

Research Article

Human Kinetics and Engineering (Technology) Education Teachers, Perception on Health Safety Practice Skills: Legal Liabilities and Tort Administrative Agenda

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Abstract

The study examined the perception of Human Kinetics (Physical Education) and Engineering (Technology) Education, teachers on health safety practice skills: Legal liabilities and tort administrative agenda. These two fields of academic disciplines are prone to accidents/injuries during practical classes, in workshops and physical education (sports) activities arenas. Some of such accidents may be in the magnitude that parents or guardians may decide to seek redress in a competent law court. Yet some teachers in these areas of academic endeavour may still perceive such incidences as an act of God, hence they may not anticipate any legal consequences emanating there from. To this end, the researchers of this study, purposively selected a total of 102 teachers in these two areas of academic discipline, at the rate of 17 teachers from departments of Human Kinetics (Physical Education) faculty of education and departments of electronics computer engineering (faculty of engineering) of these tertiary institutions: Federal College of Education (Technical Asaba Delta State), Federal College of Education (Technical Umunze Anambra State), Anambra State College of Education (Nsugbe Anambra State), University of Nigeria Nsukka and Odumegwu Ojukwu University Uli. The descriptive research design was used for the study. While the questionnaire fashioned after that of Likert was used as the instrument for data collection, which was pilot - tested on academic staff in same academic disciplines of Ebonyi State University Abakaliki, which did not form part of the study area, and yielded a reliability index of 0.81. Which therefore was considered adequate for the study. Data collected was analyzed using chi-square inferential statistics tested at 0.05 significance level. All the 2 hypotheses tested were rejected. Hence, it was concluded that though these categories of teachers in the two academic disciplines under study, are aware of the legal implications that could arise as a result of accidents resulting from non-judicious practice/application of health safety skills during practical lessons, yet not enough health safety practice skills could be seen being meticulously adopted to prevent accidents. Based on the findings of the research study recommendations were made.

Keywords: Legal liabilities; Tort; Accidents; Injuries; Error of omission; Commission; Redress; Academic disciplines; Human kinetics; Engineering technology; Physical education; Electronics computer

Introduction

Professional development of teachers especially in these two critical academic disciplines of Human Kinetics (Physical Education)

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Engineering (Technology) Education, ought to be a continuous one, considering the fact that there is need to depart from the traditionally dominant pedagogical practices of teaching and instruction to the modern methods, if the needs of the present contemporary undergraduates (students) of human Kinetics (Physical Education and Engineering (Technology) Education are to be met [1,2].

Presently there seem not to be any clear evidence of regular or routine form of continuing professional educational development, aimed at enhancing teacher's health safety skills practices in these areas of academic disciplines [3]. Efforts in this regard require sustained and continuing training and re-training of the teachers in these fields of academic areas under study, to keep the teachers abreast with current developments on health safety skill practices.

Just like faculties of Engineering (Technology) Education, aim at churning out needed technically well educated graduates, adequately equipped with the required safety skills to drive our present technologically inclined nation's economy forward, the same way the

departments of Human Kinetics (Physical Education), are expected to produce needed manpower in human kinetics, that will serve as P.E teachers in secondary schools, sports councils, coaches, and sports administrators and other related areas of sports endeavour.

Due to the proneness of these two areas of academic disciplines to frequent accidents, fresh or intending undergraduates seeking for admission into tertiary institutions are often scared to apply for places in these areas of study, which consequently robs the nation of quality and talented candidates being enrolled to pursue courses in these academic disciplines.

Teachers in these two areas of academic pursuit need to be adequately trained on how to handle, administer and dispense the numerous delicate, risky, fragile and sometimes dangerous equipment and machines they use during workshop/sports field/gymnastic practical lessons, in order to minimize or possibly prevent accidents on students, due to ignorance, lack of sound knowledge and sometimes carelessness as a result of error of omission or commission by the teacher.

The term accident according to National Safety Council (NSC) may be regarded as mishaps in any industrial or organizational establishment causing bodily injuries to a person, which prevents such injured person to resume ones studies or duties within the next forty-eight hours.

Accidents are usually unexpected, unwanted scenario, which may not have been anticipated, which however through adequate professional trainings and exposures in health safety skill practices, ought to have been prevented. Thereby supporting the old adage that says, "prevention is better than cure". According to Yekini, there are still wide scale of accident cases which occur in technical colleges workshops, due to lack of adequate health safety practice skills by teachers and students alike. Accidents do not happen, rather they are caused.

Furthermore one of the foremost ancient pioneers of industrial safety engineering, described accident as objects arranged side by side, which he referred to as "dominoes", when the first domino is knocked over, all the other dominoes fall, in other words the accident circle or sequence, would have been completed [4]. If however the key "domino" is removed safely, the accident will be bridged, and the accident would have been prevented.

In line with this great ancient pioneer of industrial safety engineering, this study will critically review accident prevention and adequate health safety practice skills based on the 3E's of preventing accidents in the cause of teaching, Human Kinetics and Engineering (Technology) Education, Relating these 3-Es to health safety skill practices for accident prevention (Figure 1).

Education

Which is the responsibility of universities and colleges of education, to impart sound knowledge to the teachers and teachers-to-be, through sustained continuous training and re-training in health safety skills practice. Hence Guarneri cited in Yekini, observed that most graduates from these areas of academic discipline do not possess adequate safety skill practices required for their safety that qualify them to work in industries.

Few years ago in Awka Anambra State, there was an incident where a 3rd year Electrical Electronics student of one university in Nigeria died of electrocution, while attempting to switch over the electricity source of power, in their living house, from the generating

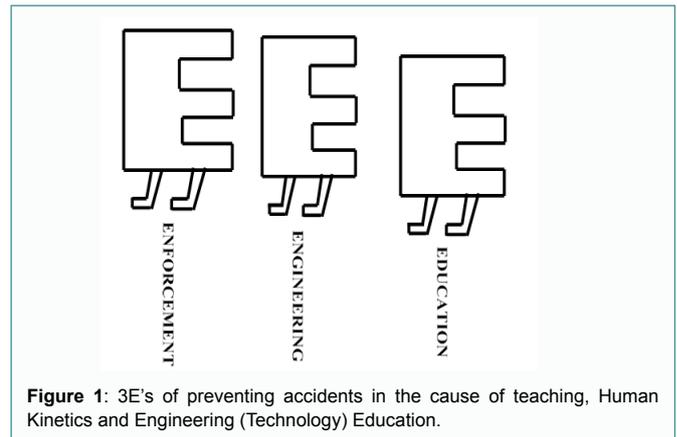


Figure 1: 3E's of preventing accidents in the cause of teaching, Human Kinetics and Engineering (Technology) Education.

set back to National grid. Unfortunately he had a cell phone stocked in his month, which he was using as torch light to see clearly while carrying out the change-over operation. This resulted to the pathetic death of the young, vibrant, energetic future hope of that family. There could be many other similar unreported cases in electrical-electronics workshops and industries which therefore calls for intensification of emphasis on health safety practice skills in the education of students in these areas of study by their teachers.

Engineering

Teachers/teachers-to-be, in other fields of endeavour may think that they have little or nothing to do with engineering. Ideally adequate training of teachers in human kinetics and other fields of academic endeavour require some engineering skills in order to prevent accident. For example re-arranging the movable desks in the classroom, in order to provide easier movement for both students and the teacher is an aspect of engineering health safety skill practice that would reduce accidents. The act of human kinetics education teachers regularly tightening bolts and naughts of gym equipment is an engineering safety skill practice that would reduce accident during gymnastics practices.

Enforcement

Enforcement in this regards refers to discipline, which comes through education and adequate training. This is a very important role a teacher must perform, to impart to students knowledge of how to perform any given task safety and equally mindful of other peoples safety too.

Teachers are therefore duty-bound to help their students form self-image of the desire to live safely and help others to do same [5].

In this vein, there is therefore need to include legal education in these two fields of teaching profession, in order for teachers in these fields to be aware of the legal implications of their actions or in-action during practical lessons, since ignorance is no excuse in law". Teachers need to be educated on what constitutes negligence, sources of negligence and available legal defence strategy against negligence and tortuous liability.

The law of "tort" may be regarded as a breach of the common law, arising from breach of duty/duties primarily fixed by the law, and by implication, such duty (duties) is towards persons generally and the breach of which, is redressable by an action for unliquidated damages [6]. Primarily this law of Tort is a legal term used both in common law and civil law systems, to interpreted various wrongs that may lead to civil law proceedings, mainly to seek redress for damages by persons, through their unlawful or dangerous activities on other individuals.

All over the world educational experts advocate for healthy school environment, that will support and protect the health and safety of both the teachers and learners alike. However many studies indicate high incidences of avoidable accidents and injuries, during practical lessons in these two areas of academic pursuits, hence the researchers of this study were motivated to conduct this research, that aimed at ascertaining the perception of health safety practice skills by Human Kinetics and Engineering (Technology) Education Teachers: Legal liabilities and Tort Administrative agenda.

Hypotheses

H₀₁ - Teachers of Human Kinetics/Engineering (Technology) Education will not significantly perceive non-practice of Health safety skills during practical lessons in workshops/sports fields, as major causes of accidents/injuries on students and teachers alike.

H₀₂ - Human Kinetics and Engineering (Technology) education teachers, will not significantly perceive error of omission or commission, regarding diligent practice of Health safety, during practices classes, resulting to accidents, could constitute a legal liability or tortuous act under the law.

Methods and Procedure

The purposive sampling techniques was used to select the 102 teachers (lecturers) of Human Kinetics (Physical Education) and Engineering (Technology) Education teachers from six tertiary institutions in Anambra, Enugu and Delta States of Nigeria, ensuring that the research will cover 2 federal Colleges of Education (Technical), one State College of Education, 2 federal universities and one state university. From each of the institutions 17 lecturers were used as respondents. Participants in the study comprised teachers that have been on the job for at least 2 years and above. The analysis of their teaching experience showed that 47 (46.08%) have 2-5 years teaching experience; 39 (32.24%) 6-10 years teaching experience; 10 (9.8%) 11-15 years teaching experience and 07 (6.86%) had 16 years and above teaching experience. The descriptive research design was adopted for the study, since only a few of the purposively selected sample (lecturers) will be used for the research, the result of which will later be used to generalize for the entire population.

Instrument

The research instrument was the modified likert type

questionnaire with four point rating scales of Strongly Agree, Agree, Disagree and Strongly Disagree. The instrument was pretested on 20 academic staff of Ebonyi State University Abakaliki, which yielded a reliability index of 0.81. Data collected was analyzed using Chi-square inferential statistics tested at 0.05 Alpha levels. Altogether 102 questionnaires were distributed with the help of research assistants who were briefed on what precisely they were to do, in order to ensure successful conduct of the research.

Discussion

A total of 102 questionnaire were distributed to the teachers of Human Kinetics and Engineering (Technology) Education departments of 6 tertiary institutions, only 86 were returned, which represents (84.3%) of the 102 distributed. While 16 or (15.7%) were not returned. Hence the researchers made use of the 86 returned questionnaire for the data analysis.

Table 1 indicates that 236 of the respondents representing (68.6%) agreed with the (items of responses) statements used for testing the null hypothesis one.

Furthermore, the frequencies of the respondents responses in Table 2, portrayed that an average of 173 of the respondents or (67.1%) of the total sample, agreed with the statements the researchers used in testing the null hypothesis 2. While 85 of the rest respondents or (32.9%) disagreed with the statements.

In view of the findings from analysis of Table 2, the null hypothesis which states that, Human Kinetics and Engineering (Technology) Education teachers will not significantly perceive error of omission or commission, regarding non-careful practice of health safety skills, resulting to accidents/injuries, constitutes legal liability or Tortuous Act under the law was rejected.

The findings on Table 1, therefore is in agreement with the observations of [3], that presently there seem not to be any clear evidence regular or routine form of continuing professional educational development aimed at enhancing teachers health safety practice skills in these two areas of academic discipline.

Furthermore, the findings equally corroborates the acertion [1,2], that there is yet the need for further professional development of teachers in these areas of academic endeavour, in view of the present changing needs/requirements of training or educating undergraduates (students) in these two areas of academic disciplines.

Table 1: Responses of teachers of Human Kinetics and Engineering (Technology) on their perception on non-practice of health safety skills as major causes of accident/injuries during practices in workshops & sports fields.

S/N	Items of Responses	SA	A	D	SD	Total	df	Cal χ^2	Tab χ^2
1	Teachers of Human Kinetics and Engineering (Technology) are adequately educated regarding health safety practice skills they require for teaching, before their graduation from tertiary institutions.	28	42	13	3	86			
2	The present curriculum Kinetics and Engineering (Technology) education teachers is adequate.	14	9	35	28	86			
3	Inclusion of detailed health the curriculum in the training of teachers of Human Kinetics and Engineering (Technology) education is of essence.	31	41	9	5	89			
4	Further training and re training of teachers of Human Kinetics and Engineering (technology) Education, will reduce accidents/injuries during workshop practices/physical education activities in the sports field.	36	31	12	3	86			
	Total	109 (31.7%)	127 (36.9%)	69 (20.1%)	39 (11.3%)	334	9	103.05	16.92

0.5 level of significance.

Table 1 indicates that the table values of χ^2 at 0.05 significance level is 16.9, and the calculated value is 103.05. Hence, since the calculated value turned out to be greater than the critical value, therefore the null hypothesis was not accepted at $\chi^2=103.05$, $df=9$; $p<0.05$ Alpha. This means that teachers of human Kinetics and Engineering (Technology) significantly perceive non-practice of health safety skills, as major causes of accidents/injuries during engineering workshop/physical education practices.

Table 2: Responses of Teachers of Human Kinetics and Engineering (Technology) Education, Will not significantly perceive error of omission or commission, regarding non careful practice of Health safety skills, resulting to accident/injuries, constitutes legal liability or Tortuous Act under the law.

S/N	Items of Responses	SA	A	D	SD	Total	df	Cal χ^2	Tab χ^2
1	Teachers of Human Kinetics and Engineering (Technology) education, must ensure healthy school environment which supports/protects the health/safety of both teachers/learners always	35	32	10	4	86			
2	Accidents/injuries during workshop/physical education practices is regarded as an act of God, hence parents/guardians seeking legal redress for damages, could be termed as an act of ingratitude to the teachers efforts	32	45	3	6	86			
3	Teachers of Human Kinetics and Engineering (Technology) education are adequately equipped during their training of what constitutes legal liability and a Tortuous Act, when accidents occur during practical lessons.	13	11	32	30	86			
	Total	80 (31.7%)	93 (36.9%)	45 (17.5%)	40 (15.5%)	258	6	113.05	12.59

0.5 level of significance

In Table 2, the χ^2 showed that critical value is 12.59 and the calculated value is 113.05 at 0.05 level of significance, at 6 degree of freedom (df), since the calculated value is greater than the critical value, the null hypothesis was rejected at $\chi^2=113.05$; df =6; P >0.05, Alpha. This indicates that Human Kinetics and Engineering (Technology) Education teachers significantly perceive that any error of omission or commission emanating from non-practice of health safety skills during practical classes, which results to accident/injury, to constitute a legal liability or tortuous Act under the law.

The results of the findings in Table 2 confirms the observation of National Safety Council (NSC) that “accidents do not happen, rather they are caused” [7].

In the same vein the findings equally supports Yekini, who observed that there are still wide scale of accident cases which occur in technical colleges workshops, due to lack of adequate health safety practice skills by teachers and students alike [8]. The result of the finding from same Table 2 equally corroborates with the study of [5] that stressed the need for teachers to inculcate into their students self image of the desire to live safety and help others to do same [9].

Furthermore, the result strongly supports the views [6], both of whom emphasized the need to educate teachers about the legal implications of their actions or inactions that could result to accidents or injuries during practical lessons [10,11].

Conclusion

There is the need to put in place regular and routine professional educational development of teachers in Human Kinetics (Physical Education) and Engineering (Technology) aimed at enhancing their health safety skill knowledge and practice. This is of essence due to the fact that there are continuous technological advancements in these two areas of academic disciplines, which the teachers/learners need to be aware of in order to minimize or prevent accidents/injuries during practices. Most workshops/gymnasias of the engineering (Technology) & Human Kinetics Education are obsolete, over crowded, poorly arranged equipment.

Due to lack of routine practice of re-training of teachers in these academic fields, some modern or recently acquired equipment are left in their unutilized containers, due to lack of knowledge on how to use them.

Recommendations

In view of the findings of this research the following recommendations are being preferred:

- There is need to widen the scope of the curricula of Human Kinetics (Physical Education) and Engineering (Technology) Education in the tertiary education, with emphasis on health safety practice skills.
- Due to ever increasing number of accidents and injuries both on students and teachers during practices, detailed knowledge

and exposition of what constitutes legal liabilities and Tort should be expeditiously incorporated as part of the training/re-training programmes of teachers in these two academic disciplines.

- There is need to establish a data base that will keep an up-to-date record of accidents/injury cases, in form of bulletin or newsletter, in these two areas of academic pursuits, to help up-coming professionals in these fields to learn from the mistakes of their colleagues, thereby improving healthful teaching and learning environment.

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