





Vol. 05 Issue 07 July - 2022

Manuscript ID: #0663

ETHICS AND EDUCATION: TOWARDS A REORIENTATION OF VALUES IN TERTIARY INSTITUTIONS IN NIGERIA

Paulinus Chikwado Ejeh, PhD

Philosophy Unit, General Studies Division, Enugu State University of Science and Technology Email: paulinus.ejeh@esut.edu.ng +234 7038546333

Corresponding author: *Paulinus Chikwado Ejeh Email: paulinus.ejeh@esut.edu.ng

ABSTRACT

Moral maturity is a mark of human development and the moral development of the citizens of every nation must precede other aspects of development otherwise the process of development would be obstructed by immorality of the citizens. In the same vein, any education that is devoid of morality is incomplete, meaningless and harmful to both the individuals who acquire it and the society in which they live. This paper is therefore, a critical examination of the role of ethics or morality in education. Through the historical and analytical methods, the paper discovers that there is presently a dearth of moral probity in our educational system. It then advocates for a re-orientation of values in our tertiary institutions through a re-introduction of moral education in the teaching curriculum of every tertiary institutions in Nigeria. The paper recommends that Nigeria should get her priorities right by giving primacy to morality in her educational and developmental programmes.

KEYWORDS

Ethics, Morality, Education, Development, Tertiary institution



This work is licensed under Creative Commons Attribution 4.0 License.

Introduction

The Nigerian society today exhibits serious and alarming symptoms of moral decadence in every aspects of her life. In the tertiary institutions, morality is fast becoming a strange or foreign word. This is so because approaches to moral education in Nigerian schools have been found to be grossly inadequate and incapable to cope with or handle the contemporary moral crisis prevalent in Nigeria. Consequently, immoral activities and behaviours have permeated and adversely affected the Nigerian educational system, thereby violating and making mockery of the entire National Policy on Education. The National Policy on Education which is the philosophy of Nigerian Educational system is stated as: the building of –

- A free and democratic society
- A just and egalitarian society
- A united strong and self-reliant nation
- A great and dynamic economy
- A land of bright and full opportunities for all citizens (FRN, 1999).

In the above, the second policy - a just and egalitarian society is the focus here as it concerns or affects morality and education. In fact, a closer look at the overall National Policy on Education would reveal that they are bound and built on the foundation of morality or moral probity. This is because, sincerely and logically speaking, none of the policies can be fully realized without a sense and application of morality. A just and egalitarian society as contained in the policy above calls for a society in which there is justice and equity. This can only be possible if morality forms the foundation of our educational system. Foundational problem of Nigeria can be traced back to lack of moral insights among other things. If according to Immanuel Kant, we as moral agents treat our fellow men as ends in themselves and not as means to our own end, then there will be justice and equity in our society because then we recognize the needs of others and not just about ourselves alone.

The prevalent moral deficiencies in our tertiary institutions are signs that the National Policy on Education in Nigeria has been clearly defeated. The problem is not that there is lack of morality in our tertiary institutions currently; rather the problem is that even the stake holders seem helpless and confused about how to tackle the hydra-headed problem of immorality that has spelt its name in almost every facet of the contemporary society. It is for this helplessness and confusion that this paper attempts to re-emphasize the need for morality or moral education in our tertiary institutions as well as highlight the irreversible effects of lack of morality on our students as well as on the society in general. Hence the paper argues strongly that the remedy for lack of morality in our tertiary institution is a return to our values; a re-orientation of values – traditional African values that hitherto had served as guides for a moral living for every society in Africa.

Definition and Meaning of Ethics

Ethics is sub-division of a branch of philosophy called axiology, and axiology is the study of values. Ethics, according to Eliot Sober (1991) is "the philosophical study that is concerned with the nature of good and bad, right and wrong, justice and injustice". For Sober, ethics is the systematic study of the fundamental principles of the moral law, the branch of philosophy which deals with the morality of human actions. The philosophical study of ethics also seeks to give us general guidance concerning what to do, what to seek, and how to treat others. Ethics shows us the way to behave in order to live happily. The essence of ethics is to enable man to fully understand the reasons underlying the approval and disapproval of both his actions and that of his fellow men. In other words, ethics, as a systematic study, concerns itself with two main tasks: first, that of deciding general principles on which ethical terms, i.e. good, bad, duty, etc., are to be applied to anything and, secondly, with deciding exactly the meaning of these terms.

In our every-day conversations or discussions, the term 'ethics' is frequently used as a more consensual word than 'morals' which is less favored. Morals refer to human behavior where morality is the practical activity and, ethics describes the theoretical, systematic, and rational reflection upon that human behavior (Churchill, 1982). Morals, values, and ethics are strongly attached to society, spirituality and culture. Basically, there are three meanings of ethics. Firstly, ethics is commonly taken as a synonym for morality, the universal values and standards of conduct that every rational person wants every other to follow. Secondly, ethics is a well - established branch of philosophy that studies the sources of human values and standards, and struggle to locate

them within theories of human individual and social condition. Thirdly, professional ethics, and it is not universal nor is it ethical theory; it refers to the special codes of conduct adhered to by those who are engaged in a common pursuit (Chowdhury, 2016).

The knowledge of what is morally right and what is morally wrong helps to mold our conduct in such a way that we are enabled to live in accordance with the norms of the moral law. It also helps in cultivating in us a sound way of determining and judging actions that are morally right or wrong. This will be easily achieved when we recall that according to St. Thomas Aquinas (a theologian and philosopher), the moral law is that which obliges all men to do good and avoid evil; an attitude which he says, is inborn in every rational being. Therefore, morality is the foundation and bedrock of every society. Without it, man's growth and development would be incomplete or simply impossible.

Basically, the lack of proper moral insight may be one of the explanations for the social upheavals and crisis that are prevalent in our societies today. This is so because moral issues have been seriously neglected, and such neglect has had tragic effects on the lives of men and their welfare. However, one thing that is basic to human relationships and on which human relationships thrive is, the idea of performing morally right actions or doing things which are good to all men. But then, the questions we need to ask are these: What is the motive behind our actions? Do we perform an action for the sake of an ultimate goal or because the society expects our actions to follow a particular pattern? Or do we simply act because the law obliges us to do so?

Ethics is a requirement for human life. It is our means of deciding a course of action. Without it, our actions would be random and aimless. There would be no way to work towards a goal because there would be no way to pick between a limitless numbers of goals. Even with an ethical standard, we may be unable to pursue our goals with the possibility of success. To the degree which a rational ethical standard is taken, we are able to correctly organize our goals and actions to accomplish our most important values. Any flaw in our ethics will reduce our ability to be successful in our endeavors and to function properly in the human society.

Definitions and Meaning of Education

The term education is from the Latin word *Educare* which means to *rear* or to *train*. Education denotes to lead, draw out, or bring up a child. The child then is the central point of education. Education can also be described as a product, a process, an institution or a discipline. As a product education measures the amount or quality of knowledge and experiences accumulating at a given time and at a particular level. As a product education lays emphasis on the quality of education. It refers to change in behavior. As an institution education is said to be attached to institutional structures of knowledge. Education is essentially regarded as a means to an end. Education therefore can be summed up as a process, an instrument and the aggregate of knowledge inculcated and assimilated for developing a person's mental, physical and spiritual abilities, attitudes and other forms of behaviours.

Among many factors that distinguish man from animals, and which covers all the experiences of man by which knowledge is acquired is education. As human beings, we all started learning as soon as we were born, and we continue to learn until we die. Thus, education and life cannot be separated, for it impinges on our lives all the time. Through education, man is trained to become effective and contributing member of the society. Many people have defined education as schooling, but schooling of course is not education. Education transcends the four walls of a school and can take place anywhere a person finds himself or herself, in different shapes and forms (Ejeh & Arum, 2021).

Education involves all phases of learning activities embarked upon by human beings. According to the progressivists' view, education is not restricted to the school, but includes all those incidental and activities that society uses to pass on values, attitudes, knowledge, and skills. Education in this sense, therefore, becomes extensive and includes the works of many institutions of society such as the family, the school, the church, the working place, and the entire community. Hence, education is concerned with improvement. It undertakes to change a man or woman from what he or she is to what he or she might be or ought to be. It follows then that the process of education involves change – the change of the educated and also the educator. For George Hegel (1956), "education is a progressive perfection of humanity from a simple, uncultivated, primitive state of mind through the hard discipline of labour and toil to the consciousness and exercise of freedom." According to Plato, "a good education consists in giving to the body and the soul all the beauty and all the perfection of which they are capable."

John Dewey (1938), an influential modern educator sees education as a reconstruction of experience which assists the individual in the direction of subsequent experience.

Ethics/Morality and Education

As noted above, ethics is the branch of philosophy which tries to probe the reasoning behind our moral life. The critical examination and analysis through the concepts and principles of ethics according to Reiss (1999) helps to justify our moral choices and actions. Ethics is concerned with what is good as distinct from what is bad; what is right and what is wrong. It also concerns what is duty and what is obligation. The connection of all these to education is that generally, man is educated in order to enable him understand the positive and negative aspects of life and be responsible for choosing any of them. And because norms or standards are established by society, there is a link between value-judgment, values and morals. All these are mutually related to education. When society establishes its norms of good and bad behaviour, it is making a value-judgment (Ayeni, 2012). Hence, as Kang & Glassman (2010) rightly noted, morality and ethics are part of a way of life and cannot be separated from all other aspects of life experiences

Education then, helps man to appreciate other people in the society, committee of nations and the human race in general. Hence man is principally educated to benefit himself and the society in order to develop social attitude and values which are important in the sustenance of the individual and the society. The development of positive social values and attitudes helps to improve man's personality and character which is the trademark of all educated persons. Because man is a social animal, he cannot be confined to solitary life; hence he must abide by the social demands of his environment. Since the foundation of every human society is built on the principles of morality, man being capable of good and bad, must be prepared through education to learn to choose to be good. Therefore, ethics in education helps run the system smoothly. It sets standards that are applicable and protects the interest of both the learner and tutor. Teachers and all other stakeholders are responsible to help develop the personality of students and act as mentors to them to influence their personal development and behaviour.

The Role of Morality in the Nigerian Educational System

The philosophical basis of education in the Nigerian society is based on the belief that man should be trained to take care of himself at all times and advance himself in his community at all cost. This training includes the training of the individuals to cultivate moral habits or principles that would enable man to succeed in his bid to advance himself in his community. Equally, the purpose of education in the Nigerian society was to train individuals with functional skills that would help them live peacefully and contribute to the overall development of their society and their fellow men.

The role of morality in the Nigerian educational system can be approached from two perspectives viz-a-viz the student or child and the teacher or mentor. From the student's perspective, the aim or the role includes the development of character and inculcating of respects for elders and those in position of authority. This is why the mission statements of every University in Nigeria is to produce graduates who are worthy in character and learning. Character or character formation therefore, is the primary purpose of education. On the part of the teacher or mentor, the role is to provide guidance and serve as moral mentors to the students. In other words, teachers are supposed to be moralists who impart morals on student's behavours.

Morality no doubt is the bedrock and the foundation of every human society. The society itself prescribes the norms and principles of behaviours expected from every member of the society. These principles of behaviours when imparted on the individuals go a long way to affect the school or the educational system positively. In other words, while the society influences the school system, the school system equally affects the society later whether good or bad. This is why the role of morality in the Nigerian Educational System is quite indispensible and cannot be over-emphasized. It is because the hope of a better society lies in the hand of or within the domain of our educational system that the Nigerian Policy on Education includes and emphasizes the role of morality in the Policy when it talks of "a just and egalitarian society." Without morality in our Educational System, the whole idea and vision for learning, character formation and a better society will be meaningless. This is because, generally, learning or education without good character would be like a car without a break system. Just like the break system controls the movement and direction of the car; stopping it when it moves or swerves out of order, so does good character influences, controls and directs education to

achieve the highest value. This is why at the end of a degree programme or course, the student (learner) is evaluated not only by the degree to which he/she has excelled in learning (his chosen discipline), but most importantly by how much his/her character has been positively molded to conform with both the institution's ethical or moral standard and the general and accepted moral principles of the society. Any deficiency in character might cause the student to forfeit his/her degree certificate.

Thus morality is a *sine qua non* for learning and or for the acquisition of higher degrees in our tertiary institutions. For this reason, the role or morality in our educational system include molding of character, instilling virtues and maintenance of moral well-being of the learners. The educational stakeholders – the educational system or management in turn should be seen as the mid-wife that assists the students to give birth to good character and virtuous living.

The Need for Moral Education

From the fore-going morality has been identified as an important factor in our educational system. Unfortunately, a cursory look at the level of decadency in our educational system or tertiary institutions indicates a great and urgent need for a more pragmatic moral education based on the traditional African values that bears the mark of our culture and customs. In the past, Moral Education was included in the tertiary institutions' academic curriculum and taught to all students especially in the first year of a degree programme. Unfortunately, due to certain reasons beyond the scope of this paper, Moral education was systematically and craftily removed, stopped or de-emphasized in our tertiary institutions which led to its eventual death. The amount of immoral behavours and unethical activities in our tertiary institutions attest to the fact that moral education is no longer part of the school curriculum, and that there is a need for its re-introduction.

The following are observable facts that point to the level at which lack of morality or Moral Education has caused almost irreversible moral havoc both from the activities and in the lives of the students and the caregivers in our Educational System:

Endemic Dishonesty

The concept of dishonesty includes vices such as lying, cheating, fraud, deceit, lack of trust, and other forms of corruption. In our Educational System all the aforementioned vices and more are quite rampant. Students involve themselves in various corrupt or dishonest practices or activities in order to pass exams. They not only cheat during quizzes and exams but also tempt lecturers with money for marks. In fact, cheating during exams and 'sorting' as it is called has become almost a normal thing in our tertiary institutions such that even the parents who entrusted their children into the hands of the lecturers for character formation, do provide the money for their children to use in sorting the lecturers. Some even unashamedly negotiate with the lecturers directly on behalf of their children. The implication is that the students no longer study their books to acquire knowledge that would help them in future. They rather opt for a short cut (cheating and sorting) which they feel is less labourious, but then with grave consequences. The end result would be that upon graduation, the students involved are empty, confused, unlearned, and uneducated as they were before embarking on the academic programme.

Thus, dishonesty has become a cog in the progress wheel of students' academic life. It (dishonesty) has become a trade that is plied by almost all students in our tertiary institutions. Unfortunately, this has also affected and eaten deep into the lives of many academic and non-academic staffs in our tertiary institutions. Some dishonest academic and non-academic staffs alike, besides being tempted by students with money, also go way out to institutionalize 'sorting' such that without 'sorting' weak students and even the-not-so-weak students can't pass the exams. Some of these academic staff have students agents who serve as point of contact between them and the students. Some of these dishonest staff also engage in 'sex for marks' where some beautiful female students are marked or selected to fail their exams except they submit themselves for couples of sexual escapades.

The implication of dishonesty with all its antecedent factors is that it is carried into the larger society with vengeance. In other words, having mastered the art of dishonesty – lying, cheating, fraud, deceit, etc., in the tertiary institutions, the society becomes a testing or launching ground where all these vices are tested and launched. This is why most of all the atrocities committed in our society today are by the teaming youths in the tertiary institutions or graduates of the tertiary institutions. Therefore, there is a great and urgent need for a

pragmatic Moral Education in our tertiary institutions in order to bring back moral order and sanity into our Educational System in keeping with the goals of the National Policy on Education which is to build "a just and egalitarian society".

Indecency

Students in tertiary institutions have become so bold and daring in their exhibition of indecent behaviours especially as it concerns sexual propriety. They have become so impudent, shameless and untamed in the way they dress and act. Indecent dressing and offensive fashion are on the increase; prostitution or what the students themselves nicknamed as "runs" is a common practice both within and outside the campuses. In the past, the school authority was serious with and about code of dressing of dressing code for all students. But now, it seems that the ethical code of dressing has gone down the drain as most students especially the female students move about half-naked unchallenged by the school authorities. This apparent display of indecency has greatly affected the very structure of the school system that supposed to be guardian of morality and good character.

The level of rape and other sexual misconducts such as inordinate and unhealthy sex orientations can be traced to the unguarded and unchecked activities of students in the tertiary institutions. In both male and female hostels, indecency reigns supreme. Lesbianism and homesexualism are practiced – taught and learned with impunity. This is so because morals or moral principles are have become so relative or personal such that every student determines what is good or bad by himself/or herself. The implication is that indecency has spread much into the society thereby corrupting not only the adults but also the young and inexperienced in our homes. This is why today, sexual exploits of under-aged children in both primary and secondary schools is no longer news. Therefore, there is indeed a great need for Moral Education in our tertiary institutions in order to curtail and arrest the problems associated with indecency.

Erosion of Traditional Values

Generally speaking, Africans all over the world have common or universal traditional values peculiar to Africans alone. These values include hard work, good character; respect for elders, the aged, the weak and the less privileged; truth, hospitality, chastity before marriage and many others. These are unwritten moral codes embedded in the heart of every true child of Africa regardless of nation. Unfortunately, due to romance with or the influence of Western cultures and education, these unalloyed African traditional values have been eroded from the lives of most educated Africans and even those who have never experienced Western cultures directly. Hence, today there is no more respect for the elders, the aged, the weak and the less privileged; truth has been thrown to the dogs; hospitality to even kinsmen has become a big case as everyone tries to emulate the Western culture of only the Nuclear family structure as the obligatory area of one's responsibility. Hard work that has so far been the mark of an African man has been sacrificed on the gruesome altar of laziness. This is why we have too many graduates who are unemployable because they exchanged or short-changed hard work with laziness and self-deception. Chastity before marriage on the other hand is already a history forgotten without any reference – virginity (a cherished African value) has been long deleted from the dictionary of most African youths.

In fact, sex or sexual activities seem to be the preoccupations of most students in the tertiary institutions these days as students exhibit and display their sexual desires openly in almost everything they engage themselves in such as in dancing, dressing, singing, painting, and dirty conversations. Unfortunately, our Educational System seems to be incapable of addressing or handling these issues. This is why this paper advocates for a return to our traditional cherished values that have so far sustained our educational system; maintained decency and decorum long even before the romance with Western cultures. Thus, there is truly a need for value reorientation.

Value Reorientation

Value is described as something that induces man to choose one thing and not the other and which determines his behavior and means of attaining his choice. Naturally, man is a valuing animal and so value is present in everything and everywhere in his life. Value can be brought by society or an individual and can either be positive or negative, ideal or real, idealistic or realistic, absolute or relative, objective or subjective, high or low,

universal or particular, constant or changing. Positive, absolute, objective values are durable and desirable. And when values are idealistic, they serve as sign-posts, arousing energy and interests in our minds. Such values are universal and constant. High values are those values that are noble, altruistic and unselfish in nature such as justice, kindness, generosity, honesty, beauty (more of character) etc. While low values or base values are those values that are selfish and ignoble such as greed, laziness, hatred, envy, lust, dishonesty, indecency, etc.

In this context, value reorientation entails the restoration or change of attitudes towards a number of things that have been identified in this paper as low or base values. Hence, given the increasing rate of rottenness in our educational system, it becomes pertinent and expedient that for education to serve man's purposes as outlined in the National Policy on Education there must be change of values or value reorientation targeted towards the development of behaviours and positive mindsets. Thus, in order to embark on a successful and sustainable value reorientation in our tertiary institutions, there must be a general transformation of the students' mindsets. To do this, traditional African values must be employed or brought back to bear or act upon the students world-views. For this reason, our Educational System must avoid pushing or fronting other values (Western) over and above our traditional values that have positively distinguished Africans as moral and progressive people. In other words, the Education System in Nigeria must be designed or re-designed in such a way to give the students the positive sense and pride of being Africans without undue clamour or desire to replace our values system with that of the European value system. Hence school authorities in the tertiary institutions should, in addition to teaching morals in schools, also teach and inculcates self-esteem, self-dignity, self-realization, self-acceptance and national pride. These would help in curtailing the problem of brain-drain syndrome that has already overtaken the whole of Africa. This brain-drain syndrome has caused many African intellectuals to abandon their culture, their values, their essences as African men and women, to embrace foreign cultures and values, thereby condemning themselves perpetually into using the Western yardsticks to measure their achievements and essences in life.

Therefore, there should be a change in the way the students see themselves as Africans/Nigerians. They should be made to understand that they don't have to depend on anyone (not even the Western worlds) in order to be accepted or in order to exist meaningfully. This is because, prior to the introduction of Western civilization in this part of the world, Africans/Nigerians had lived and developed their cultures and civilization peculiar to them and independent of foreign influence. Hence, students should be made to develop pride in being Africans/Nigerians and a sense of completeness without reference to any Western yardstick. Also, with regard to the prevalent immorality or indecency in our tertiary institutions, the traditional values should come handy and be re-emphasized strongly. Once the traditional values are re-instated and sustained in the school system and most importantly in the minds of the students, the problems of immorality and other sexual misbehaviours would be controlled effortlessly. This requires, of course, according Moral Education its rightful role and place in the education of the Nigerian students.

Since values provide standards or criteria which people can use to eradicate actions and outcomes, to justify opinions and conducts, to plan and guide behavior, to decide between alternatives, to compare self with others, to engage in social influences and to present self to others, students should be taught how to cultivate positive values. Value influences the way we construe events and situations, and are linked with our emotions. Hence we have values relating to honesty, cleanliness, responsibilities, generosity, hard work, etc. That values influence thoughts and actions means that values can either be positive or negative. Positive values are those that further the growth of the individual and the society in some desirable ways. Negative values on the other hand, are those that retard the growth and the development of the individual and the society. Apparently, students in our tertiary institutions have acquired negative values. The negative values acquired imply that there is a need for a re-orientation. Value reorientation then refers to the re-channeling of the people's attitude of the mind into a more desirable ways of behaving. The aim of value re-orientation is to enable the individual acquire good values otherwise termed morals that are acceptable to the society and which will further the growth of the society in question. Hence there is a great need for value reorientation because there is a serious neglect for merit in our institutions of learning. Students no longer aspire to succeed in their academic endeavours by personal achievements and merit. They rather cut corners thereby circumventing the morals behind merits. Even in admission into the University through the Joint Admission and Matriculation Board, most students cheat their way into the University of their choice, even with the help of their parents as well as some officials of the Board.

Lecturers and Vice Chancellors alike sell admission quotas as well as marks to graduate students who hitherto failed their exams.

Therefore, there is a great need to replace negative values with positive values – the traditional values – since the Western values have not only corrupted and compromised our value system, but also replaced them.

Recommendation

This paper recommends and advocates for a reorientation of values though an introduction or re-introduction of Moral Education that is pragmatic, realistic, and traditional back into the school academic curriculum. The paper urges the Ministry of Education and mother Educational stakeholders to brace up and challenge the ugly trend of the reign or immorality in the nation's Educational System. They can do this by collectively ensuring that violators of ethical laws in tertiary institutions whether by students or staffs face the law or are accordingly and adequately punished publicly to deter future violators. This would surely lead to a more moral and ethical academic environment.

Conclusion

This paper attempts a critical analysis of the link between morality/ethics and education. It highlighted the meaning of ethics/morality and education and showed how education cannot function meaningfully without morality or ethics. The paper equally showed that the erosion of the cherished African value system which was replaced with Western values accounts for the level of immorality prevalent in the nation's Educational System.

References

Ayeni, M.O. (2012). "The Concept of Morality in Education Discourse". *International Journal for Cross-Disciplinary Subjects in Education (IJCDSE), Volume 3, Issue 2.*

Dewey, J. (1938). Experience and Education, New York: Macmillan, p. 23.

Churchill, L. R. (1982). "The teaching of ethics and moral values in teaching: Some contemporary confusions". *The Journal of Higher Education*, *53* (*3*), 296 - 306. doi: 10.2307/1981749

Ejeh, P.C., & Arum, M.O. (2021). "Examining Conscientization as a Radical Model of Adult Education in Nigeria" in *Sapientia Foundation Journal of Education, Sciences and Gender Studies (SFJESGS), Vol.3 No.2* June, 2021; pg. 327–343ISSN: 2734-2522(Print); ISSN: 2734-2514(Online).

Eliot, Sober (1991). Core Questions in Philosophy. New York: Macmillan Publ. Co., p. 386.

Federal Republic of Nigeria (1999). *The Constitution of the Federal Republic of Nigeria*. Abuja: Federal Ministry of Information.

Hegel, G.W.F. (1956). The Philosophy of History, New York: Dover, p.56.

Kang, M. J., & Glassman, M. (2010). "Moral action as social capital, moral thought as cultural capital". *Journal of Moral Education*, 39 (1), 21 - 36. doi: 10.1080/03057240903528592.

Chowdhury, Mohammad (2016). "Emphasizing Morals, Values, Ethics, And Character Education In Science Education And Science Teaching". *The Malaysian Online Journal of Educational Science, (Volume4 - Issue 2).*

Reiss, M. J. (1999). "Teaching ethics in science". Studies in Science Education, 34 (1), 115 - 140. doi: 10.1080/03057269908560151

Rennie, L. (2007). Values of science portrayed in out - of -school contexts, in *The Re-Emergence of Values in Science Education* (pp.197-212). DOI:10.1163/9789087901677_017 brill.com > downloadpdf > book