provoking insights into human behavior, medical advancements, interventions, spatial mapping, literacy dissemination and more. The convergence of diverse approaches in resolving certain issues through the research process has been called multidisciplinary research. The relevance, issues, challenges are highlighted in the following pages.

Relevance of Multidisciplinary Research: An overview

Two decades into the new millennium, the world continues to face evolving difficulties on a variety of fronts, both man-made and natural. While governments, policymakers, medical professionals, law enforcement, and civil society continue to grapple with the current pandemic, researchers have been in the forefront of efforts to find a treatment for the latest plague. Historically, research has been a back bencher

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but a game changer in terms of critical decisions and solutions across multiple disciplines and problems.

Regardless of specialization, a multipronged strategy spanning medical, technical, banking, administrative, social, and political systems has arisen today in the fight against the pandemic's primary adversary, covid19. It has also established a new standard and will continue to be one of the most effective techniques in the future. Multidisciplinary research has been identified as a solution, a strategy by nearly every country in the world for addressing a variety of socioeconomic-legal difficulties and issues. News broadcasts from throughout the information highway demonstrate the enormous prospects and possibilities for humanity's safe zones. It is the interaction of widely disparate domains of human activity. The response to the raging COVID19 epidemic has demonstrated the importance of teamwork, collaboration, resource allocation, and knowledge exchange. These are visible in hospitals, policy-making rooms, on the streets, and in the banking and educational sectors. How? Lockdown and social distancing have been established, and the use of masks and hand sanitizer has become nearly automatic; implementing these measures has been a continuous process of brainstorming sessions based on research findings and feedback from key stakeholders. The pandemic has revealed a Pandora's box of dark secrets: mismanagement of funds and priorities, flagrant civic irresponsibility in everyday behavior, social norms, and mores, varying degrees of social and political will; communication gaps between policymakers and the public; the diversity and complexity of issues; and the necessity of cross-disciplinary research collaboration across disciplines as diverse as medicine, banking, sociology, and psychology, among others. Thus, it is critical to be alert, to share knowledge, and to document the same more vigorously.

Why Multidisciplinary Research?

The industrial revolution, which began in the early 18th century, wrought widespread and profound changes in practically every facet of life. The evolutionary process of change has been examined and studied extensively, resulting in a wealth of knowledge spanning numerous scientific disciplines, theoretical formulations, and applications to a variety of systems and institutions. Three millennia later, the world has awoken, shaken by natural disasters, human errors and calamities, great scientific achievements ranging from moon landing to space exploration, cutting-edge and life-saving technologies and drugs, and innovative approaches to resolving myriad problems through a combination of approaches tailored to the situation's needs and demands, and much more.

Going beyond the technical jargon: understanding Multidisciplinary research

Multidisciplinary research involves the use of appropriate approaches/techniques drawn from different disciplines to redefine problems. It is based on one's domain knowledge and experience and understanding of complex situations and the means by which they can be tackled. Examples include the Tsunami, COVID19, Chennai floods, bush fires; political assassinations, financial scams.

It is a combination, collaboration and coordination of several techniques and approaches utilized by interrelated disciplines/academic interests. Working in tandem with other disciplines on a parallel/sequential basis is appropriate for social scientists of the present times, in the same way as a medical team is required in different stages in a surgery which involves coordination between different medical specializations; and even in postsurgical care and rehabilitation involves utilization of psychologists and social workers. Thus, a multipronged strategy drawn from different disciplines geared to patient care is in place. Even this care and support varies in myriad settings and situations. For example, medical-legal-socio-economic-administrative settings and an understanding of all these issues and the processes involved is necessary. This is seen in practice in most institutional settings.

Multidisciplinary research approach provides a framework to understand the complexities of human relationships, communication, behavioral patterns and response mechanisms in different contexts. It involves 'outsourcing of knowledge' and sharing the same towards solving or resolving an issue or problems across different settings. Such researches enhance problem solving in critical societal issues and also provide flexibility and clarity in conceptual thinking, which provides a pathway to innovate according to the context. Example includes the interventions in natural disaster management such as floods, earthquakes. News reports would reveal how this approach was used to save lives, property and reduce destruction to a great extent.

It is a combination of theoretical approaches from different disciplines that are applied in various ways in terms of awareness generation, advocacy and action. The period of the ongoing COVID-19 pandemic has thrown up challenges in so many ways. Understanding the need to combat and neutralize the threat has resulted

in greater knowledge sharing by different stakeholders. This has resulted in greater awareness; greater adherence to safety protocols, vaccination and other safety measures the world over.

The Issues

Multidisciplinary Research is a term that refers to the synthesis of approaches from numerous disciplines, ranging from the natural and social sciences to business and economics, medicine and psychology, yoga and sports, in any given context. From classroom teaching in schools and universities to corporate training, mentorship, and counselling, to yoga and wellness therapies, surgeries, and financial inclusion and education, there is something for everyone. By observing facts, doing literature reviews, conducting recorded interviews, and conducting laboratory testing, several disciplines of human activity have collaborated to develop solutions to situations that demand action. This has been practised for a long period of time and is also documented. The method and tactics have evolved in response to breakthroughs in science, technology, and other closely connected sectors. The excessive specialization and fragmentation of social sciences has resulted in research delays due to academic responsibilities, deadlines to meet, and work stress. These factors have contributed to increased stress levels in academics, business, healthcare, and practically every other arena of human activity. Subject overlap, information overload, and lack of information dissemination/sharing are other significant challenges. There is a lack of understanding regarding the 'why, how, when, where, and what' of conducting multidisciplinary research, the numerous procedures, the techniques used, and the necessity of all of these. Conservative approach to new ideas is still an issue and reluctance to utilize opportunities for the larger and individual good with long term focus is also lacking.

Mushrooming of institutions, departments, courses that state that they are interdisciplinary/multidisciplinary without any background knowledge or data is also an issue.

Identification of teaching and research faculty, in terms of qualification and experience in imparting skills to students to undertake multidisciplinary research is yet another issue.

Keeping up with recent improvements in knowledge updating and sharing in simple-to-use, accessible, and economical formats is another difficulty. While information and library sciences continue to attract significant interest across academic, corporate, and government sectors, the fact remains that they are under utilized for a variety of reasons best understood to individuals and institutions.

Challenges

The obstacles of undertaking multidisciplinary research are enormous in today's rapidly changing and expanding environment. There is a discernible paradigm shift when only one strategy is used in education, for example. "The chalk and talk approach" has evolved into a bouquet of educational offerings, including the incorporation of online lecture classes through the establishment's network connectivity, training of both students and faculty in its use, guest lectures, and the use of folk media, the arts, sports, and yoga, to name a few have led to a sea change in terms of opportunities for the learners and the learned.

Another difficulty is determining the boundaries of one's discipline. How far and in what form may one intervene in fact-checking without intruding on another researcher's domain? For instance, study into the efficacy of yoga therapy in the management of disease/injury. This requires the coordination of many observation and documentation methods, therapy by all participants: the medical professional, the yoga therapist, the researcher, and the care seeker, as well as the use of technology, training, and good information exchange. Access to information and resources varies considerably between fields. This is a hard process of knowledge exchange in terms of connection with persons in positions of authority and influence, and hence differs by discipline. While the internet has significantly narrowed the gap, obtaining critical and authentic information about any subject or scenario remains challenging. Additionally, an abundance of information contributes to the confusion. The filtering process needs to be clear, easy to navigate, and smooth too.

Learning to work together and going beyond the realms of one's own knowledge space, being flexible and open to ideas is a challenge in itself. A doctor may have different views regarding the nature of a treatment for a patient based on the test reports of a patient. But the fact that is being realized today and is increasingly apparent is a shared approach to patient care: that a combination of medication and therapy and counseling will work much better in the long run. The researcher can help bridge this gap by Recognizing the immense potential of collaboration and team work, accepting and acknowledging the differences and also individual contributions is also vital for multidisciplinary

research to work it is the integration of knowledge for the larger good that will also be sustainable and replicable.

Navigate and negotiate approach vis a vis the situation, the needs and demands for a research, understanding and accepting that conducting a research with other disciplines as a part of the process, where each part(discipline) plays an important role in contributing to successful outcomes.

Access and affordability and necessity are equally important issues. Funding is a major challenge for any research. This is even more so, where different disciplines are involved and complex issues are addressed.

SWOT Analysis

Strengths

Increase in contact with and collaboration with different disciplines will enhance the qualitative appeal of this functional arrangement; will reduce or lessen the biases in research that is unavoidable; more studies in this regard is necessary.

Multidisciplinary Research involves minimum effort but with maximum impact in terms of outcomes and the entire processes involved. Planning is vital so too is communication; open and flexible communication channels are a key ingredient in this regard. For example, the green channel utilized now in critical care where ambulances transport the patient to a medical facility across vital roads in a busy city; how the coordination works involving many departments. These have multiple benefits for doer and receiver/the researcher and the researched. This is Multidisciplinary Research in operation.

Example of Multidisciplinary Research in a medical settings and in trauma care, diabetes and cancer care, and mental illness needs a synchronized approach across disciplines and now the medical field is using it as in referrals, teleconferencing, telemedicine and interventions like yoga therapy, counseling, medical and psychiatric social work to name a few. It has improved health outcomes in terms of efficient use of resources and enhanced job satisfaction for the medical/research team when success has been achieved in patient care. In the long run, the benefits far outweigh the costs initially incurred. With a dedicated research framework in place, it will help in enhancing the communication process much faster aided by technological advancements like cloud, drones, Artificial intelligence and more.

Weaknesses

Periodic training of all personnel is lacking and not seen as a necessity, while faculty Development programs are a part of the academic program, they are more a measure to get NAAC grading. The groundwork is minimal far as research is concerned. Moreover, the professional approach is limited; biases and prejudices and stereotypes between academic disciplines serve to limit working together and sharing knowledge too; research in social sciences are still seen as cumbersome and a necessity for promotion and publication, rather than as a means to enhance one's learning process to be a better professional and research is still limited to just publications and as a theory paper in academia. It is not seen as a lucrative career in many ways.

Opportunities

Both Qualitative and participative research approaches have become acceptable and multiple voices can be heard; use of multiple forms of communication including technical and social media; subjective meaning of a situation, event by the participants (patients, clients, customers, general public, students) make it a rich source for documenting and sharing knowledge; a greater scope to explore creative approaches that have stood the test of time in handling problems eg story telling, puppetry, folk arts; documenting these multiple strategies that have proven successful, especially for children, the elderly, mentally ill, persons with disabilities to name a few is an important step and enhance the quality of research.

Threats

The major threats includes complacency (what works in one sector may not work always; similarly the successful outcomes may not always be possible); time and financial constraints; lack of enthusiasm for research due to time consumption, sometimes unnecessary and boring works with limited remuneration; external control, administrative glitches, mismatch between capability and willingness and commitment to research; gaps in communication of information, resources, decisions and also poor access to the right information.

How Multidisciplinary Research can work in the social sciences

Multidisciplinary researches can be designed, planned and executed by focusing on Retrospective studies as the researchers can get insight from similar and related studies/research in the past.

Personal narratives of best practices across different disciplines can also be used, e.g. engineering and quality of life seen in senior living accommodation projects in real estate sector. Similarly, collaborative and complementary streams in health care sector e.g. yoga therapy, Allopathy and Ayurveda, homeopathy, counseling and mentoring for persons with disabilities creation of knowledge hubs and clearing houses of research, accessible websites, will be a ground breaking initiative to facilitate knowledge sharing and resources in every institution or government. These are an ongoing agenda but there is limited knowledge.

Student research internships will provide opportunity for students to earn and learn and thereby tapping the inherent potential of youth and it will give fresh insights to tackle problems of a diverse nature. Social media interface, leveraging the use of social media platforms to propagate the best practices in collaborative research and their benefits can also be utilized.

Conclusion

In a nutshell, research is a scientific search for knowledge based on observation, review of studies, interviews. It is a process of collating facts by documentation, using techniques drawn from different disciplines. This collaboration, i.e. multidisciplinary research will ensure greater transparency and efficiency. In the long run, it will help in formulating suitable policies at the government/administrative level; facilitate greater efficiency in sharing of knowledge and technology, streamlining resource allocation in different settings at different times; will ensure a continuity of data in terms of preparedness for the good and bad times too. Multidisciplinary Research is here to stay, overcoming barriers and roadblocks in academia and governance will pave the way for sustainable development.