English Language Classrooms: Major Approaches to Effective Communication in Writing

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Abstract

Good and effective writing is the main concern for teachers in classrooms in Bangladesh where English is taught as a foreign language as well as a second language. But as many teachers in EFL context attest, foreign language writing is a challenging task which majority of learners are not comfortable about. This paper aims to talk about the current approaches in teaching writing in English classrooms. Firstly, it provides an overview of the three approaches to writing namely, product, process and genre approaches. Secondly, it discusses the proposition for an integrated approach with reference to various research conducted on these approaches. Finally, some recommendations for improving teaching and writing in English classrooms are put forward.

Key Words: *Approach, genre, product, process, writing instruction.*

1. Introduction

Writing is the primary basis upon which one's communicative and thinking skills are judged. The ability to communicative effectively in writing is vital to success in social, academic and professional life. However, it is a difficult productive skill both to the native (L1) and second/foreign language (L2) writers. Writers have to put their thoughts into meaningful form adhering to the linguistic resources of the target language and communicative purpose of writing. It is more challenging for English as foreign language (EFL) learners who get meager or no opportunity to practice writing outside classroom in their regional context. At the same time, EFL teachers experience many hurdles which manifest themselves in the frustration of the students when instructed for a writing task. Moreover, many EFL teachers admit that their knowledge of writing practice is limited and this creates a gap between their ideal and their actual teaching situation (Pennington, 1997 cited in Xin, 2007). It is necessary to give teachers opportunities to reflect on their teaching practice and thus they learn about new classroom approaches or innovations in teaching writing through meaningful educational experiences or teaching models. The present study aims to review the current trends in writing pedagogy and recommend practices which teachers could employ in order to help students develop their writing skill.

2. L2 Writing Pedagogy

Current studies in L2 writing pedagogy propose three approaches namely, product, process and genre approach. In the ESL/ EFL classrooms, teachers have largely depended on product and process approach to teaching writing for three decades before focus has been shifted to genre approach. All these approaches depend on the type of students' competence, the text type being studied, the curriculum, and above all, unique teaching and learning approaches and ideologies.

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Each of these factors plays critical roles in effective L2 writing instruction.

The product approach

According to Gabrieltos (2002), the product approach to teaching writing is "a traditional approach in which students are encouraged to mimic a model text, usually presented and analyzed at an early stage" (p.5).Writing development revolves round the imitation of the content, organization, grammar and vocabulary of the model text provided by teacher.Model texts provide students with input on linguistic features such as appropriate use of vocabulary, syntax, grammar, cohesive devices and proper organization. The product approach emphasizes on structuring the classic three-to-five paragraph essay following a model illustrating the correct usage of the rhetorical pattern (Young, 1978). The approach is characterized as follows:

(i) Writing is seen as a linear process, emphasizing only on the final product which is evaluated on form and grammatical accuracy,

(ii) Being teacher-centered, teacher is considered an expert, the sole authority in the classroom,

(iii) Using controlled and guided writing as dominant teaching techniques,

(iv) Success is measured by grammatical accuracy and language functions, not creativity,

(v) Writing for one audience only: the teacher.

Steele (2004) illustrates four stages of writing modeled on product approach:

Stage 1: In the first phase, students are provided with standard models of texts for analyzing the features of language and organization. This involves familiarization with the grammar, vocabulary and structure of the model texts which guide students to understand what they have to produce and how to produce.

Stage 2: This stage involves controlled writing by manipulation of the fixed patterns students have learnt from the model texts in the first stage. For example, they learn and practice the different conventions of writing formal letter, essay and paragraph while getting grammar points correctly.

Stage 3: This stage involves, students' learning of the organization of ideas. The model texts guide them forming the structure of their composition. Teacher discusses the structure of writing composition.

Stage 4: This stage is concerned with the final product of writing. Students choose from a set of similar writing tasks and following the model complete their tasks.

The four stages indicate the linear method of writing, beginning with reviewing the model text, analyzing its features, internalizing grammar and organization and finally writing. Thus, the final product is expected to manifest students' knowledge about the structure of language. According to Badge & White (2000), the final product when evaluated on the preconceived and fixed notions of good writing fails to recognize the learner's skill and knowledge that they bring from outside the classrooms as social individuals. The primary goal of product writing is an error free coherent text. Students learn the features of the model text and apply the same form in new settings regardless of content. So, it is simply a mechanical work which is not concerned about the thoughts of the writer and eventually impedes writing skill

development and effects students' motivation and self-esteem. Thus, the interaction with the reader becomes shallow, incomplete and non-communicative (Escholz,1980). Teachers' feedback on students' writing usually tends to focus on surface-level linguistic errors. Revision involves editing grammatical errors and mechanical problems. The teacher in the role of the editor is primarily

concerned with formal linguistic features (Hyland, 2003). Editing takes place only after teacher feedback, which students feel reluctant to follow owing to time constraints and absence of emphasis on practice.

Nevertheless, the product approach can be advantageous in some cases, such as improving learners' grammatical accuracy, especially with lower-level students, increasing the self-confidence of novice writers; and enhancing learner's stock of vocabulary (McDonough & Shaw, 2003). Another advantage could be when the model is imitated for specific purposes, for example, learning the format of formal letters, essay, paragraph and report writing for academic goals. In the academic and business settings, imitation of a model is considered positive, because it saves time which would otherwise be difficult for organization, vocabulary, and sentence construction by the less proficient writer. In other words, product approach is better for scaffolding the writing of inexperienced writers.

The process approach

Originated in L1 instruction in native English settings, the process approach is a major shift from the emphasis on finished product to writing as a cognitive process which consists of cyclical and recursive or even disorderly (Zeng, 2005) writing strategies such as planning, drafting, understanding rhetorical problems, organizing, revising and editing (Ferries & Hedgcock, 2005). Accordingly, in this approach writers engaged themselves in their writing task through a cyclical approach which involves going through stages of drafting, revising and receiving feedback on their drafts from peers and/or from teachers, followed by revision of their evolving texts. The main objective is that students develop their writing skills through a number of activities and stages. Researchers including Flower and Hayes (1980, 1981) and Grabe and Kaplan (1996) offer a number of dominant traits of process-oriented approach to writing. Summarized by Mahrooqui and Denman (2015), these include:

(i). Being concerned with the 'hows' of writing,

(ii). Teaching students strategies of invention and discovery,

(iii). Teaching students how to connect ideas,

(iv). Acknowledging the individuality of students in terms of their needs, abilities, cognitive styles, rates of teaching and learning styles.

The strategies of writing in a typical process-oriented lesson consist of the following stages:

Stage 1: Students generate ideas by brainstorming and discussion

Stage 2: Students jot down their ideas, and judge quality and usefulness of those, make plans, look for resources, consults peers/ teachers. They may organize ideas into a mind map, spiderogram, or linear form

Stage 3: Students write the first draft. This is done individually or sometimes in pairs or groups.

Stage 4: Students exchange their writing with a classmate in order to review each other's work.Teachers also provide feedback.

Stage 6: Students make improvement to their drafts following feedback from peers or teachers. They make several drafts, revise and edit.

Stage 7: A final draft is written and submitted.

In this approach, the writing stage begins with brain storming and discussion to generate ideas.

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Getting started can be difficult, teachers design activities so as to stimulate generating ideas. Teachers remain in the background, scaffolding the whole process, providing language support when necessary and taking care not to inhibit students in the production of ideas. Students focus on the purpose and audience of their writing which would help them form the basis of their composition. Organization of ideas helps students with the structure of their texts. They decide where to begin. Writing of several drafts inculcates in the students' mind the awareness that they are putting their thoughts and ideas in writing for a particular audience. This helps develop an understanding of the significance of effective writing. Making several drafts is transition from writer-based thought into reader-based text (Johnson & Johnson, 1998). Good writers evaluate their own language and writing by checking own text, looking for errors in grammar, structure, organization and content. Teachers also evaluate and provide feedback on the content of student's writing more than on form and accuracy. Positive feedback helps develop confidence and create good feeling for the next writing class. The overall purpose is to create meaningful, purposeful writing tasks that develop the writer's skills over several drafts (Maniruzzaman & Mahmud, 2008). Through advocacy of more activities other than sole writing in the classroom, process writing has transformed traditional English classrooms into a "collaborative workshop environment within which students, with ample time and minimal interference, can work through their composing processes" (Silva, 1990, p.15).

However, the process approach has its own limitations. According to Badger and White (2000), process approach considers all writing as being produced by the same set of procedure and ignores the fact that certain kind of texts are created for specific communication purposes. It pays little importance to the contextual, linguistic and organizational factors that also define, shape and judge a piece of writing. In ESL/EFL context, writing teachers need to be careful when adapting the process approach and learners need more explicit and strict direction from their teachers. Hyland (2009) points out that some students do not trust peers' feedback, and at the same time, they are reluctant to criticize others' writing. Moreover, as students have limited language knowledge, the writing teacher has to take roles of both language teacher and writing teacher. Hyland (2009) describes that teaching good writers' strategies cannot fully equip students to be good writers. Furthermore, as it requires time to accomplish writing in the classroom, not all classroom time can be spent on writing; rewriting the same task or composition may make them frustrating and irritating and hence they may react negatively. But as long as the activities are varied and the objectives clear, they will usually accept doing so.

In addition, overemphasis of the cognitive relationship between the writer and the writers' internal world (Swales,1990) undermines the social purpose of language. Thus, it could be summed up that similar to the product approach, the process approach does not focus on the social nature of academic writing. Besides owing to its lengthy process, it is difficult to fully adopt in a large EFL classroom.

The genre approach

In contrast to the traditional product approach to writing which emphasizes on the final product, and the process approach which gives importance to psychological factors involved in writing, the genre approach emerged as an illustration of the changing views of learning to write which shifted towards how language is structured to achieve social purposes in particular contexts (Hyland,

2007). Swales (1990) identifies genre as a class of communicative events the members of which share some set of communicative purposes. (p.58). This approach emphasizes on the context in which writing is done and the purpose of writing. It advocates the context which determines what should be written and how ideas can be presented. Genre refers to the different types of writing such as narrative, report, formal/informal letters, academic writing, and business purpose. Each type of writing is different from the other in terms of language and organization. Most genre use conventions that involve communicative purpose, e.g. a personal letter starts with a cordial question in a friendly mood, a formal letter begins with salutation as Dear Sir/Madam or an argumentative essay emphasizes its thesis as it aims at making an argument.

Badger and White (2000) consider genre approach as an extension of the product approach. Similar to product writing, genre approach usually uses a model and makes the students analyze features before producing something similar. A typical genre approach might involve:

Stage 1: Reading and analyzing a model for understanding the genre, text structure and language.

Stage 2: Controlled writing, such as writing individual sentences using a substitution table;

Stage 3: Free or guided writing (such as notes given to construct one or two of the paragraphs in a letter- the rest being already given).

Stage 4: Free writing of a parallel text or independent construction of text by the learner.

Although, apparently similar to product approach to teaching writing, the genre approach is concerned with the social context and the social purpose of writing. As regards writing development, both approaches view writing development as the analysis, manipulation and imitation of input of model texts provided to the learners (Badger & White, 2000, p.155).

3. Towards an integrated approach

All the three approaches discussed above have encountered objections and remarks regarding their effectiveness. Both the process and the product approach fail to recognize that writing is primarily a communicative activity and as a result ignores the relation of writing within the social context for which it is being written. This, in turn, reveals the positive aspect of the genre approach, which admittedly takes into account the significance of the social context and the knowledge of genre. It involves an understanding both of the expectations of the discourse community it addresses and the relevant conventions in terms of structure, language and rhetoric (Dudley-Evans & St John, 1998, p.116-115). However, the fact that this approach fails to recognize the cognitive nature of the writing process and the skills involved in this process, proves to be its major weakness, since it sees the role of writers as 'largely passive'(Badger & White, 2000).

Many researchers propose an integrated approach to writing teaching, some propose a blend of the product and process approach (Maniruzzaman & Mahmud, 2008; Hasan & Akhand, 2010; Atkinson, 2004; Connor, 2002; Grabe and Kaplan, 1996), while some others supported combining genre and process approaches (Badger and White, 2000; Kim &Kim, 2005; Hefferman, 2006). Maniruzzaman & Mahmud (2008) suggest for an amalgamation of the product and process approach which will help learners develop their creativity as well as linguistic knowledge and organizational skill. Hasan & Akhand (2010) demonstrate that the combination of product and process outperformed the use of a single approach. Both Atkinson (2004) and Connor (2002) advocates for a deviation from the traditional text-based study of L2 writing and support process-oriented approach where context and culture are given importance. Badger and White's (2000)

experiment with the amalgamation of the process-genre approach revealed that dual approach works well if the writing cycle begins with description of the key linguistic features, the social context and analysis of the genre in the models of writing provided to the students. Student writing is then subjected to the sequence of drafts in the process approach (p. 157). Kim and Kim (2005) suggested that a blend of the genre and process approach would give learners opportunity to develop self-confidence and creativity as well as acquire the features of the intended genre.

Hyland (2011, as cited in Alzaanin.2014) recommends that teachers should attend to different aspects of the five types of knowledge integral to the learning of writing which are:

(i) content knowledge of the ideas and concepts the topic will address

(ii) linguistic knowledge of the syntax, lexis, and appropriate formal text component

(iii) process knowledge of how to prepare and carry out a writing task

(iv) general knowledge of communicative purpose of the genre and its features

(v) content knowledge of readers' expectations and cultural conventions

Thus recent literature suggests knowledge of such aspects in writing along with a combination of different approaches within EFL instruction ensures a wider development of writing skills in the learners. Therefore, it may be advisable for writing teachers to consider an eclectic approach to writing instruction which considers their teaching contexts, their students' needs, and their instructional purposes (Badger & White, 2000).

4. Recommendations

The above discussion attempted to provide an understanding of the advantages and disadvantages of current approaches to teaching EFL writing. The following include some recommendations put forward for teachers to help develop students' writing skill.

- It is essential that teachers are aware of the current trends in EFL writing instruction.
- An integrated approach which identifies the linguistic features, rhetorical techniques, communicative purpose and social conventions of writing could be adopted by teachers.
- Students should be provided ample opportunities for the practice of producing descriptive, narrative, argumentative, exploratory and persuasive texts.
- Teachers could recommend a variety of reading materials to students to enrich their understanding of the conventions of L2 texts
- Writing tasks which are related to students' social and cultural experience and knowledge could motivate students to practice.
- Teachers could design realistic tasks such as writing notes, e-mails, filling in forms, report writing, letter writing, preparing brief talks, writing memos and writing summaries
- Teachers' could publish students' writing in blogs, class magazine and posters to build their self-efficacy and self esteem.
- It is necessary that teachers always provide different types of feedback (direct, indirect and/or positive) to students' writing. Positive feedback can help build self-confidence and good feeling for writing.

Conclusion

From the review of the writing pedagogy that have developed over the years it is observed that the different approaches to teaching writing are not competing theories; rather they are complimentary

to each other. EFL teachers need to be aware of the current trends in teaching writing and adopt those according to the need of the teaching learning situation. Before concluding, it is necessary to acknowledge some limitations of the current paper. The paper relied solely on published literature for discussing the issues related to L2 writing pedagogy. Discussions provided only snapshots of the theory, its application and limitations. More comprehensive studies would be required to investigate context specific L2 writing pedagogy discussed here in this article.

References

Alzaanin, E. I. (2014). Investigating the pedagogical practices of EFL writing teachers in Palestinian universities: A cognitive-ecological perspective. Unpublished Doctoral Thesis. Retrieved from http://researcharchive.vuw.ac.nz/handle/10063/3315

Atkinson, D. (2004). Contrasting rhetorics/ contrasting cultures: Why contrastive rhetoric needs a better conceptualization of culture? *Journal of English for Academic Purposes*, 3, 277-289.

Badger, R.& White, G. (2000).A process genre approach to teaching writing. *ELT Journal, Vol. 54:2*. Oxford: OUP.

Byrne, D. (1988). *Teaching writing skills*. (New ed.). Longman.

Connor, U. (2002). New directions in contrastive rhetoric. TESOL Quarterly, 36(4), 493-510.

Dudley-Evans, T. & St John, M. (2000). *Developments in English for specific purposes: A multidisciplinary approach*. Cambridge University Press.

Eschholz P. (1980). The prose models approach: Using products in the process. In Donovan T., Mc Clelland B. (Eds.), *Eight approaches to teaching composition*, Urbana, IL: National Council of Teachers of English.

Ferris, D. R. & Hedgecock, J. S. (2005). *Teaching ESL composition: Purpose, process, and practice*. Mahwah, NJ: Lawrence Erlbaum Associates.

Flower, L. S., & Hayes, J. R. (1981). A cognitive process theory of writing. *College Composition and Communication*, 32, 365-387.

Flower, L.S., & Hayes, J.R. (1980). Identifying the organization of writing processes. In L.W. Gregg & E.R. Steinberg (Eds.) *Cognitive processes in writing* (pp.3?30). Hillsdale, N.J.: Lawrence Erlbaum Associates Publishers.

Gabrielatos, C. (2002). EFL writing: product and process. Retrieved from http://www.gabrielatos.com/Writing.pdf.

Grabe, W., & Kaplan, R. B. (1996). *Theory and practice of writing*. London and New York Longman.

Hasan, K. & Akhand, M. (2010). Approaches to writing in EFL/ESL context: Balancing product and process in writing class at tertiary level. *Journal of NELTA 15*, 77-88. doi: 10.3126/nelta.v15i1-2.4612.

Hedge, T. (2005). *Writing*. 2nd ed. New York: Oxford UP, 2005. Print.

Hefferman, N. (2006). An integrated approach to teaching academic writing. *Asian EFL Journal, 8(3).* 249-258. Retrieved from http:// asian-efl-journal.com/quarterly-journal/2006/09/29/an - integrated-approach-to-teaching-academic-writing/

Hyland, K. (2009). *Second Language Writing.* 7th ed. New York: Cambridge UP,. Print.

Hyland, K. (2007). *Second language writing.* Cambridge: Cambridge University

Hyland, K. (2003). Genre-based pedagogies: A social response to process. Journal of Second Language Writing, 12: 17-29.

Johnson, K. &Johnson, H. (1998). *Encyclopedia Dictionary of Applied Linguistics.* Blackwell, USA.

Kim, Y., & Kim, J. (2005). Teaching Korean university writing class: Balancing the process and the genre approach. *Asian EFL Journal, 7(2),* 1-15. Retrieved from http://asian-efl-journal.com/quarterly-journal/2005/06/29/teaching-korean-university writing-class-balancing-the-process-and-the-genre-approach/#thethe-tabs-1-3.

Kroll, B. (2001). Considerations for teaching an ESL/EFL writing course. In M. Celce-Murcia (ed). *Teaching English as a Second or Foreign language.* (3rd ed.). Boston, MA: Heinle & Heinle.

Kroll, B. (2003). *Exploring the dynamics of second language writing.* Cambridge: Cambridge University Press.

Lefkowitz, N. (2009). Colloquium: The future of foreign language writing. The 2009 Symposium on second language writing (pp. 22-23). Tempe, AZ.

Mahrooqui, R. A. & Denman, C. J. (2015). Process vs. product : Arabic and English writing classrooms in Oman. P.77-93. In Amrooqui, R.L.., Thakur, V. S., Roscoe, A. (Eds). *Methodologies for effective writing instruction in EFL and ESL classroom.* p. 77-93.IGI Global: USA.

Maniruzzaman, M. & Mahmud, S. (2008). Teaching composition writing in English as a second language at the tertiary level: A balanced curricular and instructional approach. *Bangladesh Journal of Public Administration, 12 (2).*

Mahmud, S. (2014-2015). Bangladeshi EFL teachers' and learners' preferences for error correction and feedback. *Harvest, Jahangirnagar University Studies in Language and Literature, 30.*

McDonough, J. & Shaw, C. (2003). *Materials and methods in ELT: A teacher's guide.* Oxford: Blackwell Publishing Ltd.

Pennington, M. C., & Richards, J. C. (1997). Reorienting the teaching universe: The experience of five first-year English teachers in Hong Kong. *Language Teaching Research, 1(2),* 149-178. doi: 10.1177/136216889700100204

Silva, T. (1990). Second language composition instruction: Developments, issues, and directions in ESL. In B. Kroll (Ed.), *Second language writing: Research insights for the classroom* (pp. 11-23). Cambridge, UK: CUP.

Steele, V. (2004). Product and process writing. Retrieved on from http://www.englishonline.org.cn/en/teachers/ workshops/teaching-writing/teaching-tips/product-process.

Swales, J. M. (1990).Genre analysis: *English in academic and research settings*. Cambridge, UK: CUP.

Xin, Z. (2007). Reflective thinking on communicative teaching in writing. *US-China Education Review,4 (5)* ISSN1548-6613.

Young, R.E. (1978). Paradigms and problems: Needed research in rhetorical invention. In C.R. Cooper & L. Odell (Eds.), *Research on composing* (pp. 29-47). Urbana, IL: National Council of Teachers of English.

Zeng, D. (2005). The process oriented approach to ESL/EFL writing instruction and research. *Teaching English in China, 28* (50), 66-77.

Alice Munro's "The Office" and the Crises of a Female Fiction Writer

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Abstract

Alice Munro's "The Office" covers some important aspects of the life of a writer; specifically, Munro in this short-fiction describes how writing is a troublesome work for a woman when she has even a formal office. This short fiction shows us that writing can be a profession like that of other formal professions (pedagogy, research, banking) as well as how writing as a profession is tougher to a woman compared to a man. A male writer can continue to write at home closing the door, but it looks gruesome to laws and children if a female writer writes doing the same (Munro1). The female fiction writer books an office to continue writing smoothly leaving the family adversity behind, yet she faces problems in the office what usually does not happen to a man. People in general consider writing to be a passion than a profession, but when the central character of this story books an office for writing, it hits the point that writing can be a full-fledged profession too. This paper investigates and analyzes the career of a female fiction writer, and explores the dimension of crises and the ways in which she covers them up.

Key Words: *Autobiography, office, resistance*

"The Office" is an autobiographical short fiction as Munro herself declares, "the most straightforward autobiographical story I have ever written" (qtd in Alice Munro: Writing Her Lives, 172). Robert Thacker, the academic authority on Alice Munro, writes: "'The Office' [is a] story that grew directly from Munro's circumstances in 1960 or 1961, and so [it] offers a precise sense of her situation then" (172). Alice Munro is a widely acclaimed short story writer who frequently chooses female protagonist in her stories. Her choice of central character seems to be influenced by the factor that she herself had witnessed the condition of women in southwestern Ontario, the town where she was born and raised up. Her first-hand experience in Ontario is the primary reason why she chooses female protagonist for her stories. As in an interview with Stefan Asberg in Swedish Television (STV), being interrogated if it is important to tell the stories from women's perspective, Alice Munro responds:

> When I was a young girl I had no feeling of inferiority at all about being a woman. And this may have been because I lived in a part of Ontario where women did most of the reading, telling most of the stories, the men were outside doing important things, they didn't go in for stories. So felt quite at home. (2)

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The condition of Ontario was quite favourable for women because there they could read and write in a congenial atmosphere. In line with this, Munro adds, "I never knew about the word 'feminism,' but of course I was a feminist" (5). Munro claims that she was not familiar with the term "feminism," although she was a feminist, knowing not the term, and this statement verifies why she chooses a female protagonist in "The Office." The female protagonist who is a fictionist too in "The Office" introduces herself: "I write. Is that better? I try to write" (1).

In "The Office," the female fiction writer intends to establish her career as a writer apart from the role as a wife-mother. Munro passed through some anxious moments in Vancouver when she composed "The Office." Robert Thacker informs, "Munro makes it clear how being a writer who is also a wife and mother is very different from the life of those men who write or work at home" (173-74). She looks forward to her husband reserving an office to continue writing smoothly. She said to her husband, "I think I ought to have an office" (1). An individual office helps the protagonist unfold full potential and continue writing having been hardly disturbed. Hardly can a house provide a female writer with a congenial ambience to write in, since a house refers to such a place where people live in but they don't feel like having a sense of belongingness (phrasemix.com). The story thus proceeds as follows:

> A house is all right for a man to work in. He brings his work into the house, a place is cleared for it; the house re-arranges itself as best it can around him. Everybody recognizes that his work exists. He is not expected to answer the telephone, to find things that are lost, to see why the children are crying, or feed the cat. He can shut his door. Imagine (I said) a mother shutting her door, and the children knowing she is behind it; why, the very thought of it is outrageous to them. (1)

The female protagonist explains how a house is favourable for writing to a male writer. When a man sits to work closing the door, everyone recognizes that he has works to do. He is not expected to take care of the offspring whereas a woman rears the children and does other family chores. In contrast, if a woman locks door, it appears to be "outrageous" to the children (1). Taking both sides into account, the female protagonist looks for an office, as her goal is to write fiction being not troubled. Steven D. Brown and Robert W. Lent, two major psychoanalysts, write in the Journal of Career Assessment, "the relation of self-efficacy to interests was largely indirect via outcome expectation and that outcome expectations and interest mediated the relation of self efficacy to choice goals" (4). The writers claim that efficiency and interest, in case of results, hold a weak relation. Efficiency becomes a non-major factor, and so interest and result determine the effectiveness of career objective. In line with this statement, although success is yet to be defined, the protagonist has interest in writing fiction. She, therefore, books an office, as a pre-requisite for establishing her writing career along with accomplishing the family chores.

Besides having a good writing skill, the female fiction writer needs to fulfill some requirements, such as the physical office-space and the money to pay the rent of the office. With the consent of husband, she searches of an office around her house and finally books one from Malley family. She gets reassured that this time she can continue writing with full attention because she will remain free of family-anxiety during her writing hours. An office, however, is not enough for a fiction writer, because it is either to be rented or to be purchased.

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In regard to the basic necessity of any female writer, Virginia Woolf penned down the reason in her "A Room of One's Own":

> All I could do was to offer you an opinion upon one minor point-a woman must have money and a room of her own if she is to write fiction; and that, as you will see, leaves the great problem of the true nature of woman and the true nature of fiction unsolved. (4)

Woolf thinks that a female writer should meet-up two basic requirements: money and an individual room. Money will help ensure writing materials and an individual room will do a congenial ambience. The protagonist of "The Office" rents an office, but she does not have money to pay for it. Her husband, nevertheless, agrees to pay for her office as she narrates, "Go ahead, if you can find one cheap enough, is all my husband had to say to this" (2). As the female fictionist does not have money, her husband will carry the rent of the office.

Fiction writing is not yet established as a profession because writers can barely live on with the honorarium they earn from fiction writing. The female protagonist assumes fiction writing to be an identity; hence, she rents an office to write fiction overcoming all odds. This accomplished challenging task establishes fiction writing as a profession. Corrine Bigot, a scholar of English and Commonwealth Literature at the University of Toulouse Jean Jaures, France and a critic of Munro, writes in Theatre Adyar, "[w]ith 'The Office,' Munro offers a variation on Virginia Woolf's essay, A Room of One's Own, as the main protagonist, a young wife and mother who is also a writer, rents a room in the hope of finding peace and inspiration" (3). The female protagonist in fact does not rent an office room for "peace" while "inspiration" for well writing is a fact to her. The protagonist has peace, according to the narration, in her house:

> I have a house; it is pleasant and roomy and has a view of the sea; it provides appropriate places for eating and sleeping, and having baths and conversations with one's friends. Also I have a garden; there is no lack of space. (1)

Similarly, Thacker also explores,

> [t]he story speaks also to the circumstances of [Munro's] life after about ten years of married life in Vancouver. Rhetorically, the narrator asks, 'what do I want an office for? I have a house; it is pleasant and roomy and has a view of the sea . . . there is no lack of space.' These details are true of the house on Lawson Avenue, encircled by hedges and vegetation, looking down on Burrard Inlet. (173)

The female protagonist describes the amenities of her house. She has no problem with the space of the room, its landscape, and its dining. Bahee Hadaegh and Marjan Daraeein, two researchers, write in their article entitled "Similar Women's Role in Russian and Canadian Modern Societies: A Comparative Study of Alice Munro's Short Stories and Those of Anthon Chekhov" that "an effort for gaining self-development and identity" drives the protagonist to rent an office (4). An office is the pre-requisite for writing, and writing is an identity of the female protagonist. In his book Cultural Identity and Diaspora, Stuart Hall conceptualizes identity as a "production" (1). A question may arise: the female fiction writer has an identity that is, she is a wife and a mother; but why does she pursue another identity then? Hall aptly

remarks, "we should think, instead, of identity as a 'production,' which is never complete, always in process, and always constituted within, not outside representation" (1). Accordingly, the female protagonist is in a continuous process to boost up her identity and she keeps her continuous efforts in improving her identity.

The female protagonist tries to establish writing as an independent profession. Although she knows it is not an easy task, she chooses this track intentionally. Roy Suddaby and Daniel Muzio adapt critics like Halliday et.al to explain an independent profession in their Theoretical Perspectives of the Professions. They refer to, from Halliday and others, "while professions may provide some degree of monopolistic protection, there is a much variability in earnings and status within professions as across them" (original italics 7). It gives the denotation that a profession ensures protection in association with wage and status. The protagonist says,

> And what do you write, they inquire with spirit. Fiction, I reply, bearing my humiliation by this time with ease, even a suggestion of flippancy, which was not always mine, and again, again, the perceptible circles of dismay are smoothed out by such ready and tactful voices-which have however exhausted their stock of consolatory phrases, and can say only, "Ah"! (1)

People usually think writing cannot be a profession; hence, they ask the female fictionist what she writes of. Bearing all humiliation, she responds that she writes fiction, although she doesn't expect this sort of question, the sort that incites her enthusiasm and zeal to establish writing as an independent profession. Formal professions have some compulsions: "sign in-sign out time," proper dress code, and other etiquettes. Her office hour is unlike other offices, "I did not want to make use of my office during regular business hours, but during the weekends and sometimes in the evening" (3). In fact, the female protagonist is a free-will agent who does not work in the office during regular hours; rather, she works during holidays and in the evening when people usually finish their work as a means to establish writing as an independent profession.

The female protagonist in her booked office faces a number of crises which eventually makes her quit from the office. She is disturbed by the owner of the office who comes to the office for an inspection, and asks her some disturbing questions, such as who has painted and commented above the washbasin? He seeks then an apology in the second visit, and offers her a bunch of gifts that includes a teapot and a tree plant. In fact, offering gift is not a gift at all, beneath the surface it has an ill motive-the owner of the office attempts a physical relation with the female protagonist. As she narrates,

> It took me some time to realize that he told this story not simply as a piece of gossip, but as something a writer would be particularly interested to hear. Writing and lewdness had a vague delicious connection in his mind. Even this notion, however, seemed so wistful, so infantile, that it struck me as a waste of energy to attack it (6).

The owner of the office gossips with the female fiction writer so that he may come close to her; for this, he applies tricks all he can do as he thinks writing and lewdness might have a

close connection. Apart from lewdness, the owner seems to be excessively conscious of the office. His unnecessary and untimely office inspection makes the writer anxious and annoyed. She pays every effort to remain safe from this perverted person. Instead, she develops a self-identity that is noticeable in her dealings with the office owner. She warns the office owner, "Mr. Malley, please don't bother me about this any more. I said it suits me. I have everything I want. Thanks for showing me about the light" (4). The female writer requests the office owner not to annoy her in guise of asking questions about office equipments. The pleading the female protagonist makes seemingly does not work to meet her crises, so she leaves the office. Diana Sullivan Everstine and Louis Everstine, in their book *Strategic Interventions for People in Crisis, Trauma and Disaster,* point out what people do in a crisis moment, "[a] person in crisis encounters a situation or a series of situations that cause the person to alter his or her patterns of living" (3). These critics argue that people during a crisis moment confront a situation that leads them to change their track. The female fictionist goes through a time when she has to decide either she is to quit the office or to endure the disturbance whereas she follows the former path.

The owner of the office imposes power upon his tenants. Power imposition is one of the prime reasons for what the female fictionist leaves the office. A doctor books the office before the female fictionist, but he shares the same fate as the fictionist does. A question may arise: what's the problem of the doctor with Mr. Malley? Mr. Malley narrates, "The only trouble was, he gave more adjustments than was listed in the book of chiropractory. Oh, he was adjusting right and left" (5). The owner of the office is not assigned to oversee the adjustments of the doctor, but he oversees the work of the doctor and the work of the female writer. He can enter into the office whenever he wants to enter. The protagonist describes, "I saw from the street that the light was on in the room where I worked. Then I saw him bending over the card table. Of course, he came in at night and read what I had written!" (7). He can do this unwanted thing because he has a tool-the authority over the office. Having the authority over an office, the owner displays the notion power relation. Michel Foucault, in his "The Subject and Power," defines power relation:

> In effect, what defines a relationship of power is that it is a mode of action which does not act directly and immediately on others. Instead, it acts upon their action, an action upon an action, on existing action or on those which may arise in the present or the future. (14)

Foucaultian notion of power relation is such that power does not act directly; rather, it leaves an indirect influence upon an action that comes in force at present or in future. The owner of the office applies power upon the action of the female writer. Subsequently, she comes to a decision and quits the office. This decision of leaving the office can be considered to be an impact of power exercised by the owner upon the action of the female writer.

The female protagonist resists the impositions so far the office owner sets it unjustly. Considering the problems at home, she decides to book an office for writing and she continues her writing there. The office owner employs his best effort to have physical contact with her but she does not succumb to the lewd owner. The owner of the office also wants her to remain submissive to him. This time the female protagonist resists and shows disobedience

to him. Foucaultian notion of resistance and disobedience explains, "[. . .] no matter how terrifying a given system may be, there always remain the possibilities of resistance, disobedience and oppositional grouping" (qtd. in Faubion 354). It means that there might have been repressive system, but resistance and disobedience arise whatever the situation may be. A similar incident takes place in between the female fictionist and the owner of the office: she resists by quitting the office without any surrender to the owner. When the female fictionist does not pay much attention to the owner, he sends her a notice to meet him which she describes,

> I went at once to get it over with. He sat at his desk surrounded by obscure evidences of his authority; he looked at me from a distance, as one who was now compelled to see me in a new and sadly unfavourable light; the embarrassment which he showed seemed not for himself, but me. (14)

The female fictionist goes to the office to resolve the matter, but the office owner's countenance seems unfavourable and authoritarian what is embarrassing to the female protagonist. The office owner adds slanting points to their discussion in order to demean the protagonist. She fixes a way to tackle the situation as she narrates, "[m]y anger was delayed somehow, blocked off by a stupid incredulity. I only knew enough to get up and walk down the hall, his voice trailing after me [. . .] I thought-I must go" (8). The protagonist grows angry, although she can't show it to the owner. To avoid this circumstance she leaves the office of the owner refusing the repeated calls. This departure from the owner's office appears to be a disobedience to him and indeed a way to tackle the situation.

Although there have been some crises, the female fictionist still sees hope to turn round. Andy Dufresne, the central character of the movie The Shawshank Redemption, says, "Remember, hope is a good thing, maybe the best of things, and no good thing ever dies" (2:15:45-56). The protagonist says that hope is one of the best things that never goes in vain. The fictional female writer exposes her hope to her husband and so her husband affords to meet her wish of being a writer. The support that this Canadian husband extends is rare in other parts of the world. In Indian subcontinent, for example, Rokeya Shakawat's "Sultana's Dream" gives the denotation of a society where women are psychologically segregated from men. The narrator of "Sultana's Dream" says, "We have no hand or voice in the management of our social affairs. In India man is lord and master, he has taken to himself all powers and privileges and shut up the women in the zenana" (our italics 5). The narrator says that women do not have right to speech and decision making in India when men play the role of masters putting the women into zenana-four walls of the house. The above discussion shows that Indian women face problems inside a house whereas the Canadian women, although not confined to a house, face problems outside of the house. The women of both regions, nevertheless, continue their efforts to survive with dignity; thus, the narrator of "Sultana's Dream" says,

> A lion is stronger than a man, but it does not enable him to dominate the human race. You have neglected the duty you owe to yourselves and you have lost your natural rights by shutting your eyes to your own interests (5).

Apparently, a lion is more powerful in respect to its physical strength than a man, but it does

not mean that the lion possesses more power than the man. Bringing the example of a lion, the narrator means that men may be stronger than women in physical strength but physical strength is not the last thing to dominate in the society. She thinks there must lie the issue of dutifulness through which women can achieve power. The female fictionist of the "The Office" holds a similar sort of determination, "I have not yet found another office. I think that I will try again some day, but not yet" (10). She leaves her office being disturbed by the owner, still she hopes to find a new office to continue her writing.

Alice Munro gives us a sense that Canadian society offers a space and scope for women. Women can think of an independent career. When the protagonist of this short fiction chooses to be a writer, her husband appears to be an assist in allowing her to book an office. Still, there is a problem regarding the possession of the office. Since the office is not owned by the protagonist, she faces troubles created by the owner of the office. She tackles the situation with her courage and personality. Even though the female writer quits the office, she makes no compromise with her identity and personality. In "The Office" Munro has specified the crises of a female writer that appears rare in other fictions. When Munro writes the story in the '50s, writing was not women's profession. "The Office," a funny, an ironic, and a bitter story informs us about the struggle of women, especially when a woman starts entering into the professional domain of writing. The story teaches us how to reply when people consider women's writing is just a waste of time.

References

Bigot, Corinne. *Performance Review Stories by Alice Munro: "The Office" and "Dolly"*. Theatre Adyar, Paris, May, 2015. PDF file

Brown, Steven D. and Robert W. Lent. Social Cognitive Career Theory in a Diverse World: *Closing Thoughts. Journal of Career Assessment*. 2017. Vol 25(1). P 173- 180

Everstine, Diana Sullivan and Louis Everstine. *Strategic Interventions for People in Crisis, Trauma and Disaster.* Routledge. 2006

Faubion, J.D. (ed.) (1994) Power: *Essential Works of Foucault.* 1954-1984. Trans. Hurley, R. et al. New York: The New York Press.

Foucault, Michel. *The Subject and Power.* Chicago Journals, Vol.8, N.4, Summer, 1982. P 777-95. PDF file

Hadaegh, Bahee and Marjan Daraee. "Similar Women's Role in Russian and Canadian Modern Societies: A Comparative Study of Alice Munro's Short Stories and Those of Anton Chekhov." *International Journal of English Language and Literature Studies.* 2015, 4(3): P 146-160. PDF file.

Hall, Stuart. Cultural Identity and Diaspora. Retrieved from: http://ls-tlss.ucl.ac.uk/course-materials/ELCS608874357. PDF Accessed on 30 July 2018

Munro, Alice. "The Office." PDF. Retrieved from: https://elearn.uni-sofia.bg/pluginfile.php/87072/mod_resource/content/ 1/Story%20TM%2010%20The%20Office.pdf.

Accessed on 30 July 2018

---. "In Her Own Words." Interviewed by Stefan Asberg. Nobel Lecture in absentia. December 7, 2013. PDF.

Suddaby, Roy and Daniel Muzio. *Theoretical Perspectives of the Professions.* Retrieved from https://www.researchgate.net/profile/Roy_Suddaby/publication/257890096 Accessed on 10 July 2018

Woolf, Virginia. A Room of One's Own. PDF. Retrieved from http://seas3.elte.hu/coursematerial/PikliNatalia/Virginia_Woolf_A_Room_of_Ones_ Own.pdf Accessed on 30 July 2018

PHRASEMIX. Retrieved from https://www.phrasemix.com/answers/whats-the-difference-between-house-and-home. Accessed on 30 July 2018

The Shawshank Redemption. Directed by Frank Darabont. Performance by Tim Robbins, Castle Rock Entertainment, 1994

Thacker, Robert. *Alice Munro: Writing Her Lives.* McCLelland & Stewart Ltd., Canada.

An Analytical Study of Noise Pollution at Different Locations of Sylhet City by Using GIS

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Abstract

This GIS based analytical study has been carried out to explore environment friendly conditions regarding sound at various locations of Sylhet city. Sound Level Meter (SLM) is taken to assess the noise level conditions and noise mapping has been done using Geographic Information System (GIS) technique. The Department of Environment (DOE), Bangladesh standards are considered as limits for the designated land uses. A total number of 44 noise monitoring stations (commercial, residential and mixed areas) are nominated for the collection of data. The maximum noise levels ranging between 80 to 89.4 dB (A) are recorded in commercial locations, 70 to 82.2 dB (A) in residential areas and 82 to 98 dB (A) in mixed areas (CNG Refueling stations) in the city. The study finds that, the safe distance for maximum permissible noise levels are 31feet to 73.5 feet away from the noise source. The study suggests that the people's awareness; especially, the awarenessof drivers and using appropriate PPE (personal protective equipment) along with road related protections can reduce human health hazards.

Key Words: *GIS, Noise, pollution, noise level and vulnerability*

Introduction

Our modern life depends on easy and cost-effective movement of people. For this reason, the number of traffic and CNG-Refueling stations are increasing day by day which are contributing to noise pollution. They contribute to noise pollution a lot. At present noise level in every city of Bangladesh is in the worst condition. Some important terms like A-weighted scale, permissible noise limit and equivalent sound level have great significance. A-weighted scale on a sound level meter best approximates the frequency response of the human ear. DOE has set noise pollution control rules and regulation (September, 2006) based on permissible noise limit and an estimation of the continuous sound level denoted as Leq. Rajiv and Yogesh assessed noise pollution indices in the city of Kolhapur, India [1]. They highlight zone-wise evaluation and analysis of noise pollution indices. Sylhet is approaching to face a destruction on environment. Regular monitoring of noise level at work place is also important. The effects of excessive noise could cause a permanent loss of memory or a psychiatric disorder [2]. Extreme noise affects the hearing power of people. D. K. Asthana and M. Asthana emphasize on additional arrangement for noise exposure at field [3]. Noise

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has some general impacts on health. Balashanmugam, Ramanathan, Nehrukumar and Balasubramaniyanhave assessed noise pollution in Chidambaram town [4]. They examine the problems of reduction of individual's efficiency in his/her respective working places because of road traffic noise pollution in Chidambaram due to rapidly growing vehicular traffic. Rayamajhiassessed the noise pollution in different Hatbazars of Butwal City, Rupandehi, Nepal and shows that the noise level was found to be higheron hatbazar day as compared to non hatbazar day in all sampling sites [5].

High noise levels can produce stress and vasoconstriction, and an increased incidence of coronary artery disease [6]. Noise can lead to changes in one's gastrointestinal system and gastric changes are related to ulcers [7]. Some systematic Review on environmental noise and annoyance (WHO guideline) are done to ensure better options [8]. Excessive noise pollution leads to hypertension [9]. These man-made problems not only affect the adults but also cause serious problems for children.

To avoid these situations noise level at every place should be maintained considering DOE parameters. There are some key sources of noise pollution. Major sources of noise pollution are identified as horn of motor vehicle, use of loud-speaker, industries, brick-crusher and construction noise [10].

At the present time, CNG refueling stations are increasing with the increase of vehicle. They produce noise (high level) along with vehicles. A study needs to carry on that issue and this case study emphasizes on the fact where GIS helps to get a clear view of the matter.

Objectives

The following major objectives are:
1. To assess the noise pollution level of Sylhet City.
2. To identify the vulnerable zones considering different noise level using GIS.
3. To identify safe distance for maximum permissible noise level for CNG refueling station.

Study Area

Assessment of noise level or sound pressure level in dB (A) (A-weighted decibels) has been carried out using standard Sound Level Meter. The Sound level data for different zones of the study area including 20 CNG-Refueling station which is considered as mixed zone because of the presence of people, vehicles and sound of station at the same time, 14 commercial locations and 10 residential locations are observed. All data in every location is taken at three specific time of the day. This assessment has done by using primary data and the data is collected in the field.

Table 1: Distribution of noise mapping locations differentiated on land use classes with respective GPS coordinates (degree), Commercial area

Land use category	Location No	Location Name	GPS Coordinates	
			Latitude	Altitude
1	2	3	4	5
	C1	Amborkhana	24.9050	91.8698
	C2	Chowkhatta	24.8994	91.8688
	C3	Rekabibazar	24.8994	91.8623
	C4	Lamabazar	24.8965	91.8615
	C5	Taltola	24.8910	91.8654
	C6	Zitumiah point (Sheikhghat)	24.8904	91.8602
	C7	Zindabazar	24.8946	91.8689
	C8	Bandar	24.8907	91.8701
	C9	Naorpool	24.8936	91.8788
	C10	Shibganj	24.8917	91.8909
	C11	Shobhanighat	24.8917	91.8780
	C12	Upashahar	24.8857	91.881
	C13	Tillaghar	24.8961	91.9007
	C14	Sobid Bazar	24.9069	91.8611

Table 2: Distribution of noise mapping locations differentiated on land use classes with respective GPS coordinates(degree), Residential area

Land use category	Location No	Location Name	GPS Coordinates	
			Latitude	Altitude
1	2	3	4	5
Residential	R1	Upashahor	24.8844	91.8879
	R2	Sheikhghat	24.8905	91.8550
	R3	Jalalabad H/S	24.9074	91.8662
	R4	Shaplabagh	24.8938	91.9005
	R5	Kumarpara	24.9006	91.8792
	R6	Moubon (Shobhanighat)	24.8933	91.8813
	R7	Mojumdari	24.9097	91.8703
	R8	Kajalshah	24.8993	91.8514
	R9	Baghbari	24.9033	91.8510
	R10	Baro Bazar R/A	24.9102	91.8733

Table 3: Distribution of noise mapping locations differentiated on land use classes with respective GPS coordinates (degree), Mixed area

Land use category	Location No	Location Name	GPS Coordinates	
			Latitude	Altitude
1	2	3	4	5
CNG Refueling station	CNG 1 (P-1)	Shahjalal CNG station, AkhaliaGhat, Sylhet	24.9092	91.8347
	CNG 2 (P-2)	North-East station, Sunamganj Road, Pathantula.	24.9103	91.8511
	CNG 3 (P-3)	Ahmed CNG station, Subidbazar.	24.9095	91.8568
	CNG 4 (P-4)	Jalalabad CNG station, Amboakhana.	24.9053	91.8682
	CNG 5 (P-5)	Navana CNG station, Chowkidekhi.	24.9191	91.8743
	CNG 6 (P-6)	Biroti CNG-refueling station, Mirabazar.	24.8958	91.8843
	CNG 7 (P-7)	Monwar CNG station, East Shibgonj.	24.8951	91.8944
	CNG 8 (P-8)	Surma Auto Care, East Shibgonj.	24.8951	91.8946
	CNG 9 (P-9)	Surma CNG Conversion & Filling Station, Subhanighat.	24.8895	91.8793
	CNG 10 (P-10)	M/S Bengal Gasoline & Servicing, Uposahar road.	24.8871	91.8808
	CNG 11 (P-11)	Nayeem CNG-refueling station, Kadamtoly.	24.877	91.8798
	CNG 12 (P-12)	Meghna CNG-refueling station, Alampur, Sylhet.	24.8745	91.8935
	CNG 13 (P-13)	M/S Shahjalal (R.) Filling & CNG station, Kodamtoly.	24.876	91.8751
	CNG 14 (P-14)	M/S Abedin CNG & Filling Station, Kadamtoly.	24.8813	91.8746
	CNG 15 (P-15)	Clean Fuel CNG Station, Kadamtoly.	24.8813	91.8739
	CNG 16 (P-16)	Tarana CNG station, Daudpur.	24.876	91.8688
	CNG 17 (P-17)	M/S R. Rahman & sons Filling Station, Pirer Bazar.	24.8729	91.8652
	CNG 18 (P-18)	South Surma CNG Station, DaudPur, South Surma.	24.8712	91.8661
	CNG 19 (P-19)	Navana CNG-refueling station, Pirojpur, South Surma.	24.8686	91.8646
	CNG 20 (P-20)	DibaRatri CNG-refueling station, Moulvibazar Road.	24.8669	91.8574

Methodology

This case study has been done by following a series of steps chronologically which is shown in the following figure1.
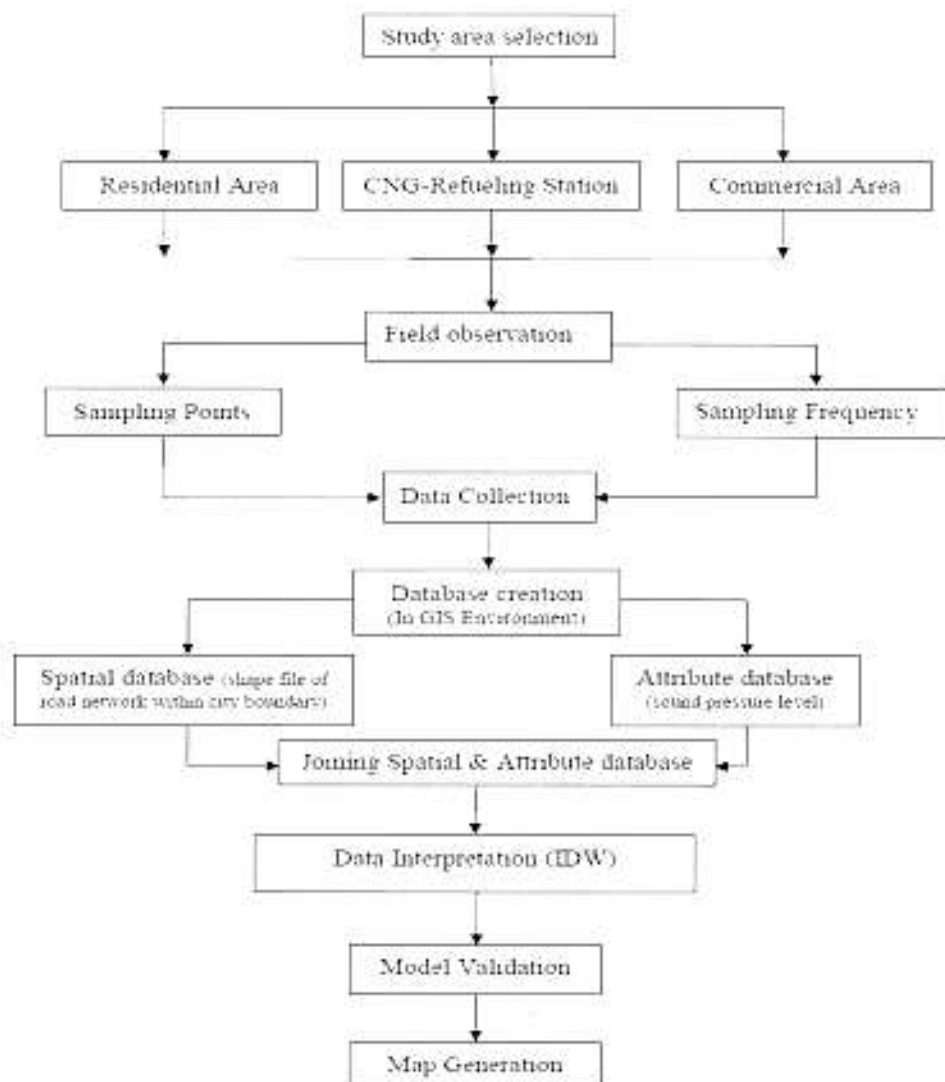
Figure1: Process of the case study

Here, Interpolation and mapping has been performed by using ArcGIS Geo-statistical Analyst [11].Inverse distance weighted (IDW) interpolation assumes that the variable being mapped decreases in influence with distance from its sampled location [12]. In geo-statistics, a semi-variogram is used to quantify the differences between sampled data values [13].Determination of Lmin and Lmaxwhich refers to the minimum and maximum noise level during the sample period is needed by using specified equations [14].

Analysis and Results

Figure 2: Variations of noise level with distance (ft.) for Shahjalal CNG Refueling station, Akhaliaghat

Figure 2 shows that;the maximum noise levels are 89 dB (A). It is clear from the figure that the noise level is decreasing with increasing distance from CNG station to noise source. It's also clear that the permissible noise level is measured at 37 feet away from noise source at the day time. According to this process safe distance is identified for the permissible noise level was measured for the rest observation points and it is represented by figure 3.
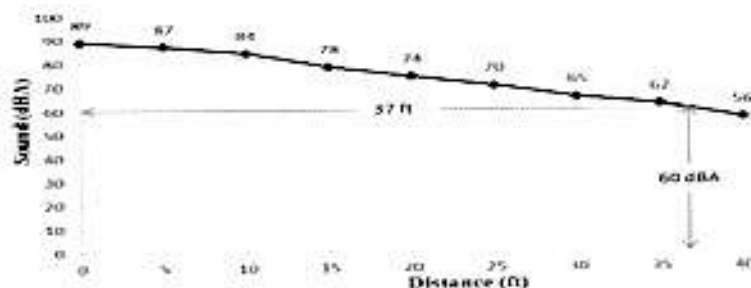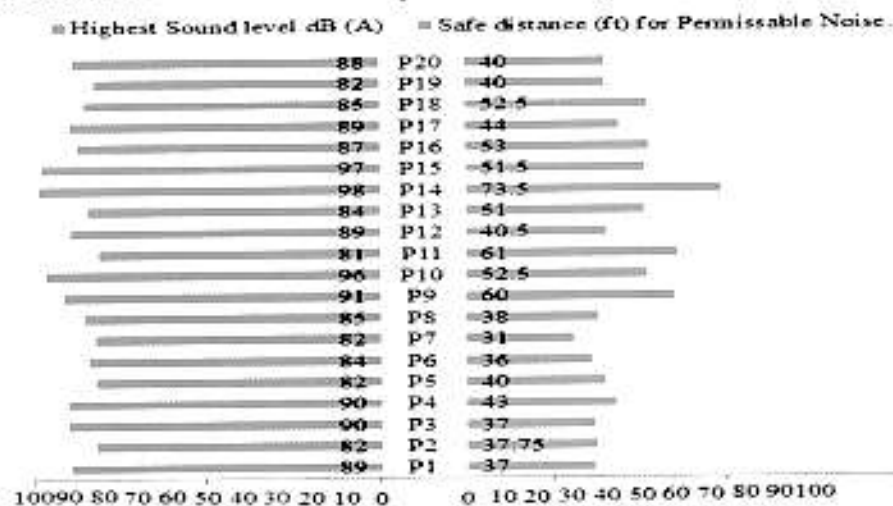

Distance (ft.)

Sound level dB (A)

Figure 3: Highest sound level in dB (A) and safe distance for permissible noise, from noise source

In figure 3, theleft side data shows the highest sound level dB (A) at various CNG refueling station of Sylhet city for every observation point. Right side data shows the safe distance (ft.) from noise source for permissible sound level set by the Department of Environment (DOE). Some of the CNG refueling stations are located near the residential areas. As per ambient air quality standards in Bangladesh, in residential areas the noise level is 55 dB in day time and 45 dB in night hour. Each of these CNG refueling station produce greater amount of sound ranging between 81-98 dB (A).

53
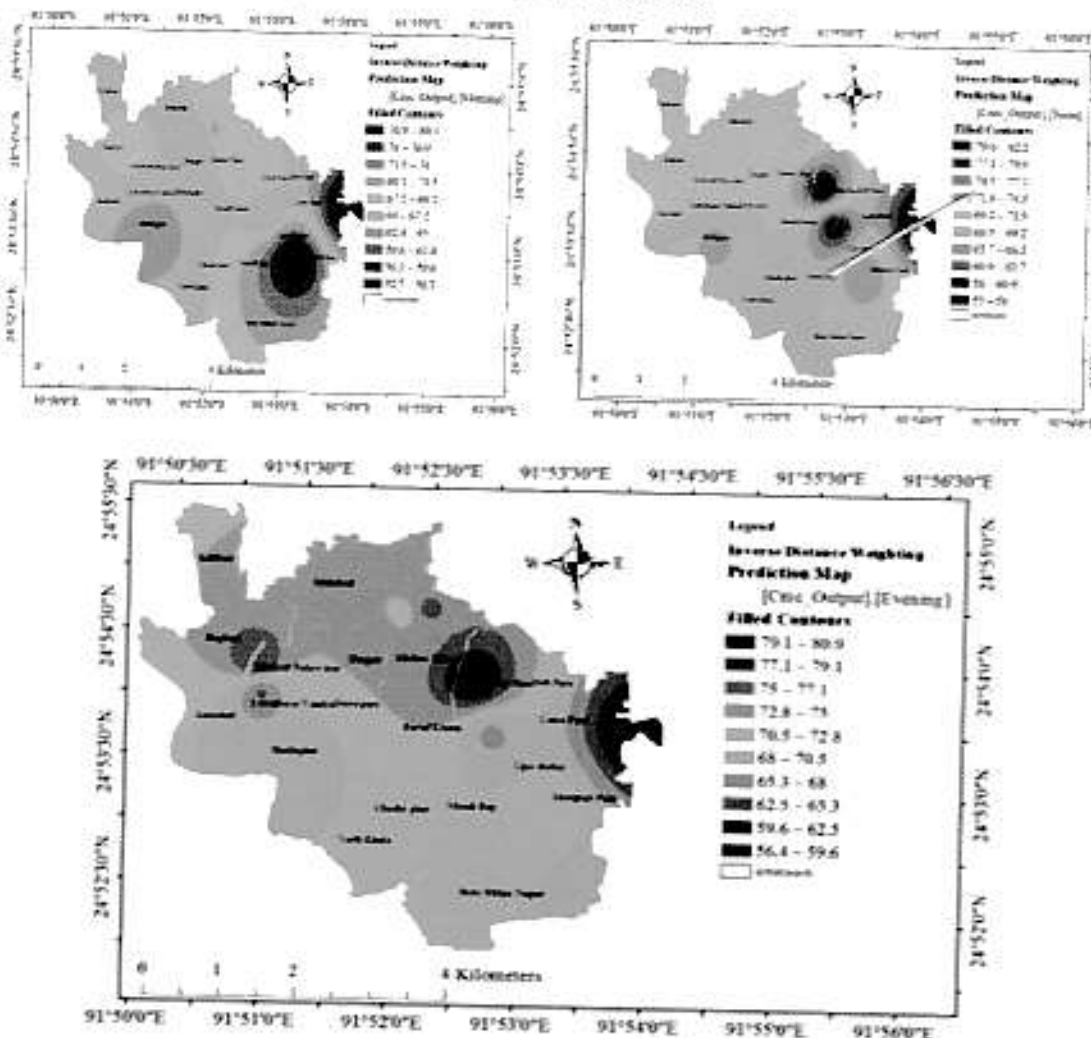
Figure 4: Noise level in dB (A) at few residential locations of the city for morning, afternoon and evening

Figure 4 is a cartographic representation of the Leq of the morning, noon and evening period of the day at few residential locations. Sound level data collected from different locations of the study area along with geographical coordinates obtained using GPS are plotted in ArcGIS 10.1 software. Interpolation (IDW) technique has been followed for noise mapping. The noise maps are prepared for the case study area comprising of residential, commercial and mixed zones (CNG-Refueling stations). Noise maps show that, the noise levels range between 62.4 dB(A) to 80.1 dB (A) detected at south-east portion of the city in the morning, 60.9 dB (A) to 82.2 dB (A) in the noon and 62.5 dB (A) to 80.9 dB (A) in the evening at north side middle portion of the city. All values exceed DOE (Department of Environment), GOB (Government of Bangladesh) standards.

Figure 5: Hourly (morning Leq-m, noon Leq-n& evening Leq-e) A-weighted equivalent sound level in dB (A)at few residential locations of the city

Figure 5 shows the daily average noise pollution scenario at few residential locations of Sylhet City. The values range between 54.7 dB (A) to 77.1 dB (A) depicting lower and higher limits for the period of the day.

Figure 6: Mean noise level in dB (A) at few residential locations of the city (Morning, noon and evening)

Figure 6 indicates the distribution of mean noise levels at few residential locations of the city for day time (7am to 9pm) as per ambient air quality standards in Bangladesh. The map shows that major part of the residential areas lies in 60.9 dB (A) to 87.6 dB (A) and Lm-n-e range during day time of the Sylhet City.

Figure 7: Noise level in dB (A) at few commercial locations of the city for the three periods of the day (morning, afternoon and evening)

Figure 7 is a cartographic representation of the Leq of the morning, noon and evening period of the day at few commercial locations. Noise maps show that, the noise levels range between 80.3 dB (A) to 82.6 dB (A) detected at heart of the city in the morning, 84 dB (A) to 87.6 dB (A) at west and east portion in the noon and 80.7 dB (A) to 89.4 dB (A) in the evening at middle and west portion of the city. All values far exceed DOE and GOB standards.
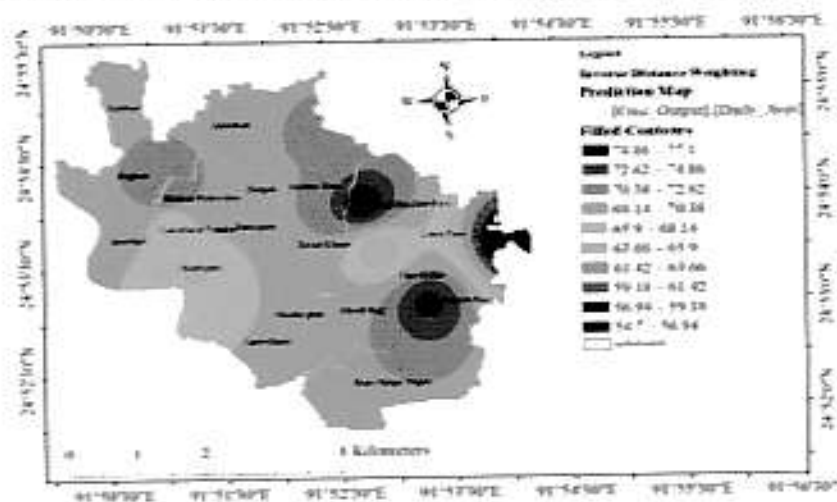

Figure 8: Hourly (morning Leq-m, noon Leq-n & evening Leq-e) A-weighted equivalent sound level in dB (A) at few commercial locations of the city.

Figure 8 shows the daily average noise pollution scenario at few commercial locations of the Sylhet City. The values range between 73.1 dB (A) to 85.2 dB (A) 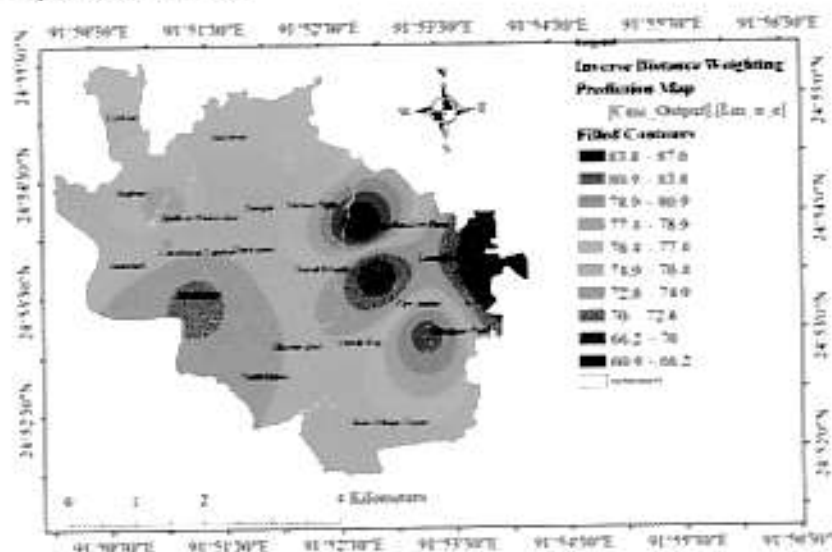depicting lower and higher limits for the period of the day. It observed that, the values range between 81.8 dB (A) to 84.4 dB (A) detected at the heart of the city such as Amborkhana, Chowkhatta, Bandar, Zindabazar, Zithumiah point (sheikh ghat),Subhanighat and Upasohar point due to the market activities and traffic congestion. The highest daily average values are recorded 85.2 dB (A) at Tillaghar which is situated east side of the city.
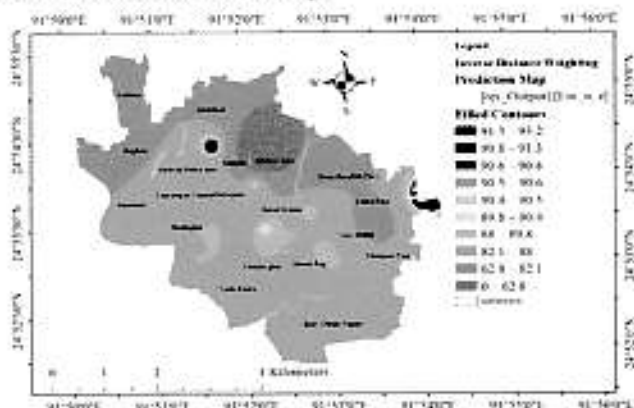
Figure 9: Mean noise level in dB (A) at few commercial locations of the city (Morning, noon & evening)

Figure9 represents the distribution of mean noise levels at few commercial locations of the city for day time (7am to 9pm). The map shows that, the major part of the commercial areas sound level lies between 82.1 dB (A) to 93.2 dB (A). The highest values lie between 89.24 dB (A) to 93.16 dB (A) at the commercial areas such as Bandarbazar, Zindabazar, Taltola, Amborkhana, Chowhatta,ShobhanighatUpashahar and Tillaghar. This is because of fact that these places are highly populated, with most of the commercial establishments, narrow and crowded roads with all types of vehicles.

Figure 10: Mean noise level in dB (A) at few CNG-Refueling stations of the city (Morning, noon & evening)

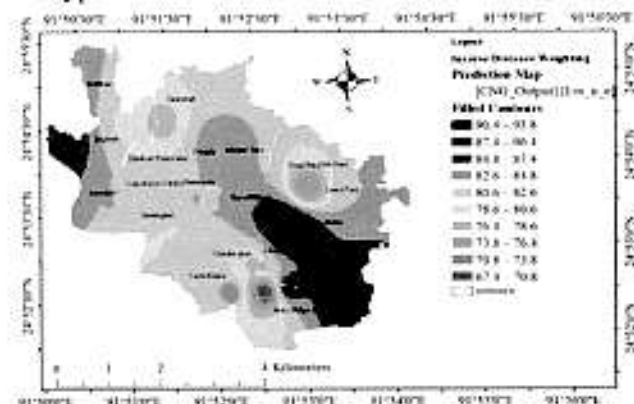Figure 10illustrates the distribution of mean noise levels at CNG refueling stations of the city for day time (7am to 9pm) as per ambient air quality standards in Bangladesh. The map shows that, all observation points contribute high noise levels which liein between 67.4 dB (A) to 93.8 dB (A). The map also indicates that, south-east corner and west side middle portion of the city are more vulnerable than other part of the city. The occurrence of high noise creates annoyance, partial deafness and other possible noise-related health risk in these areas.

Conclusions

This paper illustrates a GIS based analytical study of noise pollution of some selected commercial, residential and CNG Refueling stations of the study area. It has observed that the acceptable noise levels set by the Department of Environment (DOE), Bangladesh exceeds in every point in the study area. The major findings of the study are:

- ✓ In commercial areas of the city, the noise level rises from 80 to 89.4 dB (A).
- ✓ In residential areas highest noise levels recorded fluctuating from 70 to 82.2 dB (A).
- ✓ At few CNG Refueling stations, the highest noise level ranging from 82 to 98 dB (A) and safe distance for maximum permissible noise level is 31feet to 73.5 feet.

References

A. G. Journal, and C. J. Huijbregts, "Mining Geo-statistics", (1978), Academic Press, New York.

A.O. Akintuyi, S. A. Raji, D. Adewuni, and E. O. Wunude, "GIS- Based assessment and mapping of noise pollution in Bariga area of Lagos State, Nigera. Sokoto", (2014), Journal of the Social Sciences, Vol. 4: No. 1.

B. Wasek, "Reports on sound pollution at Capital", (2009), Daily Prothom- Alo,10th June, 2009, 24pp.

D. F. Watson, and G. M. Philip, "A Refinement of Inverse Distance Weighted Interpolation", Geoprocessing, 2:315-327, 1985.

D. K. Asthana, M. Asthana, "A Textbook of Environmental Studies", (2013), 1st Edition.

E. H. Isaaks, and R. M. Srivastava, "An Introduction to Applied Geo-statistics", (1989), New York: Oxford University Press, 561 Pp.

http//en.Wikipedia.org/wiki/Noise_pollution#cite_ref-8. [Accessed 25th August 2015].

K. B. Rayamajhi, "Assessment of Noise Pollution in Different Hatbazars of Butwal City, Rupandehi, Nepal", The Himalayan Physics Vol. 6 & 7, April 2017 (61-64).

P. Balashanmugam, A. R. Ramanathan, V. Nehrukumar and K. Balasubramaniyan, "Assessment of noise pollution in Chidambaram town", International Journal of Research in Engineering and Technology eISSN: 2319-1163 | pISSN: 2321-7308.

P.R. Trivedi, and G. Raj, "Noise Pollution", (1992), AkashdeepPub.,New Delhi-110002 (India).

R. B. Hunashal and W. B. Patil, "Assessment of noise pollution indices in the city of Kolhapur, India", International Conference on Emerging Economies - Prospects and Challenges (ICEE-2012) Available online at www.sciencedirect.com.

R. Guski, D. Schreckenberg and R. Schuemer, "WHO Environmental Noise Guidelines for the European Region: A Systematic Review on Environmental Noise and Annoyance",

S.M. Abel, "The Extra-auditory Effects of Noise and Annoyance: An Overview of Research", (1990), The Journal of Otolaryngology, 19 Suppl. 1, Pp.1-13.

W. Babish, H. Ishing, P.C. Elwood, D.S. Sharp, and D. Bainbton, "Traffic noise and cardiovascular risk", (1993), Archives Environmental Health, 48: 406-413.

A Contemporary Study of E-Commerce Problems and Prospects: Digital Bangladesh Perspective

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Abstract

The world in which we are living is the world of science and technology. Human beings are getting and expecting more easy and comfortable life with the miracle touch of information technology. Like all other sectors, the various forms of business are transferring into an electronic way. The developed countries have already adapted the modern technology; but the developing and underdeveloped countries have not adapted modern technology till now. Though most of the developing and underdeveloped countries are introducing Information and Communication Technology (ICT) in their various forms of business, Bangladesh is still struggling to adapt it. E-commerce adaptation, growth, development and problem solving methods have been identified and analysed in this paper. This paper is based on both primary and secondary data. The study has found that there is significant relationship among user's educational qualification, region and various forms of e-commerce which was presented as a bivariate and partial correlation. The study has also discussed the prospects of e-commerce in Bangladesh and some critical problems which are arisen by day to day online transactions. Finally, the study suggests that proper steps should be taken by the government, business organizations, regulatory organizations and other related parties for promoting e-commerce in Bangladesh. IBM SPSS 26 and data modelling tools have been used to analyse the collected data.

Key Words: *E-commerce, F-Commerce, ICT, Digital Bangladesh, M-Commerce, E-Commerce Customer*

1. Introduction

E-commerce is one of the most uprising sectors in Bangladesh for connecting global business in all aspects. The modern world has been developing with the touch of ICT. The growth of world population in the use of internet and ICT in different sectors has reshaped the way of communication and demands utilization of its potentials to the development of trade, industry and commerce all over the world.

Today's world is dominated by the revolution of ICT. This electronic revolution in this modern world is establishing and ensuring an easy, better, comfortable, enjoyable and sustainable way of life by using the ICT (Hossain, Ali, Kibria, & Bhuiyan, 2013). Now E-commerce has become a buzzword all over the world. E-commerce is the process of conducting all forms of business by suing the computer hardware, software and computer related all kinds of communication. In Bangladesh four types of E-Commerce form are very popular. These are Business-to-Business (B-2-B), Business-to-Consumer (B-2-C), Consumer-to-Consumer (C-2-C) and another Facebook commerce (F-commerce) or sometimes Mobile commerce (M-commerce) (e-CAB, 2017).

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Internet brings the revolutionary change in the various forms of business all over the world (techinews24.com, 2016). The Internet which explores using of electronic commerce or E-commerce by the business sector has become tremendous since its inception in the world (Listing, 2016). In Bangladesh the development and initiation of E-commerce are increasing day by day by the proper patronization of government (viruscaptive.com, 2016).

Some good initiatives have been taken by the government of Bangladesh regarding E-commerce operation in recent few years. There are some fully E-commerce based companies taking part in their operations. There also some traditional business organizations are adopting E-commerce operation (online selling of goods and services) as well as their traditional (physically purchase by the customer) operation of business.

The underdeveloped and developing countries must need technological development in searching new market and making buyer and seller relationship to achieve the competitiveness in the highly competitive global market around the world. The Internet can be considered as the touch bearer which provides the opportunity to overcome the barrier of time and place in building buyer and seller relationship all over the world.

This paper mainly focuses on different forms and problems of E-commerce in Bangladesh which are being introduced now-a-days (Place B. M., 2016). In Bangladesh E-commerce business is expanding day by day with various forms. This paper tries to focus on various e-commerce forms, which are Business to Business (B2B), Business to Consumer (B2C), Consumer to Consumer (C2C), Business to Government (B2G), Government to Government (G2G) in our country (Programme, 2016). Finally, this paper will draw a relationship between internet users and E-commerce development in Bangladesh and also some recommendations which can help to develop the E-commerce business in Bangladesh.

2. Literature Review

The advancement of new technology has been affecting all aspects of our daily life, as the same way, the literature on E-commerce has turned into a key issue in the field of business research. In Bangladesh, E-commerce operation actually started in the year of 1999 by some non-resident Bangladeshi people. The key reason why e-commerce, especially the business-to-business segment of E-commerce, is growing so quickly, significant impact on investors, sales execution, procurement, intangibles cost, distribution costs which were described in their article (Hoq, Kamal, & Chowdhury, 2005).

Bangladesh has entered into a new era of technology in where customers can now use authenticated web access to buy and sell different products (Ahammad, Satter; Saifullah, 2007). (Ahmed, 2007) also present some vital points and the future of E-commerce business that may prepare to implement E-commerce solutions into their daily operations. (Ohidujjaman, Hasan, & Huda, 2013). (Alom, 2012) describes in their research paper the present challenges of E-commerce and its solution in Bangladesh context. They also discuss the effectiveness of E-commerce in financial sector of Bangladesh and economic development.

(Ahmed, 2007) Stated that Bangladeshi customers can now use authenticated web access to buy and sale different products and have a large potentially for E-commerce and its related activities. In his study he tries to demonstrate the prospect and the future of E-commerce for those business

organizations that may be preparing to implement E-commerce solutions into their daily activities.

A Mukherjee, P Nath, (2007), (Velmurugan, 2009) stated that the most important things for E-commerce are appeal of the web sites, products and service offering, quality of the services, trusted seals and branding.

(Ferdous & Ishtiaque 2013), (Laisuzzaman, Imran; Nahid; Amin 2010) evaluate the commercial feasibility and overall prospect of E-commerce operation of pharmaceutical industry, find out the main advantages and disadvantages of online pharmacies, identify the major challenges faced by online pharmacies and gain the lessons that can be taken from the experiences of Drugstore.com to set up online pharmacy in Bangladesh (Company, 2016). (Mohiuddin ,2014) described in his study that Bangladesh has more than 2500 E-commerce websites and 1 million digital buyers overall and 50per cent of them are from Asian regional market place. He also showed that E-commerce industry is growing at a rapid pace in Bangladesh. He also draws a conclusion in his study that more or less the bricks-and-mortal outlets are brought into changed electronic forms with a rapid change in their form of business. By searching Google, the result regarding social media marketing in Bangladesh is found about 2,150,000 results just in 0.50 second. So a huge potentiality is available in Bangladesh. (Ishtiaque, 2002) presented in his paper that there are several companies in Bangladesh who are using E-commerce application to provide easier services for their consumers. In spite of the fact, wide ranging studies on E-commerce are not carried out in Bangladesh and other south Asian region (Trade, 2016).

In the same way (Rakibul ,2008) and (Shahidul ,2010) stated that maximum researches in E-commerce have concentrated on portraying the role of concerned organizations and only a few researches were conducted in Bangladesh in the field of E-commerce regarding its opportunities and challenges in the business land scope of Bangladesh, general perspectives, analysis of conceptual framework and other traditional factors. Internet users and social medias can act as a complementary towards E-business as well as E-commerce in Bangladesh (Star, 2016). (Rahaman, 2017) Mobile phone can also be an effective element for promoting the e-commerce operation in Bangladesh. The country can create opportunities as this will help both producers and customers with supporting hand of E-commerce (Bank, 2016). This is only a theoretical evaluated parts of E-commerce it may not be feasible by adopting its proper ICT and ICT related infrastructure in Bangladesh (Tribune, 2016).

3. The Methodology and Model

a) Survey Area

This study was conducted in Dhaka, Chittagong, Sylhet, Rajshahi division (the highest tier of local government systems in Bangladesh) of Bangladesh for collecting the data regarding the e-commerce problems in Bangladesh. Most of the e-commerce customers are engaging with this format of business from these four major divisions of Bangladesh.

b) Data Collection procedures

The data collection was collected by the way in which primary objectives full fill by making a structured questionnaire. As the respondents were aware about the questionnaire and most of them were educated. So in here the study will take structured questionnaire regarding fulfil the research objectives. The questionnaire includes sections on-

i. Background characteristics of the e-commerce customers and their professions e.g. region, profession, gender, education level etc.

ii. Knowledge of e-commerce business, format of this new business, security, awareness and problems of e-commerce in Bangladesh.

Secondary data and information have gathered by browsing of Internet, e-cab, web site of BTCL, various e-commerce books, e-commerce related Journals and different research papers to enhance research with an efficient and effective process.

c) Sample Size and Sampling Design

To collect proper data a total number of 413 respondents was selected from various divisions of Bangladesh. 183 respondents from Dhaka, 100 from the Chittagong, 83 from Sylhet and 42 from Rajshahi division were selected randomly by collecting the data.

The sample size needed was calculated using the following formula:

$$n = z2 \ [P(1-P)/d2] \ *Deff$$

Where

n = sample size

z = two-sided normal variant at 95% confidence interval

P = indicator percentage

d = precision (Confidence level)

Deff = design effect

To obtain data on indicators at 95% precision and 4.82% confidence interval, assuming a design effect of 2.08 and the most conservative estimate of indicator percentage (50%), the minimum required sample size 413 had required to get the objectives of the research. It was a statistically representative sample.

d) Respondents

The respondents were all the e-commerce customers of Dhaka, Chittagong, Sylhet and Rajshahi division from Bangladesh.

4. Research Objectives

The principle objective of this research is to identify how the traditional forms of business are changing as electronic forms of business in Bangladesh.

The specific objectives of this research are as follows:

i. To find out the level of development and model of e-commerce in Bangladesh.

ii. To find out the major problems and prospects of e-commerce in Bangladesh.

iii. To provide recommendations for development of e-commerce in Bangladesh.

5. E-Commerce and Bangladesh

E-commerce is totally based on the Internet, Information and Communication Technology (ICT) and Telecommunication Technology. In Bangladesh the E-commerce operation was started in the late of 2000 in a very short range. Some non-residential Bangladeshis were the main initiators of E-commerce operation in Bangladesh (bd24live, 2016). The world is changing day by day by the influence of ICT but Bangladesh is lagging behind from this modern innovation Computer and

The BTRC findings stated that the popularity of internet was rising rapidly among different subscribers in our country. October 2016, the total number of internet subscribers was over 62.248 million, which was around 54.658 million in October 2015. According to the data of BTRC, the numbers of mobile internet subscribers have steadily increased to more than 58.045 million in October 2016 which was 52.331 million in October 2015. On the other hand Internet service providers (ISP),WiMAX service providers and public switched telephone network (PSTN) also saw an increase in subscribers(Habil, 2015).

From the BTRC data it was found that around 3million people subscribed to ISP and PSTN by the end of March 2016 and 131,000 subscribed to WiMax (Roy, 2016).It's very great news that each and every year the number of Internet users are increasing with a rapid range,as Internet is the main factor for developing of E-commerce in Bangladesh.
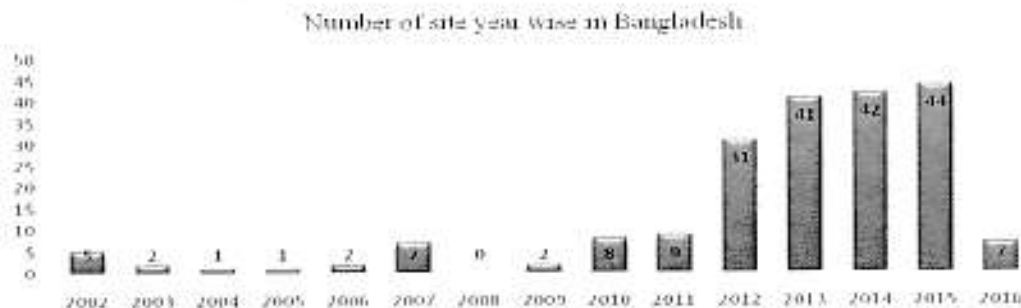
Figure 1: Year wise number of web sites in Bangladesh

Data was taken from the 2002 to 2016 regarding e-commerce in Bangladesh. Most of the web sites were established during 2002 to 2016 .192 sites e-commerce web sites lunched in the year of 2015. It was shown that the beginning of e-commerce in Bangladesh was little bit slow in their growth. But from the 2010 to 2015 e-commerce was booming in Bangladesh. From the figure 1 it was shown that in 2009 only eight e-commerce web site was established, in 2010, 2011, 2012,2013,2014,2015 respectively was 8,9,31,41,42,44. From the table 1 it was clearly shown that the major development of e-commerce in Bangladesh was established in 2010 to 2015.

According to ITU Bangladesh have 21 million Facebook users at the end of June 2016. It also found that Facebook user rate is higher than the internet user rate in Bangladesh in compare to previous year. The total Facebook user is 21 million which is 165 percent higher than the internet user in Bangladesh (The Daily Star, 2016). Data shows that every internet connection has 1.6 million Facebook users. In our country every E-commerce site has a Facebook page in their page they promote their products operation (Place B. M., 2015). As an E-commerce is an Internet based market so those are arriving in the Internet, is may be customers of E-commerce.

A social media analytics and publishing company, social bankers, provide social media management services and deep data analytics for thousands of brands that market on Facebook, Twitter, Google+, LinkedIn, YouTube, Instagram and other social networks. They presented in their research that people of 18-25 years of age of Bangladesh are the major Facebook users. Out of the total 2.80 million Facebook users, 1.37 million are young (18-24 years of age) among the Facebook members, 78 per cent are male and 22 per cent female in Bangladesh. These sites become the part of day to day activity among the young generations (Directory, 2016).

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Bangladeshi people mostly use Internet and social media not only for Communication but also for business purposes. It's a huge potentiality of E-commerce development in Bangladesh.

In Bangladesh, e-commerce is divided into major three parts. One is B2B which is directly related to business organization to business organization. Bangladesh Garments Manufacturing and Exporters Association (BGMEA) has a web site related to B2B. The B2C is a very popular form of e-commerce in Bangladesh. Maximum e-commerce business is running on the basis of B2C. From the very beginning of e-commerce operation in Bangladesh B2C has been getting popular form. At the same time the C2C e-commerce business has popularized in Bangladesh. In this form of business all consumers are trading among them via online. In a very short time C2C e-commerce is getting popular all around the internet users.

Figure 2: E-commerce categories in the context of Bangladesh

Figure 3: Payment methods of e-commerce in Bangladesh

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From the launching of the Internet usage in Bangladesh the revaluation of E-commerce started in the year of 2000 the user of Internet was less than 1per cent of our total population. But day by day the numbers of users are increasing with a rapid way and it reached nearest to 15 percent in 2016. The expansion of E-commerce and e-business in Bangladesh is more accelerating by the benefits of social media. Most of the E-commerce users are also Facebook users. The main platform of E-commerce in Bangladesh is Facebook. More than 90per cent transactions of E-commerce have been done before the users visited in the Facebook page of that specific E-commerce company. As we see that majority of users of Facebook, Twitter, Google+, LinkedIn, YouTube and Instagram are young generation (18-25 years). E-commerce is a virtual market place and their main targeted customers are the Internet users those who use the Internet frequently. On the other hand, In Bangladesh the maximum transaction of E-commerce is done by the young people. They search anything from the social network mainly Facebook and also take decision from the Facebook to buy something.

According to the World Bank (report, 2016) the density of Internet users in proportion to population are as like as Maldives 54.50per cent, Bhutan 39.80per cent, Sri Lanka 30per cent, India 26per cent, Pakistan 18per cent, Nepal 17.60per cent, Bangladesh 14.40per cent, Afghanistan 8.30per cent. The position of Bangladesh is increasing in a rapid way in comparison with other countries of south East Asia.
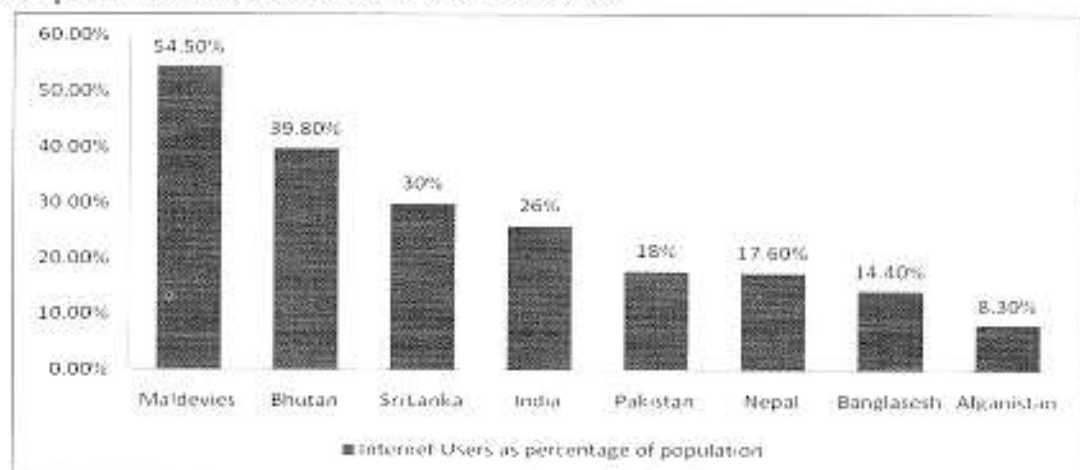
Figure 4: Internet users as percentage of total population in Bangladesh.

Source: (World Bank, 2017)

In Bangladesh the Internet users got introduced in the year of 1999.From this year just 0.04per cent users of Internet was in Bangladesh. Then the change of Internet users as percentage of population of Bangladesh (Figure: 2) were as follow as0.07 percent,0.13 percent,0.14 percent,0.16 percent,0.20 percent,0.24 percent,1 percent,1.80 percent,2.50 percent,3.10 percent,3.70 percent,4.50 percent,5 percent,6.63 percent,13.90 percent,14.40 percent respectively in the year pf 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2013, 2014, 2015.In comparison with the same way the numbers of E-commerce site are increasing day by day in Bangladesh. We can see in the figure 2 that how the number of Internet users are increasing year by year in Bangladesh.
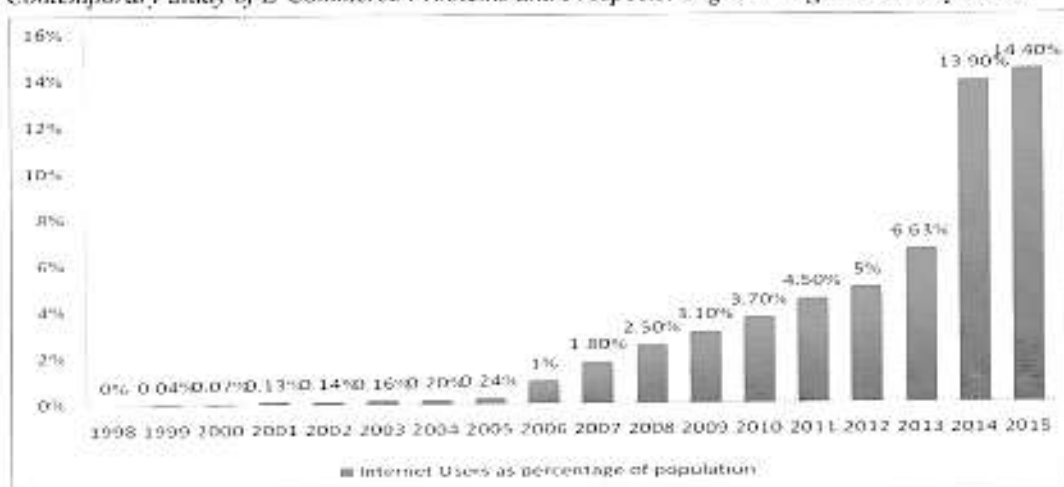
Figure 5: Internet users as percentage of population in Bangladesh

Source: (World Bank, 2017)

The world of Internet services is running very rapidly with the help of modern Information and Communication Technology. If we look at the scenario of this data, 7390 Tweets,748 photos are uploaded on Instagram,2324 Skype and 1172 Tumbler posts ,39094 GB of traffic of internet ,56943 searches google,134180 videos viewed on YouTube ,2534868 Emails sent and received just in one second. The rate of internet users in Bangladesh has pick up a new milestone in the high way of Information & Communication Technology.

6.0 Major Problems of E-Commerce in Bangladesh

6.1 Lack of Legal Acceptance

There is no proper legal support for E-commerce or online business sites in Bangladesh. The government is yet introduced a full online or E-commerce law for promoting this sector of business.

6.2 Lack of Development of IT Infrastructure

In Bangladesh only 14.40 percent of population are covered in internet access and most of the internet users are in mobile internet users. So there is a huge gap between the total number of population and total number of internet users in Bangladesh due to lack of proper IT infrastructure.

6.3 Lack of Expert Professionals in IT

We have so many public and private universities and they are enhancing their curriculum on the basis of theory and practice. But they don't improve the practical and IT knowledge resources in their educational institutions.

6.4 High Cost of Internet

The broad band internet costs are relatively high in Bangladesh compare to Asian region. The broad band facilities only cover a short range of total population.

6.5 High Cost of Electronic Devices

Till now in Bangladesh the price of all computers, computer peripherals and computer related

devices are sky scraper. The cost of the electronic device and electronic materials is so high as the general people cannot afford to buy.

6.6 Seasonal F-Commerce Business

There are so many Facebook pages in Bangladesh which are operating as a seasonal online business organization. They generally sell a certain amount of products and at a certain time in online is a treat in online sector of Bangladesh.

6.7 Lack of Trust on E-Commerce

Trust is the most important factor in E-commerce, without trust E-commerce cannot flourish in Bangladesh. Many online businesses have no validity in their operation of business and this is the major problem in Bangladesh.

6.8 Unavailability of Internet Services

In Bangladesh unavailability of internet facility is one of the major challenges for flourishing E-commerce operation. Though 14.4 percent of the population has access to the internet but still the expenses and infrastructures are out of reach from the rural as well as urban people.

6.9 Problem in Product Selection

Suitable products for basic demographics such as age. gender and ethnicity, market trends and customization of customers, buying habits. psychological and geographical factors and proper design of the products are major obstacles for E-commerce industry in Bangladesh.

6.10 Complexity in Payment Procedure

Payment is a very fundamental issue in E-commerce. Less user friendly, lack of trustworthiness, complex banking system, difficult access on internet etc are the main reasons for not having a proper payment procedure in Bangladesh. Though in private sectors payment aggregators like SSL Commerz is working as HUB and making E-commerce easier.

6.11 Unclear Product Delivery& Return Policy

On time product delivery and complicated return policy are still a challenge in E-commerce. Lacks of proper delivery time of product, unfriendly attitude from parcel companies, undefined return policy etc. are the major return and delivery problems in Bangladesh.

7. E-Commerce Problems and prospects Analysis

The e-commerce business in Bangladesh has been developing day by day in various dimensions. Most of the development was done when the government of Bangladesh introduced the concept of Digital Bangladesh. Now Bangladesh is on the train of digitalization and modernization of e-government. There is an analysis of e-commerce problems and its prospect on various way. A survey was conducted those who are using the e-commerce and an analysis is done by this data. The table 1 has shown that 283(68.5%) male and 31.5% female respondents participated in this survey among the 413 respondents from the four major divisions of Bangladesh.

Table 1: Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	283	68.5	68.5	68.5
	Female	130'	31.5	31.5	100.0
	Total	413	100.0	100.0	

Table 2: Region

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dhaka	183	44.3	44.3	44.3
	Chittagong	100	24.2	24.2	68.5
	Sylhet	83	20.1	20.1	88.6
	Rajshahi	42	10.2	10.2	98.8
	Others	5	1.2	1.2	100.0
	Total	413	100.0	100.0	

From the table 2, it is shown that 183 respondents are from Dhaka division,100 respondents from Chittagong division,83 respondents from Sylhet division,42 respondents from Rajshahi division and 5 respondents from other divisions of Bangladesh

Table 3: Educational Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Uneducated to Less than SSC	5	1.2	1.2	1.2
	SSC to HSC	123	29.8	29.8	31.0
	Honors to Masters	281	68.0	68.0	99.0
	MPhil to PhD	4	1.0	1.0	100.0
	Total	413	100.0	100.0	

It is shown in table 3 that most of the e-commerce customers are from the honours and master's degree (68%) and others 123 respondents (29.8%) from the SSC and HSC level. That means most of the customers of e-commerce in Bangladesh are educated and aware of online and e-commerce.

Table 4: Profession

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Students	226	54.7	54.7	54.7
	Job Holder	73	17.7	17.7	72.4
	Businessman	14	3.4	3.4	75.8
	Housewife	100	24.2	24.2	100.0
	Total	413	100.0	100.0	

The prospect of e-commerce in Bangladesh are fully based on students and housewife (most of them were from students who were married or completed graduation recently).It was shown that from the table 4 that 54.7% students and 24.2% housewives among 413 respondents. The next highest portion of e-commerce customers were service holders from private and public sectors.

Table 5: Lack of Legal Acceptance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	123	29.8	29.8	29.8
	Agree	221	53.5	53.5	83.3
	Moderate	69	16.7	16.7	100.0
	Total	413	100.0	100.0	

The lack of legal acceptance problems of e-commerce in Bangladesh was one of the major problems in Bangladesh. From the table 5 it was shown that 53.5% agreed and 29.8% strongly agreed in this statement.

Table 6: Lack of Development of IT Infrastructure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	188	45.5	45.5	45.5
	Agree	225	54.5	54.5	100.0
	Total	413	100.0	100.0	

The lack of development of IT infrastructure problems of e-commerce was one of the major problems in Bangladesh. From the table 6 it was shown that 54.5% agreed and 245.5% strongly agreed on this statement. That means there was a problem in the infrastructural side of the e-commerce sector.

Table 7: Lack of Expert Professionals in IT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	248	60.0	60.0	60.0
	Agree	161	39.0	39.0	99.0
	Moderate	4	1.0	1.0	100.0
	Total	413	100.0	100.0	

The lack of expert professionals in IT problems solving of e-commerce was the major problem in Bangladesh. From the table 7 it was shown that 60% agreed strongly and 39% agreed on this statement. It is cleared from this analysis that the IT expert and professional was not available in Bangladesh.

Table 8: High Cost of Internet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	183	44.3	44.3	44.3
	Agree	230	55.7	55.7	100.0
	Total	413	100.0	100.0	

High cost of internet is still one of the problems in Bangladesh though government has been trying to minimize the cost of internet service. From the table 8 it was shown that 44.3% strongly agreed and 55.7% agreed on this statement.

Table 9: High Cost of Electronic Devices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	81	19.6	19.6	19.6
	Agree	110	26.6	26.6	46.2
	Moderate	153	37.0	37.0	83.3
	Disagree	69	16.7	16.7	100.0
	Total	413	100.0	100.0	

The cost of electronic devices and materials are decreasing day by day but still it is one of the most common problems in Bangladesh to promote e-commerce. From the table 9 it was shown that 19.6% strongly agreed and 26.6% agreed, 37% moderated, 16.7% disagreed on this statement.

Table 10: Seasonal F-Commerce Business

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	246	59.6	59.6	59.6
	Agree	153	37.0	37.0	96.6
	Moderate	14	3.4	3.4	100.0
	Total	413	100.0	100.0	

One of the major problems in e-commerce business in Bangladesh is seasonal f-commerce business. Most of the e-commerce business in Bangladesh was based on Facebook page. From the table 10 it was shown that 59.8% strongly agreed and 37% agreed that seasonal f-commerce business can reduce the trust of online customer because there was no legal way to take any action in fraud. From one side f-commerce is great source of potentiality to expand e-commerce but on the other hand it can be a burden.

Table 11: Lack of Trust On E-Commerce

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	183	44.3	44.3	44.3
	Agree	111	26.9	26.9	71.2
	Moderate	23	5.6	5.6	76.8
	Disagree	96	23.2	23.2	100.0
	Total	413	100.0	100.0	

Trust is the main source of promotion of e-commerce. From the table 11 it was shown that 44.3% strongly agreed and 26.9% agreed that lack of trust on e-commerce business can reduce the absence of customers in internet

Table 12: Unavailability of Internet Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	86	20.8	20.8	20.8
	Agree	169	40.9	40.9	61.7
	Moderate	158	38.3	38.3	100.0
	Total	413	100.0	100.0	

The unavailability of internet services was one of the problems in Bangladesh. From the table 12 it was shown that 20.8% strongly agreed and 40.9% agreed, 38.3% moderate on this statement.

Table 13: Problem in Product Selection

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	86	20.8	20.8	20.8
	Agree	4	1.0	1.0	21.8
	Moderate	42	10.2	10.2	32.0
	Disagree	198	47.9	47.9	79.9
	Strongly Disagree	83	20.1	20.1	100.0
	Total	413	100.0	100.0	

The product selection problem of e-commerce was one of the problems in Bangladesh but this problem was coped up with customers recently. From the table 13 it was shown that 20% strongly agreed and 1% agreed, 10.2% moderate, 47.9% disagreed and 20.1% strongly disagreed on this statement. That means this problem will be minimized within very short time.

Table 14: Complexity in Payment Procedure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	146	35.4	35.4	35.4
	Agree	157	38.0	38.0	73.4
	Moderate	96	23.2	23.2	96.6
	Strongly Disagree	14	3.4	3.4	100.0
	Total	413	100.0	100.0	

Payment procedure is one of the major problems in e-commerce. From the table 14 it was shown that 35.4% strongly agreed and 38% agreed, 23.2% moderate and 3.4%strongly disagreed on this statement.

Table 15: Unclear Product Delivery& Return Policy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	146	35.4	35.4	35.4
	Agree	267	64.6	64.6	100.0
	Total	413	100.0	100.0	

Unclear product delivery and return policy is one of the major problems in e-commerce. From the table 15 it is shown that 35.4% strongly agreed and 64.6% agreed on this statement.

Table 16:Which site do you visit?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	B2B	6	1.5	1.5	1.5
	B2C	266	64.4	64.4	65.9
	C2C	26	6.3	6.3	72.2
	B2G	6	1.5	1.5	73.6
	F-commerce	109	26.4	26.4	100.0
	Total	413	100.0	100.0	

The most common and popular format of e-commerce was f-commerce in Bangladesh. Most of the customer liked to buy from the f-commerce business which is more easy and reliable. From the table 16 it was shown that 64.4% B2C,26.4% of f-commerce liked to buy from these format of e-commerce.

Table17: Comparison between region and site they visited

	Region				
	Dhaka	Chittagong	Sylhet	Rajshahi	Others
	Count	Count	Count	Count	Count
Which site do you visit? B2B	2	1	0	2	1
B2C	74	80	71	37	4
C2C	10	12	4	0	0
B2G	1	3	2	0	0
F-commerce	96	4	6	3	0

It is shown from the table 17 that most of the e-commerce customers like to buy their products from the B2C e-commerce site because of high security and clear return policy. From the table 17 it is shown that among 413 respondents 74 from Dhaka, 80 from Chittagong,71 from Sylhet and 37, from Rajshahi liked to buy from B2C site.

Table 18: Comparison between profession and site they visited

		Which site do you visit?				
		B2B	B2C	C2C	B2G	F-commerce
		Count	Count	Count	Count	Count
Profession	Students	4	112	10	1	99
	Job Holder	1	61	3	2	6
	Businessman	0	13	1	0	0
	Housewife	1	80	12	3	4
	Others	0	0	0	0	0

It is shown from the table 18 that most of the e-commerce customers are students, job holders and housewife. From the table 18 it was shown that among 413 respondents 112 students, 61 job holder, 13 businessmen and 80 housewives like B2C for buying online.
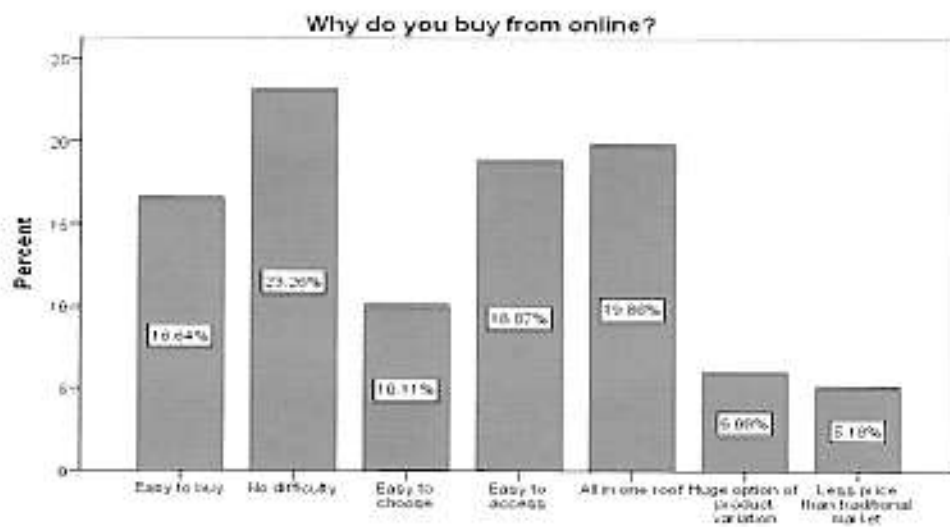
Figure 6: Why do you buy from online?

From the figure 6, it is shown that 23.26% customer think that there are no difficulties in online shopping,19.86% say all in one roof,18.87% say easy to access,16.64% say easy to buy,10.11% say easy to choose,6.08% say huge options in product variations and 5.19% say less price than traditional market. So it's clear from the data, most of the online customer think online is the best option for them in this busiest world.

Table 18: Comparison between profession and site they visited
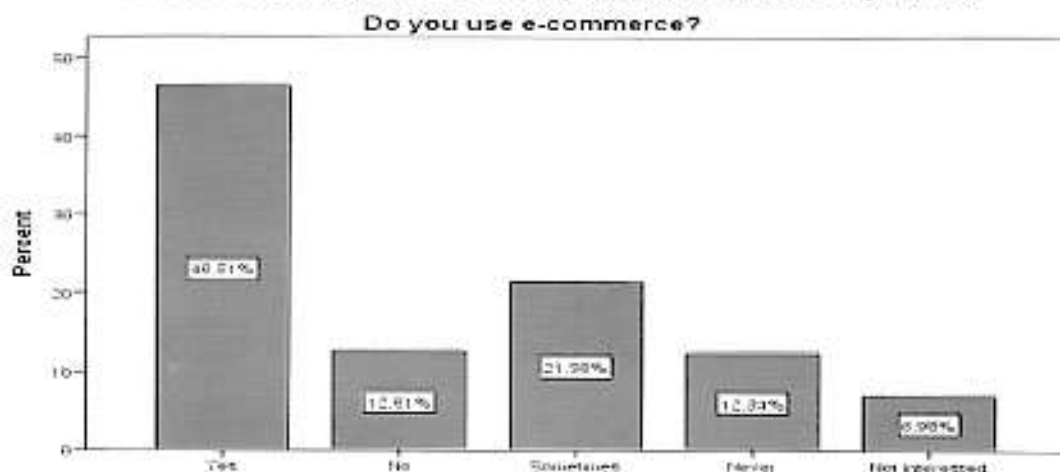
Figure 7: Do you use e-commerce?

Figure 7 presented the data regarding the usage of e-commerce in Bangladesh. Among the respondents 46.51% using e-commerce,21.56% using sometimes in a month,12.61% don't use e-commerce,12.34% never use e-commerce and 6.98% not interested in e-commerce. The data can draw a conclusion that the users of e-commerce is increasing day by day in Bangladesh.
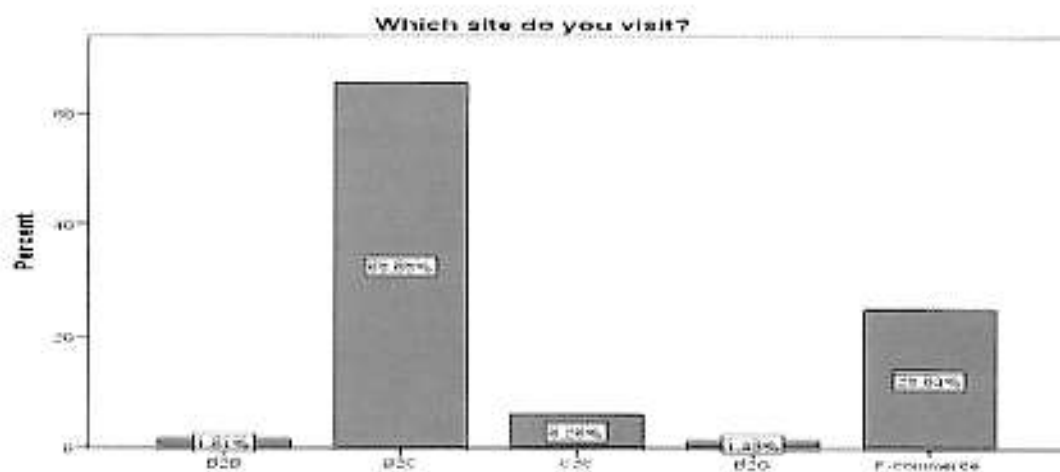

Figure 8: Do you use e-commerce?

Figure 8 presented the data regarding the favourite site of e-commerce by the e-commerce customers.65.65% customers think that B2C is the best for them,25.04% use f-commerce,6.26% use C2C,1.61% use B2B,1.43% use B2G e-commerce site. So the most popular site in Bangladesh is B2C and f-commerce.

What is the main problems of e-commerce business in Bangladesh?
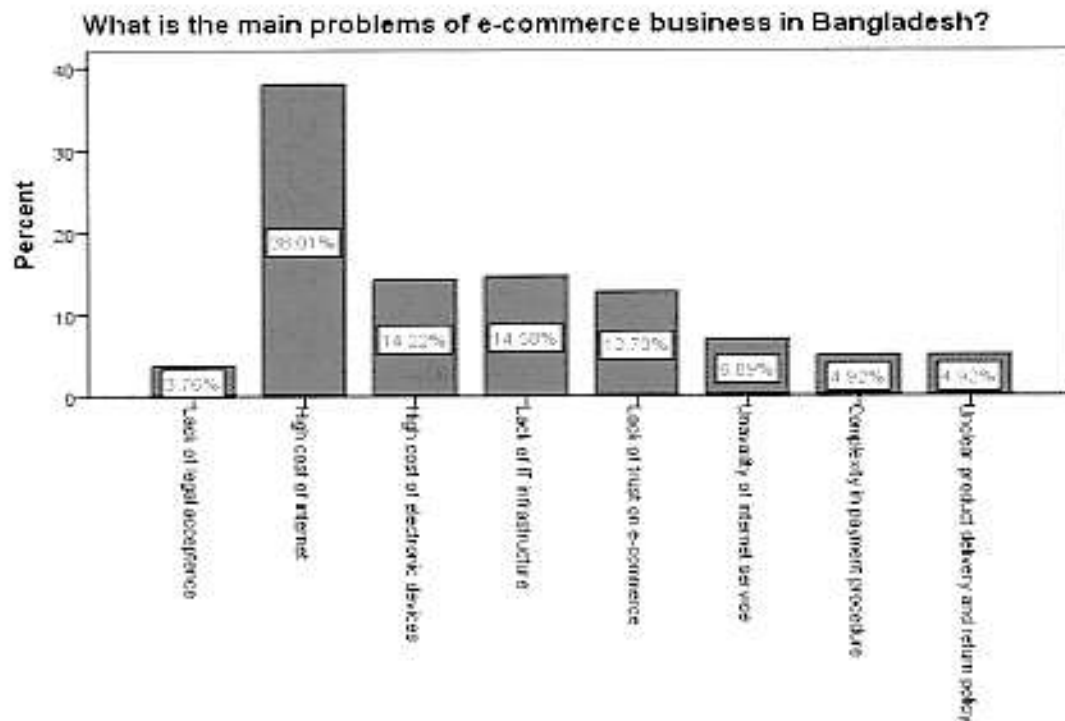
Figure 9: What are the main problems of e-commerce business in Bangladesh?

The figure represents the problems of e-commerce in Bangladesh.38.01% think that high cost of internet is the key problem,14.58% think high cost of IT infrastructure,14.22% think high cost of electronic devices,12.70% think lack of trust on e-commerce,6.89% think unavailability of internet service,4.92% think complexity in payment systems,4.92% unclear product delivery policy and 3.76% think that lack of legal acceptance are the main problems of e-commerce in Bangladesh. So most of the e-commerce users think cost of internet is the key problems in Bangladesh

8. Recommendations

In Bangladesh E-commerce is the new dimension in our business arena. There are very few organizations offering full online transactions till now. Most of the organizations are giving the product and accounting information in their web sites. Full online payment and delivery services are not being provided by the E-commerce organizations in our country. Though there are some technical and infrastructural problems, our E-commerce organizations are developing in a progressive way. In this research paper there are some recommendations that will ensure the real operational, functional and wide range use of E-commerce practices and operations which can create the new dimension of business in Bangladesh:

⇨ For building trust among the E-commerce customers government should introduce a certification body which can certify the E-commerce site as valid.

⇨ Bangladesh should introduce some real life IT institutions and IT based higher degree.

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⇨ There are some special loan facilities given by the government for example SME loan, as the same way E-commerce loan may be introduced for flourishing E-commerce

⇨ The price of broad band internet service should be minimized.

⇨ A strong autonomous body regarding E-commerce should be established in Bangladesh

⇨ A universal payment gateway for E-commerce should be set up.

⇨ Full E-commerce (all kinds of task related to e-commerce are done by the online) organizations may be introduced for long time.

⇨ The payment procedure of online shopping or E-commerce transactions should be need to make as simple as possible and reliable.

⇨ Recognized financial institutions such as public or private banks should be included in payment procedure as major way of payment or alternative way of payment which can help to build reliability among the e-commerce customers.

⇨ Business organizations and related associations should be made aware of the benefits of E-commerce operations and online transactions. For this business, regulatory body BGMEA can play a significant role.

⇨ Government should introduce a new law regarding E-commerce.

⇨ In Bangladesh E-commerce has no institutional recognition, government should give these recognitions.

⇨ High competition among the Internet Service Providers (ISPs) should be developed and new ISPs should be encouraged to come into business specially for development of E-commerce sites.

⇨ For building up awareness among the mass people, government and E-commerce related organizations (e-CAB) should take proper steps.

9. Conclusion

Bangladesh is a potential country around the world that can be a good example for using the Internet and ICT. The penetration of internet users is enough to sustain a full E-commerce business operation in Bangladesh, though here are still some obstacles available for E-commerce in Bangladesh. The major problems of e-commerce operation in Bangladesh are to maintain the e-commerce sites properly and to create the trust among the e-commerce customers. Mainly in Bangladesh the e-commerce business has a great potentiality because the maximum users of this are the young generation. From the analysis of e-commerce market, it is proved that the target customers of e-commerce are young people. If any organization can capture the young generation and women customer, they can develop e-commerce business. The government and e-commerce regarding body can play a vital role in developing the proper infrastructures of this form of business in Bangladesh. In the mission of making digital Bangladesh, e-commerce can play a vital role in all out efforts. E-commerce has limitations in Bangladesh; but it can create a digital nation within a short time frame.

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References

A Mukherjee,P Nath. (2007). "A reeximination Role of electronic trust in online retailing:A Reeximination of the commitment-trust theory". *European Journal of Marketing*, 41,No.9/10, 1173-1202.

Ahammad, S. M., Satter, F., & Saifullah, M. (2007). PROSPECTS OF E-COMMERCE IN BANGLADESH. *J. Sci. technol. (Dinajpur)*, *Vol. 5*, 74-80.

Ahammad, S. M., Satter, F., & Saifullah, M. (2007). PROSPECTS OF E-COMMERCE IN BANGLADESH. J. Sci. technol. (Dinajpur) . Vol. 5, 74-80.

Alom, M. J. (2012, August). E-commerce :Benefits in trade and commerce,Bangladesh. *International Journal of Management, IT and Engineering*, 2(8), 571-585.

Bank, W. (2016, May 23). http://data.worldbank.org/indicator / IT.NET.USER.P2? end= 2015 & locations= BD&start= 1990&view=chart. Retrieved from http://data. worldbank.org/: http://data.worldbank.org

Bd24live. (2016, September 23). http://www.bd24live.com/article/6536/index.html. Retrieved from http://www.bd24live.com: http://www.bd24live.com

BTRC. (2016, January-October 2). *Internet Users in Bangladesh*. Retrieved October 24, 2016, from BTRC web site: http://www.btrc.gov.bd

Company, B. (2016, May 23). https://companylist.org/ Bangladesh/ Keywords/ecommerce/. Retrieved from https://companylist.org/: https://companylist.org

Directory, B. (2016, July 24). http://bangladeshidirectory.com/articles/Shopping/Most-Popular-Online-Shops-in-Bangladesh. Retrieved from http://bangladeshidirectory.com: http://bangladeshidirectory.com

e-CAB. (2017, May 13). www.e-cab.net.bd. Retrieved from e-CAB: www.e-cab.net.bd/e-commerce

Ferdous, M., & Ishtiaque, A. N. (December 2013). Prospects of E-Commerce in Pharmaceutical Industry of Bangladesh: Lessons from the Case of Drugstore.com. *Journal of Business Studies*, *Vol. XXXIV*, No. 3.

Habit, B. (2015, December 29). http://www.businesshabit.com/2015/10/the-number-of-Facebook-users-in.html. Retrieved from http://www.businesshabit.com: http://www.businesshabit.com

Hoq, Z., Kamal, M. S., & Chowdhury, A. H. (2005). THE ECONOMIC IMPACT OF E-COMMERCE. *BRAC University Journal, Vol. II, No. 2*, pp. 49-56.

Hossain, M., Ali, M., Kibria, M., & Bhuiyan, M. (2013, February). A Survey of E-Commerce of Bangladesh. *International Journal of Science and Research (IJSR)*, 2(2), 150-152.

A Contemporary Study of E-Commerce Problems and Prospects: Digital Bangladesh Perspective

Laisuzzaman, I. M., Imran, N., Nahid, A. A., & Amin, M. Z. (2010). The framework for implementing e-commerce: The role of Bank and Telecom in Bangladesh. *Journal of Tekecommication,* 1(1), 57-62.

Listing, e. T. (2016, February 12). http://www.etradelisting.com/article/top-5-E-commerce-websites-in-bangladesh/. Retrieved from http://www.etradelisting.com/: http://www.etradelisting.com

Mohiuddin, M. (July, 2014). Overview the E-Commerce in Bangladesh. *IOSR Journal of Business and Management (IOSR-JBM),* Volume 16, Issue 7. Ver. II (July, 2014)(e-ISSN: 2278-487X,p-ISSN: 2319-7668,), PP 01-06.

Ohidujjaman, Hasan, M., & Huda, M. N. (2013). E-commerce Challenges, Solutions and Effectiveness. *International Journal of Computer Applications,* Volume 70((0975 - 8887)), 9,.

Place, B. M. (2015, June 12). http://www.bangladeshmarketplace.com/. Retrieved from http://www.bangladeshmarketplace.com/: http://www.bangladeshmarketplace.com/

Place, B. M. (2016, june). http://www.bangladeshmarketplace.com/. Retrieved from http://www.bangladeshmarketplace.com/: http://www.bangladeshmarketplace.com/

Programme. D. I. (2016, July 24). http://www.ambdhaka.um.dk/en/menu/DevelopmentIssues/Businesstobusiness(B2B)Programme/. Retrieved from http://www.ambdhaka.um.dk: http://www.ambdhaka.um.dk/en/

Rahaman, M "The Effects of Mobile Phone Use on Human Behaviors: A Study of Developing Country Like Bangladesh", International Journal of Information Technology and Computer Science (IJITCS), Vol.9, No.11, pp.48-56, 2017. DOI: 10.5815/ijitcs.2017.11.05

Report, W. B. (2016, may). Number of Internet users in Bangladesh. Retrieved August 23, 2016, from http://data.worldbank.org/indicator/IT.NET.USER.P2?end=2015&locations=BD&start=1990&view=chart : http://www.data.worldbank.org/indicator/IT.NET.USER.P2?end=2015&locations=BD&start.

Roy, S. (2016, February 12). http://sarojroy.com/blog/2015/01/04/popular-E-commerce-sites-in-bangladesh/. Retrieved from http://sarojroy.com/: http://sarojroy.com/

Star, T. D. (2016, June 24). http://www.thedailystar.net/country/80pc-bangladesh-internet-users-Facebook-83080. Retrieved from http://www.thedailystar.net: http://www.thedailystar.net

Star, T. D. (2016, November 27). http://www.thedailystar.net/country/80pc-bangladesh-internet-users-Facebook-83080. Retrieved from http://www.thedailystar.net/: http://www.thedailystar.net

Techinews24.com. (2016, November 12). http://techinews24.com/E-commerce-business-bangladesh/. Retrieved from http://techinews24.com/: http://techinews24.com

Trade, B. (2016, August 12). http://www.busytrade.com/aboutus/aboutus.php. Retrieved from http://www.busytrade.com: http://www.busytrade.com

Tribune, D. (2016, July 13). http://archive.dhakatribune.com/business/2016/jan/31/E-commerce-bangladesh. Retrieved from http://archive.dhakatribune.com/: http://archive.dhakatribune.com

Velmurugan, M. S. (2009). Security and trust in E-business:problems and prospects. International Journal of Electronic Business Management, 7, 151-158.

Viruscaptive.com. (2016, November 23). http://viruscaptive.com/top-10-E-commerce-sites-in-bangladesh-which-will-help-you/. Retrieved from http://viruscaptive.com: http://viruscaptive.com