

## SCIENTIFIC ETHICS IN HIGHER EDUCATION

**Prof. A. R. Bansod**

RTM Nagpur University,  
Nagpur,

**S. J. Dhoble**

Dr. Ambedkar College  
Deekshabhoomi, Nagpur

**Abstract:** *We Now Live In The Information Age With A Lot Of Scope Of 'Virtual' Reality. Moreover, The Current Economic And Social Climate Could Also Lead To Unethical Practices And Behavior. Ethics And Value Education (Eve) Applies To All Aspects Of Education Which Either Explicitly Or Implicitly Relate To Ethical Dimensions Of Life And Are Such That Can Be Structured, Regulated And Monitored With Appropriate Educational Methods And Tools. When Transformed Into Well Matured Learned People. Society Wants To See And Expect Behavioral Changes In The Following Manner Which Are Generally Referred To As Values And Principle Of Ethics. There Are Controversies And Disputes Within The Communities And Society At Large On Certain Issues. For Researches In Humanities And Social Science, Different Kinds Of Ethical Issues Arise. New And Evolving Methods Of Conducting Research, Such As Auto-Ethnography And Participatory Action Research Raise Important But Strikingly Different Ethical Issues And Obligations For Researchers*

**Keywords:** *Nep, Ethics, Values, Teaching, Research*

### Introduction:

The National Council for Research and Development is appointed by the government and operates through its plenum and committees, one of which is the Committee for Ethics in Science and Intellectual Property<sup>1</sup>. The National Policy on Education, 1986 iterated that “No country can rise above the level of its teachers”. Further, Kothari Commission put forward that the future of the country is being shaped in its classrooms. Therefore, it is of paramount importance to deal the issues of education with much seriousness so that growth and prosperity may go in proper norms and standards of human behavior. Education has supreme importance in the human life as it has the power to make the world better place. National Education Policy 2020 is a comprehensive document and its main purpose is to improve the education sector by making it inclusive, holistic, multidisciplinary and more fruitful.

There is no doubt that multidisciplinary education is extremely significant in this post-modern society of 21st century<sup>2</sup>. There has been a lot of emphasis on holistic and multidisciplinary education in the new NEP 2020. Education has been primarily associated with social and moral code of any society of the world. The influence of education on entire human society is undeniable; the present and future of any society in the world rests upon the kind of education being provided to its offspring. Mere nurturing a mind full of cognitive abilities is not the only task of education but to involves development of a harmonious personality which bears good moral character also. Knowledge may be the biggest driving force in destroying the human civilization unless it is coalesced with right conduct and ethical

human behavior. At all levels of education, the focus on value inculcation should go hand in hand so that social and moral concerns may be addressed with each content and practice of education<sup>3</sup>.

It is in this context that the consideration of ethical aspect in education needs to be addressed. Very significantly, in the modern era, advocacy of quality education is going on, worldwide. Quality education is a dynamic concept. It evolves with time and is subject to social, economic and environmental conditions.

As a discipline, unlike morals, 'Ethics', deals with what is correct and what is wrong. For generations, cultures and societies across the world, established a moral code for social conduct for their members'. This code is to be adhered to and practiced at all times. Each cultural environment comprises certain institutions and forces which affect and shape the values, beliefs and behaviors of the society. We now live in the information age with a lot of scope of 'virtual' reality. Moreover, the current economic and social climate could also lead to unethical practices and behavior. Avoidance of such an occurrence makes it imperative that Ethics in Higher Education institutions, engaged in imparting higher learning to students inculcate and instill in them, a value system which will teach them the importance of practicing ethics in learning and teaching. Ethics and value education (EVE) applies to all aspects of education which either explicitly or implicitly relate to ethical dimensions of life and are such that can be structured, regulated and monitored with appropriate educational methods and tools<sup>4</sup>.

Main aims of EVE are (1) to stimulate ethical reflection, awareness, responsibility, and compassion in children. (2) to provide children with insight into important ethical principles and values; equip them with intellectual capacities (critical thinking and evaluation, reflection, discovery, understanding, decision-making, non-cognitive abilities like compassion) for responsible moral judgment (3) to develop approaches to build a classroom or school environment as an ethical community, and to reflectively situate individuals into other local and global communities with a mission to contribute to the common good. So far as National Education Policy 2020 is concern, it can be said that before stepping forward in this direction government has not only to find the answer to the above questions but also ensure protective measures for the welfare of the students in particular and the educational system as a whole. While the document proposes all the right moves to reform education, it does not have a legal status. To execute the provisions in their true spirit the government will need iron will, fund facility, infrastructure (particularly in rural areas, in case of providing vocational skills at school level), regulatory mechanisms, grievance redress cells, professionally trained teachers and so on<sup>5</sup>.

Considering the fact that students spend a significant part of their early and impressionable life with teachers who, contribute significantly into overall 'quality of student's lives'. There are numerous possibilities for teachers to influence the students to transform their persona in a good manner. They can analyze their life styles and behavioral attitude, by making them understand what is right and on decision on what students can commit for themselves and others. Through such instructions, teachers become architects of

congenial societies. This can only happen if teachers themselves are aware of their responsibilities in shaping the moral and ethical values of student. Curiosity and the self-driven efforts to satisfy personal curiosity form the basis of research. Research involves systematic and creative investigations in any domain of knowledge, be it about philosophical or materialistic issues, or anything in this Universe that can be perceived by our senses<sup>6</sup>. When discourse is in terms of ethics or moral aspects, we demarcate it with wrong and right, or desirable vs. unacceptable behavior. Ethics are the principles that allow us to uphold the things we value. One may also define ethics as a method, procedure, or perspective for deciding how to act and for analyzing complex problems and issues. The learner imbibes ethical values from family, friends, fellow graduates, professional organization, mentors or other social settings.

The NEP suggests several reform measures as according to the policy, the existing system of education is fragmented with less emphasis on the development of cognitive skills and learning outcomes and rigid separation of disciplines. In the NEP's scheme of things, the system of affiliated colleges will be replaced by institutions that can be divided into three broad categories - research, teaching and autonomous degree granting institutions. It states that the large affiliating universities resulting in low standards of undergraduate education, therefore the New Education Policy suggests moving towards multidisciplinary universities and colleges, with more HEIs across India moving towards faculty and institutional autonomy<sup>7</sup>.

#### **Values And Principles Of Ethics In Science:**

When Transformed Into Well Matured Learned People. Society Wants To See And Expect Behavioral Changes In The Following Manner Which Are Generally Referred To As Values And Principle Of Ethics.

#### **Truth:**

It is concerned with the expansion of human knowledge of the world, the deepening of human understanding of its aspects, and the enhancement of human ability to exploit this knowledge for the achievement of goals vital to humanity, or having social merit. The scientist serves these goals, in every branch of science, by acting in accordance with the methods of scientific research in each branch, and the rules of conduct in the scientific community in general.

#### **Freedom:**

The scientist serves the goals of scientific research, based on the principle of scientific research freedom, which is one of the most prominent expressions of the democratic system. The scientist undertakes the obligation to comply with practical restrictions imposed upon freedom of scientific research by the principles of the democratic system, for the adequate safeguarding of human life, welfare, dignity and liberty. The scientist is willing to undertake the obligation to comply with practical restrictions in the areas of development and application, to the extent that these are required by social or economic considerations, in keeping with the principles of the democratic system.

**Responsibility:**

It bears full responsibility for every scientific research or experiment he or she conducts, particularly with regard to its direct effect on human lives and on human physical and mental health, welfare, dignity and liberty. The scientist bears special responsibility for such direct effects upon those participating as patients or subjects, in scientific research or experimentation. The principles of the Helsinki Declaration regarding clinical experiments upon humans determine the scientist's threshold of responsibility, and it was in the spirit of these principles that the threshold of responsibility in non-clinical human experimentation was established.

**Integrity:**

The scientist performs every scientific act in accordance with all of the requirements of the scientific method within the framework of which he or she works, and at the highest standards. The scientist analyses data and , generalizations, experiments and theories, whether his or her own or another's, equitably, and with the requisite scope, depth and precision. The scientist presents his or her data in full, precisely, frankly and fairly.

**Collaboration:**

One acts within a universal framework of scientific collaboration, based on the shared scientific goals. It fosters scientific collaboration by maintaining an atmosphere of openness, mutual assistance and trust among scientists, their assistants and students and scientist merits individual, collective and institutional credit and may possess pursuant rights to intellectual property. for scientific achievements to which he or she has made a unique or significant contribution,

**Professionalism:**

He engages in scientific pursuits in a wholly professional manner, making judicious and continual use of the special knowledge, particular to his or her area of expertise and also strives to keep abreast of developments in his or her area of expertise and in every area of knowledge pertinent to his or her work.

**Issues in Research Ethics:**

There are controversies and disputes within the communities and society at large on certain issues. For researches in humanities and social science, different kinds of ethical issues arise. New and evolving methods of conducting research, such as auto-ethnography and participatory action research raise important but strikingly different ethical issues and obligations for researchers<sup>8</sup>. New trend on researches on social media are coming up especially in the use of big data analytics. Participants here are from popular platforms of social media or forums based on the web. Respondents may post queries or respond in public place without comprehending that their conversation may be used for a critical research

purpose without obtaining informed consent from them for the use of personal dialogues. At times, it may not even be feasible to acquire consent.

Whether, ethics committees should permit such proposal for data analytics is a big unresolved, question. It is to be noted that big data research can lead to novel insight that may inform decision making and formulation of policies for new advancements in the society<sup>9</sup>. On the contrary from the ethical viewpoint this creates a new challenge for the researchers. Research encompassing vulnerable persons; include children, persons with developmental or cognitive disabilities, persons who are institutionalized, the homeless or those without legal status<sup>10</sup>. These also raise unique issues in any research context and hence the following postulates are noteworthy:

- **Reliability and Integrity:**

Research project must be honest and diligent work of the scholar. This applies to the methods employed for the project (what you did), data collection, analysis of results, and whether it has been previously published. One should not make up any data, including extrapolating unreasonably from some of their results, or do anything which could be construed as trying to mislead anyone. It is better to undersell than over-exaggerate your findings. When working with others, one should always keep to any agreements, and act sincerely.

- **Objectivity:**

One should focus to avoid bias in any aspect of their research, including design, data analysis, interpretation, and peer review. For example, researcher should never recommend as a peer reviewer someone he know, or who he has worked with, and he should try to ensure that no groups are inadvertently excluded from your research. This also means that there is a need to disclose any personal or financial interests that may affect the research proposal.

- **Genuineness:**

Researcher should always be prepared to share data and results, along with any new tools that have been developed, when he/she publishes his findings. This helps to further knowledge and advance science. One should also be open to the criticism and new ideas. Work must be reviewed carefully and critically to ensure that the results are credible. It becomes curial to keep full records of your research. If you are asked to act as a peer reviewer, you should take the time to do the job effectively and fully.

- **Respect for Intellectual Property:**

One should never plagiarize, or copy, other people's work and try to pass it off as their own. Scholars ought to seek permission before using other people's tools or methods, unpublished data or results. Not doing so is plagiarism. Obviously, one needs to respect copyrights and patents, together with other forms of intellectual property, and always acknowledge contributions to the present research. If in doubt, acknowledge, to circumvent any risk of charge of plagiarism. There is need to show respect for anything

data/suggestion/idea that has been provided in confidence. Caution should be taken to follow guidelines on protection of sensitive information such as patient records.

- **Novelty in Publication:**

Publication should be done to advance the state of research and knowledge, and not just to advance the career. This means, that one should not publish anything that is not new, or that duplicates someone else's work.

**Agreement for Consent:**

Researchers must consider whether respondents are competent to give consent and free to volunteer it. In the case of minor (anyone under the age of 18), the consent of parents/guardian must be secure and, if possible and appropriate, the children's assent should also be sought. According to the Indian constitution, children under 18 cannot provide consent as being minors; therefore their parents or legitimate guardians must give consent on their behalf<sup>11</sup>. Children may volunteer their participation for the research project at ground level but this should be done only after due written consent. Audio clipping of conversation with respondent should only be recorded if prior consent is given by them and they fully understand the manner recording will be used. If the researcher plans to use the same setting of recording for the new experiment, he would again require a fresh written consent of the participant giving him the detail description about new study. However, when recording from electronic mass media devices such as television and radio are deployed for the non-profit research, one need to ascertain if a prior consent of the produce/publisher is needed<sup>12</sup>.

**Concerns of Ethics for Teachers in the Scientific Structure:**

The inculcation of scientific facts and thinking of youth is the teacher's responsibility. Though the key role of a teacher is to gather knowledge and disseminate the same to his/her students. For this, they need to create a congenial and amicable environment so that induce critical and questionable mind of the student occurs<sup>13</sup>. The challenging task for the teacher is to accommodate the diversity of pupils as invariably they belong to a varied demography. Thus, it becomes obligatory for the teacher to recognize the desideratum of human growth and development. Such elements are the key indicator for a teacher to direct his effort towards making his/her students conforming to professional competence with an ethical temper. Training to teachers has to be a continuing process so that the teachers are at the cutting edge of their profession and are updated on the contemporary narratives on ethical practices. Teachers are held in high esteem for their being synonymous with the ideal code of conduct. Hence they should provide ample scope for the holistic development of students. The fundamental duty of the teacher is to render their active role in the inculcation of character formation of their students. Sincere efforts are needed for the subjugation of personal interest to societal interest for common good. Further, during evaluation process bias of any kind should be avoided<sup>14</sup>.

Ceaseless endeavor is needed by the teachers to keep themselves on the cutting edge of their profession. Only then that they can enthuse the students on the nuances of science but

inculcate in them the spirit of enquiry. Teachers who do not update themselves cease to attract students.

Empathy remains the key to generate confidence in the students and then only a teacher can help students to deal with conflicts within and around. Core constitutional values and human dignity are to be suffused in the students by their mentors. Therefore, personality traits of a teacher are compassion, secularism, democratic outlook, uprightness, euphony, and prudence, impeccable and critical analysis. Therefore, every teacher should see that there is no incompatibility between his precepts and practice. The national ideals of education which have already been set forth and which he/she should seek to inculcate among students must be his/her own ideals. The profession further requires that the teachers should be calm, patient and communicative by temperament and amiable in disposition.

### Conclusions:

The Current Economic And Social Climate Could Also Lead To Unethical Practices And Behavior. The Inculcation Of Scientific Facts And Thinking Of Youth Is The Teacher's Responsibility. People Need To Create A Congenial And Amicable Environment So That Induce Critical And Questionable Mind Of The Student Occurs There Are Controversies And Disputes Within The Communities And Society At Large On Certain Issues. It Is To Be Noted That Big Data Research Can Lead To Novel Insight That May Inform Decision Making And Formulation Of Policies For New Advancements In The Society.

### References:

- Report of the task force on code of professional ethics for university and college teachers (1988) UGC: New Delhi.
- Sandoval LY, et al. (2010) Ethical qualities of professional development of the educator a humanistic perspective needed to manage a new way to see the quality of education. *Procedia Social and Behavioral Sciences* 2 (2010) 2589–2593.
- Scheffler I “Justifying Curriculum Decisions”, *The School Review*, Vol. 66, No. 4 (winter, 1958), pp. 461-472.
- Sherpa Karma (2019) Importance of professional ethics for teachers. *International Education and Research Journal [S.I.]*, v. 4, no. 3, Mar. 2018.
- Singh N (2018) Ethics and moral values in higher education. *International Journal of Multidisciplinary Research and Development*, Vol 5 Issue 7, pp 150- 152.
- Sinha SNP (1998) *Education for Excellence*. University News. Vol 36(17) Association of Indian Universities, New Delhi.
- Skill You Need (2011) *Ethical Issues in Research*.
- Smith D (2003) *Five principles for research ethics*.
- The Report of the University Education Commission December 1948–August 1949 (1962) Ministry of Education, Government of India.
- The Universal Declaration of Human Rights (1948) United Nations.
- Walton Nancy (2018) *What is Research Ethics?*



- Web Center for Social Science Research Methods (2006). Ethics in Research.
- Kumar, K (2005).. Quality of Education at the Beginning of the 21st Century: Lessons from India. Indian Educational Review, 40(1), 3-28.
- Aithal, P. S., (2016). Study on ABCD Analysis Technique for Business Models, business strategies, Operating Concepts & Business Systems, International Journal in Management and Social Science, 4(1), 98- 115.

