

## Perceptions of Students and Researchers of Food Technology towards Plagiarism: A Case Study

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### ABSTRACT

The pandemic of plagiarism, which is wide-spread all over the world, is incredibly common among the generation of students of secondary, higher secondary and university education. The present study investigates the level of awareness of plagiarism among food technology students in India and to understand their perceptions towards academic dishonesty and reasons behind indulgence in plagiarism. A structured questionnaire was administered to the students and researchers of the National Institute of Food Technology Entrepreneurship and Management (NIFTEM) in India. The findings of the study reveals that 18 per cent, 57.8 per cent and 11.8 per cent of the students are extremely aware, moderately aware and somewhat aware that what constitutes plagiarism and what does not. Most of the respondents believe copying from a publication/book without crediting the source/author is plagiarism (Mean=4.318, SD=1.0041) and plagiarism as stealing (Mean=4.024, SD=.9126). It is also found that busy schedule (Mean=3.67), easy accessibility of electronic resources (Mean=3.69), unawareness of plagiarism instructions (Mean=3.6), poor knowledge of research writing (Mean=3.95) and lack of penalty (Mean=3.4) are the perceived reasons of indulging in plagiarism by the students and research scholars, hence, conducting orientation programmes and workshops on academic integrity, scholarly writings and referencing styles could be helpful in discouraging plagiarism in academic writing among students.

**Keywords:** Academic Integrity; Plagiarism; Academic dishonesty; Academic misconduct higher education; India.

### 1. INTRODUCTION

The pandemic of plagiarism, which is wide-spread all over the world, is incredibly common among the generation of students of secondary, higher secondary and university education. Prevalence of plagiarism is not confined to students, but several senior academics, scientific writers, film makers, politicians around the world have been accused of plagiarism over the past decade. Higher education institutions (HEIs) are mandate to produce and promote ideas, theories, formula, and standards through research and publications. Quality research by the academic community is an integral part of social and economic development of a nation. In the academic and scholarly community working with authenticity, genuineness, integrity, honesty and ethics are very important for producing quality research. Especially plagiarism impacts the academic publication of universities and academic institutions in term of quality research outcome. Academic integrity, which prepares students for a responsible citizenship of future, is the core of a vibrant academic life; and plagiarism has a very negative effect on it<sup>1</sup>. Of late, it is found that Indian academics are being indulged in dishonest practices in research and scientific

writings due to pressure of earning academic performance indicator (API), promotion, matching different eligibility criteria. Recently, the news of plagiarism by of top academicians like vice chancellors came into light<sup>2</sup>, which not only show the prevalence of intentional or unintentional plagiarism in India, but also depicts the non-seriousness towards academic ethics and integrity in Indian academia.

Food technology, an applied science dedicated to the study of food, has assumed very much significance recently for the management of food security around the world. This is a knowledge intensive discipline, wherein scientific and technological development, ideas and innovations are the core for its success. But, the incidence of plagiarism cases among students and researchers is a cause of concern for all the discipline, including food technology. Many research studies have been conducted on the issue of plagiarism in all other disciplines, however, no study was carried out on the awareness and perceptions of plagiarism among food technology students. In view of this, the present study tries to examine the level of awareness and perceived reasons of plagiarism among food technology students of National Institute of Food Technology Entrepreneurship and Management (NIFTEM) in India, so that preventive measures can be put in place in the institute

to nip the academic dishonesty among the students in the bud, thereby ensuring the originality of research work.

## 2. LITERATURE REVIEW

The review of relevant literature was carried out on plagiarism vis-à-vis perceptions and reasons of indulging in plagiarism. Plagiarism, which is defined as “to steal and pass off (the ideas or words of another) as one’s own: use (another’s production) without crediting the source”<sup>3</sup>, is drawing utmost attention from all the academic institutions as they are being crippled with the plague called plagiarism. In the age of Information communication technology, the internet and electronic resources are the major sources of research and academic activities. The readily available content through internet, paving the way for growth of plagiarism in academic communities<sup>4</sup>. Plagiarism is an often reported research misconduct and academic dishonesty in the academic and research systems. In academia unchecked plagiarism could produce low standard of research and graduates, which in turn, could lead to corruption in public service and tarnish reputation of educational institute<sup>5</sup>.

In their study Maina, Maina, and Jauro<sup>6</sup> found that 63 per cent students are partially aware about the plagiarism and 20 per cent students are completely unaware, while only 17 per cent students are fully aware about the plagiarism. The study reveals that 90 per cent students at Northern University have plagiarised at least once in the past and 42 per cent students disagree to be punished for plagiarism. Ramzan et al<sup>7</sup> in their research found that 73 per cent students understand the meaning of plagiarism, while 27 per cent students don’t understand what plagiarism is. 65 per cent of respondents agreed that they consider plagiarism is wrong and 13 per cent respondents didn’t consider plagiarism as wrong, while 15 per cent are neutral. Further, it is revealed that most of the students believe that copying from a book without crediting a source or author constitutes plagiarism. Ereta and Gokmenoglu<sup>8</sup> revealed that time constraints, and lack of knowledge about plagiarism are the reasons of indulging in plagiarism.

Vanbaelen and Harrison<sup>9</sup> assessed the students’ attitudes and awareness towards plagiarism in Japan and found that 54 per cent participants have studied about plagiarism, while the rest of the participants did not study about it. The majority of students (47 %) want to know more about plagiarism, but 30.5 per cent do not know who to turn to ask for information. 22 per cent participants never studied about plagiarism, they don’t want to know more about the topic. The majority (64 %) of the respondents considers plagiarism is wrong, but 36 per cent of the respondents feel plagiarism is not a problem, when it concerns an assignment or a report. As far as university’s policy against plagiarism is concerned, 70 per cent of participants knew that the university has a policy, but they have never seen or read it.

Palmer, Pegrum, and Oakley<sup>10</sup> in their study found that students from the institution with a compulsory induction workshop on plagiarism fared better in their understanding of plagiarism than others. They outlined some measures to promote academic integrity within transnational environments that include an academic literacy induction for new students and

teaching staff, strict compliance with plagiarism penalties, the use of text-matching software, counselling for students guilty of academic misconduct, and more staff-student discussion on plagiarism.

Singh<sup>6</sup> revealed that the prevalence of plagiarism among UG and PG students using both the internet and print sources of information. Memon and Mavrinas<sup>11</sup> investigated the knowledge, attitudes and practices of culturally diversified researchers towards plagiarism. It is revealed in their study that 97.6 per cent of respondents were aware of the term plagiarism and 35 per cent of the respondents admitted that they had been indulged in plagiarism during their study periods. Further, the study revealed the low acceptance of plagiarism among the researchers. Most of the earlier studies revealed that individual and socio-demographic factors are found to affect the plagiarism of students, but the study conducted by Tremayne and Curtis<sup>12</sup> in Western Sydney University revealed that “self-control, pressure from self and others to achieve high grades, age, gender, culture and study major” are the predictors of students plagiarism.

Awasthi<sup>13</sup> reviewed 408 sample records collected from Scopus database and found that most of the users are aware of the concepts of academic integrity and plagiarism. On the other hand, Pàmies, Valverde and Cross<sup>14</sup> undertook an integrated review of 177 articles on the topic of plagiarism and examined the management of the common problem of plagiarism by students in higher education. In order to provide structure to the scattered knowledge on plagiarism, they have developed a process framework of plagiarism management.

Many research studies were also carried out on reasons of indulging in plagiarism by the students and research scholars around the world. The studies of Akbulut et. al.<sup>15</sup>, Yazici, Yazici, & Erdem<sup>16</sup> and Jereb et. al.<sup>17</sup> revealed that busy schedule, easy accessibility of electronic resources, unawareness of plagiarism instructions, poor knowledge of research writing and lack of penalty are the reasons of indulging in plagiarism.

The role of libraries in creating awareness and promoting research ethics in academic institute is much more helpful along with the institutional anti plagiarism policy. Caravello<sup>18</sup> proposes that librarians, who serve, teach, and consult with graduate students should develop their instructional role in this area. They can assist graduate students in the context of information literacy and collaborate with faculty on training and other solutions for deterring plagiarism in the institute.

## 3. OBJECTIVES

The main objective of the present study is to explore the awareness of plagiarism and perceptions of students towards the academic integrity. The present study attempts to ascertain the following objectives:

- To study the level of awareness of plagiarism among food technology students.
- To understand the perceptions of students on academic dishonesty and its reasons.

## 4. RESEARCH QUESTIONS

The present study formulates the following research questions based on the objectives of the study:

- RQ1: What is the level of awareness of plagiarism among students of NIFTEM?
- RQ2: Is there any significant difference exists in the level of awareness of plagiarism between different categories of students?
- RQ3: What is the reason behind the indulgence of food technology students in plagiarism?

**5. METHODOLOGY**

The study was conducted among the graduate, post graduate students and research scholars of NIFTEM. Survey method was employed for this study. A structured questionnaire was used to collect the data. The questionnaire has two parts. The first part collected the demographic details of the respondents and second part collected the responses on awareness and reasons of indulgence in plagiarism. Five-points Likert scale was used to record the responses on awareness and perceived reasons (Table 1).

A total of 225 questionnaires were distributed among students; however 14 questionnaires were partially filled and thus were not taken in the study, which comes to an overall response rate of 93.77 per cent. The collected data was analysed by descriptive statistics using IBM SPSS 21.

**6. FINDINGS AND DISCUSSION**

In the present survey, out of 211 respondents, 57.3 per cent were male and 42.7 per cent were female which signifies less

gender diversity among respondents. Most of the respondents were from B.Tech and M.Tech course i.e. 37.4 and 32.2 per cent respectively. 12.8 per cent of the respondents were from MBA programme and 17.5 per cent of them were pursuing PhD (Table 2).

**6.1 RQ1: What is the level of awareness of plagiarism among the students of NIFTEM?**

In order to find out the level of awareness of plagiarism among the students, descriptive statistics was used. The findings reveal that 18 per cent, 57.8 per cent and 11.8 per cent of the respondents are extremely aware, moderately aware and somewhat aware respectively what constitutes plagiarism and what does not. Only miniscule percentage of respondents (5.7 %) are not aware what constitutes plagiarism and what does not (Mean=3.758, SD=1.011). Most of the respondents believe that copying from a publication/book without crediting the source/author is plagiarism (Mean=4.318, SD=1.0041), whereas only tiny percentage of respondents (4.3 %) are not aware. Majority of the respondents consider that plagiarism as stealing (Mean=4.024, SD=.9126). Further, on the statements of “I am aware what constitutes plagiarism and what does not” and “Indulging in plagiarism is wrong” the mean are 3.758 and 3.858 respectively, which signify a higher level of awareness on plagiarism among food technology students of NIFTEM (Table 3).

**6.2 RQ2: Is there any significant difference exists in the level of awareness of plagiarism between different categories of students?**

In order to find out whether there exists any difference in the level of awareness of plagiarism between different categories of students, descriptive statistics was used. Of the total respondents, 45.9 per cent of the PhD scholars compared to 25.9 per cent of MBA students, 8.8 per cent of MTech and 10.1 per cent of BTech degree students are extremely aware what constitutes plagiarism and what does not. 43.2 per cent, 48.1 per cent, 69.1 per cent and 58.2 per cent of PhD scholars, MBA, MTech and BTech students respectively are aware moderately what constitutes plagiarism and what does not. Minuscule percentage of scholars/students across categories are not aware what constitutes plagiarism and what does not. When asked whether they are aware that “Copying from a publication/book without crediting the source/author is plagiarism”, 75.7 per cent of PhD scholars compared to 55.6 per cent of MBA, 66.2 per cent of MTech and 41.8 per cent of BTech students said that they are extremely aware.

**Table 1. Coding of responses**

Response on awareness	Code	Response on perceived reason	Code
Not at all aware	1	Strongly disagree	1
Slightly aware	2	Disagree	2
Somewhat aware	3	Neutral	3
Moderately aware	4	Agree	4
Extremely aware	5	Strongly agree	5

**Table 2. Demographic profile**

Items	N	Percentage	
Gender	Male	121	57.3
	Female	90	42.7
	BTech	79	37.4
Category	MTech	68	32.2
	MBA	27	12.8
	PhD	37	17.5

**Table 3. Perceived students awareness of plagiarism**

Statements	N	Mean	SD	Not at all aware	Slightly aware	Somewhat aware	Moderately aware	Extremely aware
I am aware what constitutes plagiarism and what does not.	211	3.758	1.011	5.7%	6.6%	11.8%	57.8%	18.0%
Copying from a publication/book without crediting the source/author is plagiarism.	211	4.318	1.004	4.3%	.9%	10.9%	26.5%	57.3%
Indulging in plagiarism is wrong.	211	3.858	1.210	5.2%	10.4%	18.5%	25.1%	40.8%
Plagiarism is considered as stealing.	211	4.024	.912	1.9%	5.2%	13.3%	47.9%	31.8%

**Table 4. Awareness of plagiarism by students category**

Statements	Student Category			
	BTech (n=79) (%)	MTech (n=68) (%)	MBA (n=27) (%)	PhD (n=37) (%)
I am aware what constitutes plagiarism and what does not.				
Not at all aware	6 (7.6)	2(2.9)	2(7.4)	2(5.4)
Slightly aware	8(10.1)	3(4.4)	3(11.1)	0(0.0)
Somewhat aware	11(13.9)	10(14.7)	2(7.4)	2(5.4)
Moderately aware	46(58.2)	47(69.1)	13(48.1)	16(43.2)
Extremely aware	8(10.1)	6(8.8)	7(25.9)	17(45.9)
Copying from a publication/book without crediting the source/author is plagiarism.				
Not at all aware	5(6.3)	0(0.0)	2(7.4)	2(5.4)
Slightly aware	0(0.0)	2(2.9)	0(0.0)	0(0.0)
Somewhat aware	9(11.4)	11(16.2)	3(11.1)	0(0.0)
Moderately aware	32(40.5)	10(14.7)	7(25.9)	7(18.9)
Extremely aware	33(41.8)	45(66.2)	15(55.6)	28(75.7)
Indulging in plagiarism is wrong.				
Not at all aware	5(6.3)	4(5.9)	2(7.4)	0(0.0)
Slightly aware	2(2.5)	20(29.4)	0(0.0)	0(0.0)
Somewhat aware	16(20.3)	13(19.1)	5(18.5)	5(13.5)
Moderately aware	25(31.6)	11(16.2)	10(37.0)	7(18.9)
Extremely aware	31(39.2)	20(29.4)	10(37.0)	25(67.6)
Plagiarism is considered as stealing				
Not at all aware	2(2.5)	0(0.0)	2(7.4)	0(0.0)
Slightly aware	6(7.6)	5(7.4)	0(0.0)	0(0.0)
Somewhat aware	15(19.0)	7(10.3)	2(7.4)	4(10.8)
Moderately aware	45(57.0)	33(48.5)	13(48.1)	10(27.0)
Extremely aware	11(13.9)	23(33.8)	10(37.0)	23(62.2)

**Table 5. Perceived reasons of indulging in plagiarism**

Description of Item	N	Mean	SD	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
Busy schedule and laziness are the causes of plagiarism.	211	3.673	.900	.9	11.4	22.3	50.2	15.2
Easy accessibility of electronic resources is the reason of plagiarism.	211	3.692	.886	.9	7.6	30.8	42.7	18.0
I think unawareness of instructions is the reason of plagiarism.	211	3.607	.996	3.8	11.4	19.9	50.2	14.7
I think overload of homework is the cause of plagiarism.	211	3.507	1.034	1.9	17.5	26.1	37.0	17.5
I believe poor knowledge in research writing and correct citation are the causes of plagiarism.	211	3.953	.877	.9	7.1	13.7	52.1	26.1
I think lack of serious penalty is a reason for plagiarism	211	3.403	.982	3.3	15.6	28.9	41.7	10.4

67.6 per cent of PhD scholars compared to 37.0 per cent of MBA students, 29.4 per cent of MTech students and 39.2 per cent of BTech degree students are extremely aware that indulging in plagiarism is wrong. 18.9 per cent, 37.0 per cent, 16.2 per cent and 31.6 per cent of PhD scholars, MBA students, MTech students and BTech students respectively are moderately aware that indulging in plagiarism is wrong.

It is found that only 5 per cent of MTech, MBA and BTech students are not aware that indulging in plagiarism is wrong (Table 4). 62.2 per cent of PhD scholars compared to 37 per cent of MBA students, 33.8 per cent of MTech students and 13.9 per cent of BTech students are reported to have extremely aware that plagiarism is considered as stealing. 27.0 per cent of PhD scholars, 48.1 per cent of MBA students, 48.5 per cent

of MTech students and 57.0 per cent of BTech students are moderately aware that plagiarism is considered as stealing. It is found that minuscule percentages of scholars/students across categories are not aware of the fact that plagiarism is considered as stealing (Table 4).

### 6.3 RQ3: What is the reason behind the indulgence of food technology students in plagiarism?

Table 5 shows the reasons behind the indulgence in plagiarism. Combinedly 65.4 per cent of respondents agreed that busy schedule and laziness are the reason of plagiarism (Mean=3.673, SD=.900). 60.7 per cent of the respondents agreed that easy accessibility of electronic resources is the reason of plagiarism (Mean=3.692, SD=.886). 64.9 per cent of the respondents said that they are unaware of any instructions on plagiarism, which is the reason of plagiarism (Mean=3.607, SD=.996).

54.5 per cent of the students opined that they indulged in plagiarism as they were overloaded with homework and assignments (Mean=3.507, SD=1.034). 78.2 per cent of the respondents believed that poor knowledge in research writing and correct citation are the reasons of plagiarism. Most of the institutions do not have academic integrity department and strict regulations on penalty have not been formulated for academic dishonesty. More than 50 per cent of the respondents thought that lack of serious penalty by administration is also a reason of plagiarism.

## 7. CONCLUSIONS

The pandemic of plagiarism is wide-spread in every walk of life and food technology students are not an exception. The finding of the study reveals that the most of the research scholars and the students of NIFTEM are aware of the various acts of plagiarism and only minuscule percentage of students across the categories are not aware of it. The level of awareness of plagiarism by PhD scholars are higher than MTech, MBA and BTech students. In conforming with earlier studies of Akbulut et. al.<sup>15</sup>, Yazici, Yazici, & Erdem<sup>16</sup> and Jereb et. al.<sup>17</sup>, busy schedule, easy accessibility of electronic resources, unawareness of plagiarism instructions, poor knowledge of research writing and lack of penalty are the perceived reasons of indulging in plagiarism by the students and research scholars of NIFTEM. The results of the study conveys that there is need of creating an academic integrity department and develop anti plagiarism policies at the institute level. Since the students and research scholars expressed their unawareness of plagiarism instructions and poor knowledge of research writing, so orientation programme and workshop on academic integrity, scholarly writing, reference style and tools are to be organised periodically, which could be helpful in discouraging plagiarism in academic writing. The libraries can play a vital role in creating awareness of academic integrity and plagiarism among the academic community. It is the high time for the library and information science professional to take the lead in facilitating training to the academia, thereby reclaiming the glory of librarianship. Though the present study is limited to NIFTEM, the findings are likely to be useful to other higher educational institutions for formulating policies and planning

to curb plagiarism in their respective institutions.

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