

Use of Social Networking Sites in Academics: A Review

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Abstract

In the current era with the advent horizon of technology and its usage, encouraged the use of social networking sites among the society. In last decade it made an imperative impact and rapid change on the working on almost all organizations and professions be it businesses, industries or academia. In the academic organizations, the use of social networking sites by students and youths for academic and non-academic communication is increasing rapidly in India and Oman. Social networking sites is itself provide massive communication channel and service that can support and yield in getting solutions of many administrative issues for academic institutions. However, Universities and institutions have not formally accepted it in India. This paper reviews surveys and experiments by academic researcher in various parts of the world. To evident the usefulness and significance of SNS in academic world several studied and experiments have been elaborated in this paper. During this study top fifteen universities in the world have been taken into consideration. The comparative study been carried out among them with reference to use of social networking sites and its relative factors. We found that almost all universities are very much aware and have significant place in their system. The result brings the fact that use of social networking sites in academic institutions will bring the significant change in the operations and tasks handling, hence proposed.

Keyword: Social Networking Sites, Academic, Universities, Colleges, Students, Educationalist, Researchers

Introduction

From last three decades a tremendous technological shift has been embedded in common man life. The technology rather digital technology became one of the significant facilitators in various service areas and industrial sector. In fact, digital technology is playing an imperative role in our lives be it in any profession. Nowadays, the technology became an integral part of our lives as it provides large number of applications and services in almost all needs of our lives. To live better life a human being requires the social contacts on regular basis. The use of technology plays vital role in teaching and learning trends that reflects its significance [53-54]. The technology provides better applications to be in touch with several individual or groups. Various social networking sites (SNS) are available to provide communication services and mostly youth i.e students are actively engaged with SNS on various platforms. Hence, usage of SNS became one of the research areas to study. In this study, we focused on the usefulness of SNS in academic sector. The students are central entity and main focal point in academics. Thus, through literatures we studied about students their purpose of using SNS in various parts of the world. The usefulness of SNS among students, their purposes, concerns and issues are described. Few experiments for teaching-learning purposes, the usefulness of SNS for admission in college or university and use of SNS in employee screening have been described in this paper. As the significant existence of SNS in academia, this paper compared top fifteen universities and found that almost all universities have significant place of SNS and its usage in their system.

Literature Review

Educationist and researcher in different parts of world have conducted surveys regarding SNS usage. The usage of SNS by the students for various academic and non-academic purposes. The common findings were that the more than 60% of the student spent more than 2 hours per day on social sites [1-5]. The study results say that the Facebook was most preferred social media site [1,3,5,6-13,17-19,24] although there was difference regarding the second preference, between Wikipedia [10], MySpace [3,9] HI5 [8], Yahoo [5], Linkedin [11], Orkut [14,17],

Tweeter [19], Google+ and YouTube [6,12,13]. These sites were used for more for social communication [1-4,7-10,13-18,20], relationship building [2,4,7,9,10,14-20] Entertainment [4-5, 9,12,14,17], sharing of Resources [1-2,7,14,17-18,20], Personal Presentation [8,9,10] and Job search [4,12]. The use of SNS in education was limited only academic communication [2,15,17]. Many researchers—believed that it has for more applicability in academics [15,21]. It is also means of expression for those who cannot express, it enhances communication [21] and computer skills. SNS can be a tool of social and collaborative Learning [22]. Many students in some universities were using it in their education and research [4,23,24]. Simultaneously, the issue for concern for its use were misuse of personal information [3,18,20], Lack of Trust, misinformation [3], security risk [3,18,19,20], unwanted friends, uncontrollable nature [3], wastage of time [3,18,19,20] can affect future personal and professional life [3].

Experimentations by SN in education

J. de J. Moreno created a SN (<http://openet.mixxt.net>) to facilitate interaction between students and the teacher. The students were encouraged to search for software, documentation, videos, fostering especially the use of free software (Openproject, WinQSB, Day, Sistrat, etc.). Using dropbox, the working groups kept the different versions of the work. It could also access the results of the computer programs used by students. The teaching material was accessible through a website (or WebCT). One closed question instrument were used to assess the results and the processes induced by the SN and dropbox in the activities. The results shows that the implementation of blended learning has a positive effect on in learning outcomes (raising exam + work pass rates) in the subject. Moreno suggested that active use and social of SNS cannot be ignored in the process of teaching, as a high percentage of young people, make daily use of social networking [25].

Kirkwood (2010) discussed the potential for the development of cloud-based read-write e-learning platforms that employ constructivist and participatory pedagogies and actively engage the student population. He suggested that this will encourage the students to become more active participants in their learning. As a result, at Victoria University SNAP (social networking for Academic Purposed) was designed and implemented [26].

Richard et.al used ethnographic approach to focusing on Livemocha, an example of an online community specifically aimed to encouraging collaboration between foreign language learners. The usage results shown that SNSs can be used by language learners to explore new relationships rather than merely maintain existing ones and that longitudinal studies are required to achieve a better understanding of the complex processes of mediation involved in online community formation and maintenance [27]. The semantic analysis can be applied for blog search engines to prove that there are more prospects of social networking [51].

Use of SNS/media in attracting admission

Ferguson, Christopher Paul studied the reasons behind two distinct higher education institutions implementing college-created social networking sites (SNSs) as a way to recruit undergraduate students. He used interviews, social network site observations, and document analysis as the primary methods. He found that the institutions studied here explored the phenomenon of social networking as a recruiting strategy because online SNSs are a popular platform that college and high school students use to engage in conversation during the college choice process. Each of the institutions also had a culture of experimentation amongst its enrollment management staff, and there was an individual or vendor associated with the institution who was a visionary in using social networking as a college-specific platform. A common belief among staff members at these institutions shared was that SNSs are a marketing tool that enables institutions to be "authentic" by allowing members to create, collect, and share stories in relation to its college environment. The design of these college-specific SNSs was strongly influenced by general-use SNSs like Facebook and MySpace. Like these popular sites, the college-based SNSs focused on member-created content as the basis for communication. In order to assess the effectiveness of a college-created SNS, the researcher determined that institutions must connect its SNS to its student information system [28].

According to the study by the Center for Marketing Research at the University of Massachusetts-Dartmouth, 100% of universities surveyed use social media to communicate with students, up from 61% in 2007-08. The study found that 98% of the responding colleges have a Facebook page and 84% have a Twitter account. Among the top 10 schools were The Ohio State University, Louisiana State University and the United States Military Academy at West Point, Howard University, John Hopkin University etc. [29].

International student recruitment is inherently complex, as it requires deeper understanding of local markets and differences in student decision-making processes. These differences are amplified by language and cultural contexts of countries. Social media offers a potent solution with its ability to adapt to needs of prospective students from a wide range of languages and cultures [30].

Use of SNS/media in employee screening

Organizations are increasingly relying on internet searches and social networking websites to uncover detailed and private information about job applicants. Such Internet screening techniques have the potential to provide additional information beyond that found using traditional screening approaches at minimal Cost [31-33,39-41]. However, there is no clarity whether this approach is legal and appropriate or not [31,33,35,37]. There can doubt about the standardization, reliability, and validity of the information obtained [31,34,37]. This can be view as a mode of discrimination against minorities and protected class [34]. This practice helps candidate in getting better jobs and employers getting better candidate [36,45]. Placement cells and career centers of universities and institutes are using these sites for sharing career related information and connecting students with the employers [46]. The students who are prospect candidate for recruitment are not aware that whatever they post today may lead to adverse action tomorrow or may even hamper their career growth [38].

Use of SNS during working hours

One of the issue of concern for organization is employee and students use of social media during office hours whether it is hamper their productivity. Most of the organization restrict to use of social media during office hours inside organization premises using organization's communication resources [38,44]. Even if the employee or student is using this site outside the premises and after the office hours there are policies on what must be posted and what cannot be posted [38,42,43]. Some intellectual believed that these sites can be used as knowledge management tool [47].

Social media usage policies adapted by the Institutes / Universities

A search was conducted online to find out social media usage policy of world famous universities, (top 15 universities were selected from the website <http://www.topuniversities.com/university-rankings>). The List include one university from Switzerland, four from UK and ten from USA. Thirteen out of fifteen policies were acquired, by searching websites of respective universities. Out of thirteen two universities (i.e. California Institute of Technology (Caltech) and Yale University) does not have specific social media policy, but they were having generic internet policy. The information obtained is given in Table 1.

Table 1A Comparison of social media policies of Top World universities

Rank	1	2	3	4	5
Univerty	Massachusetts Institute of Technology (MIT)	University of Cambridge	Harvard university	UCL (University College London)	University of Oxford
Country	USA	UK	USA	UK	UK



SNS Policy Exist	Y	Not found	Y	Y	Not found
Policy URL	http://web.mit.edu/cps/social-media-guidelines.html		http://www.provost.harvard.edu/policies_guidelines/Social_Media_Guidelines_FINAL_Version_1_0_effective_080112.pdf	http://www.ucl.ac.uk/social-media/guidelines	
Creation/implementation Date	2011		8/1/2012		
Written by	Communication Production Services, MIT				
Written for	staff, faculty and students who use social media to promote MIT activities, groups or initiatives.		Individuals authorized to speak on behalf of the University	UCL managing staff	
In conformation of Existing Policies and rules	MIT Policy on the Use of IT or the MITnet Rules of Use., FERPA, MIT students Information Policy		University-Wide Statement on Rights and Responsibilities -1970, Statement of the President and Deans on University Rights and Responsibilities (2002), HiPAA, FERPA		
Rank	6	7	8	9	10
University	Imperial College London	Yale University	University of Chicago	Princeton University	California Institute of Technology (Caltech)
Country	UK	USA	USA	USA	USA
SNS Policy Exist	Y	Only web policy exist	Y	Y	Only website policy
Policy URL	http://www3.imperial.ac.uk/webguide/socialmedia	http://its.yale.edu/forms-policies/policies	http://www.ucls.uchicago.edu/labnet/tech-support-center/policies/social-	http://www.princeton.edu/communications/services/social-media/061611_Princeton	http://www.jpl.nasa.gov/copyrights.cfm#security

			network-policy/index.aspx	ceton Social Media Policies.pdf	
Date of Creation/implementation			5-Apr-12	2011	
Written By			Human Resources Dept	The Trustees of Princeton University · Office of Communications	
Written for			staff employees.	faculty and staff, including student employees, who engage in online conversations for work-related purposes	
In conformation of Existing Policies and rules			University's Business Conduct Policy, Eligibility and Acceptable Use Policy for Information Technology	Applicable University policies for property, privacy and civility outlined in "Rights, Rules, Responsibilities" and the Princeton University Information Technology Policy, FERPA and HIPAA Act, NCAA	

Table 1B Comparison of social media policies of Top World universities

Rank	11	12	13	14	15
University	Columbia University	University of Pennsylvania	ETH Zurich (Swiss Federal Institute of Technology)	Cornell University	Stanford University
Country	USA	USA	Switzerland		
SNS Policy Exist	Y	Y	Y	Y	Y

Policy URL	http://newroom.columbia.edu/wp-content/uploads/2012/02/Social-Media-Guidelines_Feb_2012.pdf	http://www.upenn.edu/almanac/volumes/v59/n12/media.html	http://www.rechtssammlung.ethz.ch/pdf/203.24_social-media-richtlinien_e.pdf	http://univcomm.cornell.edu/socialmedia/	http://www-group.slac.stanford.edu/com/docs/SocialMedia-Policy.pdf
Date of Creation/implementation	Feb. 1, 2012	November 13, 2012,	26-Feb-13	2011	17-Feb-12
Written by	CUMC Office of Communications	Penn++++'s Privacy Office and Office of Information Security	The ETH Executive Board		The SLAC Office of Communications
Written for	CUMC faculty, staff or students	students, teachers and staff	Organizational units of ETH Zurich	the colleges and units	all SLAC employees posting on behalf of SLAC, as well as employee who use social media tools for collaborative or personal reasons

In conformation of Existing Policies and rules	*	**	the Acceptable Use Policy for Telematics Resources of ETH Zurich (BOT)	Campus Code of Conduct, The Abuse of Computers and Network Systems policy	Stanford Computer and Network Usage Policy, Department of Energy Social Media Policy, Department of Energy Web Policies
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*CUMC policies on professionalism, protection of confidential or proprietary information and use of computers or other University resources, and the prohibition on discrimination and harassment

** Copyright Policy, Acceptable Use of Electronic Resources, Non-Discrimination Policy, Sexual Harassment Policy, Solicitation and Distribution, Policy Prohibiting Workplace Violence, Confidentiality of Records, Family Educational Rights and Privacy Act (FERPA)

A similar attempt was made to search the policy documents for Indian universities no such document was found, this may mean that either the policy does not exist or if exists it has not been well publicized through websites. However, government of India has formulated social media policy for the government department for their usage. The draft is available at [48], this can serve as a model for development of such policy institutes.

Results and discussion

Through several literatures it has found that students are the Major user of SNS. They use it for various activities like social communication, relationship building, entertainment, sharing of resources, personal presentation and Job search [1-20]. Most of the researchers believed that SNS has more applicability in academics and it can be used for enhancing the various skills for learners. The student, Teachers and Industry representative agree that the merits of SNS are More than it's demerit [49]. In fact, researchers also are using it for their research and education. Most of the academic instructions are aware of the power of social media but still they have not formally adopted it although they are using it informally [50, 52].

Conclusion and Future work

The social networking sites have potential to be utilized in academics as wells in employment. The institutions must take the following steps to prevent the misuse of these sites,

1. Creating awareness about the problems and risk of SNS amongst all stakeholders
2. Implementing security measures by firewall, antivirus etc.
3. Formally recognizing and Including SNS as a medium
4. Development of SNS usage policy.

The future research can be take up integrating SNS with various other technologies and ICT tools including Educational ERP, Learning Management system(LMS), like Moodle etc. It can suggest and develop innovative model of Teaching, Learning and development. This will lead to paradigm shift in the teaching learning scenario and employment activities... The Social networking site as technology can be sync with upcoming technologies like Big Data, Cloud computing, Mobile computing, Internet of Things, availability of Free and open source software has given an added advantage.



References

1. Amanda Lenhart, Kristen Purcell, Aaron Smith, and Kathryn Zickuhr Social media & Mobile Internet use Among American teens and young adults, <http://Pewinternet.org/reports/2010/social-media-and-young-adults.aspx>
2. Ahmed T. S., Kamal M. B., Nik S. N., AbdulRahman and Tunku B. T. A. (2011), "Investigating students' attitude and intention to use social software in higher institution of learning in Malaysia", *Multicultural Education & Technology Journal* Vol. 5 No. 3, 1 pp. 194-208
3. Jabr N.H (2011), "Social Networking as a Tool for Extending Academic Learning and Communication", *International Journal of Business and Social Science* Vol. 2 No.)
4. Agarwal S. and Mital M.(2009), "An Exploratory Study Of Indian University Students' Use Of Social Networking Web Sites: Implications For The Workplace", *Business Communication Quarterly*
5. Khalid Rashid, Rana Sanaullah, Muhammad Zafar Iqbal (2013) Social Networking Sites and Mobile Phones, *Interdisciplinary Journal of Contemporary Research in Business* January 2013 Vol 4, No 9
6. Check Martin, University of New Hampshire (2010). "Student Grades Not Affected by Social Networking.", <http://www.newswise.com/articles/student-grades-not-affected-by-social-networking-new-research-finds>.
7. MügeAkyıldız, MetinArganUsing online social networking: Students' purposes of Facebook usage at university of turkey, *Journal of Technology Research* 2013
8. Andrei Stanciu, Florin Mihai and Ofelia Aleca(2012) " Social Networking As An Alternative Environment For Education" *Accounting and Management Information Systems* Vol. 11, No. 1, pp. 56–75, 2012
9. Young K(2009), "Online Social Networking: An Australian Perspective", *International Journal of Emerging Technologies and Society*, Vol. 7, No. 1, 2009, pp: 39 – 57
10. Liu Y(2010), "Social Media Tools as a Learning Resource," *Journal of Educational Technology Development and Exchange*, Vol 3 No 1, pp 101-114.
11. Osborn, Debra S; LoFrisco, Barbara M, How Do Career Centers Use Social Networking Sites? *The Career Development Quarterly* 60.3 (Sep 2012): 263-272.
12. Neelesh Kumar Jain,. Ashish Verma, Rama Shankar Verma and Prashant Tiwari Going Social : The Impact of Social networking in Promoting Education, *International Journal of Computer Science Issues*, Vol. 9, Issue 3, No 1, May 2012
13. Shen K.N and Shakir M(2009)," Internet Usage Among Arab Adolescents: Preliminary Findings" in *European and Mediterranean Conference on Information Systems*
14. K.P. Singh, Malkeet Singh Gill, Use of Social Networking Sites by the Research Scholars: A Study of Guru Nanak Dev University, Amritsar, *Library Herald* Vol 49 No 3 September 2011
15. Musibau, AjagbeAkintunde; Eyinnaya, Eluwa Stephen; Edward, Duncan E; Wantrudis, MkomangeClaud; Nojeem, LasisiAyodele(2011, The Implications of Social Networking Sites in Education in Nigeria , *Interdisciplinary Journal of Contemporary Research In Business*, ISSN: 207371xc22

16. Garcia, Elaine; FenioAnnansingh; Ibrahim Elbeltaqgi (2011), Management perception of introducing social networking sites as a knowledge management tool in higher education , *Multicultural Education & Technology Journal* 5.4 (2011): 258-273.
17. Anil Kumar, Rajinder Kumar, Use of Social Networking Sites (SNSs): A study of Maharishi Dayanand University, Rohtak, India, *Library Philosophy and Practice (e-journal)* 2013 Paper 1000. <http://digitalcommons.unl.edu/libphilprac/1000>
18. Neeraj Kumar, User Perception and Use of Social Networking Sites by Sikkim University Students 8th Convention PLANNER2012)
19. Noushia Parveen , Use of Social networking Site (Facebook) in Making Awareness Among The Library and Information Science Professionals of University Libraries of U.P: A Case Study , *International Journal of digital Library services*, VoL.1July -Sept.2011 , Issue 1 ISSN:2250-1142 www.ijodls.in
20. Nirmali Chakraborty, Activities and Reasons for Using Social Networking Sites by Research Scholars in NEHU: A Study on Facebook and ResearchGate, 8th Convention PLANNER-2012Sikkim University, Gangtok, March 01-03, 2012© INFLIBNET Centre, Ahmedabad)
21. Ephraim Okoro. Social Networking And Pedagogical Variations: An Integrated Approach For Effective Interpersonal And Group Communications Skills Development *American Journal of Business Education (Online)* 2012)
22. Ephraim Okoro,, Integrating Social Media Technologies In Higher Education: Costs-Benefits Analysis *Journal of International Education Research* 2012)
23. Dr. R.Subramani, D.V.Nithyanandan, Reach and Academic Use of Various Applications of Social Media: A Survey among the University Students of Tamil Nadu, *American International Journal of Research in Humanities, Arts and Social Sciences*, June-August, 2013, pp.82-86
24. Har Singh, Anil Kumar Use of Social Networking Sites (SNSs) by the Research Scholars of Panjab University, Chandigarh: A Study, 58th ILA International Conference on Next Generation Libraries: New Insights and Universal Access to Knowledge 682-6912013 Indian Library Association, New Delhi
25. Justo de Jorge Moreno .(2012) Using social network and dropbox in blended learning: an application to university education, *Business , Management and Education* ISSN: 20297491
26. Kirkwood K(2010), "The SNAP Platform: social networking for academic purposes" *Campus-Wide Information Systems* Vol. 27 No. 3, pp. 118-126
27. R. Richard Harrison, Thomas, Michael Identity in Online Communities: Social Networking Sites and Language Learning, *International Journal of Emerging Technologies and Society* 2009
28. Ferguson, Christopher Paul , Online social networking goes to college: Two case studies of higher education institutions that implemented college-created social networking sites for recruiting undergraduate students , University of Pennsylvania, ProQuest, UMI Dissertations Publishing, 2010. 3410480.
29. <http://edition.cnn.com/2011/10/20/tech/social-media/universities-social-media/index.html?iref=allsearch>
30. Dr. Rahul Choudaha, Social Media in International Student Recruitment Association of International Education Administrators (AIEA) Issue Brief March 2013

31. Davison, H Kristl; Maraist, Catherine C; Hamilton, R H; Bing, Mark N To Screen or Not to Screen? Using the Internet for Selection Decisions Employee Responsibilities and Rights Journal 24.1 (Mar 2012): 1-21.
32. Brown, Victoria R; Vaughn, E Daly , The Writing on the (Facebook) Wall: The Use of Social)Networking Sites in Hiring Decisions, Journal of Business and Psychology 26.2 (Jun 2011): 219-225.
33. Leigh A. Clark Sherry J. Roberts, Employers Use of Social Networking Sites: A Socially Irresponsible Practice, Journal of Business Ethics (2010) 95:507525 Springer 2010 DOI 10.1007/s10551-010-0436-y
34. Greenwald, Judy Web-based screening may lead to bias suits Business Insurance 42.10 (Mar 10, 2008): 1,6.)
35. Using Social Networking Sites for Recruitment: Pros &Cons HR Focus 84.4 (Apr 2007):
36. Vicknair, Jamie; Elkersh, Dalia; Yancey, Katie; Budden, Michael C , The Use Of Social Networking Websites As A Recruiting Tool For Employers American Journal of Business Education 3.11 (Nov 2010): 7-12.)
37. Clark, Leigh A; Roberts, Sherry J, Employer's Use of Social Networking Sites: A Socially Irresponsible Practice: Journal of Business Ethics 95.4 (Sep 2010): 507-525.)
38. Jonathan Segal,Widening Web of Social Media HRMagazine 57.6 (Jun 2012): 117-118,12
39. Sherry J. Roberts, Terry Roach (2009, March) Social networking web sites and human resource personnel: suggestions for job searches, Business Communication Quarterly, Vol. 72 Issue 1, p110-114
40. Bohnert, Daniel, Ross, William H.(2010, July) The Influence of Social Networking Web Sites on the Evaluation of Job Candidates, Cyber Psychology, Behavior & Social Networking Vol. 13 Issue 3, p341-347, 7p
41. Elzweig, Brian,Peeples, Donna K, (2009, Autumn), Using Social Networking Web Sites in Hiring and Retention Decisions.SAM Advanced Management Journal , Vol. 74 Issue 4, p27-35, 9p
42. Peter Done, : Financial Adviser (Mar 28, 2013), United Kingdom, **ISSN:** 09535276
43. Cain, Greg; Jones, Jennifer Employment Law : The Dangers Of Social Networking Sites , New Zealand Management (Nov 2008)
44. Adams, Elizabeth Lay down the law on using social networking sites , Human Resources (Aug 2008): 10
45. Calogero, Katherine Become a Fan of Government Procurement on Facebook: How The Federal Government's Acquisition workforce can use Social networking websites to recruit new employees Public Contract Law Journal 40.3 (Spring 2011): 807-828
46. Osborn, Debra S; LoFrisco, Barbara M, How Do Career Centers Use Social Networking Sites? The Career Development Quarterly 60.3 (Sep 2012): 263-272.)
47. Garcia, Elaine; FenioAnnansingh; Ibrahim Elbeltagi (2011), Management perception of introducing social networking sites as a knowledge management tool in higher education , Multicultural Education & Technology Journal 5.4 (2011): 258-273.)
48. http://deity.gov.in/sites/upload_files/dit/files/SocialMediaFrameworkDraftforPublicConsultation_192011.pdf

49. Farooque, M., M., J. & Kadam, M., S. (2015). An Analysis of Views of student, Teachers and Industry Employees On Use of Social Networking Sites (SNS) In Education, Global Journal on Technology [Online]. 09, pp 130- 137. Available from: <http://awer-center.org/gjt/>
50. Gharib M, Farooque M. M. J & Tehniyat shaikh Use of social networking sites for Academic communication: A formally Informal mode of communication :Ajanta (2019) Ajanta Publications ISSN - 2277-5730
51. Farooque, M. M. J. (2018). Make Semantic Analysis of Opinions about social networking using Blog Search Engines. Computer Reviews Journal, 2, 296-298.
52. Farooque, M., M., J. & Kadam, M., S. (2013). Harnessing the Power of social media Allana Management Journal of Research Vol-III Issue1 Jan-June 2013, (special edition) Allana Institute of Management sciences ISSN 2231-0290.
53. Mohammed Aref, Saba Al Shahri, (2018), "Existing & Distance Education Trends: A Comparative Study", Majan International Conference" Muscat, Oman
54. Asad Rahman Syed Ahsan Jamil, Mohammed Aref, (2016), "Oman e-readiness: A paradigm shift for businesses", International Journal of Economic Research, 13 (5), 2223-2233.