Ethical Issues in Educational Research

Abstract

Ethical issues are important aspects of research that need to be followed to make research practice honest and transparent. The researcher must follow specific rules and ethical guidelines to meet the research community's and academia's expectations. It can pave the path for fairness and integrity in the field of research. The researcher can follow the simple and basic ethics rules before conducting a study. In this research paper, the authors have made a solemn effort to delineate the critical ethical issues and how they can degrade the quality of research and cause trouble to any investigator. This paper focuses on ethical issues, ethical standards, guidelines, and proper use of artificial intelligence so that no researcher faces any problem before, during, or after the study. This paper is a sincere effort to let the researcher know the importance of ethical issues and standards. As technology expands and its integration into education, teaching, and research emerges, the authors have enumerated how to use artificial intelligence in educational research. Artificial intelligence has created a sincere problem for researchers to maintain integrity, originality, quality and human wisdom.

Keywords Ethical Issues, Ethical Standards, Ethical Guidelines, Artificial Intelligence, Educational Research

Introduction

Educational research is a methodical exploration of educational systems, practices, and policies that strive to upgrade student learning outcomes and educational experiences(Kour, 2011). The primary objective of educational research is to recognise efficacious teaching and learning approaches, assess educational programmes, and influence educational policy determinations. Research has endeavoured to establish knowledge-based evidence that can contribute to refining educational practices and ultimately ameliorate student achievement(Johnson & Christensen, 2012). Educators facilitate informed decisions after conducting educational research to fulfill the heterogeneous needs of learners by scrutinising sundry facets of education such as curriculum design, instructional techniques, and assessment methods (Ethical Considerations for Including Women as Research Participants, 2016).

Ethics

Ethics are the guiding principles that assist in safeguarding the things that people value (Johnson & Christenson, 2012). It is widely accepted and has well-defined parameters and guidelines based on morality that direct researchers, academicians, and practitioners to comply with fairness while involved in research. (Velasquez et al., 1987/2010). The word 'ethics' originates from the French word ‘ethique’. It was first used in the 14th century as a discipline concerned with moral obligations. Moreover, ethics has been termed moral philosophy, and ethics takes into account the system of moral values or principles on any subject matter (Singer, 2023).Ethics exhibit the way for right or wrong in human conduct, covering beliefs about what is ethically acceptable (D’Angelo, 2012). It is an area of expertise that comprises the notion of right and wrong behaviour based on rules and regulations (Dyer, 1988). Perkins (2006) views ethics as understanding the foundation and structure of morality, guiding individuals and groups on how to believe in society. A structure of moral doctrines affects our ways of living related to whatever is upright for individuals and society. McNamee(2017) views ethics as a division of philosophy that speaksinquiries about actions fostering a claim on morality and studying the

values and customs of individuals. It has been applied to numerousarenas of life, such as economics, business, politics, and the environment (Brady, 2018).

Importance of Ethics in research

However, it is essential to note that ethical considerations in research are crucial to guard the rights and welfare of participants participating in research, ensuring their privacy, dignity, and autonomy (Glattke, 2007). By prioritising ethical considerations, researchers can establish trust and maintain the integrity of their studies. Additionally, ethical practices can lead to more accurate and unbiased data, as participants are more likely to provide honest and reliable responses (Anonymous III., 1995). While ethical considerations in research are essential, focusing on these considerations may hinder the progress of educational research and limit its potential to improve student achievement(Calman, 2002). For example, strict ethical guidelines may restrict researchers from conducting specific experiments or gathering data from vulnerable populations, which could lead to limited findings and a lack of understanding of the diverse needs of learners. However, balancing preserving ethical standards and advancing educational research is essential. By adhering to ethical considerations, researchers can confirm that their results are consistent, valid, and relevant to real-world educational settings, ultimately leading to more informed decisions that benefit all learners.

Key Ethical Issues in Conducting Educational Research

The first critical ethical issue in conducting educational research is informed consent. For example, researchers must ensure that participants know about the study, the possiblethreats involved, and their choice to take out at any time. Additionally, researchers should obtain informed consent from participants regarding how to share their data with other researchers or organisations. The second critical ethical issue is confidentiality and privacy. This approach includes taking measures such as using secure storage systems and anonymising data during analysis. By addressing these ethical concerns, researchers can build a rapport with participants and uphold the doctrines of kindness, ensuring the well-being and rights of individuals involved in the study.

Informed Consent

Archard (2008) emphasises informed consent as a fundamental principle of research ethics, which requires researchers to obtain voluntary and informed consent from individuals before participating in research.This means that participants must be fully aware of the objective and aim of the study, the procedures, the possible risks and benefits, as well as their rights and ability to withdraw at any time without negative consequences.Informed consent is crucial for upholding autonomy and protecting the well-being and rights of participants.

The participantsprovided consent to guarantee that they had the autonomy to make an informed verdict about partaking in a study, and they respected their autonomy and right to self-determination. Without informed consent, researchers risk violating ethical principles and potentially causing harm to participants(Cohen, 2012). By obtaining consent, researchers can establish trust and maintain the integrity of their research, ultimately leading to more reliable and valid results. For example, in a clinical trial testing a new medication, obtaining informed consent involves explaining to participants the purpose of the study, the possible side effects of the medicine, and their choice to take out of the

study at any time if they are affected by adverse reactions. This confirms that participants are aware of what they agree to and allows them to make autonomous decisions regarding their participation. Without informed consent, participants may be unknowingly subjected to risks or forced into research against their will.The nocebo effectoccurs when individuals experience adverse side effects or worsening symptoms after exposure to a placebo. Depression can occur when participants in a study are informed about potential side effects and develop symptoms despite receiving an inactive substance (Cohen, 2012). To mitigate the nocebo effect, researchers must provide clear explanations about the purpose of the study and potential side effects and emphasise participants' right to withdraw if they experience any adverse effects(Sallam, 2015). Thisensures that participants are fully informed and can make autonomous decisions about their participation, avoiding any unintended harm from the nocebo effect.

Oluchi (2013) opined that participants' understanding about the purpose and procedures of study can help alleviate concerns and build trust, leading to greater participant engagement and cooperation. Informed consent also promotes ethical responsibility and respect for individual autonomy, as it acknowledges the rights of participants. By obtaining consent, researchers demonstrate their commitment to upholding ethical standards and prioritising their participants' well-being and rights. It allows them to make an informed decision about whether to take part based on their circumstances and beliefs. Ultimately, informed consent is a crucial step in conducting ethical research and maintaining the integrity of the scientific community.

Confidentiality and Anonymity

Confidentiality and anonymity concerns are also crucial to consider when conducting ethical research. Participants wereguaranteed that their data would be kept confidential and that their individualities would remainunidentified in any circulatedfindings or reports. It protects their privacy and encourages honesty and openness in their responses, as they can share their views and experiences without fear of retribution or judgment(Wiles et al., 2008). Respecting participants' confidentiality builds a strong foundation for ethical research and helps maintain the scientific community's integrity. Furthermore, participants can beconfident that their information will be picked up with extremecaution and security. All information collected during the research process will be kept safe and only accessible by authorised personnel(King et al., 2014). Strict protocols, including encryption and limited access controls, should be followed to protect participants' personal information. This commitment to data security is essential for establishing trust between researchers and participants, fostering a collaborative environment where individuals feel comfortable sharing their experiences and opinions.

By prioritising confidentiality, researchers can create a safe space for participants to freely express themselves, ultimately leading to more accurate and insightful findings(Dougherty, 2021). For example, in a study on mental health stigma, researchers could protect participants' personal information by using encrypted online surveys and restricting access to only authorised personnel. Individuals can openly share their experiences with mental health without fear of their information being compromised or disclosed. The confidential nature of the study encouraged participants to provide honest and detailed responses, providing researchers with valuable insights into the impact of stigma on individuals' lives. Rodgers and Nolte (2006) found that encrypted online surveys and restricted access may reduce the risk of unauthorised access.However, there is still a possibility of data breaches or hacking(Hammouchi et al., 2019), which may discourage participants from sharing their experiences due to concerns about compromised personal information.

Researcher Bias and Objectivity

The tendency of researchers to be influenced by their individualopinions, principles and choices in the planning, application, investigation and elucidation of a study is referred to as researcher bias(AERA et al., 1985).This bias can lead to distorted or inaccurate findings and conclusions. To minimise researcher bias, researchers need to strive for objectivity by conducting studies in a neutral and unbiased manner, using rigorous methodologies, and being aware of their biases. Ross (2013)defines objectivity as being impartial, unbiased, and free from personal opinions or preferences. In research, objectivity is essential for producing reliable and valid results (Forster, 2017).

By practising objectivity, researchers can ensure the credibility and integrity of their findings and conclusions.Objectivity is crucial to the effectiveness of a survey(Endacott, 1994). The researchers needed to remain objective throughout the analysis process, ensuring that their personal beliefs or biases did not influence the interpretation of the data. By maintaining a neutral stance, researchers can ensure that findings correctly reflect participants' experiences and provide valuable insights into the sensitive topic of mental health (Elliott, 1975). This objectivity helps build trust with participants, encouraging them to openly share their experiences without fearing biased interpretations. For example, in a study on the effectiveness of therapy for individuals with anxiety disorders, researchers may use objective measures such as self-report questionnaires and clinical assessments to gather data. By remaining neutral, researchers can accurately analyse the data and determine whether the therapy significantly improved participants' symptoms. Esarey and Valdes (2020) state that an unbiased approach ensures that results are valid and reliable, ultimately contributing to the development of evidence-based treatments for mental health conditions. Moreover, researchers' biases toward specific treatment approaches or preconceived notions about anxiety disorders may influence their interpretation of the data, potentially leading to biased conclusions and ineffective treatment strategies.

Identifying and managing potential biases in research is crucial for accurately understanding and addressing social anxiety (Xu et al., 2022). Implementing rigorous research methodologies, such as double-blind studies and peer review, can help minimise bias and ensure the validity of findings(Elliott, 1975).Additionally, involving individuals with lived experiences can help reduce the stigma surrounding social anxiety by highlighting the experiences of real people and fostering empathy and understanding in society (Endacott, 1994). This collaborative approach between researchers and individuals with lived experiences can also lead to the development of more accurate and comprehensive diagnostic tools for assessing social anxiety. By gaining insights from those who have first-hand knowledge of the disorder, researchers can refine existing assessment measures and create new ones that capture the nuances and complexities of social anxiety. In turn, this approach can enhance the accuracy of diagnosis and ensure that individuals receive appropriate treatment based on their specific symptoms and needs(Xu et al., 2022).

Ensuring objectivity in data collection and analysis is another vital aspect of research ethics. By implementing standardised protocols and minimising bias, researchers can obtain reliable and valid data that can be employed to develop effective interventions and strategies (Hill, 1998). Additionally, conducting longitudinal research can facilitatevaluable insights into the durable effects and trajectories of social anxiety, enabling clinicians to tailor individualised treatment plans better (McNiece et al., 2004).

It is essential to ensure objectivity in data collection following a set of steps. To ensure objectivity in data analysis, researchers should follow a systematic and transparent approach. Before collecting data, they should clearly define their research question and hypotheses. It is crucial to use random sampling techniques to minimise bias and ensure sample representativeness. During data collection, researchers should adhere to standardised protocols and avoid any personal biases or preconceived notions (Niemierko & Goitein, 1990).

Additionally, appropriate statistical methods should be used to analyse the collected data, ensuring the accuracy and reliability of the results. Cleaning and organising the data, checking for outliers or errors and selecting suitable statistical tests are crucial steps in this process(Fawson et al., 2006). By following these steps, researchers can enhance the validity and credibility of their findings and make their research more robust and trustworthy. Furthermore, researchers should also consider the limitations of their study and acknowledge any potential confounding variables that may affect their results. Explaining the statistical methods is essential, allowing for transparency and replicability in future studies.

Additionally, peer review and collaboration with other experts in the field can further strengthen the reliability of the research findings(Alam & Patel, 2015). This approachincludes identifying any biases that may influence the data collection process or introduce errors in the analysis. By addressing these limitations, researchers can provide a more comprehensive understanding of the research outcomes and promote accurate interpretation of the results.

Transparency and Honesty

Transparency refers to providing transparent and open information about a study's methods, procedures, and results, allowing others to assess the validity and reliability of the research. Honesty involves truthful and accurate reporting of findings and acknowledging limitations or biases(Rezaeian, 2021). By practising transparency and honesty, researchers promote trustworthiness in their work and contribute to the integrity of the scientific community. It is also crucial to ensure the integrity of scientific research throughout the research process.

The survey included disclosing conflicts of interest, reporting methods and results accurately, and sharing any potential biases or limitations of the study(Byerly, 2022). By doing so, researchers can build trust within the scientific community and allow for critical evaluation and replication of their work. In addition, open and transparent research practices promote collaboration and facilitate the exchange of ideas, leading to more robust and reliable scientific advancements (Gelman, 2017). For example, a researcher who studies the effects of a new drug on a particular disease should thoroughly disclose any financial ties they have with the pharmaceutical company that produces the drug (Nickel, 2014). All the steps taken during the study were accurately reported, such as participant selection, data analysis methods, and reproducibility. Furthermore, discussing potential limitations or biases in the research, such as sample size or confounding variables, allows other scientists to evaluate the findings in a better way.

Role of Institutional Review Boards (IRBs)

The function of Institutional Review Boards in reviewing and supervising research studies with human participants is vital. Ensuring that the projected research complies with ethical standards and protects the rights of participants is an essential function (Kennedy, 2005; Levine, 1989; Pritchard, 1994). IRBs assess the study design, methodology, informed consent process, data collection procedures, and any potential risks or benefits associated with the research. The authors also evaluate the potential benefits and harms of the study and assess whether the research design is sound(Pritchard, 1994). In addition to these responsibilities, IRBs have the authority to approve or reject research proposals based on their assessment of ethical considerations(Lee, 2002). Safeguarding participants' physical and psychological well-being is a top priority for the IRB.

They shall assess the possible risks and benefits of such a study, considering whether appropriate measures are in place to ensure that participants are not harmed. Moon (2009) considered the informed consent process and guaranteed that participants understood the proposed research and any latent risks. The IRB also considers the confidentiality and privacy of participants to ensure that their identities and personal information are protected throughout the study(Nickel, 2014). If necessary, providing support and resources for participants is another vital role of the IRB. This approach may include offering counselling services for participants who experience distress or providing information on community resources that can assist with any adverse effects. Additionally, the IRB may require researchers to develop a clear plan for obtaining informed consent from the participants to ensure that they are entirely aware of the study and its possible hazards before participating(Chapman-Cliburn, 1986). Overall, the IRB plays a crucial role in protecting the well-being of participants and upholding ethical standards in research.

Ethical Codes and Standards

Ethical codes and standards provide clear guidelines for researchers to conduct their studies ethically and responsibly. By adhering to these codes and standards, researchers can guard the rights and well-being of participants and maintain the integrity and credibility of their research findings(Schutz, 1973). Additionally, ethical codes and standards help establish trust between researchers and the public, as they demonstrate a commitment to conducting unbiased and objectiveresearch (American et al. Association, 1992).Without the oversight of an IRB, there may be a higher risk of unethical practices occurring in research, which can undermine the credibility of the scientific community as a whole. APA 7th edition should be followed during in-text citation and referencing.

Ethical standards have been developed to guide the conduct of research that is ethical. The Code of Ethics, updated in 2011 as the Code of Ethics (American et al. Association, 2011), requires values and moral ideals to be maintained in educational research. The following are considered in terms of several essential ethics and principles.

Ethical Standards

Ethical standards are the enforceable rules for researchers in arriving at an ethical progression of the act. The following standards are set by the AERA committee:

Permission

The participants involved in the study must be informed about the research objectives, the risks involved, and the potential consequences. Oral or written permission was obtained from the participants before inviting them to participate in the research study. In addition, they must be kept informed about the significant changes in the course, nature, purpose, procedure, risks, benefits, and limits of confidentiality ofresearch activity, which might influence their willingness to participate in the study. Agreeing to participate in the research activity was termed informed consent.

Truthfulness

No hidden objective, methodology or data reporting compromises the researcher's or the participants' trust. Deception is used when participants' reluctance to provide truthful data is considered to indicate a compromised state. The data can then be obtained from the participants based on partial truth.This was accomplished by a debriefing session carried out after the completion of the study, where all aspects of the study and its causes for deceptions were discussed with participants (Philips, 1994). The research process aims to restore trust among participants, students and customers.

Freedom to Withdraw

At all times during the study, participants had complete freedom of withdrawal. Participants or clients were assured at the beginning of the research study that they could easily withdraw from the study at any time if they did not feel relaxed during the research process or if the study targeted their emotional or psychological state.

Protection of Physical and Mental Harm

There could be specific issues that may disturb the research participants. Questioning these patients on such sensitive issues may put their emotional, mental, and physical well-being at stake. When such unanticipated consequences occur, necessary remedial steps are undertaken to minimise the harm.

Confidentiality, Anonymity and Privacy

The participants are entitled to confidentiality. They may be exposed to definite threats when acquiring information or data. Therefore, there is a need to provide them with more excellent protection of their identities, confidentiality and disclosure.The obtained data should not be misused for fraudulent practices. Information sought confidently from the research participants, students, clients, or colleagues should be used judiciously. The limits of protection and legislative provisions should be communicated to stakeholders. Information that could lead to identifying a source or research participant should not be made public in research reports.

Non-discrimination

The ethical code stands tall against discrimination among research participants based on race, caste colour, faith,area, marital status, socio-economic status, gender, age, language, or sexual orientation.

Harassment

Non-discriminatory behaviour paves the way for cooperation with research participants, students, colleagues, or employees. It is unethical to harass or collect sensitive data from research participants to take advantage of their research study. There should be no misuse or abuse of knowledge, data means or sources for contemporaries, learners, administrators, or grant agencies.

Non-Exploitation

Exploitation abuses research participants, students, colleagues, or anyone to gain professional, personal, or economic advantage. Education researchers are directed not to exploit their interpersonal relationships directly or indirectly.

Authorship Credit

Due credit should be given to the authors whose ideas or research works are utilised in the research activity. Researchers must not practice fabrication, falsification, or misinterpretation of authorship. To take into account their contributions to the field of study, it is appropriate to establish a list of authors as follows: primary author and secondary author. Using assistance from other authors while preparing a research report is only ethical if the authors are duly credited. Plagiarism is an unethical task. This occurs when the author uses the idea, work, or even a tiny detail of another author's work without crediting them. Proper in-text citations and references to the work should be mentioned in the research report to circumvent the ethical issue of scholarly theft. Plagiarism can be avoided by summarising the words, quotations, or definitions contributed by others and citing the author’s name, source, and page number. In addition, if the authors presented the work they produced in their previous publication as original work in another publication, the work was considered 'self-plagiarism. Consequently, in the new study plan, it is also necessary to cite the source of the previous work.

Intellectual Ownership

Researchers are the only owners of the work they produce or to which they have a contribution to the field of the study. Copyrights, patents, and trademarks, known as intellectual property, are owned and protected by the owner. Permission to use the intellectual property of others must be sought, and due credit should also be given to the owner.

Technical Proficiency

A high level of scholarship and an ability to think critically and professionally are necessary for a research project. Before starting any research project, researchers should be aware of their intellectual dimensions, proficiencies and experience to maximise the available resources.

Integrity

The investigator should exhibit integrity, reliability and humility during the study.As part of the study effort, objectives, data and facts must be presented transparently.

Scientific, Intellectual, and Professional Accountability

One of the most critical components of education research is accountability. The most crucial element of good scientific practice is respect for other researchers' differing views, professional ethics and theoretical and methodological approaches.

Respecting Rights, Dignity, and Uniqueness

Respecting the rights and dignity of study participants is crucial. Prejudice or bias on the researcher's part against a particular region, gender, ethnicity, culture, caste, creed, or socio-economic status of the study participants should be avoided.

Social Responsibility

The primary task of the researcher is to consider that the findings produced do not jeopardise research or community opinion, as each study creates generalizability for a particular society or group.

Artificial Intelligence and Ethical Issues in Educational Research

Artificial intelligence (AI) has permeated various facets of education, profoundly influencing how research is conducted, personalised learning environments, and improved educational outcomes. The potential of AI-driven tools and techniques is immense for revolutionising educational research, offering new ways to gather and analyse data, personalising learning experiences, and improving educational outcomes. However, this integration of AI in educational research raises substantial ethical concerns that necessitate thorough examination and the formulation of ethical guidelines.

Ethical Guidelines for the Use of Artificial Intelligence in Educational Research

To address these ethical challenges, researchers in the field of education and artificial intelligence(AI) should adhere to the following guidelines:

Ethical Oversight

Ethical review boards or committees specifically focus on artificial intelligence in education to evaluate research proposals, assess potential risks, and ensure compliance with ethical principles.

Transparent Data Usage

The participants were informed of how their data would be collected, used, and kept. Participants could opt-out or withdraw their data at any time.

Bias Mitigation

Artificial intelligence models for bias were continuously monitored, and proactive measures were taken to correct and prevent bias from affecting the research outcomes. This approach may include diverse training data and algorithmic fairness audits.

Interdisciplinary Collaboration

Collaboration with experts from diverse fields, including ethics, education, and computer science, can ensure a comprehensive understanding of the ethical implications of artificial intelligence in educational research.

Learning of Artificial Intelligence

Education and learning of artificial intelligence provide researchers, educators, and students with a sense of cognisance of the ethical use of artificial intelligence in education to foster a culture of responsible artificial intelligence adoption.

Conclusion

Ethical concerns are serious. The researcher must adhere to ethical guidelines and be aware of ethical issues before conducting a study. Researchers in the field must prioritise ethical principles such as respect for human dignity, beneficence, justice, honesty, and transparency while navigating the complex terrain of AI-driven educational research. By doing so, they can harness the power of artificial intelligenceto enhance educational outcomes while safeguarding the rights and well-being of all stakeholders in the educational ecosystem.

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