Promoting Academic Integrity in South Asian Research Culture: The Case of Pakistani Academic Institutions

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ABSTRACT

The practice of academic plagiarism is not something new in the world and the easy access to information with 'copy and paste' technology has caused a rapid increase in the practice in recent years. Hence, academic institutions are taking strict measures to combat plagiarism. Universities of developed regions are using anti plagiarism software to detect plagiarism and are putting substantial efforts to create anti plagiarism awareness and guidance among researchers. In addition, the scholarly literature shows that their libraries are also working in the promotion of fair use of information and plagiarism free research culture on campuses. This study investigates the case of current anti plagiarism practices of the universities and their libraries in Pakistan as a developing country of South Asian region. A questionnaire was designed and sent to the head librarians of the central university libraries (ULs) of all HEC recognized universities to collect data on the anti-plagiarism practices of the universities and their libraries. The findings indicate that while universities of Pakistan are determined to control plagiarism; they are more focused on the use of anti-plagiarism software as compared to creating awareness and guidance about avoiding plagiarism among researchers. ULs are also participating to combat plagiarism with an informal status in software base plagiarism detection service and irregular practice of different anti plagiarism guidance activities.

Key Words   Academic plagiarism, anti-plagiarism detection and guidance practices, Turnitin, university libraries, role in detection, plagiarism prevention

Introduction

The practice of plagiarism and violation of copyrights is not new in the world. The introduction of copyright laws in the 17th century and intellectual property rights in the 20th century were major steps taken to protect the rights of authors and publishers. However, a strong voice against academic plagiarism, as intellectual theft and serious academic crime, was only started to raised from 1990s (Sutherland-Smith, 2008). Scholarly literature has reported the term 'plagiarism' under various names, such as research misconduct, lack of academic integrity, misappropriation of intellectual property, and academic fabrication (McGowan, 2008). Plagiarism not only affects the quality of research but also negatively impact the reputation of academic institutions. Therefore, academic institutions tend to take strict measures to protect institutional and academic integrity.

The anti-plagiarism software (similarity index) has become a vastly accepted plagiarism controlling tool in the research evaluation process of universities all over the world (Kloda & Nicholson, 2007; Stapleton, 2012). The anti-plagiarism software services usually provide the facility to assess the level of similarity between a researcher's work and material publicly accessible online. Davis and Carroll (2009) state that the use of Turnitin (anti-plagiarism software) in academic institutions has brought two positive effects. Firstly, it has increased the awareness about existence of plagiarism and put a check on intentional plagiarism. Secondly, it has initiated a discussion about the use of alternative methods to prevent plagiarism due to its limitations with both intentional and unintentional plagiarism.

However, it is important to keep in mind that discovering a high percentage of matching text in a research item through these softwares does not prove that a student is being academically dishonest (Davis & Carroll, 2009; Introna & Hayes, 2007; Macdonald & Carroll, 2006; Stapleton, 2012). As these services cannot measure the intention of plagiarism and research expertise of a researcher, therefore, the learning of skills for the ethical use of information is equally important (Lampert, 2014; McGowan, 2008).

HEC Pakistan was the first academic institution in the South Asian region which developed a plagiarism policy and managed a free access to anti plagiarism software for its recognized universities in 2007 (HEC-Pakistan, 2012). HEC Pakistan has bound all forms of academic research to obtain clearance through this software before final submission. The universities are managing this software service through different academic and administrative units like faculty, IT centers, QEC and central library etc. Other higher education institutions in South Asia are also following similar steps, e.g. UGC India has also proposed the implementation of such regulations to stop academic theft in India in a recent report (iThenticate, 2013).

University libraries are also playing a vital role in the universities' efforts to promote academic integrity and quality of research (Kloda & Nicholson, 2007). The libraries are not only facilitating research through acquisition and dissemination of information but also participating in the services for detection of academic plagiarism and anti-plagiarism guidance/training of researchers for promotion of ethical use of information.

The scholarly literature shows multiple examples of university librarians offering services to their community to detect plagiarism. Furthermore, it also indicates the need for a more expanded role of university libraries in preventing plagiarism with the promotion of ethical use of information. In Pakistan, Piracha (2011) claimed that in 2007 the Punjab University Library was the only university library in Pakistan, which was involved in managing the service of anti-plagiarism software and arranged Turnitin's training programmes for faculty members. He concluded that with this practice at the University of the Punjab "there is a wave of awareness under which scholars are being guided by the instructors on how to avoid coping others work"(p.11). However, no other study found that presented the scenario about prevailing anti plagiarism activities of universities

and their libraries in Pakistan for detection and prevention of plagiarism. Therefore, the present study aimed to investigate the status of anti-plagiarism practices of universities and their libraries in Pakistan.

Literature Review

The inter-disciplinary nature and effects of plagiarism have created a multidimensional research literature. The present review is limited to the studies related with understanding on the anti-plagiarism strategies of universities, especially use of anti-plagiarism software, and participation of libraries and librarians in detection and prevention of plagiarism.

Universities' Strategies to Combat Plagiarism

Roberts-Cady (2008) divide the plagiarism controlling strategies into two main categories which are being adopted by the higher education institutions all over the world: "behaviour modification strategy", which includes imposing appropriate penalties for a person in case plagiarism is detected in his/her work. The second category is "character development strategy" which includes the use of honor codes to promote ethical thinking. Even so, with the growing awareness of multidimensional causes of plagiarism, scholars are suggesting skills development strategy as a third approach to combating plagiarism (Introna & Hayes, 2007; McGowan, 2008).

The adoption of anti-plagiarism software is widely used to detect plagiarism in universities. According to the makers of the software, 126 countries hold the licenses of the software and it is available in 10 languages. Furthermore, a large number of universities around the world, especially in European countries, are continuously adopting anti-plagiarism software (Stapleton, 2012). A study conducted by the management of Turnitin software on HEC Pakistan's efforts to control unfair use of information in Pakistan also indicated an increasing trend of using Turnitin software at Pakistani universities. It claimed that the increased usage of Turnitin software in HEC recognized universities has decreased the level of plagiarism in Pakistan (Turnitin.com, 2014).

Ledwith and Risquez (2008) concluded in their study on a group of first year students, that they "perceived the anti-plagiarism software quite positively and…they became more attentive to the originality of their work as a result". There are other studies (Davis & Carroll, 2009; Lee, 2011; McKeever, 2006) as well that support anti-plagiarism software's deterrent effect on one hand but at the same time they equally stress upon pedagogical intervention to avoid plagiarism among students.

Cogdell, Barbara has suggested "a four-pronged attack" to combat plagiarism that consists of: "a consistent institutional approach towards plagiarism; removing as far as possible, opportunities for plagiarism; educating the students to

understand what plagiarism is and how it can be avoided; and promoting ethical behaviour in their academic work"(2008, pp.42-44).

Davis and Carroll (2009) also mention that the plagiarism policies have been revised in many countries to include the institutional responsibility in ensuring that the students have the required skills to avoid plagiarism, rather than simply assuming that the students arrive with these skills in the university or learn the skills informally.

Librarians' Role

The university librarians are playing an important role in promoting such an academic research culture that is free of plagiarism. The academic librarians are offering two types of services in combating plagiarism worldwide; i.e. services related with detection of plagiarism and with guidance against plagiarism.

To assist in detection of plagiarism, a number of academic librarians are helping their faculty members in detecting plagiarism in students' assignments (Burke, 2005; Wood, 2004) and some others are playing their role in managing the services of anti-plagiarism software purchased by their university administrations (Kloda & Nicholson, 2007; Piracha, 2011). Some librarians have complied lists of 'web based paper mills' to make well aware their faculties about those websites which provide services to students for purchasing online prepared assignments for students' research work (Auer & Krupar, 2001).

Burke (2005) shared her personal experience as a reference librarian in Axinn Library of Hofstra University, New York. She states that when she started her job in April 1999 she received usually only three to four requests in a month from the faculty to detect plagiarism in student assignments. However, number of such requests increased to 25 in a month by December 2000. This resulted in her recommendation to the university administration to subscribe to an anti-plagiarism software.

In the developed world the university libraries not only provide facilitated access to information to help researchers but also create awareness regarding fair use of information and knowledge (Gibson & Chester-Fangman, 2011; Mundava & Chaudhuri, 2007). Libraries offer information literacy instruction programs (ILI) for this purpose. They use workbooks, library instruction handouts manuals, bibliographical instruction programs, library orientations and online tutorials (Jackson, 2006) to instruct students about avoiding plagiarism. These efforts help students and faculty to learn about the ethical use of information, citing previous research appropriately and to stay away from unintentional plagiarism.

Lampert (2004) argues that the need for an "anti-plagiarism based information literacy curricula" to prepare the students to combat plagiarism has been realized by most of the institutional faculties. Forbes (2007) provided a list of information literacy skills which should be a part of research curricula to help students of all disciplines to do a successful plagiarism free academic project. Hornreich (2011) suggested that in addition to information literacy instruction, librarians should

make "the reference desk a place where appropriate citation of information is stressed each time we help students retrieve a source". Similarly, Auer and Krupar stress that "librarians must now actively seek out new roles on campus that will create open and regular dialogues with students about information and its ethical use" (2001, p.424).

South Asian Scenario with Special Reference to Pakistan

Studies on different aspects of plagiarism are appearing on the scholarly canvas of South Asia. The studies conducted by many regional scholars highlighted not only the causes and implications of the plagiarism(Aryal, 2012; Dey & Sobhan, 2006; Jayaraman, 2012; Satyanarayana, 2010) in South Asian countries but also stressed on the need to develop more rigorous policies to combat with the problem(Adhikari, 2010; Chaudhuri, 2008; Khanzai, 2015; Pai, 2013; Vij, Soni, & Makhdumi, 2009). However, no attempt was made in any country of the region to describe the situation about what universities and their libraries are doing to control plagiarism.

The research studies conducted about plagiarism in Pakistan are few in number and indicate a lack of conceptual awareness about plagiarism among researchers of different disciplines (Shirazi, Jafarey, & Moazam, 2010). The studies showed that students in Pakistan do not take the plagiarism seriously due to lack of policies' implementation (Ramzan, Munir, Siddique, & Asif, 2012) . Furthermore, the students and even faculty have a remarkable low level of awareness of correct referencing methods and use of quotation marks (Cheema, Mahmood, Mahmood, & Shah, 2011; Nazir & Aslam, 2010; Saeed, Aamir, & Ramzan, 2011). Most of these scholars stress the need for firm measures to be taken for creating conceptual awareness of plagiarism and for development of information usage skills among researchers as an effective strategy to prevent plagiarism in Pakistan.

The literature review shows that the development of skills to handle the information in an ethical and legal manner is considered equally important to prevent plagiarism along with usage of a detecting and deterring agent like Turnitin. Therefore, universities and their libraries world over are involved in both types of anti-plagiarism practices i.e. detection and guidance practices. However, universities and their libraries in Pakistan with regards to both types of anti-plagiarism practices have not reported in the literature and the present study is first of its kind.

Objective of the Study

The aim of this study was to investigate the status of practices of the ULs and their universities to combat academic plagiarism in Pakistan. The research questions were:

1.   What are the current anti plagiarism practices of the universities in Pakistan?

2. What is the role of ULs in the anti-plagiarism software service?
3. What are the ULs' current anti plagiarism practices?

Research Design

The study is based on a part of the data collected for the doctoral study of the first author. The survey method adopted to collect data and a questionnaire was developed after thorough analysis of the available literature on plagiarism detection and prevention. The questionnaires of Gibson and Chester-Fangman (2011) and Kloda and Nicholson (2010) about role of university libraries in combating plagiarism provided guidelines. Furthermore, personal observations of the current practices of university libraries in Pakistan were also helpful in development of themes for the questionnaire.

The questionnaire contained closed, open-ended and Likert type scale based questions. To check the reliability of the instrument, a pilot study was conducted. The data from the pilot study was entered in SPSS 21 and reliability of questionnaire items with Likert scale were measured. The Cronbach's alpha values ranged from 0.798 to 0.940 for the items which considered well enough for collecting data. To check the face and content validity of the questionnaire items, discussions were made with the professionals and experts in the field, and few minor adjustments were made.

Data Collection

The head librarians of the ULs of all HEC recognized universities approached in June 2014 through registered post on the universities' postal addresses available on HEC's website. One hundred completed questionnaires received back during a period of four months with multiple rounds of postal and electronic reminders to the head librarians of those ULs. The response rate for the questionnaire was 69% against 144 ULs. The responses of one questionnaire found mutually contradictory, so that questionnaire was excluded, and data of 99 cases were entered into SPSS 21. Figure 1 shows the response rate according to type organization i.e. public and private sector as per 99 filled questionnaires.
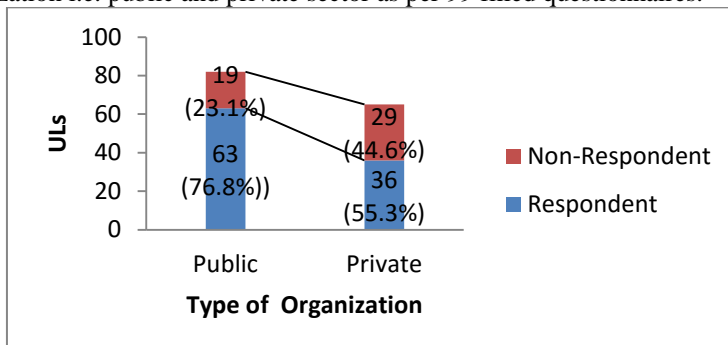

Figure 1 Bar-chart of Survey response of ULs by Type of Organization

The major response for this study was from the public sector ULs and 76.8% among them responded for the survey while 55.3% ULs of private sector responded for the survey.

Data Analysis

The data analysis of the questionnaire responses presented here is only about the current anti plagiarism practices of the universities and their libraries to combat plagiarism.

Anti-Plagiarism Practices Of Universities

(a) Plagiarism policy

The head librarians were asked about the presence of plagiarism policy in their respective universities. The results show that most of the universities were using HEC's plagiarism policy for the implementation of rules and awareness of their researchers. However, few universities had also developed their own policies (Table 1).

Table 1
Universities with plagiarism policy by type of University

Type of University	*Yes*	*No*	*Using HEC Policy*	*I don't know*
Public	21 (33.9%)	3 (4.8%)	35 (56.5%)	3 (4.8%)
Private	15 (41.7%)	5 (13.9%)	14 (38.9%)	2 (5.6%)

(b) Anti plagiarism awareness and guidance practices in universities

The head librarians were asked as to what methods were being used to raise awareness among the researchers in their universities. Figure 2 shows that the most commonly used method to create awareness among researchers as per self-reported data by the universities was offering advice in a class. The methods of special lectures or workshops, and guidance from library on anti-plagiarism awareness and education, were being used in 50 and 44 respondent universities respectively. Booklets and university websites were least used methods (Figure 2). Few respondents also specified the use of library web page, student handbook, ethics committees and information literacy sessions as methods used in their universities to create awareness and provide anti plagiarism guidance to researchers (Figure 2).
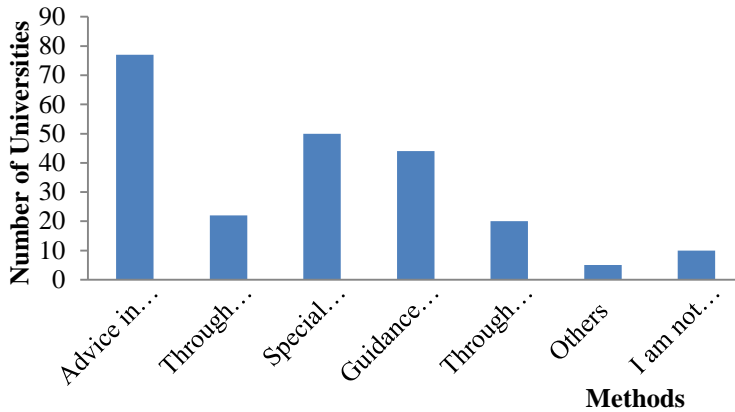
Figure 2   Methods used by the universities for anti-plagiarism awareness and education

(b) Use of Anti Plagiarism Software in universities

Figure 3 shows that 77 HEC recognized public and private sector universities were using Turnitin as per self-reported data. 84.1% universities among public sector and 66.7% universities among private sector were using the software. The value of correlation coefficient Cramer's V (value=.267, p =.030) indicates a low relationship between the variables which means that use of Turnitin software was high among public sector universities. The free provision of anti-plagiarism software to public sector universities by the HEC in 2007 might be a factor behind this result.
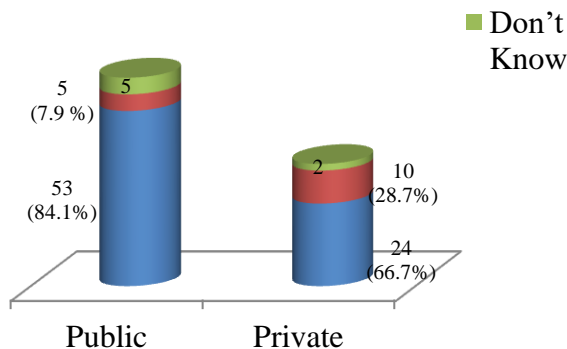

Figure 3   Use of anti-plagiarism software in public and private sector universities

(d) Management of the anti-plagiarism software in universities

In 2007, HEC asked its universities to designate focal persons for the administration of Turnitin software service in the respective institutes after the provision of the software. The universities nominated their heads of various academic and administrative units as focal persons. Therefore, services of anti-plagiarism software in Pakistani universities are formally being managed by various entities. The data of Table 2 reveals that in the 77 universities that were

using Turnitin software for detection of plagiarism, quality enhancement cell and faculty members were selected more respectively for the facilitation and management of 'Turnitin service' in the universities. The central university library and IT administrations were as third and fourth choice respectively. One respondent from private sector not replied for this question. The selection of QEC as turnitin service administrator in most of the universities was might be under the influence of HEC's own practice (the quality enhancement cell of HEC is responsible to look in and control the matters of plagiarism in HEC recognized universities).

Table 2
Cross-Tabulation of Management of Turnitin Service in the Universities and
Type of University(N-76)

Type of management	Type of University		Total
	Public	Private	
Quality enhancement cell	23 (43.4%)	6 (26.1%)	29
Faculty members/ Deans	9 (17.0%)	7 (30.4%)	16
Central University Library	3 (5.7%)	6 (26.1%)	9
IT administration/centre	6 (11.3%)	1 (4.3%)	7
Other (please specify)	11 (20.8%)	2 (8.7%)	13
I don't know	1 (1.9%)	1 (4.3%)	2

(e) ULs in Plagiarism Detection Service

Table 2 indicates that a small number of universities (9) designated their central head librarians as the focal person for Turnitin service and that the majority of these universities belonged to the private sector (6). In public sector universities, Quality enhancement cell (43.4%) was the first choice and Central University Library (5.7%) was fourth choice for this purpose (Table 2). Whereas in the private sector, faculty members were the first choice (30.4%) followed by quality enhancement cell and central university library (26.1% each) (Table 2).

It is interesting to note that while using the option of 'others (please specify)' four head librarians specified, three types of collaboration pairs i.e. Library and QEC; Library and Faculty; Library and IT Center for the management of Turnitin services. Further exploration of data revealed that among these four head librarians three belonged to the public sector and one was from the private sector. The findings indicate that private sector universities preferred central university library as sole administrator of Turnitin services while public sector universities preferred their central library to be a collaborating partner.

The head librarians were asked in another question that if their library is not officially involved in the administration of Turnitin service, and did their was library have access to the software and provide software's services as an informal facilitator. The data reveals that 29 university libraries had access to the software for the informal facilitation and learning of their researchers. Only three respondents did not respond to the question.

Figure 4 shows that libraries in Pakistan are playing a role in the plagiarism detection process more as an informal facilitator rather than as a formally designated unit for service provision. It also reveals that most of the public sector ULs are playing this role of being an informal facilitator of Turnitin service.
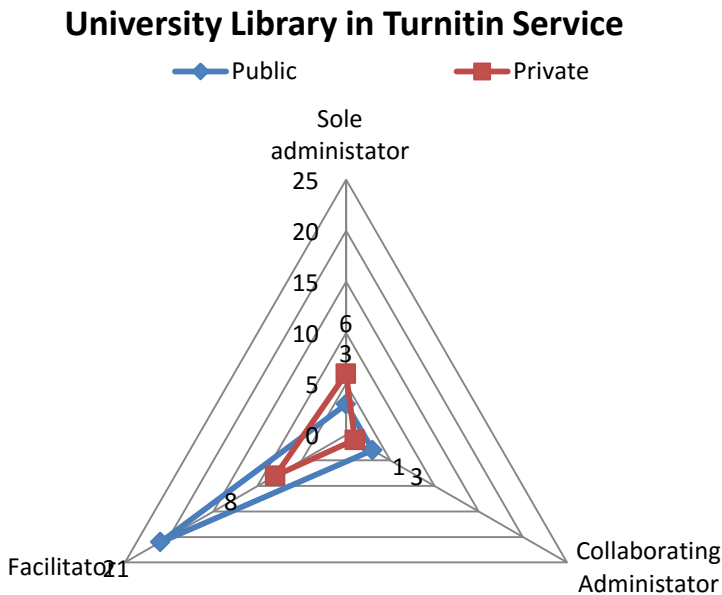

Figure 4 Role Profile of Public and private sector universities libraries in Turnitin software service

Anti-Plagiarism Practices In ULS

The head librarians were asked about the current anti plagiarism practices their libraries were practicing. Table 3 indicates that although ULs were carrying out different anti plagiarism awareness and guidance activities but frequencies of these practices were not regular. ULs practiced provision of instructional guidance on reader and reference desks and marking restrictions on Photocopying more on often bases as compared to other activities. The practice to provide leaflets on

plagiarism policy at reader and reference desks was least prevailing.

Table 3   Median and Mode of Current Anti-Plagiarism Practices of ULs

Anti-Plagiarism Guidance practices	Median	Mode
Instructional guidance at reader and reference desks against plagiarism	3	3
Collaborating and Conducting workshops on anti-plagiarism education (referencing skills etc.)	3	1
Photocopying restrictions	3	3
Giving introduction on plagiarism policy into library orientation programs	3	1
Collaborating with the faculty in anti-plagiarism classroom learning	3	1
Creating awareness against plagiarism through library website	3	1
Providing leaflets on plagiarism policy at reader/reference desk	2	1

Scale= Not at all = 1, Sometimes = 2, Often = 3, Mostly = 4, Always = 5

Discussion

The objective of the study was to investigate the efforts of universities and their libraries to control academic plagiarism in Pakistan. The findings reveal that universities of Pakistan are determined to curb plagiarism and 85 HEC recognized universities (Table 1) are following a plagiarism policy and 77 of these universities are using Turnitin software for detection of plagiarism (Figure 3). The findings are validating the claim of the management of Turnitin software that the usage of the software is increasing in Pakistan (Turnitin.com, 2014).

The findings of different research studies conducted in Pakistan (Cheema et al., 2011; Ellahi, Mushtaq, & Bashir Khan, 2013; Khan, 2012; Ramzan et al., 2012; Saeed et al., 2011) reported little conceptual awareness about plagiarism in academic circles in Pakistan. The studies indicate that intention is not always to plagiarize but there is a lack of knowledge on citing sources and fair use of information. The findings of the present study reveal that universities are providing anti plagiarism awareness and guidance through different methods (Figure 2). The method mostly used by the universities to create awareness and provide guidance is 'advice in class'. It was not the objective of the study to evaluate the level of effectiveness of anti-plagiarism guidance practices of the universities. However, it appears that anti plagiarism awareness practices exist in universities but the quantity and quality of these practices is not sufficient to achieve the goal. Specific studies are required to evaluate these practices for imparting information among researchers regarding the fair use of information.
The findings of the study highlight a positive aspect of the community of librarians. The head librarians were found well aware about the current academic policies and practices of their universities. The very low ratio of the response 'I don't know' in the study validates this aspect.

The study reveals that while the libraries are participating in combating plagiarism in their organizations, their participation is very limited. This indicates that an explicit role of universities libraries in plagiarism detection process is not a common practice in Pakistan.

An interesting observation of the findings is that more private sector libraries are solely managing the services of Turnitin software as compared to the public sector libraries and the public sector universities libraries are found to be acting more as informal service providers (Figure 4). Despite the fact that the first university central library officially designated as Turnitin service administrator in 2007, was a public sector University Library. Further investigations are required to find the cause behind this trend.

Recommendations

Some recommendations on the basis of the study are:
1. More IL instructions regarding fair use of information are need to be provided more by the universities.
2. The libraries should enhance the frequency of their anti-plagiarism guidance activities to play an effective role in combating plagiarism with their universities.

Conclusions

It is concluded that in Pakistan universities are making effort to curb plagiarism with adoption of digital detection system of plagiarism and providing anti plagiarism awareness and guidance through advice in class. Some universities also included their libraries in the detection service. ULs are playing a liaison and instructive role to combat with plagiarism with different practices but frequencies of these practices are not sufficient. There is a need to develop a systematic and recurrent approach in creating anti plagiarism awareness and guidance among researchers extensively by the universities and libraries in Pakistan.

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