INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH AND ANALYSIS

ISSN(print): 2643-9840, ISSN(online): 2643-9875

Volume 07 Issue 03 March 2024

DOI: 10.47191/ijmra/v7-i03-51, Impact Factor: 8.22

Page No. 1284-1290

Ethics in Research-Scientific Work In the Field of Education

Albana Sadiku

Faculty of Education University "Isa Boletini" in Mitrovica



ABSTRACT: Ethics can be interpreted as a regulatory factor that helps in the honest realization of work in the field of education, whether it is of a research nature or not. Utilizing ethics, the ways of functioning are defined, respectively the limits, the reasons, and the correct ways of interacting with others. In a narrower sense, ethics in research in the field of education defines the permissible limits up to which a researcher has the right to access. This researcher must have a clear objective for the study, be able to define the purpose of that study, and in specific steps share the ways of carrying out his research. It is preferable, for a researcher to be even slightly informed about the nature of the research he is carrying out, to read pre-practically about the research subjects, because of the consequence, so that he has a clear professional orientation and the eventual orientation of the variables that he wants to research, so the ethical aspect in the field of education is strengthened and considered fulfilled when the researcher uses accurate sources.

KEYWORDS: Ethics, education, research, scientific work.

INTRODUCTION

Scientific research is a constructive integral part of each of the fields of education and training. The research conducted trends, developments, benefits, innovations, causes, and effects. In the field of education, which field aims to create genuine and constructive learning conditions, research is an integral and inseparable part. In many cases, it can also be considered as a systematic opportunity for constructive results. "The ability to guess, especially our ability to guess about our guess, is a human masterpiece" (Lakhotia, 2021).

The concept of ethics as a notion and as content has been discussed utterly, particularly in the field of social sciences, since in social sciences things are in more descriptive and narrative formats, and as such they can tolerate the violation of ethics by wrapping it with emotional colors or attitudes personal. This means that during research, to respect the ethics of the research, the researcher should be subjective. According to Hall (2004) when we talk about subjectivity, we are referring to a broad topic that refers to beliefs, attitudes, views, convictions, subconscious tendencies, orientations, understanding, etc. In other words, subjectivity is a very important practice in how one approaches ethics (Bazzul, 2016).

The beginnings of creating a clear idea of ethics in education have their origins many years ago. The idea of such protection came as a result of the violation of the dignity of the individual or the subject who was part of the research, regardless of the purpose of that research. Among the most succinct definitions of ethics is that of Cavan (1977:810), who asserts that: "ethics is a matter of principles of sensitivity to what is right for others, and then telling only the truth because through it we respect human dignity". A researcher, while carrying out research, must support his professional ethics in subjectivism and must be clear with himself and with the presentation of data, whether descriptive or empirical. Research challenges have increased with the development of science and technology, on the other hand.

Nowadays we have a perplexing relationship between the fields of different sciences and the focuses that society is giving priority to, therefore a researcher must be a person very attentive to his moral, professional, and social responsibilities (Allea, 2013). The ethical aspect, in most cases, is closely related to moral development and judgment. A researcher must have clear ideas on tolerated elements or interventions, but he must have a well-formed moral self-concept, and he must know how to evaluate a good behavior or action from a bad one. Kimmel (1988) raised many years ago the ways of behavior of researchers, namely acting with dignity and responsibility toward research participants. Based on the view of Kimmel (1988), the definition of ethical and unethical behavior is not dichotomous, since there is no well-defined normative code, such as: "should" or "shouldn't", instead a

researcher makes judgments based on values professional and manages to identify the dependence of ethical and unethical issues within that profession.

Analyzing all these arguments and definitions that were mentioned above, a new researcher will be faced with dilemmas and initial research problems. This means that a young researcher must be aware of the nature of the research he is conducting, and the characteristics of the respondents, but they must also be based on the nature or type of research. On this perspective, Cohen (et al., 2007:69) have asserted that "methodological and ethical issues are inextricably intertwined in most of the research we have qualified as qualitative or interpretive".

In the field of education, a researcher has a very wide range of different populations, which are identified based on the sample and the characteristics of that sample, including age group, gender, place of residence, and the type of instrument they will use. hinting that each of the instruments used has its elements that identify and personalize it. In the case that research will be done with children, then the instrument must be determined, then the way of implementation based on the group to which the children belong, which means that the ethical implications of the participants vary from being observed as an instrument to defining other instruments and that these instruments must be following the age of the children and the ethical concept (Fine et al., 19).

The challenges of ethics in teaching are very broad, we can affirm with full conviction that they are developing and changing over time. We have many circumstantial factors that are influencing the definitions and management of ethics in general. Nowadays we are faced with technology and its management problems. Too often, technology is depriving us of proper data storage, including violent technological interventions. According to Bazzul (2016), technology is sending us to two very opposite camps, on the one hand, it is motivating because it facilitates the applicability of a certain instrument, while on the other side, it challenges us with the ethical context, and especially with the ways of preservation and data protection. In the field of education, its applicability has many benefits, as it facilitates analysis, data extraction, discussion, and conclusion.

Three main frameworks of research ethics must be considered: obligations, rights, harms, and benefits (Aubrey et al., 2000).

LITERATURE REVIEW

Curiosity is the internal human indicator that makes us tend towards research, to understand the cause and effect of certain social and natural phenomena.

i. Kindness and being polite in research

During the research, a researcher may have many dilemmas on the subtleties that accompany him during the realization of the research. At the moment when we talk about kindness, on the other side we have harm, namely when and how we can harm a person while we are contributing to the understanding of a social phenomenon. Can we contribute to human society by harming people? According to Cohen (et al., 2007), kindness, namely not harming others is invoked in the Hippocratic Oath, which is based on the principle of primum non nocere (first of all, do not harm). Of course, this primum non-nocere also differs from the country in which the research is carried out since each institution can suffer different damages from the other and this varies from the nature of the research and from the subjects participating in that research.

Aronson (et al., 1969), raised the same ethical dilemmas during research that we face today, according to them there are two groups of values held by society, the first is the belief in the values of free scientific research, in search for truth and knowledge, while the second is belief in the dignity of individuals and their right. From this definition, we can affirm that the ethics of research in the field of education leads us to the focus that a researcher must have on the preservation of physical, psychological, and human damage or the dignity of the individual, property damage, damage to personal or cultural values, etc. The point is, that regardless of the goal that the researcher has and the academic development that the researcher may be depending on, respect for the people participating in the research must always exist. Research is done to improve the life or well-being of those who are the target of the research, which means that the researcher has an ethical obligation towards the participants and their lives, in case the researcher does not rely on these aspects during the research, for the participants will it was very inhumane and disrespectful (Collin et al., 2007). However, research ethics in education constantly requires social support to develop (Riquarts, 1987), therefore there must be correct and reliable communication between the two stakeholders.

Confronted with constant dilemmas about the ethical aspect and potential harm during research, Bailey (1994:457) has suggested several approaches that can be used to

avoid harm to research subjects, including:

- "Computer simulations;
- Research on a situation in which the negative effects of damage already exist
- Application on only a very low level of the participant's potential or only for a short period;
- Obtaining the consent of the participants;
- Justification of the research because the amount of damage caused is much smaller

than the damage caused by the existing situation;

- Using samples instead of whole populations so that fewer people are exposed;
- Preservation of the privacy of the participants through anonymous storage of data".

ii. Absolutist and relativistic ethics

Absolutist and relativistic ethics present two conflicting camps in terms of research principles. According to the view that comes from the proponents of absolutist ethics, a researcher has principles to which he has a universal obligation. Absolutists support the idea of defining principles clearly, then these principles will be a guide for the researcher during his research work, and these principles will guide him on what to do and what not to do (Collin et al., 2007). According to Collin (et al., 2007) an example that justifies this view is the prison experiment carried out by Zimbardo in 1984, where the experiment had to be stopped halfway through. Even though the experiment has maintained professional ethics by considering the preservation and protection of the well-being of the participants, again things have flowed in an unintended direction until the experiment had to be stopped. On the other hand, when we talk about relativistic ethics in research, a researcher has tolerance since it does not set absolute guidelines and leaves room for ethical consideration to develop from its natural point to a point of development that will be influenced by circumstances. (Collins et al., 2007).

iii. Experience of the researcher

No matter how much experience a researcher may have, I can never accurately predict all eventual situations that may arise while conducting research, there will always be requests from participants that the researcher may not have anticipated, problems unforeseen. Various researchers often suggest that it is very important to know the participants beforehand, perhaps the researcher should do a pre-test with them or have a conversation to understand the nature and requirements of the participants (Collins et al., 2007).

For the participants in the research, the initial requirements that must be met are related to the preservation of identity, selfconfidence, and trust in the researcher. If the participants investigate that during the research these characteristics are being affected, then the instrument answers completed by the same participants may not be real. This self-presentation comes as an internal defense mechanism to present their ideal self, as those participants envision it, not as they are. Therefore, a researcher must be aware of the competence of ethics in the research.

Experience is an addition for a researcher because based on experience, that researcher has developed professionally and acquired certain skills and abilities. Experience is a bonus for the researcher while applying instruments such as surveys, interviews, questionnaires, focus groups, case studies, etc., but experience can fade when dealing with experiments and the characteristics that identify this research method. Gorard (2001) emphasizes the ethical dilemma as a constantly controversial context during the realization of an experiment, according to him a researcher who wants to realize an experiment, before his experience, seems to be careful that the research design is not discriminatory, that the group of the control should not be deprived of a genuine treatment because ignoring this group may bring inaccurate results because the personality traits of the participants are directly affected.

iv. Ethical dilemmas

During research, we have two conflicting camps or two groups that represent different interests, the first is the researcher who tries to extract qualitative data according to his plans and the second is the participants who seek to preserve their characteristics, dignity, and privacy. In addition to preservation, which is related to the empirical aspect of research, a researcher is obliged to preserve the ethical aspect even when quoting or paraphrasing. Another ethical dilemma is related to ways of writing in a regular format and respecting ethics in research in the field of education. The researcher must be extra careful when quoting from secondary or secondary sources but also when paraphrasing, because consciously or unconsciously he can make a selective reporting of information from the literature (Roig, 2015).

Conflict of interest is another big dilemma, namely when and how is a researcher considered to be facing a conflict of interest? According to Roig (2015:46), "When a researcher's connection with the organization or people who are actively involved in the research causes affection, the subjectivity of the researcher in the administration of that scientific research is considered a conflict of interest". It is more than clear that affective connection should be avoided when determining the people who will be included in a research, family members, society, and any person or group with whom there may be a connection since this affective state affects the subjectivity of the researcher.

v. Privacy during research in education

Privacy is a constitutional right of every individual who lives in a legal state, therefore a researcher must respect this right. There are many other elements and reasons why the privacy of research participants should be preserved and why this preservation of

privacy falls under the umbrella of professional ethics during research in the field of education. When we talk about privacy, there is a considerable number of researchers who present different perspectives and rationales. The most frequent has to do with the storage of sensitive information, this storage should be done in safe places to deprive the distribution of information to the participants. Until recently, the storage of the participant's confidential data was done by the researcher at home, nowadays the extraction of that data from the researcher's official facility, without the participant's consent, is prohibited by law (Collins et al., 2007).

When we talk about privacy, among others, we also refer to the person's right to participate in our research or not, the person's right to answer all questions or not, the person's right to refuse the answers to any of the modules that the researcher has planned, his right to determine the place of the research in certain cases, etc. A researcher, regardless of whether there has been initial consent from the particular participant, cannot force that participant to continue the research against their will because the researcher conflicts with professional ethics in the field of education to preserve the privacy of the participant.

vi. Anonymity during research in education

Anonymity is about the attribution of the information, therefore, participants can request that their identity not be revealed under any circumstances (Lakhotia, 2021). The researcher must be meticulous while preserving the anonymity of the participants because there are many details that at first glance may seem to be preserving the anonymity of the individual, but are a path for finding and identifying the particular participant. The biographical or geographic details of the participants enable the easy identification of individuals, especially when they belong to certain communities and this is called deductive discovery (Prakash, 2021:44).

It is preferable that the moment when a researcher meets with the participants in his research, to give detailed data about the way of carrying out the research, the demographic part of the instrument used, the duration, the purpose of that research, the impact of that research in measure, etc. The main focus should be on the anonymity of the participants and according to research ethics, the researcher should be honest on this point. All this information should preferably be written at the beginning of the instrument.

Sim (et al., 2019) has presented two cautionary views regarding anonymity and the attention the researcher should have:

- The more detailed the biographical data is, the more the likelihood of a deductive discovery increases;

- If the researcher is a foreigner, which means that he does not know well the area in which he is conducting the research, then I may not be able to correctly assess which particular pieces of information, when put together, can lead to a discovery of unplanned.

Anonymity is directly related to the sincerity of the participants. We can affirm with full conviction that a research person who will remain anonymous will present more accurate data than another participant who will be asked to write his identity. It is a human tendency that the moment when the participants remain anonymous, they present themselves with all the features, characteristics, beliefs, attitudes, opinions, and actions because they do not have the pressure of labeling or eventually judgment. In cases where the identification of the participant is required, then there is a very large space for them not to present their identifying features, characteristics, beliefs, attitudes, opinions, and actions, and actions, but to try to present themselves in the format most liked by the researcher or the mass.

vii. Confidentiality during research in education

Confidentiality is related to the way the researcher has processed the information and to the way it is implemented, even if any of the participants feel slighted and will not contribute anything to that research, the researcher does not dare to extract any information about that participant to enforce confidentiality (Prakash, 2021). Confidentiality is another way of protecting the rights of research participants. Through confidentiality, the participant will be convinced that his data will not be published, nor will it be understood by the general public that he was part of a research. On the other hand, participants must ensure that their data and the contribution they have made in certain research will not be used for other research.

Participants' dilemma may not be resolved regarding confidentiality, but Cooper (et al., 2001) suggest that confidentiality can also be protected by obtaining signed statements.

that indicate the non-publication of research participants, limiting the cry to data that can identify the research participants, seeking the consent of the participants for any publication that I will make and on which I will disclose their data, the non-disclosure of identification data of the participants.

viii. Unreliability and fraud during research in education

"Fabrication, forgery, and plagiarism are three ethical issues which are identified as fraud" (Chaddah, 2021:18). The researcher must be aware that things will not always go according to his plans, he must be aware of anticipated changes during the research

and that the raised hypotheses may not be confirmed. Despite these confrontations, the researcher must know how to deal with them rationally. Due to their academic development, it often happens that the researcher is not based correctly on the information he received, but intervenes in it to support his initial plans.

Unreliability and fraud are directly related to the non-respect of all responsibilities on the part of the researcher which were mentioned above. Unreliability usually refers to the release of participant data, failure to properly store demographic or empirical data, or release of data without participant information or approval.

Fraud refers to lying on the part of the researcher. The researcher does not tell the truth about his research, namely the method of data processing, where he will use that data, why he needs that data, and misuse the data by changing it and using it for research others. In the worst case, deception can be done by the researcher forcing the participants to believe that they will be researched on a certain topic when he intends to collect completely different data. Giving feedback is also an element of deception. "Feedback should be unchanging and as such should be presented to research participants" (Collins et al., 2007:67). Collins (et al., 2007) also claims that any distorted feedback implies data manipulation and is the result of experimental manipulation.

Plagiarism is a sort of cheating. The researcher, according to the ethics of education research, does not dare in any way to take written or spoken materials and not quote or paraphrase them. Such fraud is academic theft which is followed by legal norms. Plagiarism can also be considered one of the most widespread actions and consists of an ethical violation in research or writing, but on the other hand, we also have institutional policies that can tolerate or not punish the researcher when there is any small omission of plagiarism (Roig, 2015).

Patwardhan and Thakur (2021) elaborated on the issue of plagiarism, stating that, it is a paramount challenge to identify and define plagiarism because there is a dominant tendency of researchers to make adaptations of texts, but among the most problematic, and most researchers are not clear, it is self-plagiarism. From this, we understand that the ethics of education research also dictates self-citation as an ethical avoidance of repeating the materials, themes, attitudes, and opinions that we have presented before. It is understandable that the same person when he writes about a certain phenomenon, about which he has written before, has an approximate color of writing, syntax, and stylistic expression. Nevertheless, the approach to the problem, analysis, and synthesis must be presented from a different perspective than earlier texts. Nowadays, with the development of technology, we have software support, which allows us to identify plagiarism with all its specifics, including Turnitin, Anti-plagiarism, iThenticate, etc

Yadav (2021:92-93) has identified some of the habits that are directly related to ethics in the field of education, some of them are Falsification; Copying the text written by someone else, without mentioning the received source. Using the ideas of others without obtaining their permission; Use of confidential information without authorization; Changing the data, methodology, or results following the initial plans; Ignoring the human aspect of the participants; Publication of the same data in more than one research; Not considering conflicts of interest with any of the participants; Changing the results to prove the hypotheses presented.

A young researcher must know and understand that not always their research will have empirical support, not always your predictions and raised hypotheses will be verifiable. Despite the great desire of the researcher for the best possible performance, the respect of the subjects in the research, it does not matter if they are human or zoological beings, seems to be primary. Bearing in mind that education is directly related to many other social and natural sciences, it has been emphasized that any research that involves humans and animals should focus on preserving the physical side, namely suffering and damage or injury (Nuffield Council on Bioethics, 2005).

CONCLUSION AND DISCUSSION

Based on the data presented above, we can say that as much as a researcher has professional responsibility in his personal development, but also in the responsibility he has to bring innovation to society, he also has ethical responsibilities which I must respect and whose instructions I must follow with utmost precision. We are talking about ethics in the profession, which guides us toward honest research in the thorough sense of the word. When we stop and analyze ethics in education, we understand how wide and how many details this field contains.

Education is a broad component that includes many sub-components that have an essential role in its development. On the other hand, we have many actors who directly or indirectly are an integral part of the education system, therefore, a researcher, to act by ethics in this field, must be very conscious and responsible.

Listed below are some of the suggestions and recommendations based on ethics in scientific research in the field of education:

- Code of Ethics - to avoid mistakes in research, I would suggest that each of the institutions has a Code of Ethics, on which all researchers employed in that institution will be based. A Code of Ethics should contain all information on the competencies and tolerability available to a researcher. It is a crucial document that will facilitate the work of the researcher as it will give him clear instructions regarding the research activity.

- Determining the demographic or biographical data of the participants a researcher must determine the data he needs for research, but these data in no way dare to put any of the research participants in an uncomfortable position.
- Crystallization of the idea of education research a researcher must have a lucid fundamental scope of the research. It can begin from a general phenomenon and go towards the specific, which means that inductive and deductive elements are at work in determining the phenomenon that will be researched.
- To reap preliminary information on the involvement of the research participants in other research it is indispensable to know if the research sample has been part of any other research. The more prepared the sample is, the plainer the procedure of conducting research and respecting ethics.
- Accurate determination of the purpose and objectives a researcher must be very clear about the purpose and objectives of the research. When these two components are precisely defined on which all the research is carried out, even the respect of the ethics of the field of research, in our case in the field of education, is much easier and more controllable.
- Determination of research methods determination of research methods is also an ethical consideration. It is considered such for the reason that a researcher violates professional ethics when he does not determine the research methods under certain criteria such as the age group of the participants, the knowledge or experiences of the participants concerning the phenomenon being researched, how competent they are to answer on the phenomenon that is being researched, is the method used suitable for extracting the data that the researcher is aiming for, etc.
- Expectation the researcher must be prepared for any change in the procedure while conducting the research. He must be careful that the changes do not affect ethical and professional violations. During research, there might be events that were not foreseen by the researcher, therefore, based on the ethics of research in the field of education, he must know how to cope with them.
- Review of research work by others it is highly preferable, especially for young researchers, to have their research work reviewed by colleagues or other professionals in the field. At the moment when it is analyzed by another party, the possibilities of ethical violation are easier to identify and ultimately be canceled as a research process.
- Empathy a researcher usually focuses on researching phenomena on which they have interest, education, are employed, or have empathy. Empathy is a psychological phenomenon that enables the researcher to understand the emotional aspect of another, to think and feel based on the other's perspective, and simply to portray oneself under the other's skin. In the field of education, knowing that we have a very wide sample because it includes children from birth, empathy is the essential element to respect and preserve the dignity of the participants.

The ethical aspect of scientific research work has many subtleties to be handled scrupulously. The researcher must be aware of the responsibilities and obligations that he has during the realization of descriptive or empirical research. Everything must start from the research idea, namely what he wants to research and how important such research is for society. When we define research in the field of education, we must first understand the impact that research has on society, namely whether it is important for society or not. Whereas, when the topic of the research and its impact is determined, then the ethical aspect that supports that research must be very well thought out. The determination of ethical boundaries relies on the methods used and other ethical determinations, including anonymity, privacy, competence, preservation of things, duration of research, use of those data, etc.

Not always a researcher is professionally prepared to carry out research. Regardless of experience, a researcher in the field of education can face different phenomena of study because social relations function as a common integration, we can find correlations from the most diverse. So, all that is required of the researcher is to respect the ethics of research in the field of education and to have a clear research position. In such cases, regardless of professional preparation or dealing with a specific phenomenon in education, the researcher must use written materials or research done by others to create an initial range of the logical result or correlation on which to carry out the research

The extensive analysis of the participants that will be part of the research is also influential. In many researches in the field of education, the concept of ethics is adapted to the participants and the characteristics that those participants have. Assuming that our sample is children aged 4-5 years, meaning that the ways of conducting ethical research are different. With this age group, parental consent is necessary, and in certain cases, their presence during the research.

The ethical aspect in the field of education is strengthened and considered fulfilled when the researcher uses accurate sources, sources that are reliable regardless of whether these sources have been referred to you in physical form or electronic form. Application of different research sources with the same color of research as ours, supports, justifies, and gives voice to the research being done. Ethics in the field of education supports such an argumentative and explanatory perspective.

When conducting research, the researcher must have a personal attitude toward the phenomenon that is researching. Research is not just about presenting results without elaboration or elaboration. If such a thing happens, the ethical context is also in shadow. If it is a new field of study for the researcher, then he must read and get information until he creates an attitude or a

personal conviction. Once the researcher has established his attitude or conviction, he will reach acceptable correlations for the field of education and ethics in the field of education as well.

In conclusion, a researcher must be aware and entente, prepared for any kind of response or occurrence during the research. Things may not always go according to initial plans, even though those plans are very well structured. The researcher has an ethical obligation to stay organized, regardless of the outcome.

REFERENCES

- 1) All European Academies. (2013). *Ethics Education in Science*. ALLEA Permanent Working Group on Science and Ethics.
- Aronson, E. & Carlsmith, J. M. (1969). Experimentation in social psychology. In G. Lindzey and E. Aronson (Eds.), *The Handbook of Social Psychology* (2nd ed., pp. 1 79). Reading, MA: Addison-Wesley.
- 3) Aubrey, C., David, T., Godfrey, R., & Thompson, L. (2000). Early Childhood Educational Research: Issues in methodology and ethics. London and New York. DOI: 10.4324/9780203995877
- 4) Bailey, K. D. (2007). *Methods of Social Research* (4th ed.). New York: The Free Press.
- 5) Bazzul, J. (2016). *Ethics and Science Education: How Subjectivity Matters*. Springer. DOI:10.1007/978-3-319-39132-8
- 6) Douglas, J. D. (1976). Investigative Social Research: Individual and Team Field Research (1st ed.). SAGE Publications. Cavan
- 7) Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education* (6th ed.). Routledge/Taylor & Francis Group.
- 8) Chaddah, P. (2021). Ethics in Research Publications: Fabrication, Falsification, and Plagiarism in Science. *In Academic Integrity and Research Quality* (pp. 18 33). New Delhi: University Grants Commission.
- 9) Cooper, D. C. and Schindler, P. S. (2001) Business Research Methods (7th ed.). New York: McGraw-Hill.
- 10) Fine, G. A. and Sandstrom, K. L. (1988). *Knowing Children: Participant Observation with Minors*. SAGE Publications, Inc.
- 11) Gorard, S. (2001). Quantitative Methods in Educational Research: The Role of Numbers Made Easy. London: Continuum.
- 12) Kimmel, A. J. (1988) Ethical issues in behavioural research: Basic and Applied Perspectives (2nd ed.). Newbury Park. Blackwell Publishing.
- 13) Lakhotia, S. C. (2021). Philosophy and Ethics of Research in Science. *In Academic Integrity and Research Quality* (pp. 8 17). New Delhi: University Grants Commission.
- 14) Nuffield Council on Bioethics. (2005). *The ethics of research involving animals*. Nuffield Council on Bioethics.
- 15) Patwardhan, B., Thakur, A. (2021). Academic Integrity and Research Quality. Academic Integrity and Research Quality. University Grants Commission
- 16) Prakash, P. (2021). Research Ethics in Social Science. *In Academic Integrity and Research Quality* (pp. 34 53). New Delhi: University Grants Commission.
- 17) Riquarts, K. (Ed.). (1987). Science and Technology Education and the Quality of Life. Institute for Science Education at Kiel University.
- 18) *Roig, M. (2015). Avoiding plagiarism, self-plagiarism, and other questionable writing practices: A guide to ethical writing.* Retrieved from:

https://www.semanticscholar.org/paper/Avoiding-plagiarism%2C-self-plagiarism%2C-and-other-A-Roig/a018c5a4737808d095d1a8cc856aa41899cfc3f5

- 19) Sim, J., & Waterfield, J. (2019). Focus Group Methodology: Some ethical challenges. *Quality and Quantity 53*(1). DOI: 10.1007/s11135-019-00914-5
- Yadav. M. Y. (2021). Academic Dishonesty and Scientific Misconduct. *In Academic Integrity and Research Quality* (pp. 91 94). New Delhi: University Grants Commission.



There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0)

(https://creativecommons.org/licenses/by-nc/4.0/), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.