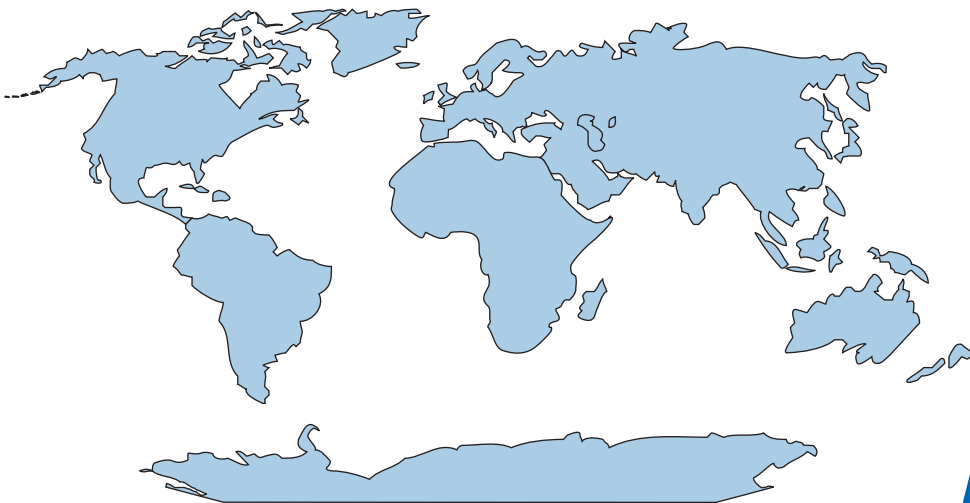


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**LESSONS LEARNED FROM USING FLIPPED LEARNING MODEL FOR TEACHING
PSYCHOLINGUISTICS AT AN-NAJAH NATIONAL UNIVERSITY**

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ABSTRACT

One of the current models that is gaining remarkable interest among educators from all levels and fields around the world is the flipped learning model. Unlike the convectional lecture-based approach to teaching which reduces education to a transfer of information, this model emphasizes active student-centered learning and enhances students' interaction and engagement. The current qualitative study aimed at investigating students' perceptions and lessons learned from using the flipped learning model in teaching psycholinguistics at An-Najah National University in the first semester of the academic year 2015 /2016. The participants were 44 EFL senior students (33 females and 11 males). To achieve the study objectives, a qualitative research method based on the so-called triangulation was used by means of content analysis, classroom observation and focus group sessions. Findings indicated that the majority of the students showed positive perceptions towards using the flipped learning model for teaching this course and that the flipped learning model was helpful for both the instructor and the students when it minimized student's passivity and maximized students' interaction, student-cantered learning and engagement. Moreover, the use of individual and group tasks enhanced students' ICT skills.

Keywords: Lessons Learned, Flipped Learning Model, Psycholinguistics, An-Najah National University

INTRODUCTION AND THEORETICAL BACKGROUND

Education, methods of teaching and learning are constantly changing during the past two decades as a result of the rapid developments in Information & Communication Technologies (ICT) that have been affecting our lives on one hand, and in response to the various challenges facing the educational systems in the 21st century on the other hand. Some of these challenges include reversing poverty, population growth, achieving sustainable lifestyles, dealing effectively with globalism, cultivating creativity, expanding human potential, and bridging the skill and wisdom gap (Martin, 2007). These challenges and others have left major impact on education to the extent that new models and trends in education have emerged to meet the requirements of 21st century when new skills and competences are essential to succeed in education.

One of the current models that is gaining remarkable interest among educators from all levels and fields around the world is the flipped learning model. This model highlights the idea of shifting instruction to students before the class and using class time for assignments, which allows students to learn the basic concepts on their own and explore the concepts in depth during the class (Chang, 2016). Webb and Doman (2016) argued that a plethora of online sources have become available for teachers in many fields and disciplines to get started with adopting a flipped approach in their classes in response to the popularity of the flipped paradigm. According to Herreid and Schiller (2013), the term "flipped" or "inverted classroom comes from the idea that what is normally done in class and what is normally done as homework is switched or flipped. Additionally, The Flipped Learning Network (2014) announced a formal definition of flipped learning with four pillars. According to the Network, flipped learning is a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter. This means that flipped instruction incorporates the best of different delivery methods, and thus, according to Corrias (2014) the classroom sessions turned out to be livelier than he expected.

However, some educators distinguish between a Flipped Classroom and Flipped Learning claiming that these terms are not interchangeable. To them, flipping a class can, but not necessarily, lead to flipped learning. Many teachers may already flip their classes by having students read texts outside of class, watch supplemental videos, or solve additional problems, but to engage in Flipped Learning, teachers must incorporate four pillars into their practice that can be found in the acronym F-L-I-P where each letter stands for one pillar as follows: F for flexible environment, L for learning culture, I for intentional content, P for professional educator (Flipped Learning Network, 2014).

By the same token ,Ahmed (2016) argued that the flipped classroom model rest upon three foundations : the blended learning approach when it moves the lecture away from class into online delivery and uses face-to-face

class time for actual application; the student-centered approach when moving learners away from an instructor-centered learning to another environment where teachers become real organizers, mentors, and facilitators and each student becomes responsible for coming to class with a basic understanding of the material, so that he/she can engage in interactive learning in the classroom. Heinerichs et al. (2016) agree with this idea when arguing that the flipped classroom is an educational approach that has become popular in higher education because it is student -centered and they showed that athletic training educators can successfully use flipped classroom principles in blended courses to create student-centered classes and also agree with Sweet (2014) who argued that the flipped learning can be used to help students become more responsible for their learning and helping teachers to provide differentiated instruction. Garrett (2008) claims that in student-centred approaches, leadership is shared when the students' share in classroom responsibilities, and they automatically become active partners and competent facilitators for the operations of the classroom activities. This claim leads to the third foundation of flipped learning which is active learning that covers a number of pedagogies focusing on students' activity and engagement.

Teaching methods such as Flipped Learning and Team-Based Learning require students to pre-learn course materials before a teaching session, because classroom exercises rely on students using self-gained knowledge. This is the reverse to "traditional" teaching when course materials are presented during a lecture, and students are assessed on that material during another session at a later stage (Balan; Clark and Restall, 2015). Unlike the convectional lecture-based approach to teaching which "reduces education to a transfer of information", this model emphasizes active learning and problem-solving, and promotes higher-order cognitive work (i.e., analysis and synthesis). The role of the instructor changes from that of predominantly delivering content to one focused on facilitating discussion and promoting problem solving and knowledge application. (Galway; Berry and Takar, 2015). Kates, Byrd and Haider (2015) found that flipped learning moves beyond exchanging classroom lectures and traditional homework for students watching lectures or videos outside the classroom to free up time for interaction inside the classroom. This reverses the role of the student from passive observer to an active participant which improves the overall learning. Wallace et al (2014) argue if instructors desire students to gain a deeper understanding of the content and begin thinking like experts, then they need class time for active, collaborative learning.

Among the advantages of flipped learning is that it provides a digital solution to the lack of time that obstructs teachers in the classroom when learning can be done outside the classroom. With an overwhelming amount of resources available today, it is up to the teachers to find ways to integrate these technologies into the learning experience (Webb and Doman, 2016). Since the blended learning approach is considered one of the foundations of flipped learning when it moves the lecture away from class into online delivery, flipping has largely been tied to the incorporation of video technology either in the form of a student practicum or an instructor lecture via on-line delivery combined with a classroom meeting involving collaboration and/or application exercises in the face-to-face session (Westermann, 2014). Using the Flipped Classroom approach, the teacher "flips" the presentation of the material, the lesson, to non-class time by preparing a video that compresses the material and posting it on a website, such as YouTube, which the students can view at home or anywhere they choose (Johnson, 2012). In this respect, Webb & Doman (2016) maintained that in the flipped model, videos are used to deliver instruction to students outside of class, thus freeing class time for hands-on learning, individualized instruction, group collaboration, and creative projects in order to master learning objectives. In flipped classrooms, lectures, which are normally delivered in-class, are assigned as homework in the form of videos, and assignments that were traditionally assigned as homework, are done as learning activities in class (Sletten, 2017).

According to Vliet; Winnips and Brouwer (2015) in flipped-class pedagogy, students prepare themselves at home before lectures, often by watching short video clips of the course contents. Long; Logan and Waugh (2016) are in line with the idea of using videos when they maintained that students review the learning content before class through instructor-provided video lectures or other pre-class learning materials, and in-class time is used for student-centered active learning. Such advantages might be due to the fact that flipped instruction has positive effects on student achievement especially when students are offered the opportunity to watch video lectures outside of class and appreciate more active approaches to learning (Leo, and Puzio, 2016).

STATEMENT OF THE PROBLEM

Parkavi (2015) maintained that traditionally courses are taught to students using the blackboard. However, teachers in the 21st century cannot completely depend on blackboard teaching to deliver information in classes that are teacher-led because the main teaching method is lecturing, making the textbook and the teacher the only sources of knowledge. Lecture-based instruction is where the teacher takes the active role of dispensing

knowledge in a classroom. In such an environment, the students are passive learners, where they rely on learning by listening, memorizing, and on the repetition of the taught knowledge. This has created passive and unmotivated learners and reduced students' chances to participate and acquire knowledge. Such traditional lecturing has been used so long that both instructors and students sometimes struggle shifting to a more engaging approach to teaching and learning.

This passive role in learning seems to disappear in the flipped classes because the strategy motivates students to spend more of out- of-class time to learn by themselves and encourages them to participate more in classroom activities. In addition to the conceptual teaching, the students should be actively involved and motivated to make the course more effective and to make students get involved in learning about concepts of a course. To this objective, Kates, Byrd and Haider (2015) call for an active constructionist approach to flipping classrooms where not only are homework and lecture sessions flipped, but students create, or "construct" knowledge outside class and present to others through group learning activities.

Regardless of its benefits, the flipped classroom strategy, being one promising approach that uses technology in teaching had not yet been heavily researched in the EFL Palestinian higher education since most instructors rely on lecturing as the major means for instructional delivery. The current study, therefore, aims to address the gap in the research in the area of using flipped learning in higher education by addressing the following questions:

1-What are students' perceptions of using flipped learning in teaching psycholinguistics at An-Najah National University?

2-What are the lessons learned from using the flipped learning model in teaching psycholinguistics at An-Najah National University?

OBJECTIVES OF THE STUDY

This qualitative study aims firstly at discussing one of the researchers' personal experience in teaching psycholinguistics course at An-Najah National University in the first semester of the academic year 2015/2016. Secondly, the study aims at providing possible readers and instructors with lessons learned and pedagogical implications for future use that can be relevant to other universities in Palestine and in the Arab world as well. Thirdly, the study has the objective of contributing to the idea of improving the productivity and efficiency of teaching psycholinguistics and similar courses at An-Najah National University especially when passing the gained knowledge, experiences and lessons along the community of professors through training or other possible techniques.

SIGNIFICANCE OF THE STUDY

Engaging students within the classroom setting is a constant and evolving process for teachers today. Teachers have used several methods to connect with today's students in a meaningful way using technology that tends to increase the effectiveness of their instruction towards how students learn best. Upon the aforementioned two questions which dealt with the theme of lessons learned, the significance of this study can be seen in two major areas. The first one is the possible knowledge and experience gained from using flipped learning model that is characterised by being less teacher-centered and more student- centered for teaching psycholinguistics and other courses at An-Najah National University which seems to be an important requirement to succeed in the 21st century .Therefore, instructors at An-Najah National University might try such approach to promote repeat application that leads to improving the productivity and efficiency of the educational process at An-Najah University .The second is that students themselves will feel more responsible for their own learning and seem to gain some benefits. The result, in this case, will be a step forward towards a possible reform of teaching practices with emphasis on more student-centered learning in higher education, especially when teaching courses take into consideration the objective of cultivating active learning and 21st century skills for the instructors of Al-Najah University who will then be in a better position to apply those to their students who are in need to develop 21st century Skills.

LIMITATIONS OF THE STUDY

In terms of population and sample, this study was limited to the course psycholinguistics studied by two sections at An-Najah National University in the first semester of the academic year 2015/2016. Generalization of the findings, therefore, is limited to this purposeful sample of the students studying this course under these circumstances. Regarding methodology and instrumentation, the study was based on applying certain procedures and techniques used during the implementation of flipped learning in addition to observation technique during the whole semester. Other research methods (e.g. questionnaires, control/experimental groups, pre-tests/post-tests) were not used in this study.

LITERATURE REVIEW

As a result of the popularity of the flipped paradigm, a great deal has been written recently to explore the potential advantages of the flipped learning model in education as well as investigating students' and teachers' perceptions of this model.

With regard to the advantages of flipped learning, several studies found positive impact on students' achievement in several subject matters. To name but a few, -Al-Rosa (2018) proved the effectiveness of the flipped classroom on improving the academic achievement of the students in teaching the science teaching strategies and its assessment course at Princess Norah bint Abdulrahman University in Saudi Arabia when the study results showed statistically significant differences between the mean scores of the experimental group and the control group in favor of the experimental group. Song and Kapur (2017) found that students in the "productive failure" condition performed better than those in traditional flipped classroom in a 2-week curricular unit on polynomials in a Hong Kong Secondary school, while Olakanmi(2017)found that the flipped instruction model facilitated a shift in students' conceptual understanding of the rate of chemical reaction significantly more than the control condition as students in the flipped classroom model condition benefited by preparing for the lesson before the classes and had the opportunity to interact with peers and the teacher during the learning processes in the classroom.

These findings are comparable to those of Hsieh et al. (2017) who found that flipped instruction not only enhanced the participants' motivation, making them more active in using idioms, but also significantly improved their idiomatic knowledge and agree with Webb and Doman (2016) who found that although both the control and experimental groups in their study showed increased comfort in the self-report data, gains on actual achievement were significant only for the experimental groups. Ahmad (2016), moreover, concluded that the flipped classroom had a significant effect on the listening comprehension of Egyptian EFL students and Al-Harbi & Alshumaimeri (2016) found that adopting the flipped classroom strategy appeared to play a role in enhancing the students' grammar performances whereas Yelamarthi, Drake and Prewett (2016) found that student learning was improved by the implementation of multi-pedagogical flipped learning methodologies in a first-year engineering course. Similarly, Porcaro et al (2016) found that students showed improved pass rate for the final examination from 47 to 48% in the traditional class to 56-65% in the flipped classroom approach and Leo and Puzio (2016) suggested that flipped instruction had a positive effect on students' achievement when some students reported they preferred watching videos outside of class.

By the same token, Oyola (2016) found that flipped education positively influenced student achievement when it facilitated differentiation and re-teaching, increased student engagement, and encouraged at-home involvement and reinforcement while Mori, Omori and Sato (2016) found that the students in their study scored better on postlesson tests in the flip condition than in the nonflip condition whereas no statistically significant difference was observed for intermediate students. Meanwhile, Touchton (2015) found that flipping the classroom gave students statistically significant advantages in difficult areas emphasized in class and students in the flipped classroom felt they learned more and enjoyed the course more than those in a traditional classroom while Van Vliet; Winnips and Brouwer (2015) found that flipped-class pedagogy enhanced students' critical thinking, task value, and peer learning. Obari & Lambacher (2015) also found that students' achievement in TOEIC scores and Oral Proficiency Interview improved from a mean of 577 to 758 since flipped learning enabled students to work both in and out of the classroom and to actively explore their learning environment. Kostaris et al. (2017) provided evidence for potential advantages in students' cognitive learning outcomes related to subject domain knowledge, the exploitation of teaching time during the classroom face-to-face sessions, the students' level of motivation and their level of engagement.

Nevertheless, Snyder et al. (2016) found that the use of flipping does not significantly impact students' success in a secondary social studies classroom and also Jensen et al, (2015)found that the flipped classroom does not result in higher learning gains or better attitudes compared with the nonflipped classroom when both utilize an active-learning, constructivist approach and propose that learning gains in either condition are most likely a result of the active-learning style of instruction rather than the order in which the instructor participated in the learning process. Perfume (2016) found no statistical difference between the experimental group and the control group in the students' learning outcomes while descriptive analysis showed learning gains in the experimental group.

With regard to perceptions and attitudes, several studies were conducted in many contexts. To name but a few, Al-Harbi & Alshumaimeri (2016) found that the students' responses towards using the flipped classroom strategy in the EFL class were positive and Long, Logan and Waugh (2016) demonstrated that students had positive attitudes towards using pre-class videos in the flipped classroom. By the same token, Perfume (2016)

found students expressed favorable attitudes towards the flipped classroom approach whereas Zainuddin and Attaran (2016) revealed that flipped learning generated positive impacts for shy and quiet students who were not fluent in English and students' level of motivation was enhanced in a study conducted by Katsa; Sergis and Sampson (2016) in addition to potential advantages in students' cognitive learning outcomes. Meanwhile, Hibbard, Sung and Wells' (2016) indicated that students instructed through the flipped learning were mostly positive and reflected motivation to succeed, Unruh et al (2016) suggested that flipped classroom teachers have higher teaching efficacy, greater comfort and involvement levels using technology, more positive attitudes toward technology, and greater levels of engagement and Galway, Berry and Takar (2015) indicated that students had largely positive perceptions towards the flipped classroom instructional model although there is some diversity across students. Thompson and Ayers (2015) revealed that participants indicated a high level of support for the flipped classroom despite the greater effort required by the emphasis on student responsibility and the active learning nature of the course. However, Chang (2016) found that students preferred the teacher-centered practices to the student-centered practices.

WHAT IS A LESSON LEARNED?

According to (<http://ocio.os.doc.gov/Commerce>), a lesson learned is useful project management information gained through experience that an organization should retain for future use and that can be relevant to other organizations. Depending on the lesson, it could be a valuable technique or an outcome to repeat. Lessons learned can be categorized as something learned from experience, an adverse experience that is captured and shared to avoid a recurrence, an innovative approach that is captured and shared to promote repeat application, or the knowledge acquired from an innovation or an adverse experience that leads to a process improvement.

WHY ARE LESSONS LEARNED IMPORTANT?

Again and According to (<http://ocio.os.doc.gov/Commerce>), lessons learned are a matter of improving the productivity and efficiency of a process. Individuals or teams can benefit from the knowledge gained through the experience of those who have gone before them. Many organizations that label themselves as "learning organizations" often overlook their own experiences as a platform for learning. They assume that their collective experiences are passed along to the next person or group. To be considered a learning organization, a given organization must be proactive, capture lessons learned, and "cross-pollinate" the concepts through training or other techniques that expose the information to others who may benefit from it.

PARTICIPANTS AND SETTING

The setting of the study was the Department of English Language and Literature at An-Najah National University during the first semester of the 2015/2016 academic year. The study was implemented over a period of 8 weeks. The participants were 44 EFL senior students (33 females and 11 males) who were studying the course psycholinguistics taught by one of the researchers. The learning environment was a language lab equipped with computer sets, LCD projector, internet connection a microphone and loudspeakers.

PSYCHOLINGUISTICS COURSE

The course psycholinguistics is meant to introduce psycholinguistic concepts to under -graduate students in language teaching discipline and English language and literature. Students taking this course were expected to demonstrate knowledge and understanding of psycholinguistic theory, define the basic vocabulary of psycholinguistics, discuss the biological bases of human communication, describe how humans perceive and produce speech as a form of linguistic processing, describe how words, sentences and discourse are processed and comprehended, discuss the different stages of language acquisition and explain first language acquisition in terms of pragmatic semantic development. The course, thus, covered different areas of content knowledge disseminated to the students from the very beginning and throughout the fourteen weeks of the first semester. These include the following: introducing Psycholinguistics and Approaches to study language development, describing language, cognitive, perceptual and motor bases of early language & speech, the social and communicative bases of early language & speech, language -learning and teaching processes and young children and first language (toddler talk).

PLANNING FOR THE FLIPPED CLASSROOM

Before starting the sixteen-week implementation, content, requirements of the course, the procedures, were set forth for the course to be taught in accordance with the syllabus.

To teach the course, a compiled textbook was used as a major source for information in addition to handouts, summaries, PowerPoint presentations, weblinks, YouTube videos, Yahoo mail, group tasks, individual tasks and video clips. All in all, teaching the course psycholinguistics using the flipped learning model went through the following steps:

1-Course orientation: Educationally speaking, the first day of a given course at university is very important to stimulate students' interest in the course on one hand, and to create a positive impression towards the course and the instructor on the other hand. Such impression will be crucial to get the students excited about the course content and improve their class participation. Hence, on the first day of psycholinguistics, the instructor tried the best to stimulate students' interest through using an icebreaker that communicated information about himself including educational background, research interests, and why he enjoys teaching this course.

2-The second step was communicating the course expectations. This was an important step to enhance students' engagement and contributed to the building of rapport on students learning.

3-After that, the instructor distributed the course syllabus which included the following sections: course description, learning objectives, course content, grade distribution, course requirements, and recommended useful materials and resources.

4-The instructor, then elaborated on the flipped learning model focusing on the course as a way to establish a learning-centered community in which students are considered to be active partners and responsible for their own learning. This introduction about the flipped classroom was due to the fact that almost not all participants were accustomed to the flipped classroom experience. Therefore, it included the requirements of the course and students' responsibilities, the explanation of some examples, and answers to students' questions. Students learnt from the beginning that they will be actively engaged in learning activities during lectures, they are expected to participate in pair work, group work. To talk about students' responsibilities, the instructor elaborated on some ground rules that aimed to hold students' accountability for their behavior, create a safe learning environment for course participants and to prevent issues of incivility in the classroom. Establishing such ground rules was meant to act as a contract that can be referred to in instances where ground rules are being broken.

5-At the end of the first lecture which lasted for 50 minutes, students were informed that a cooperative learning model is going to be employed which will involve pair and small group discussions, teacher-led discussions, individual discovery tasks, presentations, using some web resources, classroom exercises applying course concepts with some emphasis on engaging students in learning by doing. In addition to these expectations, students were encouraged and motivated to practice reading and preparing the material at home so as promote their reading skills and to give in- class presentations and summaries of what they are asked to prepare and summarize. While reading the assigned material, students were encouraged to practice active comprehension strategies (i.e., taking notes, highlighting important points and summarizing information in their own words). Students, furthermore, were asked to bring questions from their readings to the lecture for clarification. Instead of explaining every concept, lecture times would be used to clarify those concepts students found confusing and incomprehensible.

6- For summarizing and presenting the material whether individually, in pairs or in small groups of 3 or 4, students were given some tips that help them to prepare well and present better. This intention aimed to help students who lack confidence in speaking in English to develop enough confidence to discuss assigned topic and speak in English successfully using different techniques. Therefore, the instructor did the first presentation as a model through using the following steps:

He summarized 5 pages into 2 pages and prepared 44 copies given to the students in the second lecture one before the day of presentation. Students were asked to go over these pages in their textbooks and then to go over the summary given by the instructor. Students then were encouraged to write some notes or questions to be raised during the presentation. On the day of the presentation the instructor started with an icebreaker which was a game. Then, the discussion topic was presented to students. For expert phase, students are divided into several groups, with each group assigned a different perspective of critical points of the discussion. Students usually study the material individually and each group was given three T/F statements, two multiple-choice items and two wh-questions that need short answers. Therefore, students confirm their understanding of each other, and discuss the theme in order to deepen their idea as 'experts' of the theme. Students were asked to discuss the summary and find out answers for the questions. They were given 10 minutes to complete this task. After that a representative of each group started answering the questions within his/her own group members in whom one student read the question and another member answered it orally. During the two lectures, the instructor prepared three short videos and PowerPoint presentation to wrap up the material discussed with the help of the students.

7-Throughout the course, and in each presentation, one student or more (depending on students' choice) is called to the front to share on the area that they have been asked to summarize. This learning experience included teamwork especially when students were given the opportunity to summarize and present the assigned

pages using different types of techniques. Summarizing and preparation gave students the opportunity to explore different psycholinguistic themes and share what they have understood with their classmates using various techniques which contributed to revealing students' creativity. Some of them, for example, created PowerPoint slides and a handout of mind-map on the selected topic, others used Prezi, while some prepared games and simulation shows and so on. Meanwhile, the instructor acted as a moderator, a facilitator, a questioner of more than formal and traditional questions, a motivator, an environment setter and manager, an expert and an initiator of interactive styles. To improve students' understanding of concepts and motivate students to do more than the minimum requirements in this course, direct instruction was used to give an overview of the material, to explain confusing concepts, and to answer students' questions on their reading. Hence, a highly engaged and supportive instructor is important to inspire and promote learning during in-class sessions. A supportive instructor is also important to ensure that students are not left behind and that there are ample opportunities for clarification on important concepts and material that may be difficult to acquire through self-directed means e.g., watching videos and/or reading handouts and summaries.

8-During students' presentation, the instructor used to add on to what the group has presented. During the discussion, the teacher clarified any misunderstood points and answered the students' questions. This approach contributed largely to increasing students' autonomy and reduced the burden faced by the instructor, who might have to face.

9-Throughout the course, the researcher and the students altogether selected videos on topics corresponding to the course major and minor areas. These videos were selected from YouTube and TED (www.ted.com). The videos were posted to the instructor Facebook account to be watched by the students and to be shown in the classroom as well. The length of these videos was between 2- 7 minutes.

10-During the flipped classroom, the participants were asked to watch videos before class that explained the content of each lecture to maximize their learning in the classroom.

Therefore, the instructor engaged the participants with the course material through student-centered active learning activities where they created, collaborated, and put into practice what they learned from the videos and handouts they viewed outside class. A variety of active learning activities were used (e.g. interviews, warm-up activities, lecturing, videos, discussions, traditional resources, question-answer in pairs and in groups).

DATA COLLECTION INSTRUMENTS

To achieve the study objectives, a qualitative research method based on the so-called triangulation by means of content analysis, classroom observation, focus group sessions, and online Facebook personal interviews was used.

Firstly, with regard to content analysis, students were asked from the beginning of the course to write a short report 1-2 paragraphs in which they write about the pages summarized, the title, methods used for presentation, audio-visual aids used, videos, students' interaction, students' engagement and their own self-reflection. Furthermore, the four pillars of flipped learning (FLIP) given by in the Flipped Learning Network, (2014) was highlighted where the acronym (FLIP) stands for: flexible environment, learning culture, intentional content, professional educator; to explore students' thoughts and perceptions of what they did during the class and to what extent the instructor's role was different. The number of reports was 15 since students worked in pairs and small groups of three and they were sent to the instructor via the personal email and the Facebook account given to the students in the course syllabus. Therefore, to gain a more in-depth understanding of students' experience and perceptions of the flipped classroom model used throughout the course; content analysis of students' final reports was used.

Regarding the focus group sessions, two separate one-hour focus group sessions were conducted. The first focus group session was conducted directly after the final lecture and involved 7 students. The second one was conducted using the instructors Facebook account and it held one-week following the final exam after the students finished the course and received their grades via Zajel so that their responses will not be affected by the given grades and to make them feel comfortable to answer the questions freely. Two students helped in conducting the interviews to minimize the effect of bias or shyness among the interviewees and write down students' responses. These sessions involved open-ended questions regarding student perceptions of the flipped learning experience. The same questions were used in the face-to face focus group session and the Facebook focus group session as well. Both of them were in Arabic and the bilingual researcher translated the interview into English, analyzing the students' responses qualitatively. These questions were as follows:

1-Do you like the student-centered activities used throughout the flipped course, why?

2-Can you give specific examples about how the flipped learning has helped you learn basic concepts in psycholinguistics?

3-What are some positive or negative experiences you have had with flipped learning in this course?

4-What is your overall perception of the flipped learning experience in this course? Is there anything that you particularly enjoyed/did not enjoy?

With regard to classroom observation, it was conducted during the weekly lectures to identify lessons learned from the process and experience of flipping the course.

DATA ANALYSIS

For data analysis, qualitative data from classroom observations focus group session and the content analysis of reports were collected, grouped and analyzed to answer the questions of the study. These data were analyzed using a standard thematic coding process and direct participant quotations were used where possible to explain and highlight themes.

FINDINGS AND LESSONS LEARNED

The current study aimed at investigating students' perceptions and the lessons learned from using the flipped learning model in teaching psycholinguistics at An-Najah University. Data collection and data analysis were conducted to answer the study questions below:

1-What are students' perceptions of using flipped learning in teaching psycholinguistics at An-Najah National University?

2-What are the lessons learned from using the flipped learning model in teaching psycholinguistics at An-Najah National University?

With regard to the first question, the thematic analysis method was used as it fits this qualitative research study. Such method aimed at emphasizing, pinpointing, examining, and recording the major themes within data collected through the different sources used in this study. The analysis involved identifying implicit and explicit ideas within the data so as to record themes related to the questions of the study mentioned above. The aim of such thematic analysis was to explore students' perceptions, feelings and experiences in the flipped learning model. Therefore, the research questions were used to code and the researcher's judgment was the key tool in determining which themes were more crucial.

Regarding students' perceptions of using the flipped learning model, three major themes were found to be common among the participants' responses. Firstly, the majority of the students in the focus group sessions showed positive perceptions towards using the flipped learning model for teaching this course and they gave a variety of reasons. This finding is in line with several studies (Al-Harbi & Alshumaimeri, 2016; Zainuddin and Attaran, 2016; Hibbard, Sung and Wells, 2016; Perfume, 2016; Galway, Berry and Takar, 2015) who found that students' responses and attitudes' towards using the flipped classroom strategy were mostly positive. Some students indicated that this model enabled them to be engaged in in-class activities on one hand, and to encourage students to be directly involved and active in the learning process. Secondly, most students stated that this model was helpful since it encouraged them to prepare well before the lecture time through exploring the textbook, the summaries, the PowerPoint slides, and the videos and such exploring helped them and the instructor as well to invest in lecture time that was used to clarify some concepts and aspects students found confusing and incomprehensible.

Thirdly, the students, all in all, liked the way the instructor managed the individual and group tasks during the lecture especially when most students prepared well before coming to the lecture and lecture meeting time was efficiently used to engage students in student-lead discussions and inquiry-based activities. However, few students indicated that the role of the instructor is still important since direct instruction is still needed to give an overview of the material, to explain confusing concepts, and to answer students' questions. All student reported that at-home involvement was promoted through students' preparation as well as their motivation. Most of the students felt that the flexible learning environment provided by this model enabled the students to learn in a variety of learning methods and techniques as well as helped them to accomplish individual and group tasks during the lecture time. Therefore, the flipped learning model was crucial to promote student-centered learning culture. All students, furthermore, expressed positive attitudes and significant satisfaction with the use of instructional videos used throughout the course.

Most students favorably commented on the videos stating they were amusing especially when they presented funny situations and behaviours relevant to language acquisition stages in different cultures among different

languages. This finding agrees with Long, Logan and Waugh (2016) who found that students had positive attitudes towards using pre-class videos in the flipped classroom and also agrees partially with Leo and Puzio (2016) who found that some students preferred watching videos outside of class. and also agrees with Herreid et al. (2014) who found that the flipped classroom had a strong reliance on excellent videos which appeal to a crop of students who are immersed daily in a visual culture with high entertainment value. In this respect, some students suggested compiling all the instructional videos in one file and use them in accordance with the course units and objectives in the coming semesters. One student said *“The videos helped to strengthen my understanding of the basic concepts in psycholinguistics and gave me real examples, some of them were funny, of toddlers while producing their early language”*. A second student stated, *“Using the videos was one of the best learning experiences I have ever experienced since videos encouraged me to take responsibility and to be more active”*.

Nevertheless, few students also indicated that some of the information in the videos, although interesting, was repetitive and could have been presented more efficiently in accordance with the course units and objectives. Lastly, the majority of the students recommended using the flipped learning model in other courses at the Department of English Language and Literature.

With regard to the second question and since lessons learned are useful for future use that can be relevant to other instructors and other universities, it is worth focusing on some lessons learned from using the flipped learning model while teaching psycholinguistics. Again, most of these lessons were based on classroom observations, focus group sessions, the content analysis of students' reports and on the researchers' self-reflection during the course. The most significant lessons were the following:

1- The flipped learning model was helpful for both the instructor and the students when it minimized student's passivity and maximized students' interaction, student-centred learning and engagement. This lesson goes in line with Brown (2012) who maintained that the flipped classroom incorporates technologies allowing for a more learner-centered classroom environment and that participants shared a transition from a more traditional, teacher-centered practice when they were able to relearn to teach over time through a process of discovery and autonomy inherent in their role.

2-The use of individual and group tasks such as summarizing, typing the summary, emailing the summary to the teacher, creating PowerPoint slides, using YouTube videos, googling the internet for extra information or explanation enhanced students' ICT skills, critical thinking skills. This lesson is in line with Bormann (2014) who found that flipped model leads to student preparedness, and promotes computer literacy skills.

3-The clearly defined roles and responsibilities throughout the course implementation, along with a strong focus on using a variety of techniques and procedures by the instructor and the students as a whole were essential to guarantee the course success and to achieve the intended learning outcomes.

4-Being less teacher –centered approach, the flipped learning model flipped the roles and give control and power of the learning process itself partially to the students who were provided with challenging activities and tasks. These tasks helped to empower the students to share responsibility and to avoid complete formal environment in which students are passive and easily get bored. Throughout the course, students were encouraged to ask questions, give comments, give examples on their own. For example, five female students who are married and have babies used to give real examples, videotaped ones, to support certain components of the course such as mothers', stages of language acquisition, joint-reference. Other students gave examples of their own sisters, brothers, cousins, nephews, and nieces as well.

5-The flipped learning model was characterized by the willing and the readiness of most students to take ownership of their own learning, as well as that of their peers. Such readiness was available to teachers and students through diverse learning resources and facilitate the use of multimedia since students were given more opportunities to work on their own at home, in computer labs or using their own mobile phones to google for information, download YouTube videos, check pronunciation of difficult term in the course such as searching google for extra information and supplementary materials., using quotes and games for icebreakers, and so on.

6-In this flipped learning model, pairwork, group work and teamwork were enhanced and some management concepts of leadership were efficiently applied in this teaching-learning process. Lecturer may want to learn and adjust the concept according to his or her needs in the teaching process. In this concept, lecturer behaved as a moderator and a facilitator who believed in his students' abilities.

7-Students were given a golden chance to improve their speaking skill since they were required to use pure English in their presentations and discussions in addition to partial improvement in the writing –reading and

listening skills. Students learnt how to present effectively before they finally present their chosen topics as part of their assessments. For example, students had to read the material two to three times in their own textbooks in order to be able summarize it, they also had to rehearse at home to prepare themselves for the presentation, they had to learn how to form correct grammatical questions and so forth. Moreover, during the lecture, students had to listen to other presentations and to the YouTubes as a means to comprehend the material. Examples of students' feedback mentioned in their reports.

8-Immediate and continuous feedback provided by the instructor was helpful and not only improved students' presentation skills, but also enhanced their research and data finding skills when preparing and summarizing the assigned material, preparing the instructional videos and writing the final report. All of these learning experiences contributed to the success of students learning and promoted the highest levels of motivation and engagement. Such autonomous learning process has given the students a rich learning experience and discovery. They have a directed purpose in reading not only the prescribed textbook, but also other materials that are relevant and interesting. By doing so, the students took charge of their learning as they learnt not only individually, but also in teams and small groups. This of course agrees with Chen et al. (2015) who found that all groups identified cooperative learning as an effective instructional strategy in flipped classrooms.

CONCLUSION

The primary objective of this qualitative study was to investigate students' perceptions and the lessons learned from using the flipped learning model in teaching psycholinguistics at An-Najah National University. Data for this study were gathered **from** classroom observations, focus group session and the content analysis of reports in a course entitled psycholinguistics at the Department of English language and Literature at An-Najah National University in Nablus. Findings from qualitative data analysis revealed that the majority of students showed positive perceptions towards using the flipped learning model for teaching this course. Furthermore, most students maintained that the flipped learning model was helpful since it encouraged them to prepare well before the lecture, and invest in lecture time. All students, furthermore, expressed positive attitudes and significant satisfaction with the use of instructional videos used throughout the course. With regard to the lessons learned from this teaching experience, the flipped learning model was helpful for both the instructor and the students when it minimized student's passivity and maximized students' interaction, student-centred learning and engagement and when it enhanced students' ICT skills, and critical thinking skills. This model also helped to empower students to share responsibility and to avoid complete formal environment in which students are passive and easily get board. Finally, this qualitative study has presented a more student-centered learning approach that can engage students within the higher education setting.

RECOMMENDATIONS AND PEDAGOGICAL IMPLICATIONS

In light of these findings, instructors wishing to flip their course should keep in mind the following:

1. Flipping courses might be fully or partially done according to the nature and objectives of the course.
2. Videos should be compiled and arranged prior to the course so as to create a sense of continuity.
3. Flipping should aim at giving students choice and control when deciding to flip a course.
4. When flipping a course, finding ways to make learning real is crucial by means of videos, videotaping.
5. Instructors should be trained on how to incorporate the flipped classroom model into their teaching.
6. Social media can be used to help the flipped learning model, for example, creating a Facebook group to upload videos, PowerPoint presentation slides summaries, handouts and other supplementary materials.

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A STUDY OF ENVIRONMENTAL ATTITUDE OF SENIOR SECONDARY SCHOOL TEACHERS IN RELATION TO THEIR LOCALITY

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ABSTRACT

This research is an examination of the study of environmental attitude of senior secondary school teachers in relation to their locality. The investigator studied to determine the rural and urban residential backgrounds-wise difference in the environmental attitude of senior secondary school teachers. This study was conducted on a sample of 250 senior secondary school teachers, selected from different urban and rural schools of Kangra district in Himachal Pradesh by using multistage sampling technique. For measuring the environmental attitude among senior secondary school teachers, Taj Environmental Attitude Scale (TEAS) developed and standardized by Dr. Haseen Taj was used to administer the data. The results indicate that there is significant difference in the mean scores of health and hygiene, wild life, population explosion area of environment attitude of urban and rural senior secondary school teachers. Rural senior secondary school teachers have high environment attitude in health and hygiene, wild life, population explosion area than urban senior secondary school teachers. Urban and rural senior secondary school teachers have almost same environment attitude in forests area, polluters and environmental concern areas. Results also interpreted that there is no significant difference in mean scores of overall environmental attitude of urban and rural senior secondary school teachers. Urban and rural senior secondary school teachers have almost same overall environmental attitude.

Keywords: Environmental Attitude, Senior Secondary School Teachers and Locality.

INTRODUCTION

Man's quest for progress is eternal. In his zeal to achieve scientific and technological advancement, which he thinks would make his life happier; man is unwillingly endangering the surroundings and tilting the ecological balance. By invention of machine he got every tool in his hand. He invented technology for his betterment but today he is using this for his own destruction. Man's unconscionable disposal of wastes into the neighbors compounds is unwillingly endangering the environment and tilting the ecological balance and really threatening the very survival of mankind. It is true that much of the damage caused to the planet is due to man's ignorance of how to deal with nature. At one time the focus of socio-scientific discussion on science, technology and man was how best to use science and technology in the service of man and how best to tap and utilise natural resources. Today the focus of discussion is how best to utilise science and technology without endangering the planet, and how best to conserve the remaining resources for our grand children.

Trained teachers can contribute much to increasing children's awareness of environmental issues at nurseries and kindergartens. Active consciousness towards natural environment begins to develop in most children at the age of 9-11 years. They can appreciate the interaction of the people and nature and are ready to accept the demonstrations of such inter-relationship. But it should always be remembered that the perception of the environment is not necessarily an academic exercise pursued totally through book learning. It is the art of developing a sense of the significance of the environment through an "awareness" of positive and negative impacts. Environmental knowledge is defined as the factual information possessed by a student about environmental issues. Facts and events in the content areas of ecological concepts, pollution, wild life, natural resources, population and persons and organisations are involved in the environmental movement. The influence of environmental knowledge on environmental attitude has been the focus of many studies and discussions.

REVIEW OF RELATED RESEARCH STUDIES

Keeping in mind the importance of the related literature, the investigator explored the previous literature relevant to the present study and could collect the following research studies, which bear direct and indirect relevance to the present study.

Lakshmi (2007) conducted a study on the topic entitled, "A Study on the Environmental Attitude of Prospective Secondary School Teachers." The major findings of the study were:

- Prospective secondary school teachers differ in their levels of attitude towards environment.
- Male and female secondary school teachers make no difference in their attitude towards environment.

- Social status of prospective secondary school teachers makes no significance difference in their attitude towards environment.

Shobeiri, S.M. (2008) conducted a study on Environmental Awareness among Secondary School Teachers in Iran and India. The major objective of the study was to investigate their environmental awareness with respect to their residential background, subject specialization and teaching experience in India and Iran. One thousand and four teachers were selected through the stratified random sampling technique from 103 secondary schools of Mysore city (India) and Tehran city (Iran). Subjects consisted of 505 male and 499 female. They were assessed using the Environmental Awareness Test (EAT) (Shabina Jinaraja, 1999). Results revealed that there are significant differences between them in environmental awareness across and within two groups with regard to their subject specialization (science and arts). Also in overall lengths of teaching experience is not a factor, which can affect teacher's environmental awareness.

Dixit and Agarwal (2009) conducted a study on, "Environmental awareness among prospective elementary school teachers" and main findings of the study were:

- There is no effect of gender and caste on the environmental awareness of prospective elementary school teachers.
- The rural and urban prospective elementary school teachers have a favorable attitude towards environment.

Muthumanickam and Sarala (2009) conducted a study on the topic entitled, "Environmental ethics of higher secondary school teachers" and main findings of the study were:

- The female teachers have high environmental ethics than the male teachers.
- The higher secondary school teachers from urban areas have higher environmental ethics than the teachers from rural areas.

Lahiri (2011) conducted a study on assessing the environmental attitude among pupil teachers in relation to responsible environmental behavior. The objective of study was to find out the status of environmental attitude among pupil teachers. The tool used for this study was responsible environmental behavior scale developed by researcher himself. The researcher took a sample of 300 pupil teachers. The findings of the study suggests redesigning of activities involved in teachers training courses and assessing the determinant attitude which may had led to responsible behavior of pupil teacher towards the green earth.

Nagra, V. and Sandeep, S. (2013) studied environmental education awareness among senior secondary school teachers. The major objective of the study was to identify the environmental education awareness of senior secondary school teachers in relation to type of school, gender and subject streams. Environmental Awareness Test was used for collecting data from a random sample of 200 senior secondary school teachers. Statistical techniques such as mean, standard deviation and t test were applied for analysis of data. The results revealed average level of environmental education awareness in these teachers. It observed that there is no significant difference in the environmental education awareness among senior secondary school teachers with respect to type of school, gender and subject streams.

Nitasha (2013) studied on environmental awareness and values among school teachers across gender and school management style. The study was investigated with the objective of to comparative study of environmental awareness and values among male and female secondary school teacher's trainees of rural and urban areas of Himachal Pradesh. The study was conducted on 100 male and female teachers teaching in govt. and private schools of Kangra District. Teacher values inventory (TVI) 1994 by H.L Singh and Dr. S.P Ahluwalia was used to collect data regarding values. It was observed there is no difference between values of school teachers teaching in govt. and private school on six values areas.

Singh, et.al. (2014) conducted a comparative study on environmental awareness among secondary school teachers in bareilly District U.P. India. The study was attempted to examine the environmental awareness of secondary school teachers in relation to sex, type of board and courses of studies. For this purpose, 1000 teachers (600 female and 400 male) were selected from different schools affiliated to CBSE and U. P. Board. In this process of selection only those teachers were selected whose were not less than 8 years teaching experiences. For measuring environmental awareness self made questioner was used, Mean, SD and t-test value were used to analyze the data. The study will highlight the influence in type of school, sex and courses of studies on the level of teachers of environmental understanding.

Anand, K.K.C (2014) conducted a study on environmental awareness and teaching competency among secondary school teachers. Objectives of the study were to find out the level of environmental awareness and

teaching competency among male and female secondary school teachers along with arts and science branch lastly to find out the relationship between environmental awareness and teaching competency of secondary school teachers. Sample for the study consists of 300 secondary school teachers from different schools of Lohardaga and Gumla Dist. State, Jharkhand. Environmental Awareness Scale, by Parveen Kumar Jha, and Teaching Competency Scale, by Thomas Vargese. Mean, SD, t-test and Pearson Product moment correlation was used to analyze the data. Findings of the study revealed that there was no significant difference in the level of Environmental Awareness and teaching competency of male and female secondary school teachers as well as arts and science secondary school teachers. And finally result showed that there was no significant relationship between environmental awareness and teaching competency of secondary school teachers.

Nagra, V. (2015) conducted a study on environmental education awareness among school teachers in relation to level and residential background. The study has been conducted on a stratified sample of 3600 secondary and elementary school teachers to investigate their environmental education awareness with respect to their level and residential background. A self-made questionnaire was used to collect the data, which was treated with suitable statistical techniques like two-way ANOVA and t-tests. The results revealed significant variations in the environmental education awareness of secondary and elementary school teachers with the former scoring higher. Significant difference was also noted in the environmental education awareness of urban and rural school teachers with urban teachers scoring higher. However, interaction effects of both variables (level and residential background) showed insignificant differences upon environmental education awareness.

Patial, B.S. (2016) conducted a comparative study on environmental awareness among secondary school teachers in Chamba district of Himachal Pradesh, India. The study investigated the environmental awareness of secondary school teachers in relation to gender, type of board and courses of studies. One thousand teachers were selected from secondary schools in Chamba District of Himachal Pradesh (India) affiliated to CBSE and H.P. Board. A questionnaire was used as research instrument. For measuring environmental awareness self-made questionnaire was used, Mean, SD and t-value were used to analyze data. The study revealed that Science and arts teachers had more environment awareness in comparison to commerce teachers. CBSE teachers had more environmental awareness in comparison to HP Board teachers because of the rich educational climate and method of teaching of CBSE schools with compare to HP Board schools. And finally it concluded that the female teachers had more environmental awareness in comparison to male teachers.

SIGNIFICANCE OF THE STUDY

Environment has become a global issue. There is a need to create public opinion worldwide in order to save our environment. The main objective of environmental education is that individuals and social groups should develops attitude, skill, ability and participation in solving real life environmental threats. To bring awareness about environment among people from different walks of life, it is very essential that this process is started from the early years of life of an individual. In this regards, teachers are the motivator in the school regarding environment, different types of environment problems and their solutions.

Teacher plays a vital role in national development; they must possess adequate awareness towards nature first; after that they can inculcate the requited attitude and skill among students to take care of the environment. In this regards, teachers have to provide necessary knowledge in the school about environment, different types of environmental problems and their solutions etc. Responsibilities and revolutionary changes must be brought fundamentally at educational institutions, where in the students are to be well trained by imparting “awareness- drive”, attitude of teachers, who teach, impart and inspire the student in the class room. A number of measures were taken for the preparation of teachers and teachers educators to inculcate the concept of environmental awareness in their minds and also to make them confident and experts enough as strategy makers of the environmental workforce to tackle environmental related problems. The teachers, if sufficiently aware of this importance, can teach and train their students towards greater respect for wild life, plant life and also the productive use of natural resources like land and water. The kind of pro-environmental behavior of teachers certainly influences the attitude and behavior of students, so that they can act as true friends of nature and environment. Environment has become the burning issue for all the academicians, intellectuals, scientists, policy makers and governmental of all over the world.

In the present research work an attempt has been made to study the attitude of senior secondary school teachers regarding the environment, its various factors and its various aspects. The study will be helpful in making the attitude of senior secondary school teachers positive towards environment which will result in an increased environmental attitude. It also provides suggestions for framing the curriculum with importance to inclusion of environmental education so that environmental attitude level of senior secondary school teachers should be increased.

STATEMENT OF THE PROBLEM

The statement of the problem is defined as below.

A Study of Environmental Attitude of Senior Secondary School Teachers in Relation To their Locality**OBJECTIVES OF THE STUDY**

The study was conducted to achieve the following objectives.

1. To study the nature of distribution of environmental attitude scores of senior secondary school teachers.
2. To study rural and urban residential backgrounds-wise difference in the environmental attitude of senior secondary school teachers with respect to:
 - (i) Health and Hygiene
 - (ii) Wild life
 - (iii) Forests
 - (iv) Polluters
 - (v) Population explosion
 - (vi) Environmental concern
3. To study overall environment attitude of urban and rural senior secondary school teachers.

HYPOTHESES OF THE STUDY

Following hypotheses were formulated in the present study.

1. There will be no significant locality-wise difference in the environmental attitude of senior secondary school teacher with respect to:
 - (i) Health and Hygiene
 - (ii) Wild life
 - (iii) Forests
 - (iv) Polluters
 - (v) Population explosion
 - (vi) Environmental concern
2. There will be no significant difference in overall environment attitude of urban and rural senior secondary school teachers.

DELIMITATIONS OF THE STUDY

The present study was delimited in its scope in the following manner.

1. The present study was delimited only to rural and urban residential backgrounds senior secondary school teachers working in district Kangra of Himachal Pradesh.
2. The study was delimited to a sample of 250 in-service teachers.

OPERATIONAL DEFINITIONS OF KEY TERMS USED

It indicates the functional meaning of different terms as used in the statement of the problem or in the entire body of the report. In the following paragraphs operational definitions of key terms have been presented.

1. Environmental attitude: Environmental attitude and awareness would be of no meaning without cultivation of right attitude towards environment, so, attitude is a prerequisite for fostering valuing approach and responsible action which is the ultimate goal of environmental education. In the present study it was measured by 'Environmental Attitude Scale' developed by the Dr. Hassen Taj.

2. Senior Secondary School Teachers : It refer to the in-service teachers teaching in senior secondary schools in district Kangra of Himachal Pradesh.

3. Locality: In the present study locality refers to rural and urban residential backgrounds.

METHOD AND PROCEDURE

Keeping into consideration the objectives of present study, following methodology was adopted.

Method: In the present study, data has been collected about what exists at present. For the present piece of study, 'Descriptive Survey Method' was adopted.

Sampling: In the present investigation a representative sample of 250 teachers in government and private senior secondary schools was drawn from Kangra district of Himachal Pradesh. For this purpose, the procedure of multistage sampling was adopted. The selection of schools from the above mentioned district was done on random basis by the researcher.

RESEARCH TOOL USED

For measuring the environmental attitude among senior secondary school teachers, Taj Environmental Attitude Scale (TEAS) developed and standardized by Dr. Hassen Taj was used.

DATA COLLECTION

The researcher collected the data personally. Firstly the researcher visited the school, which he has selected for sample, the researcher introduced him to the principle of the school & seeks permission to collect the data from the teacher. The researcher introduced him to the teachers and acquainted them with the purpose of coming to school. The environmental attitude scale was distributed to the teachers. The teachers were imparted necessary instructions regarding filling general information about them in the tool. Teachers were also told that there answers will be kept secret & will not be shown to anyone. Teachers were asked to put a tick mark in the category which they think to be most appropriate for each item in the tool the teachers were given enough time to complete the tool. Teachers were earnestly requested to respond to each item of the scale honestly. After the completion of the scale, the investigator thanked the teachers for their co-operation.

SCORING PROCEDURE

Each item alternative is assigned a weightage ranging from 4 (Strongly Agree) to 1 (Strongly disagree) for favorable items. In case of unfavorable items the scoring is reversed i.e. 1 (Strongly Agree) to 4 (Strongly disagree). The attitude score of an individual is the sum total of item score on all the six areas. The range of score is from 61 to 244 with the higher score indicating the more favorable attitude towards environment and vice versa.

STATISTICAL TREATMENT OF DATA

The data on environmental attitude of senior secondary school teachers was verified for normality by calculating certain statistics like mean median, mode, standard deviation, quartile deviation, skewness and kurtosis. For testing the significance of difference in the environmental attitude of senior secondary school teachers in relation to their locality the statistical technique of 't'-test was applied.

ANALYSIS AND INTERPRETATION OF DATA

Analysis and interpretation of data is the heart of the research report. Analysis and interpretation of the obtained data were made by keeping in mind the objectives of the study.

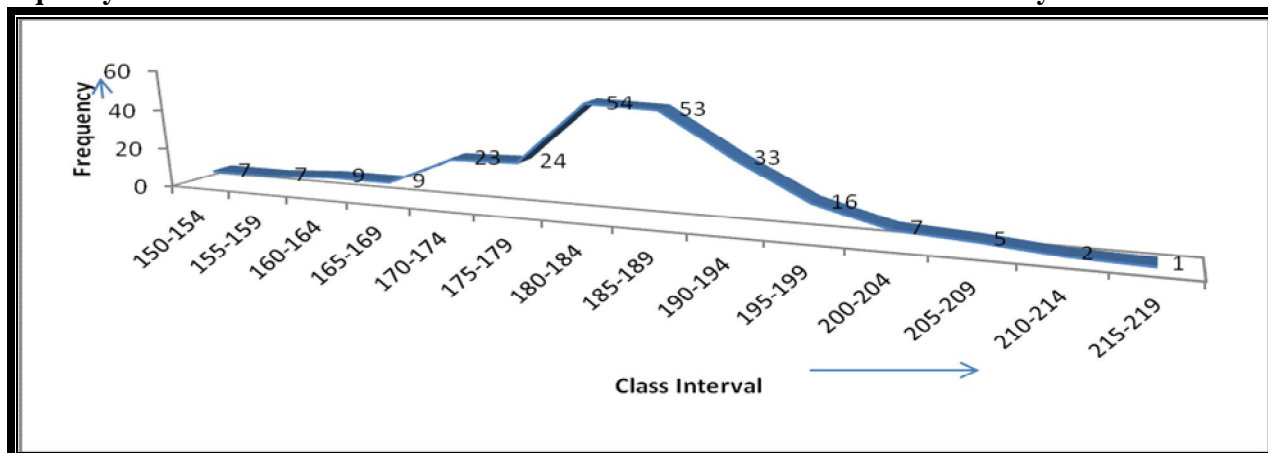
NATURE OF DISTRIBUTION OF ENVIRONMENTAL ATTITUDE SCORES OF SENIOR SECONDARY SCHOOL TEACHERS

The distribution of environmental attitude scores of senior secondary school teachers along with mean, median mode, standard deviation, quartile deviation, skewness and kurtosis is given in table.

Frequency Distribution of Environmental Attitude Scores of Senior Secondary School Teachers (N=250)

Frequency Distribution of Environmental Attitude Scores of Senior Secondary School Teachers (17-21)						
Class interval		Frequency	Cumulative frequency		Commulative frequency (%)	
215-219		1	250		100	
210-214		2	249		99.6	
205-209		5	247		98.8	
200-204		7	242		96.8	
195-199		16	235		94	
190-194		33	219		87.6	
185-189		53	186		74.4	
180-184		54	133		53.2	
175-179		24	79		31.6	
170-174		23	55		22	
165-169		9	32		12.8	
160-164		9	23		9.2	
155-159		7	14		5.6	
150-154		7	7		2.8	
Total		250				
Mean	Median	Mode	S.D.	Q.D.	Skewness	Kurtosis
182.46	183.75	184.33	12.00	6.742	-0.32	0.219

Table 4.1 shows that the value of mean, median and mode of environmental attitude scores of senior secondary school teachers as 182.46, 183.75 and 184.33 respectively, which are quite proximate to each other. The value of standard deviation and quartile deviation is 12.00 and 6.742 respectively. Further, the value of skewness is - 0.32 which shows that the curve is negatively skewed. In addition to this the value of kurtosis was calculated to be 0.219 which is indicating that the curve is leptokurtic in nature. The skewness and kurtosis in respect of distribution of environmental attitude scores is diagrammatically presented in figure.

Frequency Distribution Curve of Environmental Attitude Scores of Senior Secondary School Teachers

Hence, it may be inferred that the distribution of environmental attitude scores of senior secondary school teachers is nearly normal and thus, parametric tests can be applied on the same.

ENVIRONMENTAL ATTITUDE OF SENIOR SECONDARY SCHOOL TEACHERS IN RELATION TO THEIR LOCALITY

The summary of statistical calculations for finding out the significance of difference in the mean score of environmental attitude of senior secondary school teachers in relation to their locality is given in table.

Summary of Statistical Calculations for Finding Locality-wise Significance of Difference in the Mean Scores of Environmental Attitude of Senior Secondary School Teachers

Sr. No.	Dimension	Urban Group	Rural Group	't'- value
1.	Health and Hygiene	N= 74	N= 176	2.88**
		M= 15	M= 15.75	
		SD =2	SD =1.88	
2.	Wildlife	N= 74	N= 176	3.07**
		M= 17.00	M= 17.86	
		SD =2.06	SD =2.3	
3.	Forests	N=74	N= 176	0.23 ^{NS}
		M= 15.58	M= 15.44	
		SD =2.6	SD =2.16	
4.	Polluters	N=74	N= 176	1.56 ^{NS}
		M= 77.34	M= 76.34	
		SD =5.48	SD =6.4	
5.	Population Explosion	N=74	N= 176	4.25**
		M= 15.52	M= 16.54	
		SD =1.84	SD =2.16	
6.	Environmental Concerns	N=74	N= 176	0.35 ^{NS}
		M= 43.5	M= 43.4	
		SD =2.32	SD =1.54	
7.	Overall	N=74	N= 176	1.29 ^{NS}
		N= 74	N= 176	
		M= 15	M= 15.75	

** Significant at 0.01 level of significance

^{NS} Not Significant at 0.05 level of significance

HEALTH AND HYGIENE

Table shows that the calculated value of 't' for comparing the locality-wise difference between the mean scores of health and hygiene area of environmental attitude of senior secondary school teachers was found to be 2.88 which is significant at 0.01 level of significance for two tailed test for degree of freedom $df = 248$. Because, the calculated 't'- value (2.88) is more than the table 't'-value (2.59) at 0.01 level of significance. Hence, the **Hypothesis No. 1 (i)** that, "There will be no significant locality-wise difference in the environmental attitude of senior secondary school teacher with respect to health and hygiene area" was **rejected**.

Therefore, it may be interpreted that there is significant difference in the mean scores of health and hygiene area of environment attitude of urban and rural senior secondary school teachers. Rural senior secondary school teachers have high environment attitude in health and hygiene area than urban senior secondary school teachers.

WILD LIFE

It is evident from table show that the calculated value of 't' for comparing the locality-wise difference between the mean scores of wild life area of environmental attitude of senior secondary school teachers was found to be 3.07 which is significant at 0.01 level of significance for two tailed test for degree of freedom, $df = 248$, because the calculated 't'-value (3.07) is greater than the table 't'-value (2.59) at 0.01 level of significance. Hence, the **Hypothesis No. 1 (ii)** that, "There will be no significant locality-wise difference in the environmental attitude of senior secondary school teacher with respect to wild life area" was **rejected**.

Therefore, it may be interpreted that there is significant difference in the mean scores of wild life area of environment attitude of urban and rural senior secondary school teachers. Rural senior secondary school teachers have significantly higher high environmental attitude in wild life area than urban senior secondary school teachers.

FORESTS

Table depicts that the calculated value of 't' for comparing the locality-wise significance of difference between the mean scores of forest area of environmental attitude of senior secondary school teachers came out to be 0.23 which is not significant at 0.05 level of significance for two tailed test for degree of freedom, $df = 248$, because the calculated 't'-value (0.23) is less than the table 't'-value (1.97) at 0.05 level of significance. Hence, the **Hypothesis No. 1 (iii)** that, "There will be no significant locality-wise difference in the environmental attitude of senior secondary school teacher with respect to forests area" was **accepted**.

Therefore, it may be interpreted that there is no significant difference in mean scores of forests area of environmental attitude of urban and rural senior secondary school teachers. It may be said that urban and rural senior secondary school teachers have almost same environment attitude in forests area.

POLLUTERS

Table reveals that the calculated value of 't' for comparing the significance of difference between the mean scores of polluters area of environmental attitude of urban and rural senior secondary school teachers came out to be 1.56 which is not significant at 0.05 level of significance for two tailed test for degree of freedom, $df = 248$, because the calculated 't'-value (1.56) is less than the table 't'-value (1.97) at 0.05 level of significance. Hence, the **Hypothesis No. 1 (iv)** that, "There will be no significant locality-wise difference in the environmental attitude of senior secondary school teacher with respect to polluters area" was **accepted**.

Therefore, it may be interpreted that there is no significant difference in mean scores of polluters area of environmental attitude of urban and rural senior secondary school teachers. It may be said that urban and rural senior secondary school teachers have almost same environmental attitude in polluters area.

POPULATION EXPLOSION

Table shows that the calculated value of 't' for comparing the locality-wise difference between the mean scores of population explosion area of environmental attitude of senior secondary school teachers was found to be 4.25 which is significant at 0.01 level of significance for two tailed test for degree of freedom, $df = 248$, because the calculated 't'-value (4.25) is less than the table 't'-value (2.59) at 0.01 level of significance. Hence, the **Hypothesis No. 1 (v)** that, "There will be no significant locality-wise difference in the environmental attitude of senior secondary school teacher with respect to population explosion area" was **rejected**.

Therefore, it may be interpreted that there is significant difference in mean scores of population explosion area of environmental attitude of urban and rural senior secondary school teachers. Rural senior secondary school teachers possess significantly higher environmental attitude in population explosion area than urban senior secondary school teachers.

ENVIRONMENTAL CONCERNS

Table depicts that the calculated value of 't' for comparing the locality-wise significance of difference between the mean scores of environmental concerns area of environmental attitude of senior secondary school teachers was found to be 0.35 which is not significant at 0.05 level of significance for two tailed test for degree of freedom, $df = 248$, because the calculated 't'-value (0.35) is less than the table 't'-value (1.97) at 0.05 level of significance. Hence, the **Hypothesis No. 1 (vi)** that, "There will be no significant locality-wise difference in the environmental attitude of senior secondary school teacher with respect to environmental concerns area" was **accepted**.

Therefore, it may be interpreted that there is no significant difference in mean scores of environmental concerns area of environmental attitude of urban and rural senior secondary school teachers. It may be said that urban and rural senior secondary school teachers have almost same environmental attitude in environmental concerns area.

OVERALL ENVIRONMENTAL ATTITUDE

It is evident from table that the calculated value of 't' for comparing the significance of difference between mean scores of overall environmental attitude of urban and rural senior secondary school teachers came out to be 1.29 which is not significant at 0.05 level of significance for two tailed test for degree of freedom, $df = 248$, because the calculated 't'-value (1.29) is less than the table 't'-value (1.97) at 0.05 level of significance. Hence, the **Hypothesis No. 2** that, "There will be no significant difference in overall environment attitude of urban and rural senior secondary school teachers" was **accepted**.

Therefore, it may be interpreted that there is no significant difference in mean scores of overall environmental attitude of urban and rural senior secondary school teachers. Urban and rural senior secondary school teachers have almost same overall environmental attitude.

GENERAL CONCLUSIONS

From the analysis and interpretation of the data, following conclusions may be drawn.

- There is significant difference in the mean scores of health and hygiene area of environment attitude of urban and rural senior secondary school teachers. Rural senior secondary school teachers have high environment attitude in health and hygiene area than urban senior secondary school teachers.
- There is significant difference in the mean scores of wild life area of environment attitude of urban and rural senior secondary school teachers. Rural senior secondary school teachers have high environment attitude in wild life area than urban senior secondary school teachers.
- Urban and rural senior secondary school teachers have almost same environment attitude in forests area, polluters and environmental concern areas.
- There is significant difference in mean scores of population explosion area of environmental attitude of urban and rural senior secondary school teachers. Rural senior secondary school teachers have significantly higher environmental attitude in population explosion area than urban senior secondary school teachers.
- Urban and rural senior secondary school teachers have almost same overall environmental attitude.

EDUCATIONAL IMPLICATIONS

On the basis of the results of the present study following educational implications may be laid down.

- Teachers can play an important role in educating their students about environment which is possible only when the teachers themselves have the necessary level of environmental awareness and environmental attitude, for this purpose, the Government should introduce and enrich environmental education programmes in both in-service and pre-service teacher education programmes.
- The teacher education & training centers and in-service education programmes should device new methods and techniques of teaching for increasing the level of teachers' environmental awareness and environmental attitude.
- Various co-curricular activities in schools may be encouraged to help in developing students' environmental awareness and environmental attitude.
- Environmental education should be introduced in primary and secondary school curricula, in a maximum number of subjects.
- Environmental training should be multidisciplinary focusing on interaction between environmental phenomenon and human activity.
- The young children have great curiosity about their surroundings. They possess great love for nature and want to understand myths and mysteries of nature. Therefore, at this stage stress should laid on developing an emotional tie with nature. Method of teaching should be used as to cultivate love for nature.
- The teacher plays an important role in shaping and moulding the habits, tastes, manners and good character of the children. Therefore, to gear up environmental awareness and environmental attitude programme, it is essential that teachers should have sufficient knowledge of environmental education.

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A STUDY ON PERCEPTION OF FLAT OWNERS ABOUT GATED COMMUNITIES

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ABSTRACT

The idea of gated community is well placed in the mind of flat buyers, especially in the urban centers. Most of them choose flats in the gated community for safety and security, recreational facilities, sporting facilities, protection of their properties, healthy living environments, prestige, social status, landscaping and lifestyles. In today's highly competitive housing market, the perceptions of people about gated communities are becoming more important for attaining competitive advantage for developers. The results indicate that nearly half of flat owners in gated communities opined that the level of perception about gated communities at medium level and there is significant difference between age group of the flat owners in gated communities and their perception about gated communities, educational qualification of the flat owners in gated communities and their perception about gated communities and monthly income of the flat owners in gated communities and their perception about gated communities. The gated communities should have dynamic neighbourhood watch programmes and they must have attractive landscaping along side the roads and throughout gated community. The gated communities should have unique architectural designs and attractive and neat common areas and green parks. In order to improve the interaction and social integration, the residents of gated communities should maintain a close relationship with other residents within gated communities.

Keywords: Flat Owners, Gated Communities and Perception.

1. INTRODUCTION

Gated communities are walled and gated residential developments that restrict public access (Atkinson and Flint, 2004). Gated community is the closed urban residential formats voluntarily dwelled by harmonized social group where public place has been privatized limiting access through the execution of security devices (Roitman, 2007). Gated communities are the physical area that is walled off or fenced from its surroundings, either controlling or prohibiting access to these areas by means of boom or gates (Landman, 2000).

The idea of gated community is well placed in the mind of flat buyers, especially in the urban centers. Most of them choose flats in the gated community for safety and security, recreational facilities, sporting facilities, protection of their properties, healthy living environments, prestige, social status, landscaping and lifestyles. The entrances of gated communities are protected by gates and they are protected by security guards or surveillance through videos. The entry of general public into these gated communities is firmly prevented. These gated communities are generally developed with big shopping facilities, parks, cinemas, swimming pools, recreational facilities, artificial lakes and beaches.

There are a variety of choices available to residents in the modern urban areas. The wealthy and rich people can choose the gated communities for the want of exclusiveness and privacy and fear of crime and protect them from anti social activities in outside. The poor people can select and live in gated public housing facilities or compounds limited by their surroundings to be put away from the city. The different types of gated communities deal the issues of crime, loss of community integration, traffic and fear of unwanted fears.

In today's highly competitive housing market, the perceptions of people about gated communities are becoming more important for attaining competitive advantage for developers. Therefore, it is necessary for developers to understand perception of flat owners about gated communities in order to design, develop and market flats in gated communities efficiently. Hence, the present study is made to study the perception of flat owners about gated communities in Chennai city.

2. METHODOLOGY

The Chennai city is chosen for the present study. The flat owners are selected by using multi stage random sampling technique. The data are gathered from 711 flat owners of gated communities through structured questionnaire. The frequency and percentage analysis are carried out to know the socio-economic status of flat owners of gated communities. The mean and standard deviation are worked out for perception of flat owners about gated communities. The Analysis of Variance (ANOVA) test is used to study the difference between socio economic status of flat owners in gated communities and their perception about gated communities.

3. RESULTS AND DISCUSSION

3.1. SOCIO-ECONOMIC STATUS OF FLAT OWNERS OF GATED COMMUNITIES

The socio-economic status of flat owners of gated communities was analyzed and the results are presented in Table-1. The results indicate that 53.73 per cent of flat owners are males and the remaining of 46.27 per cent of flat owners are females. It is observed that 39.80 per cent of flat owners are in the age group of 31 - 40 years, 29.82 per cent of flat owners are in the age group of 41 - 50 years, 18.71 per cent of flat owners are in the age group of 21 - 30 years, 7.03 per cent of flat owners are in the age group of 51 - 60 years and 4.64 per cent of flat owners are in the age group of above 60 years.

The results show that 35.58 per cent of flat owners are educated up to graduation, 31.37 per cent of flat owners are educated up to post graduation, 11.96 per cent of flat owners are educated up to higher secondary, 11.67 per cent of flat owners are educated up to diploma and 9.42 per cent of flat owners are educated upto secondary. It is clear that 33.90 per cent of flat owners are in the monthly income group of Rs.30,001 - Rs.40,000, 27.00 per cent of flat owners are in the monthly income group of Rs.20,001 – Rs.30,000, 18.00 per cent of flat owners are in the monthly income group of Rs.40,001 – Rs.50,000, 16.18 per cent of flat owners are in the monthly income group of below Rs.20,000 and 4.92 per cent of flat owners are in the monthly income group of above Rs.50,000.

Table-1: Socio-Economic Status of Flat Owners of Gated Communities

Socio-Economic Status	Number of Flat Owners	Percentage
Gender		
Male	382	53.73
Female	329	46.27
Age Group		
21 - 30 years	133	18.71
31 - 40 years	283	39.80
41 - 50 years	212	29.82
51 - 60 years	50	7.03
Above 60 years	33	4.64
Educational Qualification		
Secondary	67	9.42
Higher Secondary	85	11.96
Diploma	83	11.67
Graduation	253	35.58
Post Graduation	223	31.37
Monthly Income		
Below Rs.20,000	115	16.18
Rs.20,001 – Rs.30,000	192	27.00
Rs.30,001 - Rs.40,000	241	33.90
Rs.40,001 – Rs.50,000	128	18.00
Above Rs.50,000	35	4.92

3.2. PERCEPTION OF FLAT OWNERS ABOUT GATED COMMUNITIES

The perception of flat owners about gated communities was analyzed and the results are hereunder presented.

3.2.1. SECURITY DIMENSION

The perception of flat owners about security dimension of gated communities was analyzed and the results are presented in Table-2.

Table-2: Perception of Flat Owners about Security Dimension

Security	Mean	Standard Deviation
The gated community has an active neighbourhood watch programmes	3.34	1.45
The gated community has a guard at the entrance	4.18	0.33
The gated community provides high security	3.77	0.63
The gated community prevents an unauthorized entry	4.13	0.30
The gated community has safety devices such as CCTV, video camera	4.03	0.41

The results show that the flat owners of gated communities are agreed with the gated community has a guard at the entrance, the gated community provides high security, the gated community prevents an unauthorized entry

and the gated community has safety devices such as CCTV, video camera, while, they are neutral with the gated community has an active neighbourhood watch programmes.

3.2.2. AESTHETIC APPEAL DIMENSION

The perception of flat owners about aesthetic appeal dimension of gated communities was analyzed and the results are presented in Table-3.

Table-3: Perception of Flat Owners about Aesthetic Appeal Dimension

Aesthetic Appeal	Mean	Standard Deviation
The front entrance of gated community is attractive	4.23	0.43
The architectural style of flats in gated community is very much appealing	3.87	0.32
The landscaping along side the roads and throughout gated community is attractive	3.04	1.64
The parks and common areas are attractive in gated community	3.20	1.29
The gated community has unique architectural designs	3.24	1.39

The results indicate that the flat owners of gated communities are agreed with the front entrance of gated community is attractive and the architectural style of flats in gated community is very much appealing, while, they are neutral with the landscaping along side the roads and throughout gated community is attractive, the parks and common areas are attractive in gated community and the gated community has unique architectural designs.

3.2.3. COMMUNITY INTERACTION DIMENSION

The perception of flat owners about community interaction dimension of gated communities was analyzed and the results are presented in Table-4.

Table-4: Perception of Flat Owners about Community Interaction Dimension

Community Interaction	Mean	Standard Deviation
I have a close relationship with other residents within the gated community	3.29	1.38
I have good interactions with others within the gated community	3.27	1.69
The residents of gated community have get together regularly	3.23	1.40
The gated community has child play groups	4.09	0.58
I attend social functions of other residents in the gated community	4.21	0.44

The results reveal that the flat owners of gated communities are agreed with the gated community has child play groups and they attend social functions of other residents in the gated community, while, they are neutral with they have a close relationship with other residents within the gated community, they have good interactions with others within the gated community and the residents of gated community have get together regularly.

3.2.4. AMENITIES DIMENSION

The perception of flat owners about amenities dimension of gated communities was analyzed and the results are presented in Table-5.

Table-5: Perception of Flat Owners about Amenities Dimension

Amenities	Mean	Standard Deviation
The gated community has swimming pool	3.25	1.47
The gated community has hospital	3.65	0.97
The gated community has play ground	3.70	1.28
The gated community has meeting halls	3.36	1.56
The gated community has entertainment facilities	4.02	0.70

The results show that the flat owners of gated communities are agreed with the gated community has hospital, the gated community has play ground and the gated community has entertainment facilities, while, they are neutral with the gated community has swimming pool and the gated community has meeting halls.

3.2.5. PRIVATE GOVERNANCE DIMENSION

The perception of flat owners about private governance dimension of gated communities was analyzed and the results are presented in Table-6.

Table-6: Perception of Flat Owners about Private Governance Dimension

Private Governance	Mean	Standard Deviation
The flat owner association in the gated community is well structured	3.71	1.27
The flat owner association in the gated community has strong leadership	3.39	1.48
The flat owner association in the gated community gives fair treatment to all the residents	3.40	1.40
The flat owner association in the gated community is effective in making decisions	3.21	1.53
The flat owner association in the gated community conduct regular meetings to address the issues	3.30	1.27

The results indicate that the flat owners of gated communities are agreed with the flat owner association in the gated community is well structured, while, they are neutral with the flat owner association in the gated community has strong leadership, the flat owner association in the gated community gives fair treatment to all the residents, the flat owner association in the gated community is effective in making decisions and the flat owner association in the gated community conduct regular meetings to address the issues.

3.3. SOCIO-ECONOMIC STATUS OF FLAT OWNERS IN GATED COMMUNITIES AND THEIR PERCEPTION ABOUT GATED COMMUNITIES

The relationship between socio economic status of flat owners in gated communities and their perception about gated communities was analyzed and the results are hereunder discussed. The distribution of flat owners on the basis of their perception about gated communities was analyzed and the results are presented in Table-7. The responses of flat owners about their perception about gated communities has been classified into low level, medium level and high level based on “Mean \pm SD” criterion. The mean is 90.12 and the SD is 7.53.

Table-7: Distribution of Flat Owners on the Basis of their Perception about Gated Communities

Level of Perception	Number of Flat Owners	Percentage
Low	153	21.52
Medium	345	48.52
High	213	29.96
Total	711	100.00

The results show that 48.52 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level, 29.96 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level and 21.52 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level.

3.3.1. GENDER AND PERCEPTION ABOUT GATED COMMUNITIES

The relationship between gender of the flat owners in gated communities and the level of perception about gated communities was analyzed and the results are presented in Table -8.

Table -8: Gender and Perception about Gated Communities

Gender	Level of Perception			Total	F-Value	Sig.
	Low	Medium	High			
Male	90 (23.56)	188 (49.21)	104 (27.23)	382 (53.73)	.585	.445
Female	63 (19.15)	157 (47.72)	109 (33.13)	329 (46.27)		
Total	153 (21.52)	345 (48.52)	213 (29.96)	711 (100.00)		

(The figures in the parentheses are per cent to total)

Out of 382 male flat owners, 49.21 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level, 27.23 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level and 23.56 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level.

Out of 329 female flat owners, 47.72 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level, 33.13 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level and 19.15 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level.

The F- value of 0.585 is not statistically significant indicating that there is no significant difference between gender of the flat owners in gated communities and their perception about gated communities. Hence, the null hypothesis of there is no significant difference between gender of the flat owners in gated communities and their perception about gated communities is accepted.

3.3.2. AGE GROUP AND PERCEPTION ABOUT GATED COMMUNITIES

The relationship between age group of the flat owners in gated communities and the level of perception about gated communities was analyzed and the results are presented in Table -9.

Table -9: Age Group and Perception about Gated Communities

Age Group	Level of Perception			Total	F-Value	Sig.
	Low	Medium	High			
21 - 30 years	28 (21.05)	56 (42.11)	49 (36.84)	133 (18.71)	18.444	.000
31 - 40 years	71 (25.09)	168 (59.36)	44 (15.55)	283 (39.80)		
41 - 50 years	31 (14.62)	94 (44.34)	87 (41.04)	212 (29.82)		
51 - 60 years	23 (46.00)	16 (32.00)	11 (22.00)	50 (7.03)		
Above 60 years	0 (0.00)	11 (33.33)	22 (66.67)	33 (4.64)		
Total	153 (21.52)	345 (48.52)	213 (29.96)	711 (100.00)		

(The figures in the parentheses are per cent to total)

Out of 133 flat owners who are in the age group of 21 - 30 years, 42.11 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level, 36.84 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level and 21.05 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level.

Out of 283 flat owners who are in the age group of 31 - 40 years, 59.36 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level, 25.09 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level and 15.55 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level.

Out of 212 flat owners who are in the age group of 41 - 50 years, 44.34 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level, 41.04 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level and 14.62 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level.

Out of 50 flat owners who are in the age group of 51 - 60 years, 46.00 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level, 32.00 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level and 22.00 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level.

Out of 33 flat owners who are in the age group of above 60 years, 66.67 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level and 33.33 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level.

The F- value of 18.444 is significant at one per cent level indicating that there is significant difference between age group of the flat owners in gated communities and their perception about gated communities. Hence, the null hypothesis of there is no significant difference between age group of the flat owners in gated communities and their perception about gated communities is rejected.

3.3.3. EDUCATIONAL QUALIFICATION AND PERCEPTION ABOUT GATED COMMUNITIES

The relationship between educational qualification of the flat owners in gated communities and the level of perception about gated communities was analyzed and the results are presented in Table -10.

Table -10: Educational Qualification Group and Perception about Gated Communities

Educational Qualification	Level of Perception			Total	F-Value	Sig.
	Low	Medium	High			
Secondary	7 (10.45)	32 (47.76)	28 (41.79)	67 (9.42)	5.340	.000
Higher Secondary	20 (23.53)	39 (45.88)	26 (30.59)	85 (11.96)		
Diploma	19 (22.89)	26 (31.33)	38 (45.78)	83 (11.67)		
Graduation	81 (32.01)	102 (40.32)	70 (27.67)	253 (35.58)		
Post Graduation	26 (11.66)	146 (65.47)	51 (22.87)	223 (31.37)		
Total	153 (21.52)	345 (48.52)	213 (29.96)	711 (100.00)		

(The figures in the parentheses are per cent to total)

Out of 67 flat owners who are educated up to secondary, 47.76 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level, 41.79 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level and 10.45 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level.

Out of 85 flat owners who are educated up to higher secondary, 45.88 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level, 30.59 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level and 23.53 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level.

Out of 83 flat owners who are educated up to diploma, 45.78 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level, 31.33 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level and 22.89 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level.

Out of 253 flat owners who are educated up to graduation, 40.32 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level, 32.01 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level and 27.67 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level.

Out of 223 flat owners who are educated up to post graduation, 65.47 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level, 22.87 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level and 11.66 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level.

The F- value of 5.340 is significant at one per cent level indicating that there is significant difference between educational qualification of the flat owners in gated communities and their perception about gated communities. Hence, the null hypothesis of there is no significant difference between educational qualification of the flat owners in gated communities and their perception about gated communities is rejected.

3.3.4. MONTHLY INCOME AND PERCEPTION ABOUT GATED COMMUNITIES

The relationship between monthly income of the flat owners in gated communities and the level of perception about gated communities was analyzed and the results are presented in Table -11.

Table -11: Monthly Income Group and Perception about Gated Communities

Monthly Income	Level of Perception			Total	F-Value	Sig.
	Low	Medium	High			
Below Rs.20,000	20 (17.39)	68 (59.13)	27 (23.48)	115 (16.18)	14.194	.000
Rs.20,001 – Rs.30,000	34 (17.71)	86 (44.79)	72 (37.50)	192 (27.00)		
Rs.30,001 – Rs.40,000	38	107	96	241		

	(15.77)	(44.40)	(39.83)	(33.90)		
Rs.40,001 – Rs.50,000	47 (36.72)	65 (50.78)	16 (12.50)	128 (18.00)		
Above Rs.50,000	14 (40.00)	19 (54.29)	2 (5.71)	35 (4.92)		
Total	153 (21.52)	345 (48.52)	213 (29.96)	711 (100.00)		

(The figures in the parentheses are per cent to total)

Out of 115 flat owners who are in the monthly income group of below Rs.20,000, 59.13 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level, 23.48 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level and 17.39 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level.

Out of 192 flat owners who are in the monthly income group of Rs.20,001 – Rs.30,000, 44.79 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level, 37.50 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level and 17.71 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level.

Out of 241 flat owners who are in the monthly income group of Rs.30,001 – Rs.40,000, 44.40 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level, 39.83 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level and 15.77 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level.

Out of 128 flat owners who are in the monthly income group of Rs.40,001 – Rs.50,000, 50.78 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level, 36.72 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level and 12.50 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level.

Out of 35 flat owners who are in the monthly income group of above Rs.50,000, 54.29 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level, 40.00 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level and 5.71 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level.

The F- value of 14.194 is significant at one per cent level indicating that there is significant difference between monthly income of the flat owners in gated communities and their perception about gated communities. Hence, the null hypothesis of there is no significant difference between monthly income of the flat owners in gated communities and their perception about gated communities is rejected.

4. CONCLUSION

The foregoing analysis shows that 48.52 per cent of flat owners in gated communities opined that the level of perception about gated communities at medium level, 29.96 per cent of flat owners in gated communities opined that the level of perception about gated communities at high level and 21.52 per cent of flat owners in gated communities opined that the level of perception about gated communities at low level. The results indicate that there is significant difference between age group of the flat owners in gated communities and their perception about gated communities, educational qualification of the flat owners in gated communities and their perception about gated communities and monthly income of the flat owners in gated communities and their perception about gated communities.

The gated communities should have dynamic neighbourhood watch programmes and they must have attractive landscaping along side the roads and throughout gated community. The gated communities should have unique architectural designs and attractive and neat common areas and green parks. In order to improve the interaction and social integration, the residents of gated communities should maintain a close relationship with other residents within gated communities.

In addition, the residents must have smooth and good interactions with other residents and they should have get together regularly for improving personal and neighbourhood relationships among them and also for

socialization. The developers should construct well structured and safe swimming pool and sufficient meeting halls for social interactions and conduct of meetings and celebrations of social and communal functions. Besides, the flat owner association in gated communities should have strong and efficient leadership and it must treat all the residents of gated community equally and fairly.

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BANKING: A HIGH POTENTIAL MARKET FOR ARTIFICIAL INTELLIGENCE

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ABSTRACT

Artificial intelligence has become an important area of study in recent times due to its wider applications in many fields including banking and financial services. Through this paper an attempt is made to understand the concept of artificial intelligence and its evolution. We first emphasize on the different applications of artificial intelligence in banking sector in general and then the paper focuses on recent developments in Indian banking with respect to artificial intelligence.

Keywords: Artificial Intelligence, Banks, Financial Services, Indian Banking

INTRODUCTION

A major portion of the financial system is constituted by banking and it plays a significant role in every kind of economy. By keeping the savings of the public and transferring fund for the development of trade and business, banks play a central role in the economy. According to the changing times, the banks have adapted themselves to the varying business environment and emerging technology. This has resulted in better customer service and improved profitability for the banks. Moreover, developments in the information technology have provided new means of serving the customers with great ease and cost effectiveness. In addition to that the internet revolution has completely changed the way of doing business. And now the developments in the field of artificial intelligence are providing new avenues to the banks and financial institutions. As a result, many banking and financial institutions are investing hugely on this rising technology which is to be used at different levels of business worldwide.

Artificial intelligence is an emerging technology that has attracted the interests of many businesses. It is the study of how to make computers do things which, at the moment, people do better (Rich, Knight and Nair, 2013). This field of study started developing after Second World War. From then it has seen remarkable changes in terms of its development and applications. The banking and financial services sectors worldwide are showing huge interest in artificial intelligence due to its proven results. In this paper an attempt is made to understand the level of applications of artificial intelligence in banking and how banking can become a potential market for artificial intelligence.

The paper is structured as follows. Section two positions the review of existing literature. Section three discusses the concept of artificial intelligence and its evolution. Section four presents applications of artificial intelligence in general and its specific applications in banking. Indian banks using artificial intelligence in their products and services is discussed in section five and section six summarizes the conclusion.

1. LITERATURE REVIEW

The field of artificial intelligence is witnessing endless and exciting research. Experts in the field of engineering, academics, medical science and banking and financial institutions are contributing to the literature of artificial intelligence in varied forms. There are numerous subfields within AI, but only those which are applicable to the field of banking and financial institutions and the related studies are summarized in this chapter.

Some of the studies are based on various subfields of AI. In a study Hong (2001) divided the different areas of AI on a very broad account into sixteen categories. Further Zang (2001) and Wang et al.(2007) specified these areas as reasoning, artificial life, programming, belief revision, expert systems, machine learning, data mining, distributed AI, genetic algorithms, systems, knowledge representation, natural language understanding, neural networks, theorem proving, theory of computation and constraint satisfaction. Whereas, Halal (2003) states that artificial intelligence (AI) is an important area of research in many fields including engineering, science, education, medicine, business, accounting, finance, marketing, economics, stock market and law.

There are various studies which are based on the application of AI in different fields. Fethi (2009) has carried out a comprehensive review of 179 studies that are based on the application of operational research and Artificial Intelligence techniques in the assessment of bank performance. The study focuses on numerous applications of data envelopment analysis which is the most widely applied operational research technique. Moving ahead it also discusses applications of other techniques like neural networks, support vector machines and multi criteria decision aid. Similarly, Moro et al.(2015) has analysed recent literature of business intelligence applications for the banking industry. Around 219 articles published between 2002 and 2013 from

relevant journals were selected for analysis and Drichlet allocation model was used to group the articles. The study shows that credit is the main application trend in banking particularly in predicting risk and thereby supporting credit approval or denial. The study also highlights that more number of articles are on business intelligence techniques and its applications. In a particular study Ghodselahi (2011) discussed the application of AI techniques for credit risk evaluation. A hybrid model has been designed for credit scoring and a real dataset was used to test the model. The results showed that proposed hybrid model has better classification accuracy and performance compared to other credit scoring methods. In similar lines, Nazari (2013) has used artificial neural network technique for credit risk measurement of financial facilities applicants. He found that individual loan frequency and amount of loan had most important effect and customer's bank account status and history of customer relationship with bank has least effect in identifying classification criteria of good and bad customers. Whereas Castelli et. al.(2016) have proposed an artificial intelligence system to banking sector for building a model for prediction of service quality which is based on the actual data rather than the theories and assumptions about the problem. The study explains that the proposed system which is based on a variant of genetic programming will have beneficial effects on the search process and will produce analytical models which are based on the data and not on domain dependent knowledge.

Few more studies have addressed the field of AI with different perspectives. In one of the chapter in a book, Pau and Tan (1996) has emphasized specific contributions, advantages and weaknesses of AI. They opines that the strong potential of AI techniques lies in their data fusion capability and also stress to the point that almost no AI research addresses economic competition theories like game theory or disequilibrium theories from the perspective of business. Whereas, in his article McCarthy (2004) has discussed basic questions related to artificial intelligence like what is AI and what about IQ? And do computer programs have IQs? and has put the discussion in question and answer format. He has also put light on various branches of AI like logical AI, Search AI, heuristics, genetic programming etc. and explained some of the important applications of AI like speech recognition, game playing, computer vision, expert systems, heuristic classifications to name few. On the other hand, Dirican (2015) has focused on the current impacts and expected disruptive changes of the AI and robotics on the economics and business. He opines that through the use of robotics and AI the companies will be able to manage profitability and risks more efficiently. He also suggests that the companies and governments should be ready for and be open to implement innovation and processes quickly.

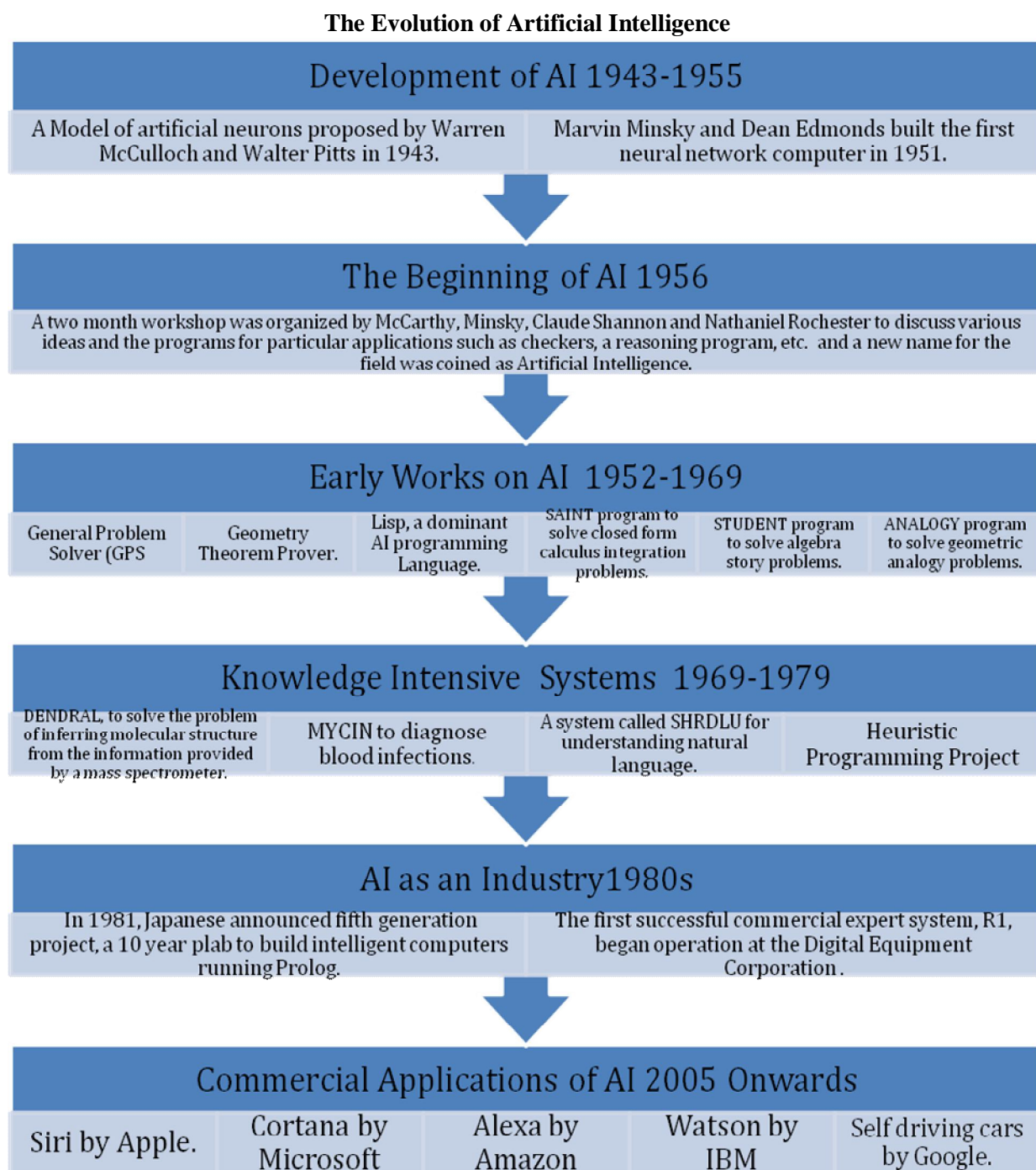
Some of the working and discussion papers published by well known consultancies have explained the field of AI from different angles. Through one of its discussion paper in 2017 McKinsey has thrown light on the developments in the field of AI and also questions the readiness of businesses for adopting the AI. The paper highlights that AI has the capabilities to boost profits and transform industries and also advocates that the businesses, developers and governments should start acting now to realize the full potential of AI in future. Whereas PwC has listed several fields in which AI has its implications in a research paper published in 2017. The paper also highlighted the challenges of AI in global and Indian scenario. Some of the fields listed in the paper are product manufacturing, defense and security, disaster management and recovery, logistics, financial services, agriculture, communication and social media, science and technology, education, medicine and healthcare and law and order.

2. ARTIFICIAL INTELLIGENCE AND ITS EVOLUTION

2.1 Defining Artificial Intelligence

Artificial Intelligence is one of the newest sciences with numerous applications in various fields. The work in this field started after Second World War and the name itself was coined in 1956. Currently the field of artificial intelligence encompasses huge variety of subfields like Machine Learning, Natural Language Processing, Image Processing, and Data Mining to name a few. The application of the field ranges from general purpose areas such as learning and perception to some specific tasks like playing chess, proving mathematical theorems, writing poetry, diagnosing diseases and analyzing huge data. Artificial intelligence is potentially relevant to many fields of human intellectual activity as it systematizes and automats the intellectual tasks. So it is rightly a universal field in this sense.

Many experts in the artificial intelligence field have defined it in different ways. Bellman (1978) defines artificial intelligence as the automation of activities that we associate with human thinking, activities such as decision making, problem solving, learning... whereas Winston (1992) defines it as the study of computations that make it possible to perceive, reason and act. According to Kurzweil (1990) artificial intelligence is the art of creating machines that perform functions that require intelligence when performed by people. But as per Nilsson (1998) AI is concerned with intelligent behavior in artifacts.



Source: Artificial Intelligence: A Modern Approach by Russell, Stuart & Norvig, Peter.

3. APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN BANKING

Artificial intelligence is changing the face of banking on a global scale. Amplified with machine learning, the AI apps are bringing visible impact in various fields of banking. Banks and financial companies are looking forward for the new inventions in the field of artificial intelligence due to various reasons. Factors like massive amounts of data in banks, quantitative nature of banking business practices, accuracy in data records and consistency in data recording and maintenance practices make the banking sector a more targeted market for artificial intelligence.

Many banks have already started reaping the benefits of artificial intelligence in different ways. Some of the top US banks have already invested billions of dollars in this technology and started reaping the benefits. JP Morgan Chase one of the largest US bank has invested \$ 9.5 billion in this technology and has recently introduced Contract Intelligence (COiN) platform designed to analyze legal documents and extract important data points and clauses. Whereas, Bank of America has unveiled an intelligent virtual assistant named 'erica' which is a chatbot leveraging predictive analytics and cognitive messaging to provide financial guidance to the company's millions of customers. Similarly, Citibank another larger bank of US has made a strategic

investment in Feedzai, a global data science enterprise that works in real-time to identify and remove fraud in all areas of commerce (Kumba, 2017). Whereas Wells Fargo has announced the establishment of Artificial Intelligence Enterprise Solutions team to leverage emerging technologies.

Some of the important applications of artificial intelligence to the field of banking in general are discussed in this section.

i. Portfolio Management For Users

Leading banking and wealth management firms are using artificial intelligence based algorithms to create and manage the portfolios for individuals. The AI based applications help banks to build online accessible tool for considering user preferences, earning power, personal information, and income sources and matching this data with financial goals of individuals. These applications also take real-time market data and considers factors like customer's lifestyle, credit history and risk aversions to create strong investment portfolio and saving instruments among different asset classes. This helps users to get important inputs on suitable financial products and helps banks in marketing and selling the appropriate products to individuals.

ii. Hedge Fund Management

Many investment firms across the world are using AI-based models for decision making. Previously computer algorithms based on static models were used by the quantitative hedge funds to make financial decisions. However, the AI-based models use real-time financial information from the major financial markets and incorporate quantified inputs from the financial markets which help the investment companies to make quick decisions. AI-based models assist in executing the trade with very minimum user intervention. Well known funds like DE Shaw, Winton Capital Management, PDT Partners, and Citadel are the main players in AI-powered hedge fund management.

iii. Fraud Detection and Preventions

Data security and privacy is very important for the banking business. Huge amount of data pertaining to customers and the organization compel the banks to look into the matters of security and privacy with utmost care. In this regard the AI-based fraud detection tools which use machine learning, deep learning and the benefits of neural learning have more potential in cyber security. Machine learning enables applications to prevent security breaches by out-thinking the criminals (Ray, 2017).

iv. Operational Efficiency

Banking sector has many routine, labor intensive and repetitive works both in customer communication and back-office operations. Some of the processes like customer education, orientation programs and communication management are tedious in nature. With the help of AI tools such tedious works will be more personalized and automated and several processes can be efficiently completed in more inexpensive and quicker manner.

v. Improved Financial Interactions Through Chat Bots

Chat bots are the automated chat systems based on artificial intelligence which simulate human chats without any human interventions. Chat bots respond to the human end user by identifying the context and emotions in the text chat. Over a period of time, the chat bots collect huge amount of data about the human behavior and habits and learns the user behavior which helps in adapting to the needs of the end user. To revolutionize the customer relationship management at personal level many banks are using the chat bots extensively. 'Erica' a virtual assistant by Bank of America and 'Allo' by Google are generic realization of chat bots in present scenario.

vi. Customer Recommendations

One of the important contributions of artificial intelligence to banking industry is recommendation engines. These engines uses the historical data about the users and different services from banks like investment strategies, credit card plans etc to make more suitable recommendations to the users based on their preferences. Along with big data and faster computations, the machines with accurate artificial intelligence are going to play a vital role in how recommendations are made in banking sector.

Banking and financial sector is witnessing strong potential in the AI-based models for their business due to cost reduction, personalized service delivery and fraud detection. Due to technological innovations customers are becoming more tech-savvy and would like to interact with the service providers on real-time basis. AI helps the banks to provide real-time data to their customers so that there will be improved financial interactions between the customer and the business firm.

4. ARTIFICIAL INTELLIGENCE IN INDIAN BANKING

Banking sector in India is witnessing many new developments with respect to products and customer services. With the ever changing business environment and innovative technologies, the banking sector is trying to adapt to new developments and bringing in noticeable changes in its business. Improvement in the use of mobile phones and internet technology has resulted in hassle free banking. In addition to that artificial intelligence is another such field using which many new models are built and being used in various banking institutions worldwide. India, one of the emerging economy is trying to build its banking and financial institutions on par with the world players. Use of artificial intelligence and its related applications are presumed to be more efficient than existing systems and are expected to bring in sizeable changes in the banking domain in coming years.

Some of the Indian banks and financial institutions have started using artificial intelligence and machine learning in their operational processes which has resulted in faster turn-around time and cost reduction. Apart from efficient customer service and cost effective business, artificial intelligence is an important technology for being more competitive and distinguished among others. In this section all such initiatives taken by Indian banks and foreign banks in India to adapt artificial intelligence in different way are discussed.

i. Eva (Electronic Virtual Assistant) And Ira (Intelligent Robotic Assistant) By Hdfc Bank

EVA is an Artificial Intelligence (AI) powered chatbot which has been created using the latest Natural Language Processing (NLP) and AI technologies. EVA ensures relevant conversations with customers through all the digital platforms. It has 99.9 per cent accuracy and is one of the smartest in its domain. EVA handles more than 50,000 semantic variations for number of banking related intents, analyses customer issues and gains a better understanding of their behavior patterns. With the help of EVA customers can access the bank's product details, fees and charges for various products and application processes easily. IRA is another AI initiative by HDFC bank which is able to meet, greet and guide customers as per their requirement. Other key developments in the AI space by HDFC bank is OnChat- an AI based e-commerce chat bot on facebook and Programmatic Ad bidding- an AI based ad bidding tool for digital marketing (Khare,2017).

ii. Sia By Sbi Bank

The State Bank of India has launched its own AI powered chatbot that is going to handle customer queries and provide information related to wide range of products and services offered by bank. SBI is also using other digital platforms like SBI inTouch which uses bots and artificial intelligence like IBM Watson to carry out various processes to improve customer experience. SIA is powered to provide information about different loans offered by bank and other services by replying to customer queries.

iii. Lakshmi – A Banking Robot By City Union Bank

City Union Bank has launched Lakshmi, India's first banking robot which has used AI at a new level. The robot is designed to be an on-site bank helper. It is capable of answering queries related to account balance, interest rates on loans, charges and deferred payments and like such 125 subjects intelligently. Lakshmi can answer all generic questions related to banking and is also programmed to connect to the core banking solution. Due to AI the robot is constantly learning from customers and more interactions make it better.

iv. Intelligent Chat Bot From Axis Bank

Axis Bank has partnered with Singapore based Fintech platform to launch intelligent banking chat bots for more personalized customer experience. The chat bots will bring mobile banking services to the bank's customers in the form of conversational interface. This service uses artificial intelligence to help banks and financial institutions to develop contextual interactions which can be used by customers through mobile, web, social and messaging channels.

v. Artificial Intelligence In Icici Bank

ICICI is the first bank in India to start online banking. Over the years ICICI has moved faster by using different technologies for better customer experience. Now with the advent of block chain and artificial intelligence the banking sector is witnessing new heights. In order to take the advantage of developments in the field of digital technology, ICICI bank is focusing on using block chain technology for import-export trade. And moving further the bank also plans to use artificial intelligence to bring change in the way of banking. Chat bots are used as quasi-bankers and software bots for carrying out remittance and providing assistance to customers in making loan choices.

vi. Yes Tag: Chat Bot By Yes Bank

Yes Tag allows customer to carry banking transactions in 5 different messaging apps to check their balance, mini statement, fixed deposit details, cheque status, transfer money and many other banking functions. Yes

Bank also took an AI leap in the form of partnership with Payjo, a leading AI Banking Platform to develop YES Pay Bot which is first AI-driven bot for a wallet (Deoras, 2017). The AI-powered YES Pay Bot carries out financial transactions over a friendly chat and also answers banking queries and requests in a conversant manner. The technology enables the bot to give quick, personalized responses and real-time insights on transactions.

Apart from the above mentioned banks there are many in the pipeline of adapting this new technology based on their requirements. Artificial intelligence and the related technology is no more a luxury in the digital economy, rather it has become a necessity to stand higher in the ladder of competition and to outperform the competitors in business growth.

5. CONCLUSION

The field of AI has started evolving around 1950's but its applications are becoming more prominent in recent years. As artificial intelligence is witnessing tremendous development over past few years, its applications are also growing in numbers. There are various industries which have already experienced the benefits of AI and its subfields. Medical science, automobile industry, communication technology, internet and social media and many others are successfully using the AI in one or other way. Prominent tech companies like Microsoft, Google, IBM and Facebook have started investing huge amounts in AI and machine learning for commercial applications. On similar lines, Banking and financial institutions worldwide are looking forward for more AI based platforms and systems for enhanced customer service, cost reduction and data analysis and interpretation. India, one of the fastest growing economies is also witnessing profound changes in the field of banking and financial services. The younger generation of Indian demography is more tech savvy and would like to have faster and more efficient technology in almost every walk of life. Finance and banking being one of the important sectors has more scope for the adaptation of advanced technology and providing new and improved products and services. Many Indian banks and financial institutions are investing in AI technology and bringing in new and improved products and services for the customers and are also in a position to reduce the cost of operations. In this sense artificial intelligence and its subfields like machine learning are of greater use in the coming years.

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STUDY HABITS OF STUDENTS WITH REFERENCE TO THEIR ELECTRONIC GAMES PLAYING HOURS

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ABSTRACT

E-games have been, from a long time, seen as one of the most popular sources of entertainment among all age-group particularly the students in adolescent age, thus making it worthy of research in education. The present work was done in Ranchi city of Jharkhand. In this study 1346 boy students of class VIII from 6 schools were taken as participants. Self-made tool 'Electronic Games Questionnaire' for students was used to collect information. Another tool, "Study Habit Inventory (SHI)" was constructed and standardized by Dr. B. V. Patel which was adopted for the present study. The purpose of this study was to estimate the percentage of students feeling difficulty to concentrate on their studies after losing e-games. It also aims to estimate the percentage of students with different study habits in terms of devoting different number of hours. Findings revealed that 34.17% of the students 'often', 46.65% of students 'sometimes' and 19.16% students 'rarely' felt difficulty to concentrate on their studies after losing e-games. It can also be concluded that there is a relation between study habits and electronic games playing, it was found that with the rise in number of hours in e-games play, the study habits of the students got poorer. Prohibiting adolescent students from playing e-games is not realistic, but the awareness of what kind of e-games their children are playing and for how many hours, may allow parents and teachers to better understand the e-games they play, to discuss the e-games and to set time limits, if necessary.

Keywords: Electronic Games, Study Habits, Playing Hours, Students, Entertainment

INTRODUCTION

E-games have been, from a long time, seen as one of the most popular sources of entertainment among all age-group particularly the students in adolescent age, thus making it worthy of research in education. With continuing technological advancements audiences for electronic-games of today are also changing. From being a curiosity of academics in the very early stages, to being a favourite amusement of children of all ages especially adolescence, electronic games (e-games) now invite a much wider demographic. E-games can be exciting, fun, frustrating, and exhilarating. Today's e-games require the player to pay constant attention to the game and be completely immersed in it, rather than passively watch it like a movie.

Large number of hours spent in e-gaming may hamper the study habits of students. Effective study habits refer to a situation in which a learner studies regularly to achieve maximum success in school work. Study habits, therefore, refers to learning which leads to the achievement of a learner's goal, through a prescribed pattern of steady behaviour. The problem that contributes the most to students' poor performance in tests and examinations is the lack of proper study habits. Generally, high academic performance has been attributed to student's effective study habits. Studying is a skill, being successful in school requires a high level of study skills. Students must first learn these skills, practice them and develop effective study habits in order to be successful. Good study habits include many different study skills: home environment and planning, reading and note taking, planning of subjects, concentration, preparation for examinations, school environment. Apart from entertainment value, e-games affect the students' habits, which affect their academic performance. The amount of e-game play can have significant effects on learning, both positive and negative. E-games are great for relaxation, but excessive playing of e-games might be hindrance to study. To have a good and appropriate study habits is important for academic success.

RATIONALE OF THE STUDY

E-games are interactive games operated by computer circuitry which are easily accessible to larger section of people dispersed geographically over a large area through network connection. E-games are the cheapest source of entertainment as these can be played either online or can be downloaded from the internet at affordable cost. As these games are available in software programme, it can be easily transferred from one computer to another or even to mobiles. It has become a favourite pastime for students and an integral part of modern lives. As electronic games are played more in homes and cyber cafes, parents, teachers and educators are very much concerned about the various possible impacts on children. There is an urge among the e-game players to win the game at least once, as a result they spend more time on e-games which hampers the schedule of their routine work. This affects the school going students more as their study time is spent in playing e-games. This leads to

less time for homework (Weaver et al., 2013 and Gentile, et. al. 2011), less interest in studies and fetching low grades in examination (Lieberman et al., 1988) which in turn contribute to poor study habits. Nowadays e-games are more appreciated by children, adolescents and youth because they provide instant rewards to the player for their action in the game in the form of points, and / or promotion to the next level of game. E-games are characterized by enhanced realism in graphics and sound, combined with even more extreme violent action. As today's children and adolescents are tomorrow's future, their activity is of immense importance in today's time. In short, e-games are a very significant part of young population in the world today. Hence it is extremely important to investigate the study habits of the students playing e-games. This study will help to bring awareness and provide a better understanding related to study habits in school going children.

OBJECTIVES

1. To estimate the percentage of students with different levels of study-habits with reference to the hours devoted to playing e-games.
2. To estimate the percentage of students feeling difficulty to concentrate on their studies after losing e-games.

METHODOLOGY

Descriptive survey method was followed in the undertaken study. The population of this study consisted of all boy students from Ranchi city of Jharkhand studying in class VIII of CBSE, ICSE and Jharkhand Board (session 2013-2014), who play different types of e-games. Sample for the present study consisted of 1346 boy students from Ranchi city of Jharkhand. Cluster sampling method was used in the study. School clusters were selected randomly from the list of schools obtained from District Education Office of Ranchi.

TOOLS USED

In the absence of appropriate tool investigators themselves designed one tool namely "Electronic Games questionnaire (EGQ)". Test-retest method was employed for finding reliability of measure of e-game playing behaviour. The reliability of EGQ was found to be 0.91. Content validity of the tool was established by three experts in the field of electronic games and six experienced and professionally qualified faculty members of Education Faculty serving in Banaras Hindu University, Varanasi. The final form of the questionnaire consisted of 14 items in part A, and 26 items in part B. Another tool, "Study Habit Inventory (SHI)" constructed and standardized by Dr. B. V. Patel was adopted for the present study. The reliability of the inventory established by test-retest method and split-half method was reported to be 0.79 and 0.82 respectively. The validity was reportedly established by using external criteria, when scores on the study habits inventory were correlated with the teacher's opinion and examination marks and were reported to be sufficiently high.

PROCEDURE OF DATA COLLECTION

The researcher personally visited various schools in Ranchi for obtaining data from students. For this permission from principals and in their absence permission from other concerned authority of the schools were obtained. The data were collected during the period of September 2012 to January 2013. Students were contacted in the classrooms in the period allotted to the investigator for data collection. Students who were not playing e-games were identified by asking them to raise their hands if they were not playing e-games. No such student was found in any of the class. After a brief introduction about the purpose of work and instruction to fill the 'Electronic Games Questionnaire', it was distributed to the students. Approximately 40 minutes were taken by students to fill the questionnaire. Students showed deep interest while filling the questionnaire. After a gap of 10 minutes another tool 'Study Habits Inventory' was distributed to students. They eagerly responded to all the questions, from both the tools so their response can be taken as reliable. After completion of data collection from students a brief talk was held with them to seek further relevant information. Every school was visited at least three times to ensure both the tools were filled by the participants of this study.

RESULTS

Objective 1: To estimate the percentage of students with different levels of study habits with reference to hours devoted to playing e-games.

Table-1: Study Habits of students devoting different number of hours to e-game playing

Time Devoted to e-games	Less than 1 Hour	1Hour < 3Hours	3Hours < 5Hours	5 Hours & above
Study Habits				
Very Poor Study Habits	16.89%	16.39%	22.45%	27.53%
Below Normal or Poor Study Habits	41.93%	46.13%	46.23%	49.87%
Normal or Satisfactory Study Habits	32.29%	28.82%	24.08%	18.86%
Good Study Habits	8.89%	8.66%	7.24%	3.74%

From the table no. 1, in context of very poor study habits it is observed that percentage of students who were devoting less than one hour and the percentage of students devoting from one hour to less than 3 hours to e-games was found to be almost similar i.e. nearly 16%, with the increase in involvement of more number of hours i.e. 3 hour to less than five hours it was seen that percentage of students with very poor study habits got increased to 22.45%, again with the increase in more number of hours (5Hours & above) it was also seen that percentage of students with very poor study habits went up to 27.53%.

In case of below normal or poor study habits, it was seen that 41.93% of students having poor study habits played e-games for less than one hour, while percentage of students playing for 1 hour to less than 3 hours and for 3 hours to less than five hours was nearly 46%, and percentage of students playing games for 5 hours and above was almost 50%.

Again it is revealed from the above table that there was decrease in percentage of students having normal study habits, with increase in number of hours in e-gaming. It was found that 32.27% of students having normal study habits devoted less than 1 hour in e-gaming, percentage of students playing e-games for 1 hour to less than 3 hours, 3 hours to less than 5 hours and five hours and above was found to be 28.80%, 24.06% and 18.84% respectively.

For the students having good study habits, it was found that with the increase in number of e-gaming hours, percentage of students having good study habits was falling. Percentage of students devoting 1 hour and 1 hour to less than 3 hours was almost similar i.e. 8.89% and 8.66% respectively. As the number of hours in playing e-games increased, percentage of students with good study habits gradually decreased from 7.24% for 3 hours to less than 5 hours to only 3.74% for 5 hours and above.

In the present study there were no students having very good study habits.

Objective 2: To estimate the percentage of students feeling difficulty to concentrate on their studies after losing e-games.

Table-2: Percentage of students feeling difficulty to concentrate on their studies after losing e-games.

Often	Sometimes	Rarely
34.17%	46.65%	19.16%

From the table no. 1, it is clear that 34.17% of the students 'often', 46.65% of students 'sometimes' and 19.16% students 'rarely' feel difficulty to concentrate on their studies after losing e-games.

DISCUSSION

The finding of the objective no.1 shows that there is a relation between study habits and electronic games playing. It was found that with the increase in number of hours in e-games play, the study habits of the students was getting poorer. With regard to students with good study habits, it was found that the percentage of students who were devoting less than one hour to e-games was 8.84, which got down to 7.24 % when number of hours rose to 3 hours to less than 5 hours. This percentage of students with good study habits further declined to 3.74% when the number of e-game hours elevated to 5 hours and above. The result was the same for the students showing normal or satisfactory study habits, again the percentage of students gradually declined from 32.29% to 18.86%, when the number of e-gaming hour increased from less than an hour to more than 5 hours.

The present study also depicts that percentage of students with very poor study habits devoting up to three hours to e-games was almost 16%, with the increase in number of hours i.e., three hours and above and more than five hours it was found that the percentage of students having very poor study habits gradually increased from 22.45% to 27.53%.

The result clearly shows that more the hours of e-game play, poorer were the study habits of the students. It is implicit from the present study that those who were playing e- games for more number of hours did it till late hours in night at the cost of their sleep. Losing sleep can have a large impact on their academic life too. Academic grades depend on the quality of work that is done, and time management affects the quality of performance. Gerdes and Mallinckrodt (1994) emphasized the importance of time management skills when it comes to academic success. If more number of hours is devoted to e-games students lose their sleep because of e-gaming, this shows that these individuals are not managing their time appropriately enough to ensure that they get enough sleep. This could also be because e-game players lose track of time when they are playing, which is supported by research done by Woods, Griffiths, & Parke (2009).

It can also be surmised that students invest most of their leisure hours in playing e-games. Excluding school hours, routine activities, rest and sleep or any extracurricular activity, an Indian student is left with 3 hours of

leisure time on an average. Most of the students were spending up to 3 hours for e-gaming. This is also corroborated by the finding of Lin and Lepper (1997) and Funk (1992) who concluded that playing video games would be at the cost of their leisure activities. Those who are spending 3 hours and above might be displacing other important activities from their daily routine such as study hours or rest and sleep. For such students it may be very hard to engage themselves in other fruitful activities like reading, playing outside and social involvement. Study conducted by Veerman, 2011 concluded that sitting for more number of hours for e-games may be associated with risk for development of attention problem, learning difficulties and adverse long term educational outcomes. In another study Liberman et. al (1974) found that children who used computers to play games frequently performed more poorly in school. Another study conducted by Selnow (1984) concluded that videogame players perceive the game as a surrogate companion, as their electronic friend. Because of this one can expect that children who spend much time playing e-games will be less socially integrated. In other study Griffiths (2010) found that individuals who play more computer games lower their incident rate of engaging in social interaction with peers. According to Padilla-Walker, et. al. 2009, children who play video games have high levels of drug use, alcohol drinking and poorer relationships with friends and family. Drug and alcohol consumption is not common to the students of the present study but it is the time spent on e-games which is of concern. Each hour a child spends playing electronic games is an hour not spent on homework, reading, exploring, creating, social interaction or other things that might have educational or social benefits.

From the table no. 2, it is clear that 34.17% of the students 'often', 46.65% of students 'sometimes' and 19.16% students 'rarely' felt difficulty to concentrate on their studies after losing e-games. In the present study it was found that 80.82% of students were not able to concentrate on their studies after losing e-games which is a matter of great concern. Games are designed around a sense of flow, where the challenges one encounters is aligned to one's skills which are constantly rewarded. Thus the game becomes more important and player becomes anxious what will happen when they will reach the end of the game. While playing a game, everybody wants to win. Winning makes player happy, losing makes them unhappy. After game even though students sit for study they are not in a position to concentrate as they are still thinking about the game or worrying about failure for long time and they become less motivated to do any other act. Frustration arising from failure to win e-game may lead individual to feel difficulty in concentrating on other activities too, including studies. Losing the game may result in loss of energy in the individual by which they feel tired and stressed and thus having difficulty to concentrate on their studies. Players are in a zeal to win e-games, after losing also they will play games till they win which clearly indicates that players give much time and priority to win the games rather than focus on their study. If students are unable to concentrate because they have something on their mind, they need to try to clear their head before they start working, else it will hinder their academic engagement and academic output.

CONCLUSION

One of the dominant concerns is regarding the large number of hours spent in e-gaming which may hamper the study habits of adolescents. Lack of proper study habits contributes to the poor performance in tests and examinations for most of the students. Another major concern is the after-effect of playing e-games, which is the difficulty in concentrating on studies after losing e-games. Majority of the students reported loss of concentration due to failure to win e-games either frequently or occasionally. This is quite worrisome. Not only the students end up spending their precious hours at the cost of their social and leisure time activities and sometimes study hours, but also suffer from poor concentration hours after their failure in e-gaming. This calls for immediate attention of teachers and most importantly parents. As the new media becomes increasingly popular among children, parents and teachers continually express fear about not knowing what e-games children are playing and what effects these e-games may have on youngsters. As parents play important role in their children's lives, they must know what their children are doing on their computer/online. With this knowledge, parents can set appropriate rules to monitor access to and time spent on playing e-games. Prohibiting adolescents from playing e-games is not realistic, but the awareness of what kind of e-games their children are playing and for how many hours, and what are their effects, may allow parents to better understand the e-games they play, to discuss the e-games and to set time limits and provide guidance, if necessary. Time limits and age-appropriate e-games can reduce the chance of developing poor study habits.

It is important to note that present study suffers from usual limitations of cluster sampling technique. Strong inferences about causal direction cannot be made. Additional experimental and longitudinal research is needed. It needs to be investigated how long difficulty in concentrating on work at hand, the after-effect of e-gaming, persists. Yet, it is hoped that youth, parents, and educators can begin to use the results of this research to modify children's electronic game habits in ways that promote children's health and school success.

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DISTRESS SALE: AN OVER VIEW

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DEFINITION

When a Property/Stocks/other assets/Sold in an Urgent manner, often at a loss. A distressed sale occurs when a sale must be made under unfavourable conditions for the seller. Distressed Sales Often Occurs at a loss because funds tie-up in the asset are needed within a Short Span of time. The Funds from these assets are used to pay for debts, Medical debts/other emergencies. Mortgage Borrowers who can no longer pay for their mortgaged Property, may opt to Sell their Property in order to Pay Mortgage. Examples: Divorce, Foreclosure & relocations.

In a Distressed Sale the seller is affected by unfavourable conditions that force the sale. For example, a seller of a piece of real estate might have to sell because they need cash to cover another debt. In that case, the seller does not have many options, so they are "forced" to take a loss on the sale.

It is important to know the conditions of a sale of an asset, particularly when trying to value the asset or to use it as comparable on the basis of the sales transaction. In a distressed sale, the valuation of the asset is artificial because it was not sold under open and competitive market conditions. If the real estate is sold under distressed conditions, the sales price cannot be used to establish the true value of the asset. Rather, an appraisal that is based on competitive comparables or the income potential of the real estate should be used. From the buyer's perspective, however, property that is sold in a distressed sale can present an opportunity to purchase the asset at a substantial discount to market prices.

REASONS FOR DISTRESS SALE

Distress Sales involves the sale of assets that must take Place due to the conditions outside the control of the owner. The idea is to generate some type of return on the asset, even if it does not cover the Current market Value. The reasons may be any one of the following:

- Repayment of time-bound debt
- Unforeseen Medical Expenses
- Foreclosure of the Mortgage Property by the Mortgages
- Immediate Need for Margin Money
- Urgent Shifting of Place of residence, etc.

CURRENT DISASTER SALE

In Today's "Times of India" (dated 13.11.2017), the following stress Sale were reported in Times Business. Two of the most well funded daily deals sites-Nearby & Bangalore based little backed SAIF Partners & Singapore's GIC-are acquired by the **Vijay Shekhar Sharma led Paytm** distress in a Sale. Both the Co's had together raised more than \$80 million in Capital and now are being bought for around \$30million in What is mix of Cash & Stock transactions.

VALUATION OF A DISTRESSED BUSINESS

The Valuation of a distressed business is a key element in many restructuring business is a key element in many restricting & Workout Situations. Three basic Valuations techniques commonly used are:

- ◆ Discounted Cash Flow(DCF)
- ◆ Comparable Multiples
- ◆ Asset-Based Value.

THE PROCESS OF VALUATION CAN BE BROKEN INTO 4 STEPS

- Understand & evaluate the business of impact of current Potential level of distress.
- Review & adjust historic & forecast financial data.
- Perform Valuation analysis
- Consider other items that can impact on Value.

PROS & CONS OF DISTRESSED PROPERTY

A Common example of Distressed sale is the sale of real estate. When the Owner can no longer make the mortgage payments.

The main reason to buy a distressed property is the Price. In most Cases, a Foreclosure Short Sale will be priced below market value because the Seller are in a hurry to complete a sale because they don't want to spend money to repair a property in order to bring a higher price. If you are eager to become a homeowner or want to invest in real estate, a foreclosure can be a good place to start, provided you know what you are doing. A REALTOR experienced in distressed properties can guide you to make sure you purchase a home that will eventually increase in value. When mortgage rates are low, you can take advantage of inexpensive financing to buy a bargain and then sell it later for a profit.

The main risk in purchasing a foreclosure is the reason the Properties is set at a low Price. If you are purchasing a house that is in bad shape, you will need to set aside funds to hire Contractors to pay for materials to improve it. Some are ok. Others will be in a bad Shape, but others lack appliances, have damaged walls& may need extensive electrical/Plumbing repairs. You will need an appraisal & for many loan Products that lender will need to assess whether the Property Can be lived in and has Value The buyer of such property needs to be more vigilant to ensure that he is not duped by unscrupulous elements.

In some cases, a distressed property will require complex paperwork before you can take possession of the property, so be prepared to be patient. Most important, educate yourself and work with professionals who can recognize the value in different properties so that you don't find yourself owning a distressed property that requires too much work or sits in a location that negatively affects its long-term value.

CONCLUSION

While a distress sale often take often Place due to adverse Conditions, the end result of the Sale can be viewed as new beginning. Going through with these Sale does reduce the asset held by the Owner. At the same time, distress Sale usually generates new Capital to review some sort of on-going debt thus relieve the financial stress currently impacting the Owner.

**ANALYZING THE EFFECTIVENESS OF DIGITAL PAYMENT SYSTEM: A STUDY AMONG
COLLEGE GOING STUDENT'S IN SOUTH KOLKATA**

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ABSTRACT

The digital India campaign has had a very significant effect in making India a digitalised economy. With the passage of time the mode of payment has also changed as people are more adapted to smart phones and have everything at their convenience. The demonetization is also one of the reasons for people to switch to the digital payment system. The initiative taken by the government of India to make our country a cashless economy acted like a catalyst among the youth of the country for taking up initiatives to make India a cashless economy. The youth or the students of the country prefer to use more digital payment mode as most students get limited pocket money so when they get additional benefits and extra saving they naturally opt for digital payment systems. We have taken up this study to analyze the effectiveness of digital payment among college goers in South Kolkata. A structured questionnaire was used as research tool for understanding the effectiveness of Digital payment System. Primary data was collected from 150 respondents in South Kolkata. Chi Square and Correlation was used to analyze the responses. Chi Square indicate that there is difference in monthly spending among age groups. Correlation indicates the relationship between monthly spending and the mode of payment after demonetization. However, there were many other reasons too for students using the digital payment system.

Keywords: Digitalised, Digital Payment, Demonetization, Cashless Economy

1. INTRODUCTION

Digital payment is a seamless and non-traditional mode of payment system involving one or more participants. Here the transactions are effected without the need for physical cash. Digital payment involves a constantly evolving way of doing things where financial technology companies collaborate with various sectors of the economy for the purpose of meeting the increasingly sophisticated demands of the growing tech-savvy users. Although digital payment had entered the Indian market years back, but people were hardly interested to know about it. As people were facing shortage of paper currency so they had to adapt to the digital payment system using their cell phone or internet to avoid the problem of demonetization in the country. To catalyze the country's economy, people had to switch to digital payment system to make the country a cashless economy. Out of the population of 7 billion, over 5 billion or 70% have a mobile phone, whereas only 2 billion or 30% have a bank account. In India: 800 million have a mobile phone and only 250 million have a bank account. Consumers are increasingly using their mobile phones to make digital payments.

The digital payments have now become a common mode of transaction be it E-commerce, Mobile bill payment, Direct-To-Home Recharge, Electrical bill, Restaurants, Vendors, etc. The basic purpose of this initiative was to make our economy a digital and cashless economy. This platform of transaction saves a lot of time and it's one of the fastest and safest modes of transaction as it can be used from any part of the world. As we know that in today's generation the use of a smart phone has become very common among all the age-groups. The youth of the country, who are more technologically advanced than the elder ones, can contribute the most towards the Digital India initiative taken by the Government of India and make our economy a cashless economy.

During the demonetization period in India all the youth specifically the college going students had to face a lot of problem. To avoid such situation maximum college going students had opted for digital payment system which was a life savior for all. As Digital payment system slowly penetrated the Indian market to help out people in the tough situation the college students mostly prefer to shop online as now most e-commerce companies prefer digital payment as it offers cash-back and other offers. So, they are the once who use different digital payment system to get the additional benefits and avoid using paper currency. Today digital payment is accepted everywhere and it is a safer mode of carrying money and convenient everywhere as most college students prefer eating in restaurants, going for movies, using the app cab and so on. It is expected that in near future there will be a surge in digital payment system among all college going students as they get additional benefit for using it.

2. LITERATURE REVIEW

2.1. Study Undertaken In India

Kadamudimatha (2016) evaluated how the mode of payment has kept on changing from barter system to the latest trend i.e. Digital Wallet. In India after demonetization people have started to use it as a substitute of physical money to meet their needs, as it's a secure way to make transaction and easy to use. He has stated that

it is not only useful for making transaction but also time saving, simple to use, attractive offers and discounts are also provided. At present there are many digital wallet companies in India namely Paytm, Mobiki, PayUMoney, State Bank buddy, etc. Further it was discussed how post demonetization there has been an increase in internet usage and digital wallets. The digital wallet companies also got an opportunity to expand their market and how it will help our country to become a Digital India.

Singh (2017) studied how digital payment and digital wallet in India got popularized due to demonetization. A tremendous growth in the usage of internet and the no. of smart phone users is increasing so people found it convenient to use it as an alternative for cash. In this study, he also pointed out that how different digital wallet companies were having competition to enter and expand the Indian market as it was the best opportunity for them to establish their company. It was also predicted that in future India will become a cashless economy and with digitalization people will surely adopt the digital mode of payment. ANOVA was used in this study to show that there is no significant variance in the consumer perception with respect to its demographic factors.

2.2. Study Undertaken In Abroad

Dennehy & Sammon (2015) analyzed how in the 21st century the usage of digital payment has increased over the years. The main focus here was to find out where the digital payment system will stand in the future. Many papers have been examined to find out what are the views regarding the digital payment system. With the passage of time the technology has been shifting very fast so with the innovation of technology the aim was to make people familiar with digital payment. It was studied that the merchants also got a new platform to invest so as to cater the customers. Data was collected by following empirical method i.e. survey, interviews, etc. Lastly the study was only focused on Google data base that was a limitation about the study.

Bezhovski (2016) studied how internet and e-commerce has opened the gateway for digital payment system. The study also talks about the increment in technology and how people are adopting the new means of payment system, how are they getting benefited and is there any pitfall of using it. It was found that when e-commerce was launched it was a unique way of trading so the digital payment is also a unique way of transaction which will also emerge as the e-commerce and in near future it will become the backbone of e-commerce. It states that the future of these digital wallets will depend on the security and privacy that are provided by the companies as people are highly security concerned. It also stated that smart phone has removed many devices from our daily life and has clubbed the usefulness in one device only similarly it is expected that digital wallet will also become a substitute for many other things.

3. RESEARCH GAP

After reviewing the work done in international context and national context, we have found out that various researches have been conducted in the field of digital wallet particularly on m-wallet. Furthermore there has been no research conducted in the eastern part of India, in relation to South Kolkata to be specific. Present study tries to address that particular issue.

4. OBJECTIVES

- To study the frequency of usage of digital wallet among the college going students of South Kolkata
- To analyze the monthly spending of different age group of students.
- To study the effect of demonetizations on the usage of digital mode of payment.

5. HYPOTHESIS

1. H0: Age does not play a significant role in the use of digital payment system on a monthly basis.
H1: Age does a significant role in the use of digital payment system on a monthly basis.
2. H0: There is not a significant relationship between the monthly spending using digital payment and preferred mode of payment after demonetization.
H2: There is a significant relationship between the monthly spending using digital payments and preferred mode of payment after demonetization.
3. H0: There has not been a significant improvement or increase in the use of card, cash, cheque, e-wallets and net banking before and after demonetization.
H3: There has been a significant improvement or increase in the use of card, cash, cheque, e-wallets and net banking before and after demonetization.

6. RESEARCH METHODOLOGY

This study adopts descriptive research by using both primary and secondary data as the research methodology. The data used for supporting the analysis in this section is from a practical survey of students going to colleges

in South Kolkata, using digital mode of payment system. A total of 150 respondents have been taken into account to analyze the effectiveness of digital payment system as a mode of payment. The sample selected was on the basis of Convenience Sampling. The survey was conducted between December 2017 and January 2018 in South Kolkata, West Bengal. The questionnaire was prepared in such a manner that it made the college going students' responds in the most convenient way. The set of questionnaire was designed to know why, when, where the students use digital payment system and to find out the effectiveness pre and post demonetization. The study area included the college goers in South Kolkata who uses digital wallet for their convenience, or for making payments.

7. FINDINGS

In the study we found that 150 respondents completed the survey, out of which 85 were male and 65 were female. The maximum number of respondent belonged to the age group 18-22. It was also found that all the 150 respondents uses smart phone. There were 127 respondents who already used digital payment system before demonetization and the remaining opted it after demonetization. It was also seen that people did not use only one mode of payment system after demonetization; they used cash, cheque, debit/credit card, e-wallets and net banking.

For high value transaction 83 respondents preferred using debit / credit card for making their digital payment and the remaining used net banking, e-wallet or none of the said option. The purpose of using the digital payment system was not fixed as 89 out of 150 respondents use it for money transfer, recharge, utility and bill payments etc. The amount that is spent by maximum respondent is between 500-2000 and the remaining respondents spend either less than 500 or 2000-3500 or above 3500.

The following tests were conducted to prove the hypothesis:

CHI-SQUARE TESTS

	Value	Asymptotic Significance (2-sided)
Pearson Chi-Square	14.074 ^a	.003
N of Valid Cases	150	

The significance value of the Pearson Chi-Square is 0.03, which is less than 0.05 indicating that it is highly significant at 5% level. Thus, we accept the alternative hypothesis and reject the null; it can be concluded that age of the users have a significant impact on the monthly spending through digital payment system. There are 96 respondents in the age group 18-22 including both male and female. It shows that basically the young once or the fresher's going to college are more into the habit of using the digital payment system than the other age category. Thus, age plays a significant role in monthly spending.

The second test that was conducted was correlation, in the table below we can see the sig. value is .000, which is less than 0.05. We can say that the sig. value is significant at 5% level of confidence, thus, we will accept the alternative and reject null hypothesis. There is a significant relationship between preferred mode of payment after demonitisation and money spend using digital payment system on a monthly basis. Value for Pearson Coefficient is 0.000 which further indicates that there is positive correlation between the two variables.

CORRELATIONS			
		WHAT HAS BEEN YOUR PREFERRED MODE OF PAYMENT AFTER DEMONITISATION?	HOW MUCH MONEY DO YOU SPEND USING DIGITAL PAYMENT SYSTEM ON A MONTHLY BASIS?
WHAT HAS BEEN YOUR PREFERRED MODE OF PAYMENT AFTER DEMONITISATION?	Pearson Correlation	1	.294**
	Sig. (2-tailed)		.000
	N	150	150
HOW MUCH MONEY DO YOU SPEND USING DIGITAL PAYMENT SYSTEM ON A MONTHLY BASIS?	Pearson Correlation	.294**	1
	Sig. (2-tailed)	.000	
	N	150	150

**. Correlation is significant at the 0.01 level (2-tailed).

Lastly, Wilcoxon Signed Ranked Test (Non-parametric, 2 Related Sample Test) was conducted and the result was the significance value is .000 which is less than 0.05; therefore we accept alternative and reject Null.

Demonetization had a great impact on the payment system and there has been a great change in the mode of payment, and people have used less cash after demonetization as they started to use the digital payment system.

8. LIMITATION OF THE STUDY

There were some limitations in the study which are as follows:

1. Firstly, the geographic area was a limitation as the research was conducted only South Kolkata.
2. Secondly, the target respondents were limited to college going students in only.
3. Only the digital wallet users were considered for the study.
4. Lastly, the sample size was limited.

9. CONCLUSION

In an era of digitalization, the study aims to study the customer perception, usage pattern Preferences and satisfaction level regarding digital payment system based on a study of 150 respondents. It further indicates the usage pattern, reasons for adoption and monthly spending of the students through digital payment system. The study observed that respondents preferred digital payment system because they not only saves time and are easy to use and access and they also used it for their convenience. While the age of respondent had some significant impact on types, amount spends using digital payment system. There has been a significant change in the usage digital payment system pre and post demonetization. It was observed that the people are slowly adopting the digital mode of payment for their convenience. It is predicted that by the year 2025 there will be a great change in the number of user using digital payment such as card , e-wallet etc. and there will also be a fall in the use of cash as a mode of payment

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EXPLORING ANTECEDENTS OF BANK SERVICE QUALITY – A REVIEW

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ABSTRACT

Banking is a service industry and irrespective of any sector bank-customer relationship has to be regulated through a quality model. However, this research stream has lacked a clear roadmap or agenda. Therefore, the present article analyzes and synthesizes existing studies of service adoption and maps the major theories that researchers have used to predict consumer satisfaction. The findings indicate that the service quality adoption literature is fragmented, though it commonly relies on service models of developed countries. Findings indicate that there are no publicly available standard scales for measuring perceived quality in banks in India.

Keywords: banks, service quality, India

INTRODUCTION

The Indian banking sector is broadly classified into scheduled banks and non-scheduled banks. All banks included in the Second Schedule to the Reserve Bank of India Act, 1934 are Scheduled Banks. These banks comprise Scheduled Commercial Banks and Scheduled Co-operative Banks. Scheduled Co-operative Banks consist of Scheduled State Co-operative Banks and Scheduled Urban Cooperative Banks. Scheduled Commercial Banks in India are categorised into five different groups according to their ownership and/or nature of operation:

By 2010, banking in India was generally fairly mature in terms of supply, product range and reach-even though reach in rural India still remains a challenge for the private sector and foreign banks. In terms of quality of assets and capital adequacy, Indian banks are considered to have clean, strong and transparent balance sheets relative to other banks in comparable economies in its region. The Reserve Bank of India is an autonomous body, with minimal pressure from the government.

With the growth in the Indian economy expected to be strong for quite some time-especially in its services sector-the demand for banking services, especially retail banking, mortgages and investment services are expected to be strong.

Introduction of banking Industry in India both in Public and Private sectors with the advent of foreign banks which are more service oriented, there is a constant demand for improved banking service quality from the banking industry with improvement in product offerings and value-added services which has directed financial institutions to review their current business practices (Brown et.al, 1993). Some of the factors driving this change are intensity of competition, changes in government regulations and adverse effects of technology. Bankers thus need to respond to change to remain competitive in today's environment (Angur, Nataraajan & Jahera, 1999). Quality of service provides a distinct marketing edge to banks since improved levels of service quality are related to higher revenues, increased cross-sell ratios, higher customer retention (Bennett and Higgins 1988) and expanded market share through word of mouth advertising, enhanced employee productivity, higher market shares and lower staff turnover and operating costs (Bowen and Hedges 1993).

Providing extraordinary service quality is also critical for enhancing long-term associations with customers, which is especially significant in the competitive business environment of modern banking (Camarero, 2007; Hawke and Heffernan, 2006). Therefore, delivering quality service to customers is a must for success and survival in today's competitive banking environment (Samli and Frohlich, 1992). As regards banks, customer longevity can only be achieved through delivering high quality services (Rust et al., 1995; Lassar et al., 2000) especially under unregulated and volatile financial market conditions (Colgate and Lang, 2001). It's therefore imperative for banks to identify and manage the service quality dimensions which would lead to competitive advantage with their customers.

LITERATURE REVIEWS

SERVQUAL Instrumentation (1985-1988)

Out of particular interest to Parasuraman et al. was Gap 5 – the expected service/ perceived service gap, which was the focus of the 1988 *JR* article. This article produced the famous equation, $Q = P - E$, and operationalized it empirically. The operational definition of expectations E is given in Exhibit #2. The operational definition of P is given in Exhibit #3.

The battery of items on which selected service providers were evaluated reflected the following service quality perceptual dimensions (quoting from the 1988 *JR* article):

- Tangibles: Physical facilities, equipment, and appearance of personnel.
- Reliability: Ability to perform the promised service dependably and accurately.
- Responsiveness: Willingness to help customers and provide prompt service.
- Assurance: Knowledge and courtesy of employees and their ability to inspire trust and confidence.
- Empathy: Caring, individualized attention the firm provides its customers.

The authors tested the model for one service firm in each of the following industries: banking, credit card, repair and maintenance, and long-distance telephone services. Model findings were statistically significant and the multi-item measures of the service quality perceptual dimensions demonstrated discriminant validity and possessed respectable coefficient alphas exceeding 0.70.

BSQ (Bahia and Nantel, 2000)

To build their BSQ retail banking-specific metric, Bahia and Nantel (2000) started from 15 dimensions after adding to the initially ten dimensions of Parasuraman et al. (1985), elements from the seven Ps of marketing that they considered as partially or not at all represented in the original list. As regards quality attributes, they analyzed an extensive list of items, some bank-specific and others generic, mainly from the banking literature. After appropriate analysis of evidence drawn from French speaking Canada, they came up with a 31-items/six-dimension scale:

- (1) effectiveness and assurance;
- (2) access;
- (3) price;
- (4) tangibles;
- (5) service portfolio; and
- (6) reliability.

SYSTRA-SQ (Aldlaigan and Buttle, 2002)

An interesting approach was that of Aldlaigan and Buttle (2002) who developed SYSTRA-SQ, a retail-banking specific service quality scale based on the Nordic model (Gro'nroos, 1982, 1984). They started with an impressive number of 963 items describing customers' service quality perceptions and concluded with a 21-items/four-dimensions service quality scale with key elements.

INTERNET BANKING MODEL (Broderick and Vachirapornpuk, 2002)

One of the key challenges of the internet as a service delivery channel is how service firms can manage service quality as these remote formats bring significant change in customer interaction and behavior. This study proposes and tests a service quality model of internet banking. The research uses participant observation and narrative analysis of UK internet web site community to explore how internet banking customers perceive and elements of this model. In the context of internet, five key elements are treated as central influences on perceived service quality: They are: customer expectations of the service; the image and reputation of the service organization; aspects of the service setting; the actual service encounter; and customer participation.

ASQ (Al-Hawari et al., 2005)

Regarding the technology mediated service delivery methods, Mols (2000) argued that customer acceptance of new technology-based channels of service delivery in banks may bring a dramatic change in the way banks build and maintain close relationships with their customers. These changes motivated banks to be aware of future trends in order to survive and compete effectively. Many retail banks face a huge challenge in reducing the number of branches they currently operate as down-sizing efforts bring with them complex post-merger problems such as social and political issues, organisational culture concerns, product modifications and IT integration. Zeithaml (2002) draws attention to service delivery through electronic channels but limits the scope to internet banking. Similarly, Parasuraman (2005) confines the study to the service quality of websites.

FAIRSERV (Carr, 2007)

As a theory-based alternative perspective to SERVQUAL, Carr (2007) proposes FAIRSERV, a model combining theoretical perspectives from the organizational fairness (justice) and marketing literatures. FAIRSERV posits that an important set of service evaluations results from a comparison of services against

norms of fairness and the treatment of similar customers (comparison others). For example, service consumers compare how service resources (i.e., time, effort, expertise, and materials) are distributed among the various consumers and feel cheated if they receive fewer resources than others. Service consumers are also interested in the procedures used to distribute service resources. They want the procedures to be unbiased and consistently applied, not unduly favoring any one person or group. Service consumers also want to be treated with civility and politeness. And finally, service consumers want to be given information about the services in which they are involved.

BANQUAL-R (Tsoukatos and Mastrogianni (2010)

Tsoukatos and Mastrogianni (2010) developed a 27-item BANQUAL-R scale consists of 12 SERVQUAL, seven BSQ, two common in SERVQUAL and BSQ. Sureshchandar et al. (2001; 2002) developed a 41 items/5 dimensional scale (the Human-Societal model) of perception-only in Indian context consisting dimensions of core service, human element of service delivery, systemization of service delivery, tangibles of service and social responsibility.

BANKQUAL (Senthikumar, Ananth & Arulraj, 2011)

The past three decades have witnessed the emergence of Corporate Social Responsibility (CSR) as a field of study and a framework for the role of business corporations and financial institutions in society. After the Tsunami in India in 2004 people were need financial assistance to recover from the loss of tsunami and revamping their life. Only source they perceive is availing loans from banking sector and other guidance. The topic of Impact of Corporate social responsibility on Customer Satisfaction in banking service is of relevance especially for those suffered from Tsunami. The data were analyzed by modeling it using Structural Equation Modelling (SEM) using AMOS 18 and found that customer satisfaction is the mediating factor for banking service quality and the CSR is the most influential factor for the customer satisfaction.

CONCLUSION

Most of the research on service quality has been done in the developed countries (Herbig and Genestra, 1996). Services are among the fastest growing sectors in emerging countries (Malhotra et al., 1994). Research on service quality in banks has been largely in the context of US and European banking institutions. Perceived service quality especially in banking sector has been found to be a culture and context specific construct (Furrer et al., 2000; and Glaveli et al, 2006) that is influenced by cultural and environmental factors and there are no publicly available standard scales for measuring perceived quality in banks (Bahia and Nantel ,2000).

While there are adequate number of studies to develop and validate service quality scales for the banking sector using a retail specific service quality model called SERVQUAL or using alternative measures and in various countries such as Canada; the United Arab Emirates; China South Africa; Cyprus; the UK; Nigeria; South Korea; Kuwait; Australia; Baumann; Malaysia and India. But still there is a need for developing and validating customized perceived service quality measure for banking in India.

In spite of the numerous considerable published works on the service quality all over the world, there is still a lack of consensus between the marketers and marketing researcher concerning about its measurement. In similar context, lack of common understanding in the definition of service quality in the banking industry is considered to be one of the barriers in the successful implementation of quality initiatives in this industry.

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HOMEWORK EDUCATION- A CASE FOR HOMEWORK IN TEACHER EDUCATION PROGRAMME

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ABSTRACT

Homework is unique educational experience that involves the whole generation of teacher and students in India and many countries of world daily. Irrespective of the subject and grade, homework seems to be the integral part of students' routine task (ASCD, 2009). However, this widespread practice of homework is not favored by the numbers of research community that associate homework with burden, (Kralovec, 2000) interference in family and leisure time (The State of Queensland- Department of Education and the Arts, 2004) and even it lacks the concrete evidence of academic achievement (Kohn, 2006). The authors of this paper argue that up to a great extent homework failed to deliver the promises because the practices of homework are not being informed by the modern theoretical development in the teaching learning field. It is very much evident from the fact that the teacher education programme, which is the bedrock of injecting fresh ideas and perspective among prospective teachers is missing the component of homework in its discourse. As a result, when one joins the field after training programme, one feels oneself little oriented about the nature, principles and strategy of the homework and shows inability to integrate teaching learning principles in homework practices. Therefore, the authors, through this paper, put forth the component of homework education in teacher education programme.

Keywords: Homework, Teacher Education Programme

Homework is much practiced aspect of school education system in India and many countries of the world. Most of the schools follow the practice of assigning homework on short term (daily, weekly basis) and long term basis (long term assignments, homework for vacations, projects etc.). A number of families judge the teaching learning level in a school by considering the amount of homework given to the learner in particular subjects. This practice and perception are very common to be observed in schools and among families. The widespread of homework practices also draw criticism from different stakeholders especially from research community. Studies found homework negative in terms of students' achievement and they described homework as detrimental to the learning process in place of supporting it. But a close scrutiny of evidences and research findings show a different picture. It appears that the conceptualization and practices of homework are problematic, not the homework itself. Homework bears the burn of unauthentic, unverified practices. It did not embrace new authentic practices informed by the researches as the other aspects of schooling have done. The teachers who are the practitioners of homework, are unaware about the concept and nature of homework. Practices are guided by the personal beliefs, or adherence to the traditions being followed in schools. Teachers who assign homework are not oriented about the principles, strategy, or authentic practices of homework. They are unable to integrate homework with new concepts developed in the broader and larger framework of teaching learning processes.

The situation demands an informed teacher who is oriented and informed about homework, its principles, use, strategies, etc. and able to integrate all the information with the larger concept of teaching and learning. This status can be achieved only when homework education becomes the part of teacher education programme.

Homework is considered bad. Reason lies in the way it is being practiced. Homework is a part of Overall structure of schooling and education. Educational and school practices are reformed a lot in the last one hundred years under the influence of new researches. The practices in schooling and education that proved contradictory to the research findings were discarded. It became possible when new researches reached prospective teachers through teacher education programme. There is no substantial place for homework in teacher education programme. And therefore, homework could not be informed and it continued the redundant practices that proved fatal for homework. Therefore, this paper argues that homework needs to be given a judicious place in teacher education programme. In arguing so, the paper takes into account the meaning and concept of homework, the role that teacher education programme can play and arguments that justify the inclusion of homework in teacher education programme.

MEANING AND NATURE OF HOMEWORK

Homework is much discussed issue among the scholars but still disagreement appears when they try to define the concept of homework, its nature, effectiveness in relation to the learning. A number of definitions are put forwarded by the different scholars. Butler (1987) defines homework as it is the "time students spend outside the classroom in assigned activities to practice, reinforce or apply newly-acquired skills and knowledge and to

learn necessary skills of independent study". Cooper, Robinson, & Patall (2006) provide the following definition of homework: Homework can be defined as "any task assigned by schoolteachers intended for students to carry out during non-school hours (Cooper, 1989)". "This definition explicitly excludes (a) in-school guided study; (b) home study courses delivered through the mail, television, audio or videocassette, or the internet; and (c) extracurricular activities such as sports and participation in clubs. The phrase "intended for students to carry out during non-school hours" is used because students may complete homework assignments during study hall, library time, or even during subsequent classes (Butler, D. J., 2011)".

Researches assign different functions to the homework. Considering homework as well-known and common education activities among different culture, class, and ability levels (Chen & Stevenson, 1989; Warton, 2001) it is described as a tool to help students learn better (Cooper, 2001; Ramdass & Zimmerman, 2011). Homework may be a source of getting knowledge about the education of children's families' and about their schools (Department of Education, 2005; Corno, 1996), developing the communication between teacher, student, and parents (Van Voorhis, 2003; Van Voorhis, 2004), and connection between home and school (Forster, 2000) as cited in Deveci, I. & Önder, S. (2013).

TEACHER EDUCATION AND ITS SIGNIFICANCE FOR HOMEWORK EDUCATION

Teacher education programme is the bedrock of injecting fresh ideas and perspective among prospective teachers. It is a medium which channelizes new thoughts and research oriented practices in prospective teachers who ultimately practice it in schools. Teacher education helps to be critical of status quo and questions the biases with which individual joins the programme. It is a platform where ideas are tested on the touchstone of research and evidences. Moving further, the backwardness of homework can be linked to its little place in Teacher Education Programme. Lack of space for homework in Teacher Education Programme resulted in uninformed practices of homework. NCFTE 2009 rightly observed that "The teacher education system through its initial and continuing professional development programmes is expected to ensure an adequate supply of professionally competent teachers to run the nation's schools. Initial teacher education especially, has a major part to play in the making of a teacher. It marks the initiation of the novice entrant to the calling and as such has tremendous potential to imbue the would-be teacher with the aspirations, knowledge-base, repertoire of pedagogic capacities and humane attitudes". Way back to 1966, even Kothari Commission has acknowledged that "the professional preparation of teachers has been crucial for the qualitative improvement of education" (NCERT, 2006).

In the context of homework education, teacher education programme should provide a respectable place to this component. Advocacy for the component of Homework Education in the teacher education programme rests on sound logic. Homework is unique educational experience that involves the whole generation of school teachers and students in India and many countries of world daily. Irrespective of the subject and grade, homework seems to be the integral part of students' routine task (ASCD, 2009). Admitting this widespread practice in school and giving no place to it in the programme that prepares teachers for school sounds strange to logic. Talking about teacher educators, NCFTE, 2009 asserts that "The profile and role of teacher educators are to be conceived primarily with reference to the philosophy and principles that govern the various aspects of school education – aims of education, curriculum, methods and materials and the socio-cultural context in which the school functions – and the role of the teacher in translating educational intents into practical action" (NCFTE, 2009). This argument is very much valid in case of prospective teachers as well.

Another reason why homework should be the part of teacher education is that homework is having a potential to act as a powerful tool of learning. But to realize this potential of homework, it need to be free from all bad practices associated with it. This reform again requires that homework must be included in teacher education programme. An International Review of literature on the theme of teacher professional development, published by UNESCO (2003) links the success of reform with the professional development. It states that the "process of professional development has a significant positive impact on teachers' beliefs and practices, students' learning, and on the implementation of educational reforms (UNESCO, 2003). At another place, it reaffirms the same point by saying that "Regardless of the scope of the reform, the relationship between educational reform and teachers' professional development is a two-way, or reciprocal, relationship. As will be illustrated in this section, educational reforms that do not include teachers and their professional development have not been successful. Professional-development initiatives that have not been embedded in some form of reform of structures and policies have not been successful either. There are several cases that support these findings"..... "In other words, educational reforms and teacher professional development must go hand in hand for either or both to work well, as they share a symbiotic relationship" (UNESCO, 2003).

INTEGRATING HOMEWORK WITH LARGER TEACHING LEARNING PROCESS

Another aspect where homework needs urgent attention is to situate homework within the larger teaching learning framework and teacher education programme can achieve this aim very well. Homework failed to perform well because it could not align itself with the advancement in the field of teaching and learning. Teaching and learning processes embraced positive changes reflected in the researches on teaching learning. The success in this endeavor came because teacher education programme channelized these ideas into education system. But homework failed to be informed as it has no place in teacher education programme.

Over a period of time, teaching learning process and overall education system moved from rote memorization to the construction of knowledge, from passive learning to the participatory learning, from reproduction of knowledge to the 21st century skills that emphasize the creative solution of problems, high order thinking skills and reflection as the knowledge is abundant now. NCF 2005 advocated a “shift away from a textbook centered rote learning approach, to one that emphasizes the link between school learning and life outside school. It stresses that the knowledge that students bring to the classroom from their life outside, and the diversity of ability and ways of thinking within the classroom are resources for teaching and learning and not hindrances.” Because the homework was not the part of all this discourse, it failed to update its practices and increasingly getting targeted. Therefore, including the component of homework in teacher education programme can open the way to realize the potential of homework (Kumar, S. R.; Dewan, H.; & Subramaniam, K).

HOMEWORK IS A LINK BETWEEN HOME AND SCHOOL

Homework is having a great potential to become link between the classroom learning and the experiences that students derive from out of school social context like family and larger society. It can also be a link to bring community knowledge in the school set up and classroom level. NCF 2005 and NCFTE 2009 suggest the importance of the role of community knowledge in education, and “inclusion of locally relevant content in the curriculum as well as pedagogy”. Homework can play this role if prospective teachers are oriented about it.

TEACHER EDUCATION PROGRAMME CANNOT BE CONSIDERED COMPLETE IF IT LEAVES THE REALITY OF CHILD LIFE AND LEARNING RELATED TO HOMEWORK

Homework takes times of students, parents and teachers and still if it is not getting proper place, it is not only affects negatively the practice and conception of the homework but it also leaves teacher education incomplete. Teacher education cannot avoid recognizing this reality that exist in the name of homework. When reforms in teacher education is suggested, inclusion of homework education should be considered as the essential component of teacher education.

It may be argued that that a lot of work (researches, practical suggestion) was done on homework. But most of them are individual in nature while homework is institutional in nature as it is associated with the practices of school. Therefore, homework discourse needs to be institutionalized through pre service Teacher Education Programme. Homework, being an institutional matter, cannot be decided on the basis of individual research only. Various questions need to be addressed that cannot be done by an individual like the amount of homework/quantity, frequency, types, variety, age appropriateness, homework according to different grades etc. and all others. It can be addressed on the formal platform of teacher education programme. Along with it, situating homework in the framework of Continuous and Comprehensive Evaluation can be an interesting point to be discussed. But a separate discussion needed to look at this aspect.

CONCLUSION

The above discussion clearly suggests that there is a wide gap between the practices of homework prevalent in school system and the theory that is available in the field. Homework and its practices cannot be looked at in isolation. It need to be seen in the larger framework of teaching learning process and changes that they are witnessing. Also authors are of the view that the teacher education programme is the platform that can be a link between the practices and theory of homework as well as teacher education can prove a medium to situate the homework in the larger framework of teaching learning process. This proposed inclusion of homework education in teacher education programme will eventually lead to informed, research based practices of homework which will benefit learners in place of being hindrance in the learning process.

In concluding words, authors suggest that on the basis of above arguments, homework must be given a substantial place in teacher education programme and a proper framework needs to be developed to utilize the potentials of homework.

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OCCUPATIONAL STRESS AMONG WORKING WOMEN: A LITERATURE REVIEW

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ABSTRACT

Han Salye, probably the leading authority on the concept of stress, described stress as, 'the role of all wear and tear caused by life'. Stress is associated with constraints and demands. Constraints prevent the person from doing things what he or she desires. Demand refers to the loss of something desired. Women are playing a vital role in the economic and social development of the nations all over the world. Working women have a whole set of problems involving both family and professional lives. Occupational stress is a Major challenge for working women educators and their employing institution. As numbers of working women are increasing in education sector they have to deal with challenges like long working hour, Job insecurity, Lack of supervision, Poor relationship with colleagues, Workload, Role conflict, Lack of opportunity for growth and advancement and job dissatisfaction Bhawana Sharma and Manju Nair (2015). That means for working women it is two sets of overlapping responsibilities. Therefore, in addition to their traditional roles, professional roles seem to be one of the major sources of stress that working women have to face. This review of literature gives information about working women stress, factors in the working environment that cause stressful situations among working women.

Keywords: Occupational stress, working women, review of literature.

INTRODUCTION

Stress is highest for the individuals who perceive they are uncertain as to whether they will win or lose and lowest for those who think that winning or losing is a certainty. Occupational stress includes the environmental factors or stressors such as work overload, role ambiguity, role conflict and poor working conditions associated with a particular job Cooper and Marshal (1976). Stressed working women suffer from many problems like more illness, medicine intake, anxiety and depression. Few physiological and psychological symptoms were also found as reported by women educators experiencing high burnout Baue (2006). Women feel more stress that has low salary or income level than higher income level working women Khurshid et al. (2011)

Many numbers of variables have been studied, which are helpful for working women to take decision regarding to stay or leave the job, including job satisfaction, occupational stress, flexibility, and self-efficacy. In present time, various studies have conducted on stress in the teaching profession Chan(2008). Women faculty members underwent severe stress in the process of attaining Work Life Balance. Continued work pressure resulted in poor performance. The result revealed that many female teachers have neglected their health in the process of improving the life of their family members and their students Vijaya Lakshmi et al (2013)

STATEMENT OF THE PROBLEM

Stress is an ordinary segment of life. The work lives of working women in service sector are not easy; in fact, they are in the eye of the storm. This study has focused on evaluating the review of literature among the two groups of employees. Eight stress factors were identified by Pareek (1983) among working women. These factors, namely Inter Role Distance (IRD), Role Stagnation (RS), Role Expectation Conflict (REC), Role Erosion (RE), Role Overload (RO), Personal Inadequacy (PI), Self-Role Distance (SRD) and Role Ambiguity (RA) were used in this study to distinguish the opinion of academicians and corporate employees.

RESEARCH OBJECTIVES

- ✓ To find out the Review of literature considering occupational stress, Personality & Interpersonal factor among working women of academic & corporate sector.

REVIEW OF LITERATURE

a) Occupational Stress And Professional Women

Negative factors severely affect the personal outlook and its impact is more in working women. These negative stressors could relate to personal life experiences such as low self-esteem, low morale and constant urge of maintaining social status (Goodman, 1980; Schnacke, 1982; Schwanke, 1981). According to a study conducted by Farber (1984), factors such as failed administrative meetings, excessive paperwork, and lack of career advancement caused among suburban teachers in the United States of America.

In a study conducted by Smilansky (1984), it was found that administrative matters and working relations did not really affect elementary school teachers as their occupational stress was related to their interactive experiences with pupils and the subsequent behavior of pupils.

Van Fleet (1988) states that unusual situations coupled with extreme demands and pressures causes stress to a person. However stress may not be necessarily bad as it turns to be a motivating factor in certain cases. According to ILO (1986), stress is recognized as a major challenge to mental, physical and organizational health.

The role orientation and role performance of professional women depends upon the perceptions of their colleagues and peers. Professional women's work and career potential is jeopardized by the domestic role and social expectations (Taylorson, 1984). Work performance, health and psychological status of teachers are determined by the work related stress (Cooper, 1986; Capel, 1987; Pierce and Molly, 1990). Studies on teachers have revealed that teaching performance, job satisfaction, and decision making are affected by health and psychological issues (Quick and Quick, 1984; Eckles, 1987).

Traditionally university teaching has been perceived as a stress-free profession, particularly by those who are not related to this profession (Fischer, 1994). Conventionally thought to be a less stressful occupation (French et al., 1982), teaching profession is getting transformed to being more stressful over the last two decades (Olivier and Venter, 2003). Factors such as bureaucracy, paperwork and pupil unruliness have rendered more challenges to the profession of teaching. Teachers' sense of well-being and willingness to stay in the teaching profession is determined by the stressors. When generally compared, teachers stand to experience low levels of job satisfaction and high levels of psychological distress (Schonfield, 1990). According to Borg (1990), a sizeable quantity of teachers deems their profession as highly stressful as they stand to being exposed to many stressors.

According to Willmott (1995), the commodification of academic knowledge production which is increasingly judged in terms of its exchange value, represented in research funding and position in university league tables, rather than in terms of its intrinsic value as an original contribution to knowledge. It is argued that this results into the potential deprofessionalization of academic work and the proletarianization of the academic worker (Dearlove, 1997; Halsey, 1992). These changes are well-advanced and documented in the case of Britain, Australia, Canada, and the United States (Miller, 1995; Smyth, 1995; Harley et al 2004). However, such kind of studies, with reference to university faculty members, has not been conducted very extensively in India, though much of research has been done.

Two third of the university faculty reported that they perceived job stress at least half of the scheduled time. Faculty also expressed burnout, health problems caused by job stress, decreased work output, low capacity to manage the work stress and basis of job change. Over workload is one of the most frequently quoted reasons for considering job change, Blix et al. (1994)

According to Kyriacou (2001), teacher's stress is defined as a teacher's unpleasant experience charged with negative emotions – such as anxiety, tension, anger, frustration, depression – resulting from the teaching aspect. Furthermore, many factors such as work demands and work load, intermittent changes, assessment by seniors and pupils, handling peers, maintaining self-respect, control and position, role obscurity and improper work conditions have been enlisted by Kyriacou (2001) in his study of stress among teachers.

In a study on stressors and stress management among college teachers in Dharwad city, Jayashree Nayak (2008) posited that due to the complicated nature of the teaching occupation, many women teachers were always under some kind of stress.

Tharakan (1992) studied on occupational stress and job satisfaction among working women. He observed that professional women experienced greater work related stress than non-professional women. The expectation of technocrats was much higher than the no technocrats.

Li-fang Zhang (2009), Suggested that, controlling the self-rating abilities of the participants, the Favorable conceptual changes in teaching approach and their role insufficiency predicated that the conceptual change in teaching strategy is negative.

As postulated by Sudalaiyandi et al. (2011), more than half of the engineering college teachers in Tirunelveli were unhappy with their workload as they were expected to conduct special classes.

Factors that cause stress among women educators are long working hours, insufficient resources and overcrowded classrooms as postulated in an article by Kodavatiganti and Bulusu (2011) who state that women academicians face higher level of stress than men.

Ryhal and Singh (1996) studied the correlates of job stress among university faculty. A sample of 100 faculty members 30 professors, 31 associate and 39 assistant professors. Results revealed that assistant professors experienced higher job stress than associate professors and professors.

Orpen (1996) examined the moderating effects of cognitive failure on the relationship between work stress and personal strain. He compared the work stress among 136 nurses and 12 college lecturers. The results found that nurses experienced more stress than the lecturers

Upadhyay and Singh (1999) compared the occupational stress level experienced by the 20 college teachers and 20 executives. The teachers showed significant higher levels of stress than executives on intrinsic impoverishment and status factors. They experienced stress because their personal wishes and strong desire for better and prosperous career were felt to be blocked by others.

Davidson and Cooper (1983, 1992), in two books on managerial women and stress, found that managerial women felt isolated at work, exhibited Type A behavior, and experienced greater strain than did men.

Extra pressures on managerial women included lack of self-confidence and subtle forms of discrimination. The study confirmed the impression that working women still carry the major burden of home and family problems (Hochschild, 1997).

Hochschild (1997) estimates, based on major time-use studies, that woman in dual career families work an extra month of 24 hour days each year compared to men. This extra time is spent on what she terms "second shift" work, work outside paid employment such as housework, home management, and childcare. Together, these studies suggest that managerial women may experience more stress than men and that the sources of stress are gender-related; that is, related to the expected and actual roles of women in society, and to the fact that, despite progress, executive women still occupy minority status in organizations. There are some stressors, however, that may be particularly important for working women. These include organizational politics, tokenism, barriers to achievement, overload, social-sexual behavior, work/home conflict, and organizational restructuring and downsizing.

Bogg and Cooper (2008) conducted a study, with 1051 British civil servants, in which gender differences in occupational stress and strain were investigated. The OSI was used to measure job satisfaction, mental health and physical health. It was found that the female participants were significantly more job dissatisfied, and had poorer mental and physical health compared to the male participants. They were also more concerned about their role at work, and the work and home interface. The male participants were mainly affected by level of control at work and their achievement oriented behavior. A qualitative study investigated occupational stress in twelve managers in the English National Health Service. Semi-structured interviews were used to collect the data and two core categories were found, 'the fit manager' and 'the unfit manager'. It was further reported that female managers were more at risk from managerial stressors compared to male managers. The managers that were most psychologically fit used a combination of male and female attitudes and behaviors to cope with stress.

Contrary to all of the previous studies presented in this section, which reported higher levels of stress among women, a study conducted by Swanson, Power and Simpson found that male medical doctors experienced more occupational stress and less job satisfaction than their female counterparts.

Aston and Lavery (1993) collected data from women in managerial or professional occupations and in clerical occupations. Managerial women reported more intrinsic rewards, and extrinsic fewer intrinsic concerns, and higher on self-esteem. However no differences were found in depression, quality of life and symptomatology.

Teachers are perennially exposed to high level of stress cutting across all cultures (Copper and Kelly, 1993; Reglin and Reitzammer, 1997; Chan, 1998; Mokdad, 2005). The combination of long working hours, insufficient pay, role ambiguity, poor teaching facilities, lack of social recognition, poor organizational climate, strained relationship with colleagues makeup a stressful recipe.

Stress is often accepted as inescapable aspect of teaching. Teachers' lives are adversely affected by stress leading to physical ill health (Otto, 1986; Mokdad, 2005) and mental ill health (Fletcher and Payne, 1982; Finlay-Jones, 1986; Beer and Beer, 1992). Teacher stress often affects the teacher's ability to function effectively (Blasé, 1986; Poornima, 2010), sometimes to the extent of causing burnout (Seldman and Zager, 1998; Reddy, 2011). Other common responses listed by Brown and Ralph (1992) includes reduction in work performance and output; inability to manage time or delegate; feelings of alienation and inadequacy; loss of confidence and motivation; increasing introversion; irritability with colleagues; unwillingness to cooperate; frequent irrational conflict at work; withdrawal from supportive relationships; inappropriate cynical humor; persistent negative thoughts; increased substance abuse; loss of appetite; frequent infections; and accident proneness.

b) PERSONALITY FACTORS

Unwavering mental and physical features render an extraordinary and unique character to an individual and these combined features can be termed as personality. These individual characteristics are influenced by genetic and circumstantial factors. Differences in personality cause alterations in the emotions, attitudes, values and abilities of people involved in a common group (Afolabi and Omole, 2011).

The five personality traits of personality are neuroticism, extraversion, openness, conscientiousness and agreeableness. Neuroticism is a state where people tend to worry too much, feel insecure and self-conscious. Neurotic people tend to be impulsive and distressful. Extraversion is a state where people tend to be warm, friendly and sociable showering affection on fellow beings. Generally, extraverted people choose to stay in the company of others instead of being alone. Openness is a state where people tend to be intellectually curious, original and independent. Such individuals are highly regarded by their peers as they are more prone to generate novel thoughts and values. Conscientiousness is a state in which people tend to be well-organized, authentic and diligent. Conscientious people are self-disciplined and possess an inborn will to attain success. Agreeableness is a state where people tend to be trusting others and sympathetic. Such agreeable people are vulnerable to exploitation by certain elements (Bakker, Van Der Zee, Lewig and Dollard, 2006). All of these personality traits have been utilized to gauge various factors like methods of learning, understanding of the work space and culture, levels of stress, burnout and satisfaction of people (McManus, Keeling and Paice, 2004). The significance of all these personality traits have been confirmed by studies (Doherty & Nugent 2011).

Ngidi, D.P. (2006) examined the relationship between teachers' personality dimensions and their level of occupational stress. He used a standardized scale (KPQ) for eliciting teachers' personality dimensions and the researcher's own scale, Occupational Stress Inventory for Teachers (OSIT) for measuring teachers' occupational stress. The researcher using the method of factor analysis validated the OSIT scale. The research instruments were administered to a randomly selected sample of four hundred and forty four teachers. The findings revealed that teachers differ in the extent to which they experience stress from work-related factors. A very high percentage (67.1%) of teachers reported an above average level of occupational stress. The findings showed that there is a negative relationship between extraversion and occupational stress. The relationship between neuroticism and time pressures; neuroticism and administrative problems and neuroticism and pupil misbehavior was positive. The findings also indicated that neuroticism is the best predictor of occupational stress in situations involving time pressures; administrative problems and pupil misbehavior, whereas extraversion is the best predictor of stress in situations involving educational changes. The last findings showed that teachers' gender, qualification and teaching experience have influences on teachers' perception of time pressures; educational changes; administrative problems and pupil misbehavior.

Mental health professionals believe that personality type plays a significant role in how people perceive stress in their job. People with 'Type A' personalities, for example, are rushed, ambitious, time conscious and driven. Studies suggest that this trait, if not properly managed, can create stress-related illnesses. In contrast, the 'Type B' personality is more relaxed, less time conscious and less driven person. Type B personalities are able to view things more adaptively (Jamal, 2009). They are better able to put things into perspective, and think through how they are going to deal with situations. Consequently they tend to be less stress-prone in their work place.

A study (Srivastav, 2001) which examined the modifying effect of certain personality traits on the relationship of occupational stress, job behavior (job satisfaction, performance and absenteeism) and physical health in a sample of 300 technical supervisors, revealed that personality attributes like emotional stability, independence, and practicality markedly attenuate the adverse effect of occupational stress on employees' job satisfaction and physical health. But the traits of radicalism and conservatism did not modify the relationship of these variables to any significant extent. The study also revealed that employees' occupational stress significantly negatively correlated with their job satisfaction and physical health, but not with their performance and rate of absenteeism at work.

Grant and Fox (2008) examined the combined / interactive effect of the Big Five traits in predicting stress, coping, and strain among 340 working women. Low Neuroticism with high Extraversion and high Conscientiousness predicted lower stressor exposure, physical ill health and job dissatisfaction, whereas high Neuroticism low Conscientiousness predicted higher stressor exposure, dysfunctional coping, physical ill health and job dissatisfaction, and lower problem-focused coping. In addition, there was some evidence for a high Neuroticism-low Agreeableness interaction in the prediction of job dissatisfaction. They suggested that nomothetic and idiographic approaches should be integrated in future research to advance a more complete understanding of the role of personality in occupational stress.

One factor that has impeded integration and theoretical explanations of the personality sources of occupational stress is the lack of a proper framework describing the structure and nature of a job-related personality (Spector, 2006)

Margaret (2007) examined the relationship between personality hardiness, and occupational stress among 100 critical care nurses. She reported that hardiness was predictive of occupational stress and burnout. Hierarchical multiple regressions revealed that one of the three dimensions of hardiness, commitment to work, was the only variable to account for significant amount of variance (up to 24%) across three of four measures of occupational stress. The study did not provide support for the prior findings about stress buffering effect of hardiness i.e., hardiness \times occupational stress, was not convincingly predictive of burnout in nurses.

People who think optimistically can expect to have positive outcomes in their efforts in personal as well as professional lives (Kivimaki et al., 2005). In order to successfully deal with factors that cause stressful events, certain psychologically intervening strategies must be adopted to manage the stressors in a professional way. Irresponsible behavior, lack of commitment, inaction and lack of initiative adds to the stressful atmosphere leading to unprofessional lethargy (Hodgson et al. 2007).

Pearlin (1989) suggested that greater vulnerability to stress exists in social roles reflecting “the unequal distribution of resources, opportunities and self-regard” (p. 245). Inequalities in income, occupation and education, all indicators of social class, are recognized as major determinants of individuals mental health (Veenstra, 2000; Humphries and van Doorslaer, 2000; Diez-Roux et al., 2000).

c) INTERPERSONAL FACTORS

Stressors may include many components such as improper management, inadequate levels of interaction, lack of working relations among colleagues and seniors, lack of employee recognition, absence of job role description and work overload (Cooper et al., 2001). Stressors either alleviate or aggravate the functioning methods of individuals. Positive stress or eustress may cause people to align themselves in a significant way with the progress of the work that they are involved; and, negative stress or distress may cause them to lose their focus on their assignments and may lead to negative organizational outcomes (Uen, Wu, and Huang, 2009). Young managers who are somewhere at levels in between their seniors and subordinates need to handle both the upper and lower levels by efficaciously overcoming their personal anxiety and stress factors. The collaborative experience and the competence of such young and efficient managers help them to gain a fresh identity when they are promoted to a new organizational level (Hill, 2003). Employees are supposed to have good working relations and social support among their supervisors and colleagues as the lack of such relations and support mechanisms often induces unnecessary stress (Cooper et al., 2001). Furthermore, several employees competing for a limited number of organizational positions also causes interpersonal stress (Jex, 1998). Negligence of work-related stress is harmful to organizations as the collective organizational and personal performance is severely affected. Ample support from supervisors and colleagues, and smooth working relations with peers assist in successful handling of interpersonal stress (Uen, Wu, and Huang, 2009). The repetitive responses to stressful situations often makes stress to become a part of the routine behavior where some people get used to that specific kind of stress, which may otherwise be harmful to unseasoned individuals. Experiencing stress for longer periods of time eventually causes such individuals to be prepared in efficiently handling such situations. Such repetitive stress causes adverse effects such as increased blood pressure, increased heartbeat, faster respiratory cycles, difficulty in digestion, reduced immunity, increased cholesterol levels, increased quantities of blood sugar, etc. However, for inexperienced employees, such levels of stress may be difficult to handle at least in the initial stages (Terrill, Garofalo, Soliday, and Craft, 2012). Satija S. & Khan W. (2013). According to them Occupational Stress is as same as Job Stress that needs to be controlled at the workplace otherwise it will negatively effect on employee's work attitudes & behavior. This study investigates that, the relationship between Emotional Intelligence and Occupational Stress. This study revealed findings that, Emotional Intelligence is a most significant predictor of Occupational Stress

CONCLUSION

Makowska (1995) studied psychosocial determinants of stress and wellbeing among working women. Work-related stressors were found to affect individual's more than familial responsibilities. Work-life balance is essential for enhancing productivity at work and job performance. In order to manage the efficiency of women considering personality & stress factors, organizations need to ensure that women are able to attain a balance between their work life and their home life. To avoid miscommunication or confusion about job roles and expectations, the duties required of an employee must be clearly outline by the manager which would further help in avoiding conflict within a work place. Timely feedback should also be provided to employees as this tells the role-taker that they are performing the job satisfactorily and as per the role requirements which can

further assist the employee in taking up any concerns they have. Managers should take specific steps to avoid crossover of potentially conflicting roles. Having multiple roles has been observed to lead to job dissatisfaction due to lack of motivation. Luecken, et al. (1997) have reported that working women with children at home, experience higher levels of home strain than those without children at home, irrespective of marital status or social support.

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URBANIZATION AND CRIME: A STUDY OF GUWAHATI

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ABSTRACT

Urbanization as considered from the economic aspect, it is good as it facilitates achievement of economic of scale and thus promotes growth of industries and development in the economy. Moreover from social point of view urbanization encourage crimes as the rate of crime is higher in large cities and in urbanized areas. Several explanations have been provided on crime in the literature as well as many empirical studies. However in this paper determinants the link between urbanization and crime, because urbanization which in some way have contributed to the rise of crime rates in cities. In this present study, there is sincere hope to present a vivid, realistic and analytical discussion of essential facts that there are more crimes in cities comes to mind which is promptly being answered by that one can count many crime reports in cities as compared to rural area. So due to different causes, past few year the crime rate has increased within the sphere of urbanized areas which also focused in this study. On the other hand, present study is most significant, because from the foregoing literature on the urban crime, there has been gap in knowledge. In any existing situation demands a researcher to fulfill that gap? So crimes with reference to the city are significance to provide a sociological understanding of urban crimes and criminals, which exists in most of the crime in any urban setting.

Keywords: Crime, Criminals, Urbanization.

INTRODUCTION

Crime is a complex social problem. Unlike the problem created by urban growth, international tensions and possible nuclear war, Crime has long been with human societies. Crime it is an act which the group regards as sufficiently manacng to its fundamental interest to justify formal reaction to restrain the violation (E.N. Johnson). Crime is a relative concept, its varies from society to society, country to country and also time to time in the same society. There is no society can free from the act of criminality. Therefore, it is an act or omission prohibited by law for the protection of public and made punishable by the state in a judicial proceeding in its own name (Marshall and Clark 1962)

According to Durkheim (1947) crime is an act that offends certain very strong collective sentiments (Borbora 2007:1)

Durkheim (1950) contends that crime is present not only in majority of societies of one particular species but in all societies of all types. There is no society that is not confronted with the problem of criminality (Barbora 2007:2)

The problem of crime is an anti-social behavior. A man in normal conditions generally does not commit crime. There are some factors such family background, socio-economic condition and social disorganization etc. which are responsible for involved a person became criminal. Criminal are the individuals that defined in the criminal code. According to the nature of crime against the persons includes such illegal acts as murder, assault, rape, crime against property includes burglary, larceny, forgery, automobile theft and crimes against public order consists of such behavior as prostitute gambling, drunkenness disturbing the peace and the use of narcotics (holt, Rinehart and Winston 1967)

With the advancement of industrialization, urbanization, modernization, globalization crime is gradually rearing its ugly head all over the world. In recent years, crime has become democratic. It was formerly a phenomenon attributed primarily to poor people residing in lower socio economic areas. Crime is now recognized by most people as a moral corruption that is apt to and does infect all strata of society. Crime is present not only in the majority of societies of one particular species but in all societies of all types. There is no society that is not confronted with the problem of criminality. Therefore crime is a common and dangerous thing in our society. Specially criminal activities damage the basement of a country. Crime which is varies from society to society in different period of time, but with instead crime has become an urban phenomenon, due to urbanization, growth of industry, migration, employment potential etc. people generally move from rural to urban areas and settled there, for better opportunities. But urbanization basically carries some material of this crime and as consequence crime increasing in urban areas. So basically in urban areas such as city, town has given much opportunity and much facility to do crime. At present crime has speeded in rural area but here there is no the shed of urbanization.

Urbanization is a process whereby population moves from rural to urban area, enabling cities and towns to grow. It can also be termed as the progressive increase of the number of people living in town's areas. So industrialization, specialization and economic development are considered as related to the theories of urbanization. A basic feature of urban is the shifting in employment from rural to urban or industrial sector. In other word, urbanization is an indicator of industrial development in the economy. Labour market pooling, trade of goods and services, knowledge spillover, high level of income and economic relations are the basic pillars of urbanization. This type of development is helpful for employment creation, poverty reduction and planned local business development in the urban regions. Theories suggest that urbanization good for promoting growth of industries and development in the economy. The other face of the urbanization many be the encouragement of crimes as well, since, crimes normally occur in large cities and in urbanized areas (Krivo and Peterson 1996). In rural areas, due to lower population density, criminal persons have less chance of hiding themselves because people know each other. The opposite is true for urban areas. The main facts of crimes in urban areas are the fewer chances of arrest and recognition (Glaosen and Sacerdote 1996). Therefore, it is argue that as urbanization increase so does crime (Galvin 2002; Gaviria 2002). Hence, one may argue that more urbanization is an indicator of higher crimes.

On the other hand, due to social change that affect the concept of crime in many ways which can be through development is science, technology, through changes in Predominant moral and social philosophy, through changes in the structure of society, especially in its transition from a rural self contained and relatively sparsely populated to highly urbanized, industrialized pattern.

OBJECTIVES

The objectives of this paper will be to analyze the causes and effect of urbanization in relation to increasing crime. This study also analyzes the trend and patterns of crime in Guwahati (Kamrup Metro) city.

METHODOLOGY

The present study has been conducted through primary and secondary source like books, research papers, articles police records etc. Therefore, information regarding crime scenario of Guwahati was collected from district authorities (DC, ADC), Municipal Administration department (Chairman and Mayor), Police Administration (Commissioner SP, DSP, SI) for primary data and also the reported cases of crime has been collected from deficient records of police officers of Guwahati (Kamrup Metro).

REVIEW OF LITERATURE

Literature review is the mostly significant part of a research. Here, the researcher defined the connection between urban phenomenon and crime. Crime is largely an urban phenomenon but the specifically urban area dimensions of the social process that connected with crime have been seriously understand in much recent criminological work. Louis wirth (1938) in his classic article on urbanism took the three concepts of size, density heterogeneity as key features from which one could analyze social action and organization in cities. We viewed "the close living together and working together of individuals who have no sentimental and emotional ties foster a spirit of competition aggrandizement and mutual exploitation. However Becker view on crime in urbanization (1968) over population is the main and important part of urban crime while 30% of the world population was living in urban areas in 1950, it was about 47 in the year 2000, his view lives us a clean conception that with the increase of populations, different crimes are also increased. We can realize that growth of population is a major cause of crime in urbanization on the other hand, clinard (1992; p.203) elaborated that view by arguing that there is more crime is density, populated areas than in scarcely populated rural areas because of urban characteristics such as mobility, impersonal relations, differential associations, limited participations in community organizations organized crime cultures and a criminal type in the life experience of offenders.

However crime rates are not evenly distributed over geographical areas in urban settings. Some neighbourhoods are more corbelled by crime and even within neighbourhood there are considerable differences between areas as a result of subtle inter plays between physical characteristics and people's behaviours. The early Chicago seha of sociology stimulated the study of concentrations of crimes in cities al over the world (Park and Burgess 1967) introduced the idea that a city can be ecologically divided into concentric zones with varying crime rates. The highest crime rates were in the transitional zones surrounding business centres. But Gerban J.N. (2007), propounded that residents in the rural areas are less confronted with crime because of higher levels of social because of higher levels of social cohesion and informal social control and lower offender rates in a well-ordered physical surrounding criminal live more frequently in cities in which their crimes are concentrated in city centers and their surroundings. The greater the distance to the city centre, the less crime occurs.

ANALYSIS

In the last decade, the rapid growth of cities and exacerbated social problems has led to a great deal of inquiry on the extent to which the physical forms of cities can contribute towards achieving a just and sustainable future. There are qualitative differences in the incidence of crime in areas of varying degree of urbanization. In this regard 'Durkheim' was one of the first writers, to state clearly that urbanization inevitably results in a greater amount of crime and such a position as, in part been validated by later research which, however, has usually been restricted to one extreme of the continuum of urbanization namely, the great metropolitan areas.

Crime, the term, through cannot be defined precisely and exhaustively has been known all the ages' civilizations. Increases in crime during this period were believed by many to stem directly from the social changes brought about by the complex processes of urban industrial development. Among the determinants of crime were thought to be conditions of poverty, low levels of education, population's density and crowding urbanism and migration.

Here, the researcher has been analyzing the causes and effect of urbanizations

- i) Industrialization, it's a trend represent a shift from the old agricultural economics to novel non-agricultural economy. Industrialization has increased employment opportunities by giving people the chance to work in modern sectors in job categories that aids to stir economic developments.
- ii) Commercialization and trade play a way role in urbanization. The distribution of food and services and commercial transactions in the modern era has developed modern marketing institutions and exchange methods that have tremendously gives rise to the growth of towns and cities.
- iii) Social benefits and services; there are numerous social benefits attributed to the in the cities such as include better educational facilities, better living standards better sanitations and better recreation facilities and better social life in general on this account, more and more people are prompted to migrate into cities to obtain the nude variety of social benefits and services which are lenaviable in the rural areas.
- iv) Employment opportunities; in cities there are various job opportunities that continually draw people from the rural areas to seek better livelihood. Therefore, the majority of people frequently migrate into urban areas to access well paying jobs an urban areas have countess employment opportunities in all developmental sectors such as public health, education, transport, sports and recreation industries and business, enterprises.
- v) Modernization and change in the mode of living; modernization plays a very important role in the process of urbanization. As urban areas, become more technology sawy together with highly sophisticated communication medical facilities, dressing code, liberalization. In urban areas, people also embrace changes in the modes of living namely residential habits, attitudes, dressing, and belief. As a result people migrate to cities grow by absorbing the growing number of people day after day.
- vi) Rural urban transformation; as localities become more fruitful and prosperous due to the discovery of minerals, resource exploitation on agricultural activities cities start emerging as the rural areas transform to urbanism.

On the other hand, urbanization effects have some positive as well as negative consequences. The positive implication of urbanization therefore includes creation of employment opportunities, technological and infrastructural advancement, improved transportation and communication, quality educational and medical facilities and improved standards of living.

But urbanization also implication some negative consequences such as urbanization attracts people to cities which lead to population increase, with increase in the number of people living in urban centers, there is continued sacreity of house. This is due to insufficient expansion space for housing and public utilities, poverty, unemployment and costly building materials which can only be afforded by few individuals. However the problem of joblessness is higher in urban areas and it is even higher among the educated people. It is estimated that more than half of unemployment youth around the globe live in metropolitan cities. So the increasing relocation of people for rural areas to urban areas is the leading cause of urban unemployment on the other hand, due to urbanization the crimes normally occur in large cities and in urbanized areas. The main facts of crimes in urban areas are the less possibility of arrest and less probability of recognition and families are less intact in urban areas.

In this present study is an attempt conduct a scientific and sociological research about urbanization and crime. In this regard, the study has conducted in Guwahati. Assam has the largest urban population of 4.3 million (census 2011) amongst the north eastern state. Guwahati has about 0.9 million urban populations, while the

other large cities of the state are Nagaon (population 16,355), Dibrugarh (population 138,661) and Silchar (population 172,709). This indicates that other than the concentration of more than 25% urban population of Assam in Guwahati. Assam has a well distributed urban population cross the state. The state's level of urbanization is 14 percent in the census 2011, where is a 1.2 percentage point increase over the census 2001 urbanization level of 12.9 percent. Moreover, it is lower than the all India annual rate of urbanization which is 2.82 percent per annum in 2001-2011 (population census of India 2011).

As per the percentage of urban population to total population in census 2011, the districts of Assam are ranked such as

Rank in 2011	District	Percentage
1	Kamrup Metropolitan	82.9
2	Dima Hasao	28.7
3	Jorhat	20.1
4	Tinsukia	20.0
5	Dibrugarh	18.4
6	Cachar	18.2
7	Bongaigaon	13.8
8	Goalpara	13.7
9	Nagaon	13.0
10	Karbi Anglong	11.8
11	Nalbari	10.7
12	Dhubri	10.7
13	Sivasagar	9.6
14	Kamrup	9.4
15	Golaghat	9.2
16	Karimganj	9.1
17	Sonitpur	8.9
18	Lakhimpur	8.8
19	Borpetta	8.7
20	Morigaon	7.7
21	Chirang	7.4
22	Hailakandi	7.3
23	Dhemaji	7.0
24	Kokrajhar	6.2
25	Darrang	6.1
26	Udalguri	4.5
27	Baksa	1.3

Source: (Provisional Population Totals, Paper 2, Vol. 2 of 2011 census)

The above table reveals that in the different districts the urban population rate was also different. But among the district the highest urban population is Guwahati (82.9) and lowest in Baksa (1.3).

However as a major urban population area; Guwahati (Kamrup Metro) the urban crime scenario as also significant Guwahati is the largest urban centre in Assam accounting for 23.8 percent urban population of the state. It is comparatively a new city in the country's urban landscape, but its significance lies in the fact that it is the leading urban centre of the entire northeastern region of the country. The city is receiving a large number of people who enter the lower circuit of job market and from the poor or deprived class of the city. As a result, the city has experienced a heavy influx of people from both the rural and urban areas. However, Guwahati in the last twenty five years has grown tremendously in all sectors due to rapid urbanization. It's a process of urbanization that an indicator of the socio-cultural environment degradation is the alarming rise of crimes. In the Guwahati (Kamrup Metro), as per crime reported ncrb.gov.in the 2013 there are 3310 cases has been reported in the city. In Guwahati, day by day number of cases was registered in the police stations; but the number of cases registered in Dispur and Paltanbazar Police Stations. However, there are different types of crime has reported such as theft, dacoity, robbery, cheating, murder, rape, kidnapping, domestic violence, cyber crime, downy death etc. But last few years a number of crimes against women has been increased in the city. Therefore it was necessary to understand the tread of crime in Guwahati (Kamrup Metro). According to the Police records (khatiyan) the reported cases were presented in the following manner, to know whether crime rate was increasing or decreasing.

Table-1: Reporting crime of Guwahati city

Year	Reported cases	Increasing/ Decreasing
2013	5,047	- 0
2014	5,378	-331
2015	5,307	-71
2016	5,401	-0.094
2017	5,810	-0.409

So, the data in the above table no. 1 reveals that in every year the crime rate was increasing. In the year 2013 total 5,047 cases were reported and in 2017 it goes higher compared with previous years. The interesting facts revealed from the table that in the city year wise reported cases has been increased.

On the other hand, it was stated earlier that in the city, due to rapid urbanization, it impact positive as well as negative, the negative impact such as increased crime rate crime with urbanization should be showing highest degree of crime against women in the city. The alarming rise of crimes against women calls for a serious speulaties for the development of the society. Crime against women comprises of 17%. Guwahati metropolitan records the highest number of total crimes. There are number of cases registered in different police stations in the metro city, but its rate highest in Jalukbari, Dispur, Paltanbazar, women police station (Panbazar). They are mostly reported cases against women such as kidnapping, rape, dowry, domestic violence, and as high illegal migrations for money women forcefully involve in prostitutions. So, in this regards the following table has been presented.

Table-2: Depicting to show the total crime and crime against women

Year	Total crime	Crime against women
2013	5047	959 (79%)
2014	5378	998 (83%)
2015	5307	1077 (89%)
2016	5401	1097 (91%)
2017	5810	1242 (1035%)

The table defined that there is a gradual growth of number of crimes committed against women in Guwahati. However, as compared with total of crime the maximum crime against women. So the numbers of crimes against women are high in those areas of the city which are thickly populated.

Therefore, the above stated information's were critically analyses and was shared by the concerned persons engaged in the maintaining the statistical records of crime in Guwahati (metro) city.

In this regard, in Guwahati, were urbanization brought industrial development and employment opportunities in the city. It is also known that most of the slums are found within the most urbanized areas and Guwahati is one of them. However, there are different factors of people involving into crime, and socio-economic factor one of them, this factor directly or indirectly involving people towards crime, such as the capitalist order in rewnewed form, which widens the gap between rich and the poor. For example alcohol consumption by the poor is often associated with their committing of some sort of crime; however, this is not the only factor contributing to the rising crimes in urban areas such as in Guwahati (Kamrup metro).

CONCLUSION

From the above analysis, we can say that, as increasing urbanizations in the city, the population rate is also increasing as population has increased the number of problem have been occurred and increasing crime rate in urban area is one of the significant point of study. The impact of the process of urbanization on the reasons of crime is more widen as it promotes changes in social structure, promites culture conflict and a change in the space environment thereby it induels an increasing number of criminals elements. Although the official data from diverse sources (primary and secondary sources) provides a scenario that how crime has been increased in the city. It is often seen that the crime rate published in newspaper exceeds the official tabulated data, as many crimes go unreported. However this official statistics cannot be denied as they very well depicts a distinct picture of different crime.

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A STUDY OF THE COST EFFICIENCY OF SELECT GOVERNMENT HOSPITALS

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ABSTRACT

This paper aims to study the cost efficiency of government public hospitals in the State of Andhra Pradesh (before bifurcation of the State). For this purpose 12 district hospitals are selected from different regions of Andhra Pradesh State and their common Decision Making Units (DMUs) are identified. The Data Envelopment Analysis (DEA) econometric tool is used to measure the efficiency and the best performing hospitals are ranked. The technical efficiency scores are computed using DEA analysis program, version 2.1 (XLDEA 2.1) one of the leading and trusted DEA software. Hospital utilization ratios are also computed using Microsoft Excel. The data was collected from Andhra Pradesh Vaidya Vidhana Parishad (APVVP) for five years. The period of study covered financial years from 2005-06 to 2009-10. The analysis is done by classifying the data into Input, Output and Explanatory variables. The results show that few hospitals are ranked high due to consistent performance and other hospitals are scored less for low performance during the period of study. Three of the hospitals were found to be reducing their efficiency level that may be due to comparatively lesser population catered to by these hospitals. It is observed that hospitals in remote areas are less dense or less urbanized areas are relatively serving lesser population and therefore are relatively less efficient.

Keywords: Cost Efficiency, Public Hospitals, Performance, Variables, Methods, Data Envelopment Analysis, Decision Making Units, Productivity.

INTRODUCTION

The present study deals with the comparative study of the cost efficiency of select public hospitals in pre-bifurcation period of Andhra Pradesh. It is often argued that health care institutions are not expected to be efficient, as they do not adhere to neo-classical firm optimization behavior (Rowna, 2000). There has been rapid increase in the application of different methods to measure hospital efficiency, the most commonly devised method for the purpose is Data Envelopment Analysis method.

The Data Envelopment Analysis (DEA) is an increasingly popular decision making tool based on linear programming technique for measuring relative efficiencies of a set of comparable entities. It has been extensively applied in performance evaluation and benchmarking of schools, banks, hospitals, manufacturing concerns etc. DEA was introduced by Charnes, Cooper, Rhodes (1978) to assess the relative efficiencies of the organizational units with multiple inputs to produce multiple outputs.

OBJECTIVES OF THE STUDY

The main objective of the study is to make a comparative study of the cost efficiency of select government hospitals in Andhra Pradesh State, India using DEA model. It attempts to rank the government hospitals based on their efficiency and also measures the magnitude of gap between the low performing hospitals from high performing hospitals.

LITERATURE REVIEW

Carnes, Cooper and Rhodes (1978) introduced the Non-Parametric method of measuring and comparing efficiency that can be used in service sector having multiple Decision Making Units (DMUs) with different units of measurement. The scale of operations is not the aspect of comparison but all the institutions or organization must have the common DMUs existing in the same basic environment. Robert W. Rutledge, Sharon Parsons and Richard Knaebel (1995) emphasized on the DEA methodology and its ability to determine the relative efficiency of each of the latest available data for a mid-sized non-profit hospital in the south east united states .DEA was able to simultaneously consider multiple inputs and outputs with which it classified months as efficient or inefficient. Bill Binglong Wang, Yaser A Ozcan and Thomas T.H.Wan(1999) identified 6010 hospitals for analysis from the American Hospital Association's Annual Surveys for 1989 and 1993 and applied data envelopment analysis (DEA), to study hospital efficiency in the United States. Results suggest that large hospital generally demonstrated higher inefficiency. The major inefficiencies exist in the availability of hospital services, the number of operating beds, the utilization of hospital staffing and operating expenses.

Rowena Jacobs (2000) examined hospital Efficiency using data envelopment analysis and stochastic frontier analysis at UK department of health and compared the efficiency rankings from the cost indices with those obtained using DEA and SCF and paper concluded that each method has particular strengths and weaknesses and potentially measure different aspects of efficiency. Ramesh Bhat, Bharat Bhushan Verma and Elan

Reuben (2001) focused on analyzing the hospital efficiency of district level government hospitals and grant in aid hospitals in Gujarat using Data Envelopment Analysis. Duncan Mortimer and Stuart Peacock (2002) compared the policy value of DEA and SFA based measure against more commonly used indicators of hospital performance. The methodology they used is the comparative analysis of DEA and SFA in estimating the relative efficiency of hospitals in Victoria. Possible sources of measured inefficiency were investigated via Battese and Coelli (1995) effects model in the case of SFA based efficiency scores and via second-stage regressions in the case of DEA based efficiency measures. The content and consistency of DEA and SFA based targets and measures are then compared against simple cost/output ratios. Antonio Afonso and Sonia Fernandes (2005) have contributed to DEA efficiency scores and Malmquist indexes for a panel data set comprising 68 Portuguese public hospitals belonging to the National Health System (NHS) in the period 2000-2005, when several units started being run in an entrepreneurial framework. William W. Cooper, Lawrence M. Seiford and Joe Zhu (2007) have provided an introduction to DEA and some of its uses. Milan M. Marti, Marina S. Novakovi and Alenka Baggia (2008) presented ample possibilities for using the DEA for the evaluation of the performance of bank branches, schools, university departments, farming estates, hospitals and social institutions, military services, entire economic systems (regions) and other things. DEA is a methodology of several different interactive approaches and models used for the assessment of the relative efficiency of DMU and for the assessment of the efficiency.

DATA ENVELOPMENT ANALYSIS (DEA) MODEL

Data Envelopment Analysis (DEA) is a multi-factor productivity analysis model for measuring the relative efficiencies of a homogenous set of Decision Making Units (DMUs). The efficiency score in the presence of multiple input and output factors is defined as:

$$\text{Efficiency} = \frac{\text{Weighted sum of Outputs}}{\text{Weighted sum of inputs}}$$

$$\text{Maximize} = \frac{\sum_{r=1}^s U_r Y_{rj}}{\sum_{i=1}^m V_i X_{ij}}$$

$$\text{Subject to: } \sum_{r=1}^s U_r Y_{rj} + \sum_{i=1}^m V_i X_{ij} \leq 1; j = 1, \dots, n$$

$$U_r, V_i \geq 0; r=1, \dots, s; i=1, \dots, m$$

Y_{rj} = amount of output r from hospital j

X_{ij} = amount of input i to hospital j

U_r = weight given to output r

V_i = weight given to input i

n = number of hospitals

s = number of outputs

m = number of inputs

Maximize = an LPP concept to Maximize efficiency for utilizing the inputs for the better outputs level

In DEA the efficiency of an organization (district hospitals in this case) is measured relative to a group's observed best practice. This implies that the benchmark against which to compare the efficiency of a particular district hospital is determined by the group of district hospitals in the study and not a value fixed by hospitals outside of the group. The basic DEA model helps to find answers to questions such as:

- Which district hospitals (or hospital departments) are the most efficient?
- If all district hospitals are to perform according to best practice (i.e. the efficient peer hospitals), by how much could inputs/resources be reduced to produce the current output levels; or alternatively, by how much could outputs be increased with the current input levels?
- How much resources can be potentially saved if all district hospitals are operating at an optimal scale?
- Which of the efficient district hospitals can serve as role models for the inefficient ones (so that their method of doing business may be emulated)?

DEA easily accommodates multiple inputs and outputs without the requirement for a common denominator of measurement. This makes it particularly suitable for analyzing the efficiency of hospitals as they use multiple inputs to produce many outputs. Furthermore, it provides specific input and output targets that would make an inefficient hospital relatively efficient. It also identifies efficient peers for those hospitals that are not efficient. This helps the inefficient hospitals to emulate the functional organization of their peers so as to improve their efficiency.

However, like many other empirical methods, DEA has its limitations. First, it produces results that are sensitive to measurement error. For example, if one hospital's inputs are understated or its outputs overstated, it can become an outlier and significantly reduce the efficiency of other hospitals.

Second, DEA measures efficiency relative to the best practice within hospitals in the particular sample. Therefore, it is not possible to compare how district hospitals in Andhra Pradesh fare relative to their counterparts in India with respect to technical efficiency.

Allocative Efficiency: The Allocative efficiency shows whether, for any level of production, inputs are used in the proportion which minimizes the cost of production, given input prices. It determines that level of activities which takes the minimum cost of production or operations for the best output levels. It concentrates more in minimizing the costs of inputs.

Technical Efficiency: The technical efficiency concentrates on conversion of physical inputs, such as labor services and raw materials or semi-finished goods, into outputs. Technical efficiency is determined by the difference between the observed ratio of combined quantities of an entity's output to input and the ratio achieved by best practice. It can be expressed as the potential to increase quantities of outputs from given quantities of inputs, or the potential to reduce the quantities of inputs used in producing given quantities of outputs. Technical efficiency is affected by the size of operations (scale efficiency) and by managerial practices (non-scale technical efficiency). It is defined independent of prices and costs.

Scale efficiency: The scale efficiency determines the extent to which an organization can take advantage of returns to scale by altering its size towards optimal scale (which is defined as the region in which there are constant returns to scale in the relationship between outputs and inputs).

Non-scale technical efficiency: The non-scale technical efficiency determines the proportion of technical efficiency which cannot be attributed to divergences from optimal scale (scale efficiency); sometimes known as managerial efficiency or pure technical efficiency.

Productivity: Measure of the physical output produced from the use of a given quantity of inputs. This may include all inputs and all outputs (total factor productivity) or a subset of inputs and outputs (partial productivity). Productivity varies as a result of differences in production technology, differences in the technical efficiency of the organization, and the external operating environment in which production occurs.

Returns to scale: The returns to scale show the relationship between the outputs and inputs. Returns can be constant, increasing or decreasing depending on whether output increases in proportion to, more than or less than inputs, respectively. In the case of multiple inputs and outputs, this means how outputs change when there is an equi-proportionate change in all inputs.

DATA COLLECTION

Data was collected using a questionnaire that included information on inputs, outputs. The secondary data have been collected directly from the APVVP, Andhra Pradesh Vaidya Vidhana Parishad located at Kothi, Hyderabad, India. The data includes selected government public hospitals. Personal interviews were conducted, the response from the finance officer, ETC officers and others was remarkable depending on which the variables were decided. The period of study covered 5 years which includes the financial years from 2005-06 to 2009-10.

INPUT-OUTPUT DATA ANALYSIS AND METHODS

Sampling

The study focuses on approximately 50% population of 23 district hospitals in Andhra Pradesh ($N = 12$) before bifurcation into two separate States, Telangana State and Andhra Pradesh State (India) on 2nd June 2014. These hospitals are distributed over the 3 regions of the state of Andhra Pradesh namely Andhra (5), Telangana (5) and Rayalseema (2).

Selection of inputs and outputs

Variable	Type	Code	Description	Units
Input	Capital	Bed	Number of Beds	Numbers
Input	Operating	Drug	Expenditure on Drugs	Expenses
Input	Operating	Diet	Expenditure on Diet	Expenses
Input	Capital	L&Eq	Expenditure on Lab and equipment maintenance	Expenses
Input	Operating	DT	Expenditure on Domestic travels	Expenses
Input	Capital	BMW	Expenditure on Biomedical wastes	Expenses
Input	Operating	WEOOE	Water Electricity and other office expenses	Expenses
Input	Staff	CAS	Civil Assistant Surgeon	Numbers
Input	Staff	NPS	Nursing and Paramedical Staff	Numbers
Output		IP	In patients	Numbers
Output		OP	Out patients Cases	Numbers
Output		MJS	Major Surgeries Cases	Numbers
Output		TUB	Tubectomy Cases	Numbers
Output		DLV	Deliveries Cases	Numbers
Output		USG	Ultra Sonography	Numbers
Output		X-Ray	X-Ray Cases	Numbers
Output		ECG	ECG Casess	Numbers
Output		LAB	Laboratory Cases	Numbers
Explanatory		PHC	Preventive Health Care	Index (0-1)
Explanatory		MCH	Maternal and child health care	Index (0-1)
Explanatory		CDS	Communicable disease services	Index (0-1)
Explanatory		NCD	Non-communicable disease services	Index (0-1)
Explanatory		CMS	Curative Medical Services	Index (0-1)

Table 1: Variables and their Description

Input Variables: The input variables are broadly classified into capital expenses, labour and Operating expenses. The degree of disaggregation within these categories depended on the homogeneity of an input category, the quality of data within which to measure this input. Nine variables were defined to measure input variable, common to all hospitals. The level of aggregation or disaggregation of each head (staff, capital or operating) depended on the information available. For example the input variable of staff could consist of total staff strength of a particular hospital. The input variable of total staff strength, under the head of staff input was disaggregated as per information available into number of doctors, nurses, paramedical staff, administrative staff and others.

The essential physical infrastructure like OPD, consultation room, ward etc. is measured by creating an index to assess the presence and the absence of the standard items of infrastructure. The information is collected by administering the questionnaire, consultation with the technical personnel and pilot study. Though, it is compulsory to build up the hospitals with the required infrastructure, it was found in few instances that the equipments are not maintained properly depriving the services to the patients.

Three measures of the capital inputs were available; a measure based on the number of beds per hospital, expenditure on Lab and Equipment and the expenditure Bio medical waste, to measure the capital investment. Beds are often used to proxy for capital stock in hospital studies usually because a reliable measure if the value of assets is not available. Operating expenses includes the expenses on drugs, diet and water, electricity and other office expenses. The selected operating expenses were found in the budget on regular basis, where as other items which are released based on the special requirements and that are not regularly released in the budget are ignore for the purpose of reducing data redundancy.

Staff inputs were measured by total time devoted for attending parties and the total manpower employed for attending the patients.

Output variable: Hospitals provide six major services: outpatient services, in-patient services, major and minor surgeries, deliveries, tubectomy and Laboratory services. Given this homogeneity in types of services provided, the number of cases treated/handled under each category was chosen as a representative measure of these output variables.

Improved health status is the ultimate output of hospitals or the health system at large. However, due to difficulties in accurately measuring improvements in health status, hospital output is measured by an array of intermediate health services that supposedly improve health status.

Although there is a general consensus that the ultimate measure of output should be an improvement in the quantity and quality of life, practical difficulties limit the use of the outcomes approach. Health is multi-dimensional and affected significantly by a host of other socio-economic factors. Consequently, output is measured as an array of intermediate outputs (health services) that supposedly improve health status.

Explanatory Variables: The explanatory variables consist of qualitative variables, Preventive Health care is measures by devising an index for preventive health care services provided by the hospitals by equally weighing the presence and absence of the various standard services provided by the hospitals. It was hypothesized that this would help explaining variance of the number of cases treated. For this purpose an index was devised and the value of this index of services ranges between 0 and 1. Similarly indices are derived for the Maternal and child Health care services and curative medical services. These indices, when regressed against the data for OPD cases and Inpatient cases, help explain the variance and correlation if any between these services and the OPD and inpatient activities.

Assuming that a particular hospital participate in a national communicable and /or non-communicable disease programme if there is a need felt in the region in which the hospital is located.

In the present study an index is devised to measure in binary terms, 0 for the non-availability and 1 for the availability of the explanatory variables.

Buttler(1995) classifies hospital output into four broad categories: inpatient treatment, outpatient treatment, teaching and research. Measuring hospital output by such variables as inpatient days or outpatient visits does not capture the case-mix and the quality of service rendered. Even though the use of Diagnosis-related groups may handle the problem of hospital case-mix; the absence of data makes its use limited in most developing countries.

DHCS*	PHC*	MCH*	CDS*	NCDS*	CMS*
Mahaboobnagar	1	1	1	1	0
Sangareddy	1	1	0	1	1
Nizamabad	1	0	1	1	1
Karimnagar	1	1	1	0	1
Nalgonda	1	0	1	1	1
Vizianagarm	1	0	1	1	1
Rajahmundry	1	1	1	0	1

Eluru	1	1	1	1	0
Machilipatnam	1	0	1	1	1
Nellore	1	1	0	1	1
Chittor	1	1	1	0	1
Nandyala	1	1	1	1	0

Table 2 Index for availability of Explanatory Variables

*DHCS: District Health Care Services, PHC: Preventive Health Care, MCH: Maternity & Child Health Care, CDS: Communicable Disease Care, NCDS: Non-Communicable Disease Services, CMS: Curative Medical Services

DATA ANALYSIS

The technical efficiency scores are computed using data envelopment analysis program, version 2.1 (XLDEA 2.1) one of the leading and trusted DEA software. Hospital utilization ratios are also computed using Microsoft Excel.

Output-oriented model was used in this study, as the decision to use or not to use the district hospital services is at the discretion of the consumer/client/patient. It is an exogenous factor that hospital managers may not have total control of. But the performance speaks itself.

A DEA Model was run after feeding the input and output variables into the Program. Twelve District hospitals were selected and fed into the model for analysis of technical and allocative efficiency. The DEA Program used for analysis based on the work of Ramesh Bhat and Bharat Bhushan Varma (2001).

There are two programs available in the computer program. The first involved the constant returns to scale (CRS) and the second one involves the Variable returns to scale (VRS) model. As the selected hospitals are catering to a similar kind of population and operate at the same level, only CRS model is applied. The size of the hospital is not considered as the sample is taken for district hospitals alone. In some studies small, medium and large size hospitals are taken to calculate the efficiency in DEA. But the major limitations of those studies include the failure to consider the size of the organization as part of the variables. In the present study this limitation is overcome by choosing only single range of hospitals that have around 200-350 Bed strength. All the twelve hospitals are operating at the district level. Therefore, the selected hospitals are single range and single type of hospitals.

DISCUSSION AND RESULTS

Data was compiled in the required variables for only 12 hospitals. The findings indicate a minor variation in the size of the district hospitals as indicated by the authorized number of beds. Summary statistics of the key variables is given in Table below in the form of the DEA Efficiency Scores. The efficiency scores are obtained by calculating the selected inputs and outputs of the sample size and comparing them on yearly basis. The table below is the result obtained by using XLDEA2.1

Hospital Location Name	2006-07	2007-08	2008-09	2009-10
Mahboobnagar	1.0000	1.0000	1.0000	1.0000
Sangareddy	1.0000	1.0000	1.0000	0.9713
Nizamabad	1.0000	1.0000	0.9638	0.9611
Karimnagar	0.6855	0.7073	0.7105	0.7923
Nalgonda	0.8326	0.9854	1.0000	1.0000
Vizianagaram	1.0000	1.0000	1.0000	1.0000
Rajamundry	0.9687	0.5328	0.6743	0.7207
Eluru	0.9219	0.9271	1.0000	1.0000
Machilipatnam	1.0000	1.0000	1.0000	0.9020
Nellore	0.6365	0.7431	0.7885	0.8033
Chittor	1.0000	1.0000	1.0000	1.0000
Nandyala	1.0000	1.0000	1.0000	1.0000

Table 3: Five Yearly DEA Efficiency scores of Government hospitals for the period from 2006 to 2010

The Efficiency scores are determined by the ratio of the sum of weighted outputs to the sum of corresponding weighted inputs (Mika Linna 2010). The Efficiency score values ranging from < 0 to 1 which shows the comparative efficiencies of all the hospitals. It follows the theory of constant returns to scale; where in the change in the proportionate inputs do not show an abrupt variation on the outputs or performance.

As depicted by the above table, the value < 1.0000 shows those hospitals that are performing efficiently wherein the increase in the input combination will show proportionately positive results as they are efficiently utilizing their available resources. These are the hospitals which are scoring well in their performance, as well as the cost control methods are properly organized and well managed. The measurement of cost efficiency is relatively straightforward using non parametric method (Ray and Kim, 1995).

The Efficiency score of 0.80 for District hospitals indicated that on an average the hospitals could increase the output using the same level of resources or reduce the input usage or input cost by 20 percent to deliver the same amount of health care. Only 58 percent of selected district hospitals are able to efficiently use their resources. An interesting observation evident from the table is that the efficiency score for the given hospitals does not follow the exact pattern of increase or decrease of the efficiency.

The technical efficiency scores indicate which of the hospitals are on the efficient frontier and following the best practices are scoring one, and which are less efficient relative to hospitals on the frontier holding the score less than one. The higher the score, the higher the potential increase in output, while maintaining inputs relative to best practice. The various statistics for the input and output variable for the PHC is given in the table above.

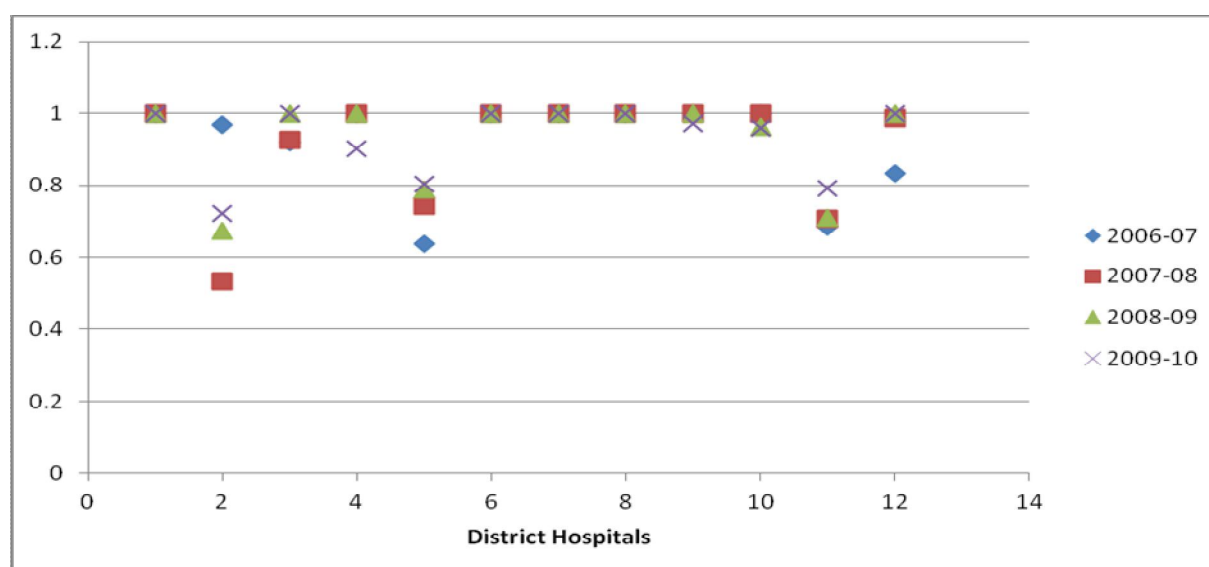


Figure: Technical Efficiency of District Hospitals

Technical efficiency scores only refer to relative performance within the sample. Government Hospitals given an efficiency score of one are efficient relative to all other hospitals in the sample, but may not be an efficient by some absolute of world standard necessarily. The plot for the individual technical efficiency scores has been plotted in above figure. The labels of the hospitals have been taken as the sequence given in the efficiency scores table. Fifty percent of the hospitals were operating in the efficient frontier throughout the period of the study. Thirty three percent of the hospitals are able to improve relative technical efficiency throughout the period of study, but they are still required to either reduce their inputs while maintaining the same number of completed treatments if they operate at what appears to be best practice. Else, they can increase their outputs to attain the 100 percent technical efficiency by means of optimum utilization of the resources.

Three of the hospitals were found to be reducing their efficiency level that may be due to comparatively lesser population catered to by these hospitals. It may be observed that hospitals in remote areas are less dense or less urbanized areas would be relatively serving lesser population and therefore would be relatively less efficient.

CONCLUSION

The review of literature enumerates the suitability of Data Envelopment Analysis for the measurement of cost efficiency of hospitals. The sample hospitals cover the major regions of the Andhra Pradesh State in its pre-bifurcation period. The efficiency score helps ranking of the hospitals on the basis of efficiency of hospitals, the hospitals having the score of 1.000 are consistently performing well with the given inputs by the government and hospitals below the efficiency score show the magnitude of gap to cover for performing well.

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AN ANALYTICAL STUDY ON EFFECTIVENESS OF MARKET CAPITALISATION AND NIFTY ON INVESTORS' DECISION MAKING IN DURGAPUR AND ASANSOL REGION – INVESTOR PERSPECTIVE

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ABSTRACT

Durgapur and Asansol is one of the densely populated Industrial belts of the eastern India. It has a whole array of manufacturing industry ranging from the steel, cement to the power sector. In this paper the selected sectors are Steel, Oil and Drilling, Power, Pharmaceuticals, Banking, Software, Cement, Real Estate, Automobile, which have significant contribution in the growth of the Indian economy in the recent times. In this study we have selected top fifty companies as per market capitalisation under various sectors. We have also identified top fifty companies according to the Nifty on monthly trade basis. Brokers are an intermediary in the decision making process of investors. Hence we have used the questionnaire method to collect information regarding the selection of companies for investment. For this we apply Likert scale method to find out the ranking of the companies by money control and Nifty. The study finds some striking result.

Keywords: Market capitalisation, Investor Behaviour, Investment

1. INTRODUCTION**Indian Capital Market****An Overview**

The Indian Capital Market faced major transformation and structural change since the globalization. These reforms have been aimed at improving market efficiency, enhancing transparency, preventing unfair trade practices and bringing the Indian capital market to international standards.

INVESTOR BEHAVIOR**Characteristics**

Investments are made with an objective of maximizing the wealth and minimizing risks. In order to take a rational decision it is important to take investment decision free of emotions. Investor behavior is characterized by overexcitement and overreaction in both rising and falling stock market and various factors influences their decision making processes. Investment decisions are also affected by investor psychology. Investors do not want to sell a stock at a loss. Hence investors want to hold back the stock till prices go up. Successful investors are able to understand and overcome these adverse psychological influences. Social involvement plays an important role in investment decision making. Apart from psychological factors, the demographic factors play an important role as well. Behavioral finance is a new paradigm of finance which seeks to supplement the standard theories of finance by introducing behavioral aspects to the decision making process of investors. This field merges the concepts of financial economics and cognitive psychology in an attempt to construct a more detailed model of human behavior in financial markets.

Our research in this paper also caters around the behavioral as well as the investment capacity of the investors in the Durgapur-Asansol region. These findings have significant implications for the development of the securities market. Classical economics defines rationality very logically, for instance, if an individual loves A better than B and B better than C, an economist would conclude that the individual prefers A to C, but this may not be so in real life situation, especially with financial investment. Although there are ample theories based on the investment pattern, however with the demography and the earning capacity and many other factors, the investment behaviours tend to change from one region to the other which may not have relevance to past rules. This leads to most investors either trading too much, buy and sell at precisely the wrong times, allow emotions to overrule logic, misjudge probabilities, or futilely chase performance.

2. LITERATURE REVIEW

According to Subrahmanyam (2007), finance can be broadly defined as the study of how scarce resources are allocated by humans, and how these resources are managed, acquired and invested over time. Two key traditional Theory of Finance are: i) Market agents are perfectly rational: perfect rational behaviour implies that any new available information is interpreted correctly and uniformly but all market agents while updating their beliefs, and (ii) Markets are Efficient: The Efficient Market Hypothesis (EMH) states all relevant information are reflected in the prices instantaneously and completely. When the hypothesis holds, prices are right, and there is 'no free lunch'. i.e. there is no investment strategy which can earn excess risk-adjusted average returns consistently.

Shiller (2002) says, researchers in psychology were discovering that people often behave in odd ways while making decisions where money is involved. Psychologists have found that economic decisions are often made in a seemingly irrational manner. Cognitive errors and extreme emotions can cause investors to make bad investment decisions. The author provided theoretical and empirical evidence to support the fact that CAPM, EMH, and other traditional financial theories did a great job in predicting and explaining certain events.

(Rozeff and Kinney, 1976) says about effect, an anomaly in the financial market where the prices of a security increase in the month of January without fundamental reasons, (ii) The Winner's Curse where the winning bid in an auction tends to exceed intrinsic value of the item purchased, mainly due to incomplete information, and emotions leading bidders to overestimating the item's value.

According to (Phung, 2002), academics were prompted to look to cognitive psychology to account for irrational and illogical investor behaviour. Behavioral finance is a relatively new paradigm of finance, which seeks to supplement the standard theories of finance by introducing behavioral aspects to the decision making process. Early proponents of behavioral finance are considered by some to be visionaries.

"An 'efficient' market is defined as a market where there are large numbers of rational, profitmaximizers actively competing, with each trying to predict future market values of individual securities, and where important current information is almost freely available to all participants. In an efficient market, competition among the many intelligent participants leads to a situation where, at any point in time, actual prices of individual securities already reflect the effects of information based both on events that have already occurred and on events which, as of now, the market expects to take place in the future. In other words, in an efficient market at any point in time the actual price of a security will be a good estimate of its intrinsic value." (Fama, 1965)

The Efficient Market Hypothesis (EMH) has been a central finance paradigm for over 40 years, probably the most criticized too. Fama (1970) defined an efficient market as one in which security prices fully reflect all available information, and hypothesis states that real world financial markets are efficient. Fama goes on to say that it would be impossible for a trading system based on currently available information to have excess returns consistently. The EMH became sensational in the 1970s and a lot of research work -centered on why the hypothesis should hold- developed supported by immense theoretical and empirical success. The University of Chicago, home to the EMH, became the world's center of academic finance.

The theoretical foundation of EMH is based on three key arguments (i) investors are rational and value securities rationally (ii) in case some investors are irrational, their trades are random and cancel each other out without affecting prices (iii) rational arbitrageurs eliminate the influence of irrational investors on market. The fact that Efficient Market Hypothesis was not purely based on rationality alone but also predicted efficient markets in cases where rationality did not exist, gave the theory a lot of credibility. The empirical evidence from the 1970s, which only strengthened the cause, fell into two main categories (i) any fresh news about a security should be reflected in its price promptly and completely and (ii) prices should not move as long as there is no new information about the company, since it must be exactly equal to the value of the security. In other words, non-reaction to non-information (Shleifer, 2000).

2.1 Behavioural Finance

Behavioural finance is a branch of finance that studies how the behaviour of agents in the financial market influences decisions made while buying or selling the market, thus affecting the prices. The science aims to explain the reasons why it's reasonable to believe that markets are inefficient.

2.2 Background and Evolution

The Modern Portfolio Theory (MPT), Capital Asset Pricing Model (CAPM) and Arbitrage Pricing Theory (APT) are the quantitative models that underpin the rational expectations based theories. Unfortunately, there is a large amount of research, which could not confirm this theory in the available investment data. The behavioural finance paradigm has emerged in the response to the difficulties faced by the traditional paradigm. In essence, it argues that investment choices are not always made on the basis of full rationality, and it attempts to understand the investment market phenomena by relaxing the two doctrines of the traditional paradigm, that is, (i) agents fail to update their beliefs correctly and (ii) there is a systematic deviation from the normative process in making investment choices. (Kishore, 2004)

3. RESEARCH OBJECTIVES

For conducting this research following objectives were set

- i. To analyze the investment pattern of the investors in Asansol and Durgapur region.

- ii. To analyze the demographic criteria in this region relevant to investment in stocks, shares and mutual funds.
- iii. To study Sector preference of the people for investment
- iv. To suggest appropriate strategies to investors for taking right investment decisions in stock market.

4. RESEARCH METHODOLOGY

In this paper we have formed a questionnaire basis which we have tried to analyse the investment behaviour of the investors in various sectors and thus resulting in the prices for the shares in such sectors. We have applied the Likert scale technique to show preference of investment in different sectors.

We have taken a wide range of 100 samples from various sectors in and around Durgapur and Asansol area in the current time period i.e 2017. The samples were collected based on purposive sampling. From the data it is seen that the maximum proportion of 63% of the investors are taking decision on investment through Friends and family. This shows that society is aware of the investment opportunities available in the market and it can be assumed that a wide part of the society is investing in the financial market.

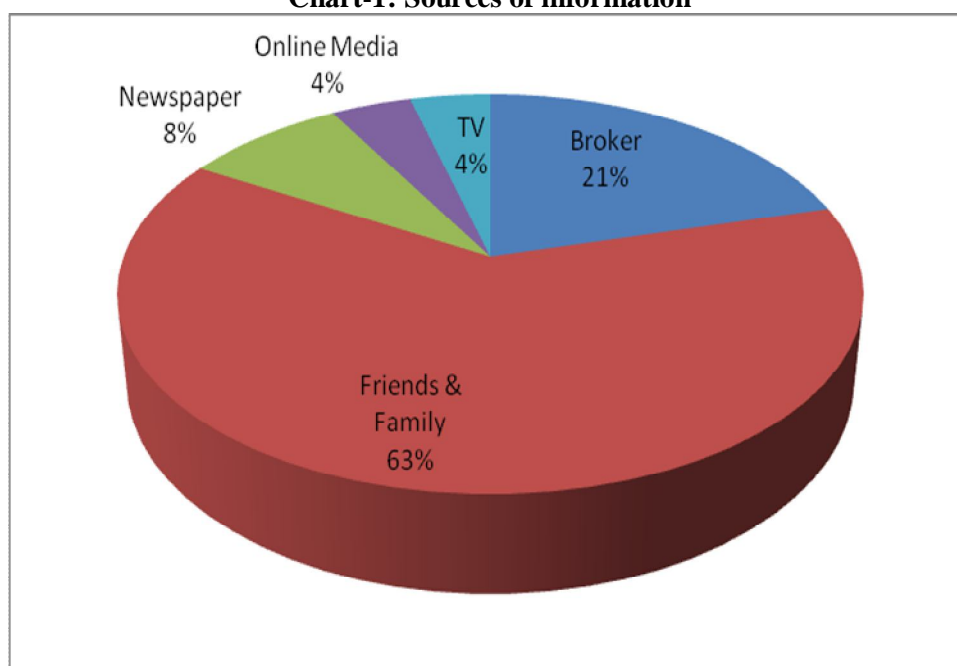
5. PURPOSE OF INVESTMENT

From the data collected we found that maximum intensity for investment is towards Child education and Retirement benefit which is together more than 60% of the whole. The percentage of people interested for investment for tax saving is only 19% as the income group is on the lower side. The investor earning falls in the range of INR 40000- INR 50000 for 58%. Thus the tax implication is much on the lower side resulting in lower intention towards investment for tax saving. Around 20%-30% of the income is generally put into investment (35%) for investors whose income is in the range of INR 40000-INR 50000. With the decrease in the income, the percentage of investors and investment proportion is also seen to have a decreasing trend. The general trend is seen that investors start investing after having a stabilised job or career (35% of the people started investing after 4 years of their service). Long term investment is preferred more than short term investment pertaining to more return. It can be related to the above as we have already seen that people are investing more for returns on investment as well as retirement benefit and child education. Investors are more inclined towards long term investment for expecting higher salary at the end of their income lifecycle.

6. ANALYSIS

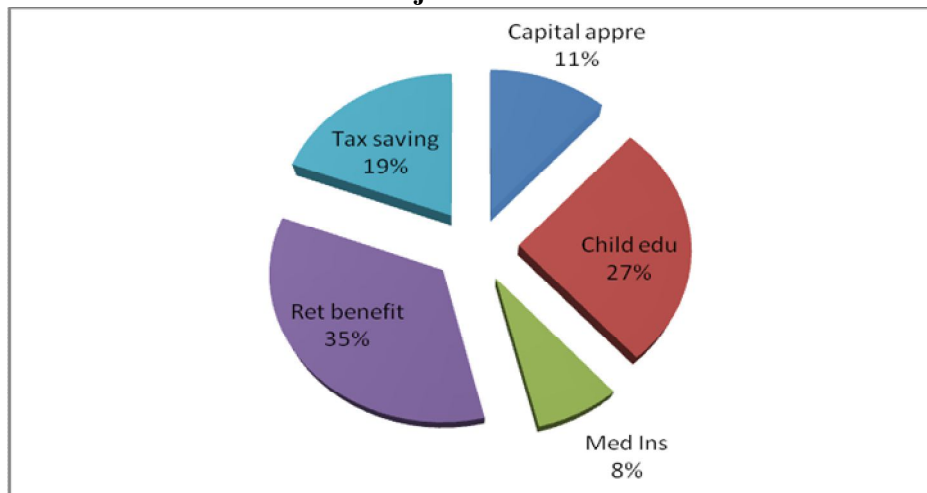
From our primary data collection we have analysed various aspects and causes that influence investment decision of the people in the region under study.

Chart-1: Sources of information



From Chart 1 it can be shown that friends and family are the major source of information for securing information about investing. This shows that society in the Durgapur Asansol region is more prone towards investment after getting motivated from friends and family. The investors are here getting motivated to invest from their family and friends. Other mediums have fairly less impact.

Chart-2: Objectives of Investment



From Chart 2 it can be seen that Child education and retirement benefits together accounted for more than 60 % of the objective of the investment. It shows that people are more inclined for long term investment, as financial theories suggest that long term Investment yields more return. Other objectives of investment like tax saving, child education capital appreciation has less impact for determining the objective of the investment.

Chart-3: Classification of Income group of the samples

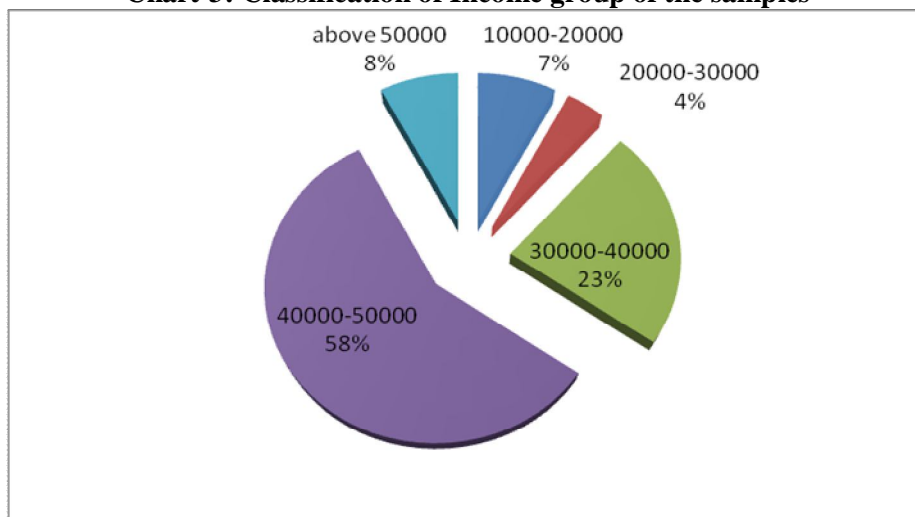


Chart-4: Pattern of savings of the samples

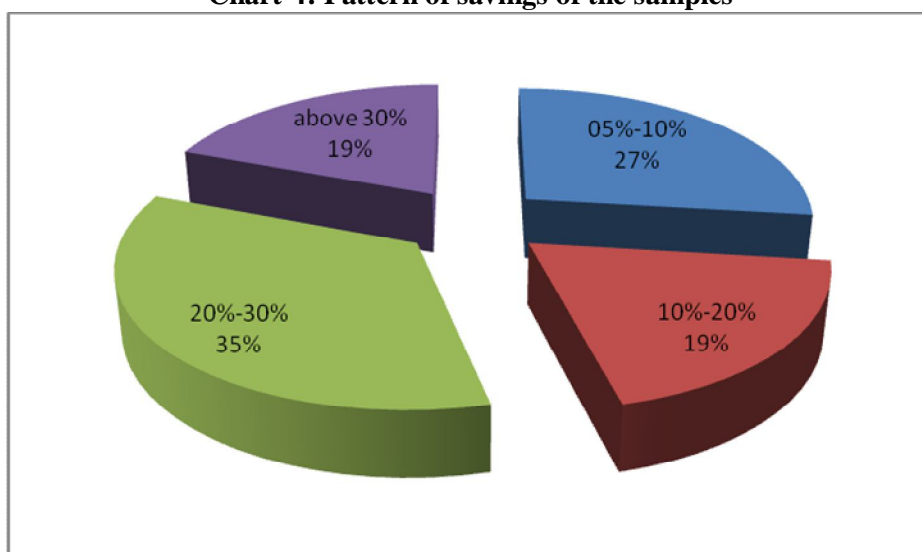


Chart 4 depicts that more percentage of people have tendency of saving 20-30 % of their saving which goes majority portion in Banking Sector.

Chart-5: Time of Investment

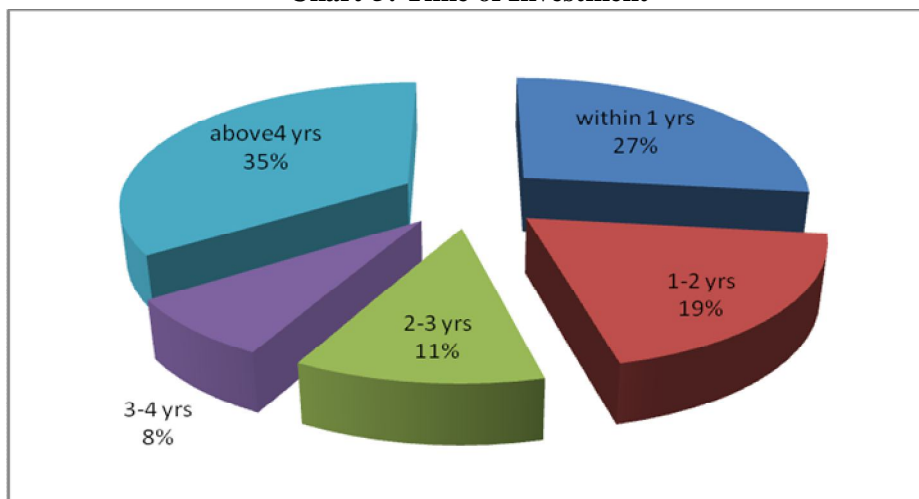


Chart 5 reveals that people start investing after getting stability in the job field which take time and hence major percentage of the people start saving after 4 years of job.

Chart-6: Criteria for investment

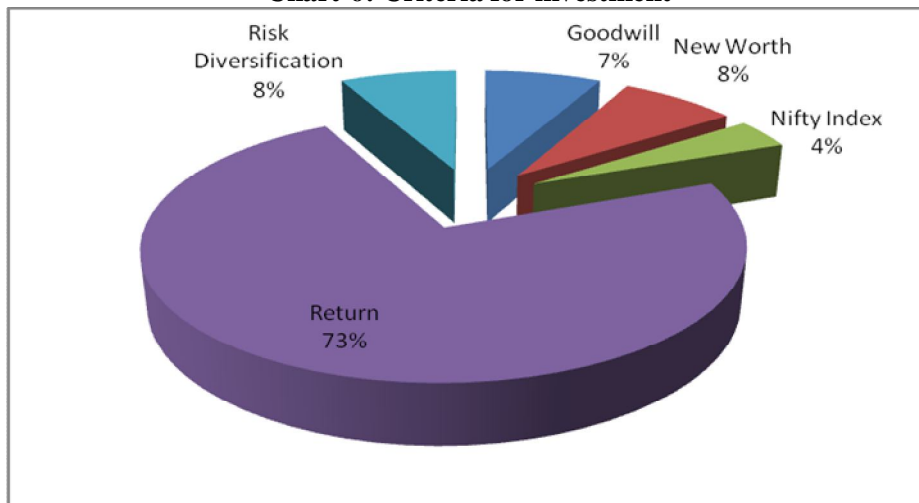


Chart 6 shows that return is the major criteria for investment which is directly linked with retirement benefits and child education. Risk diversification is the least guiding factor for choosing investment as people of this region prefer to go by traditional ways of investment.

Chart-7: Time span of investment

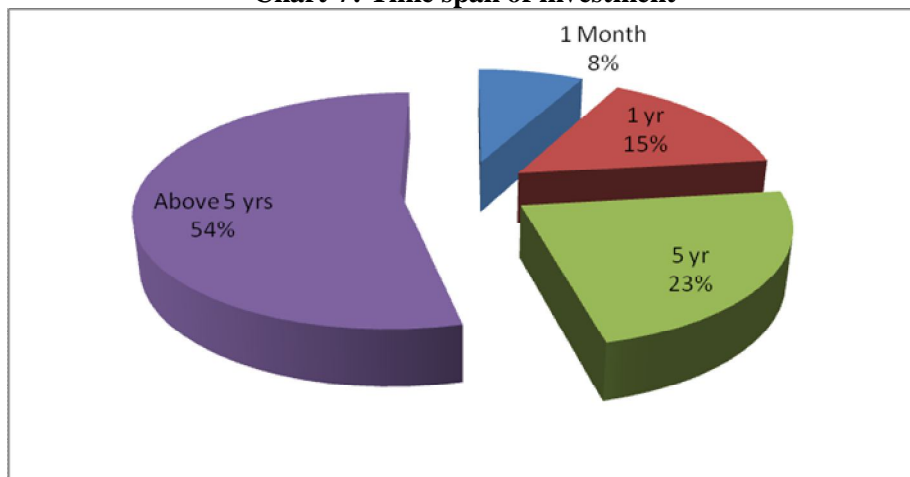


Chart 7 depicts that above 50 % of the investors are interested for long term Investment which shows that they are more inclined towards long term investment, which depicts that retirement benefits and Child education are the preferred criteria for investment as our sample is mostly middle age people ranging from 30-45 years of age.

Chart-8: Frequency of investment

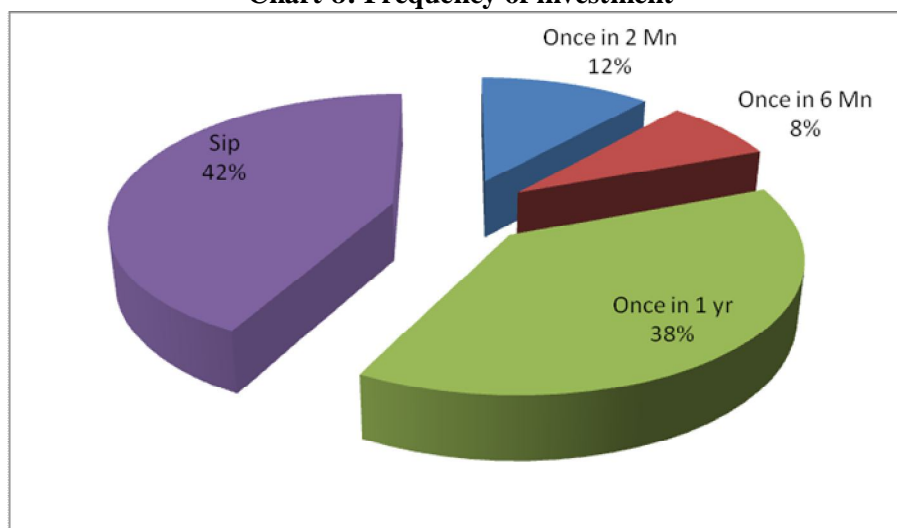


Chart 8 depicts that regular investments are more prevalent in this region rather than one time investment which shows the regularity in inclination towards investment for investors in this sector.

This shows that people are aware of capital market returns and also want to grab the benefits of capital market Investment.

Table-1: Sector preference of the people for investment

Sector	Not Likely	least Likely	Average Likely	More Likely	Most Likely
Oil	20	37	16	11	17
Pharma	35	25	22	14	6
Power	15	7	19	22	12
Steel	30	25	23	22	14
Banking	0	6	20	31	51

From the above table we have applied Likert scaling technique and it can be seen that the pharma sector is not preferable among the investors in these region followed by steel, and oil sector. After the depression of 2008 it was seen that the coal and steel sector which are highly interdependent on each other as raw materials and finished product saw a continuous declining trend. This phenomenon continues to prevail as we see that investors in Asansol and Durgapur region which is famous for steel and hardcore industry is reluctant to invest in this sector. Banking has emerged as the most desired sector for investment where we can see that around 51 % of the total samples are willing to invest in this sector. Which shows that the people of Durgapur and Aansol region are risk averters and they preferred traditional ways of investment?

Table-2: Alternatives of Investment for investment

Alternatives of Investment	Not Likely	least Likely	Average Likely	More Likely	Most Likely
Insurance	25	29	17	11	7
Mutual fund	12	15	18	20	23
Real estate	33	18	15	12	9
Shares	22	31	20	22	23
Banking	8	7	30	35	38

From the above table 2 it can be analysed that real estate and Insurance and not very desirable alternatives for Investment. Whereas Insurance sector is no more a preferable sector for investment among the people under study in the recent time as most of the sample are covered under group insurance which are compensated from the employers.

This can also be explained by the recent decline in the demand of real estate sector and its price. The real estate has hit badly due to demonetisation at the end of 2016. Banking remains to be the most sought for sector for investment followed by shares and mutual fund. This can also show that people of this region are slowly tending towards taking risk rather than being risk averter. This process will take some time unless people will become aware for share and mutual fund market.

INVESTMENT ANALYSIS FOR BANKING SECTOR

Investors take decision for investing in banking sector based on various factors which can be analysed showing Bivariate and Multivariate analysis as show below.

7.1 Bivariate Analysis

Banks	R	R Square	Adjusted Square	Std. Error of the Estimate	Standardized Coefficients Beta	t	Sig.
SBI	.373 ^a	.139	.125	16.34672	.373	3.189	.002

Variable 1: Monthly growth rate of NIFTY price with respect to opening and closing price.

Variable 2: Monthly growth rate of SBI price with respect to opening and closing price.

$$Y = \alpha + \beta X$$

Y= Growth rate of SBI share price on monthly basis with respect to opening and closing index.

β = Growth rate of NIFTY price on monthly basis with respect to opening and closing index.

Result analysis is enclosed.

R square is 0.139 which states that SBI price is only .4% dependent on NIFTY price change which may not be acceptable.

$$SE = \sigma / \sqrt{n}$$

7.2 Multivariate Analysis

From the analysis of regression we find that growth rate of Nifty price has a significant impact on the growth rate of SBI share price but the poor R square result which is 0.139, we can conclude that the model is not a good fit and the market fluctuations in the NIFTY is the only sole factor in determining the fluctuations in the share prices of ABI. This indicates that further factors may be a scope of research for analysing the price fluctuations of shares in banking sector. Here we can say that investors behaviour play an important role in share prices rather than NIFTY on its own.

Table-4: Multivariate data analysis of selected banks

Banks	Mean Square	F	Significance	R Square
SBI	310	1.87	0.411	0.983
Yes Bank	189	19.93	0.049	0.998
PNB	176	0.537	0.836	0.943
HDFC	36	7.005	0.133	0.995

Further to the linear analysis, we carried out a multivariate regression analysis where we find that NIFTY price fluctuation has high impact on the share price of banks but with insignificant results except for YES BANK, which is very new venture in India compared to the other banks taken into consideration above. Therefore we again see that investor behaviour play a very important role in the share price fluctuations in the banking sector. From our previous analysis also we have seen that investors are more inclined towards banks and their behavioural patterns determine that banks are still the leaders to attract investment.

Table-5: Market Capitalisation in the Banking sector (Rs in Crores)

Sl No.	Company Name	Market Cap	Company Name	Market Cap
1	SBI	2,26,846.20	HDFC Bank	4,28,416.77
2	Bank of Baroda	37,175.14	ICICI Bank	1,85,854.15
3	PNB	31,802.49	Kotak Mahindra	1,81,652.72
4	Canara Bank	21,138.10	Axis Bank	1,21,248.73
5	Central Bank	17,290.73	IndusInd Bank	94,028.99
6	Bank of India	15,316.31	Yes Bank	69,201.98
7	Indian Bank	14,223.84	IDFC Bank	21,681.37
8	IDBI Bank	11,699.28	RBL Bank	20,007.94
9	Union Bank	10,438.79	Federal Bank	19,662.74
10	Vijaya Bank	7,531.29	City Union Bank	11,035.55

Market Capitalisation is the market value at a point in the time of the shares outstanding of a publicly traded

company, being equal to the share price at that point of time, times the number of shares outstanding. As outstanding stock is bought and sold in public markets, capitalisation could be used as an indicator of public opinion of a company's net worth and is a determining factor in some forms of stock valuation.

From table no 5 we find that in the public sector company SBI is the leading in trade of shares. The market value of the SBI shares is highest in public sector whereas in private sector HDFC is leading. It shows the investors From investors point of view we have seen earlier as well that SBI and HDFC were leading banks having low impact through NIFTY sensex for determining the prices, however having high impact on investor's investment decisions.

7. CONCLUSION

From the study we have found that investors of Durgapur –Asansol belt still prefer traditional mode of investment as our study shows that Banks are the leading sector for investment. They still prefer return and goodwill rather than risk diversification or depending upon Nifty index for their criteria for selecting investment sector. Investors are low risk takers as the shares market which is a high risk sector is not preferred much by the investors in Asansol-Durgapur region.

The study also shows that maximum investors prefer to save for retirement and child education. These are the major two objectives behind investment decision which also shows that people are projected towards long term investment. So, long term investment has an edge over medium and short term investments.

As SBI is a large cap company having a net worth of more than 10 billion so investors are more inclined towards investing in large cap companies, like SBI, HDFC in our primary data analysis as well. The small cap companies like YES BANK still have dependency on the Nifty index as the investors are yet not inclined much in the new company ventures.

From multivariate data analysis we have found that Nifty index has an insignificant impact on banking sector share prices for large cap companies in banking sector. Therefore banking sector and Nifty index are mutually independent of each other and the investment decisions in banking sector are also independent of the NIFTY prices.

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BANKING IN INDIA IN THE ERA OF DIGITAL TRANSFORMATION AND THE RELEVANCE OF DATA MINING TECHNOLOGY FOR ENHANCED COMPETITIVENESS: AN ANALYSIS**Dr. Jacob Joju¹ and Dr. Manoj P K²**Assistant Professor¹, Berchmans Institute of Management Studies, St. Berchmans College (Autonomous),
Changanassery, KeralaAssistant Professor², Department of Applied Economics, Cochin University of Science and Technology, Kochi**ABSTRACT**

As the waves of 'Knowledge Revolution' are sweeping across the globe, there is a clear shift towards 'Knowledge Society' from the existing post-industrial society. Financial Services Industry (FSI), which includes banks and financial institutions and other financial service companies, are growingly adopting the advances in the field of Information and Communication Technology (ICT). Embracing of ICT by banks has resulted in clear benefits to the banks like enhanced customer service, lower transaction costs, wider range of delivery channels and range of products, etc. Financial Technology (Fin Tech) is being increasingly adopted by all banks. In respect of India, in particular, the country is passing through an era of Demonetisation (DeMo) since 08 November 2016. In this ongoing DeMo era, banks in India foster digital banking and cashless transactions and are growingly adopting Fin Tech. As a result of digital transformation that is going on in Indian economy in general and banking sector in particular, there is fierce competition in banking sector, between individual banks and bank-groups. The Public Sector Banks (PSBs) are fast losing their market share to private sector banks, particularly the New Generation Private sector Banks (NGPBs). In a growingly competitive industry scenario, use of ICT-based tools can bring in competitiveness for the banks. This paper studies the significance of Data Mining technology for the enhanced competitiveness of banks, particularly the traditional banks, in the ongoing DeMo era in India.

Keywords: Competition, ICT, Financial Technology, Demonetisation, Data Mining.

1. INTRODUCTION

As the waves of 'knowledge revolution' are sweeping across the globe there is a gradual but clear shift towards a knowledge society, from the existing post-industrial society. A similar and inter-related trend is the fast advances in Information and Communication Technology (ICT) – an outcome of the 'electronic revolution'. Knowledge revolution and electronic revolution are bringing about radical changes in the way in which organizations are being managed, business operations are being performed and state governance is being done. This trend has got vital implications on the operations and business models of every business, and the case of financial intermediaries like commercial banks is no exception. This is evident from the rapid pace at which technological innovations are being embraced by banks the world over. Indian banking sector has been following the above global trend only since the 2000s. It is worth noting that Indian banks have been quite late in adopting technological innovations. Because, for them the real impetus towards adoption of latest technology was basically the banking sector deregulation measures initiated in 1992 which forced them to become more competitive in terms of profitability and customer service. A serious thrust on ICT adoption was given by the Reserve Bank of India (RBI) only in 1999-2000, because of two reasons. First, for the specific purpose of a smooth transition for the year 2000. Second, for the general purpose of ensuring overall technological upgradation of Indian banks essentially to facilitate payment and settlement, enhanced customer service and profitability. Demonetisation (DeMo) drive since 08th November 2016 by the Government of India has given another impetus for greater ICT adoption by banks.

Consequent upon the reform measures initiated in Indian banking sector in 1992, the sector which was overwhelmingly dominated by the Government controlled Public Sector Banks (PSBs) and significantly oriented towards fulfillment of certain social obligations till then, were forced to work on commercial lines. Just like Private sector Banks (PVBs) and Foreign Banks (FBs), even PSBs started thinking on profitable business models rather than simply meeting the regulatory stipulations, profoundly the social obligations. The case of Old Private sector Banks (OPBs) is by and large similar to PSBs, whether it is their technological base, business models, regulatory controls by the central bank, performance or profitability. Because, OPBs too are 'traditional' in nature just like PSBs. Further, with the emergence of a few New Generation Private sector Banks (NGPBs) in the mid-1990s as a consequence of the banking sector reforms, and also the added dynamism shown by the Foreign Banks (FBs) operating in India, both the above categories of banks having equipped with advanced technological platforms, competition in the industry became intense. Thus, in the Indian banking scenario, the pressures of 'LPG' (Liberalization, Privatization and Globalization) have primarily

contributed towards injecting the 'commercial sense' or 'profit orientation' in the banking sector, predominantly the PSBs. Moreover, the deregulation measures have also brought about fierce competition in the industry, primarily affecting the PSBs and OPBs – both these being more 'traditional' in nature and with less level of ICT adoption. To withstand competition and also to maintain profitability and market share in increasingly globalised markets, it has become imperative for banks and other financial intermediaries to deliver high quality service at low cost. Customers have become all the more discerning, and customer centricity has become one of the vital determinants of business success for players in the banking industry. In the above context, to maintain competitiveness banks have to embrace ICT advances as it can significantly improve operational efficiency by reducing cost and also enable higher order customer service. Emerging ICT tools like Data Mining have got tremendous significance in the contemporary centrality for players in the banking industry because of their ability to generate relevant knowledge from large amounts of unorganized business data. Tools like Data Mining offer the requisite competitive edge for any bank to survive and prosper in this era of cut-throat competition in the ongoing reforms era in Indian banking industry, which is DeMo era too since 08th November 2016. This paper delves into the concept of Data Mining and also the areas where it could be meaningfully used.

2. LITERATURE REVIEW

IBM (2005)[3] in its study on Indian banking industry, Banking 2015: Defining the Future of Banking has made a systematic account of the future changes that may radically change the commercial banking landscape in India in the coming decade (2005-2015 period) and the likely impact of ICT on banking business, its delivery models, customer service etc. have been covered in this study. The report has predicted the 'five key trends' determining banking success in 2015.

A macro level study by Manoj P K (2007) [7], "ICT Industry in India: A SWOT Analysis" in *Journal of Global Economy*, has discussed the problems, prospects, opportunities and threats of ICT sector in India and has suggested strategies for its sustained growth. Another macro level study by Manoj P K (2012) [14], "Information and Communication Technology (ICT) for Effective Implementation of MGNREGA in India: An Analysis" has noted the vital significance of ICT for faster, hassle-free, and transparent implementation of MGNREGA. Need for ICT, its benefits, ICT success stories (e.g. MGNREGA in Rajasthan), challenges in ICT adoption etc. are discussed. Neeraja James and Manoj P K (2014) [17] in their paper "Relevance of E-Banking in the Rural Area – An Empirical Investigation" have studied the relevance of E-banking services with a focus on a rural area in Kerala and have suggested measures for better reach of banking in rural areas. An empirical study on e-CRM by Manoj P K, Jacob Joju, and Vasantha (2014) [16] "Impact of E-CRM on Commercial Banking: An Empirical Investigation with Reference to Private Sector Banks in Kerala" in *International Journal of Applied Financial Services & Marketing Perspectives (IJAFSMP)* has revealed that most of the customers of private sector have used CRM including different ICT-based services. Majority of customers and bank officials preferred e-CRM and ICT-based services and bank marketing. In a study by Jacob Joju, Vasantha S and Manoj P.K. (2015)[19], "E-CRM: A Perspective of Urban and Rural Banks in Kerala" in *International Journal of Recent Advances in Multidisciplinary Research*, the authors have compared the acceptance of e-CRM among the urban and rural customers. It has been noted that e-CRM is more accepted among the urban customers, and that rural customers have more preference of 'human factor' in the services than their urban counterparts. In his recent paper, Manoj P. K (2016) [22], "Bank Marketing in India in the Current ICT Era: Strategies for Effective Promotion of Bank Products" in *International Journal of Advance Research in Computer Science and Management Studies* the need for adoption of ICT for effective delivery of bank products is highlighted. Of the six bank marketing strategies suggested, the sixth strategy is about the effective use of e-CRM. Another field-based study on e-CRM by Jacob Joju, Vasantha S., & Sony Joseph (2016) [24], "E-Leveraging e-CRM for Future" in *Indian Journal of Science and Technology*, has pointed out the need for leveraging e-CRM in today's competitive scenario for survival and growth of banks. A study by Lakshmi and Manoj P. K (2017) [25], "Rural Customers and ICT-based Bank Products A Study with a Focus on Kannur District Co-operative Bank and Kerala Gramin Bank" in *International Journal of Economic Research (IJER)* has noted the growing acceptance of ICT-based products among rural customers. While ICT adoption is required, equally important is staff training and their skill development. A 'human touch' needs to be ensured by bank staff in their services. Reserve Bank of India (RBI) publication authored by Maiti, Sasanka, S. (2017)[26], "From Cash to Non-cash and Cheque to Digital" has studied the impact of the RBI initiatives to promote non-cash (digital) mode transactions, the progress of such initiatives, and has noted that there has been 'fundamental shift' towards non-cash (digital) transactions in the ongoing era of Demonetisation ('DeMo') since 8 Nov. 2016. Despite many studies on the impact of ICT on banks, studies that specifically focus on ICT-based tools like Data Mining that can be effectively utilized for enhancing the competitiveness of banks are

scarce, particularly in this reforms era in India and that too DeMo era. This study seeks to bridge the above gap, as it focuses on the use of Data Mining in banks.

3. RELEVANCE AND SIGNIFICANCE OF THE STUDY

Studies done at international and national levels, point towards the utmost significance of a few imperatives for commercial banks for their survival and growth. These include, inter alia, (1) Customer centricity, (2) Focus on technology, (3) Focus on specific market segments, (4) Enhanced productivity and efficiency, etc. For instance, a global study by IBM (Banking 2015: Defining the Future of Banking) relating to the 10 years' period viz. 2005-2015, projects a compounded growth rate of 7.6 percent in revenue from financial services in the Asia-Pacific region, as against 7.1 percent for the entire world. It underlines five key trends that will determine banking success in 2015. (Box I). IBM further points out: "By 2015, we will live in an intensely customer-centric market that is dominated by global mega banks and densely populated by specialist financial services providers. Fierce competition, global regulation and technology will reshape bank and non-bank structures. Technology will also drive fundamental changes in workforce disposition, which will have substantial follow-on effects for productivity, efficiency and profitability".

Box I: Five Key Trends Determining Banking Success in 2015 Identified by IBM.

- 1) Customers will be smart, informed and savvy users – they will only be interested in service providers that can meet their very specific individual needs.
- 2) Market consolidation will continue, making the mega banks even bigger. But, even big banks will face specialized niche competition, from nimble competitors like community banks, industry specialists and non-bank banks that specialize in providing specific services.
- 3) New workforce – Need for productivity and efficiency will create new sources labor and work practices. But there will also be intense competition to attract and retain talent.
- 4) Regulated transparency – Compliance with globally enforced standards of transparency and accountability.
- 5) Sharp focus on technology – This enables the requisite changes, and also rapid and accurate decision making, greater operational flexibility and efficiency. The successful will be those who can track and analyze specific customer needs and meet them with profitable and reliable products.

Source: IBM (2005), Banking 2015: Defining the Future of Banking, Nov. (www.ibm.com)

International rating agency, Moody's Investors Service, in its recent outlook (2006) has suggested that India's banking system is stable, driven by relatively solid financial metrics and it is in a favourable operating environment, conducive to credit growth. Positive factors include strong liquidity in the market, stringent prudential norms, and improved credit risk profile of banking with a declining level of NPAs. A national survey conducted by the Federation of the Indian Chambers of Commerce and Industry (FICCI) (Sept. 2006) also has suggested that Indian banking system is resilient and is adequately prepared to comply with the BASEL – II norms. It is worthwhile to note here that while more than 84 per cent of the respondents opined sound regulatory systems as the reason for commendable performance of the banking system, 63 percent felt that the reason is robust economic growth and just 52.63 percent endorsed technological advancement as the reason behind it.

4. OBJECTIVES OF THE STUDY

- (i) To trace the major trends and priorities of commercial banking in India in the growingly competitive globalised regime, characterized by DeMo drive too since November 2016;
- (ii) To study the need for adoption of advances in ICT by banks to remain competitive in the emerging scenario, particularly ICT-based tools like data mining
- (iii) To suggest strategies for enabling banks in India to remain competitive in the ongoing era of globalization characterized by the DeMo drive also.

5. DATA MINING: CONCEPT AND ITS UTILITY IN MAKING INFORMED BUSINESS DECISIONS

Data mining is an emerging and new technology that involves the extraction of hidden predictive information from large databases. It has got tremendous potential to help companies focus on the most important information that is available in their own data warehouses. It has got a few key features. Box II summarises these key features of data mining.

Box II: Key Features of Typical Data Mining Tools.

- ❖ Data mining tools, using large databases, can facilitate
 - (i) automatic prediction of future trends and behaviours, and
 - (ii) automated discovery of previously hidden (unknown) patterns

These features enable proactive and knowledge-driven decisions using data mining tools.
- ❖ These tools offer automated and prospective analyses; distinct from the retrospective tools used in typical decision support systems (DSS), as the retrospective tools involve analyses of past events. Thus, from the retrospective data access and navigation, these tools proceed far ahead to the level of prospective and proactive information delivery.
- ❖ They can answer business questions quite easily, though traditionally these are too time consuming to resolve. For example, they can identify hidden patterns from massive quantities of business databases and can hence provide predictive information helpful for meaningful business decisions.
- ❖ They are ready for application in the business community presently, because they are supported by three core components (technologies) that are now sufficiently mature and these are as follows:
 - (i) Massive data collection – business data bases are growing at unprecedented rates.
 - (ii) Powerful multi-processor computers/improved computational engines are available.
 - (iii) Data mining algorithms available today are mature, reliable and understandable tools

Today, data mining is quite practical with the maturity of the above three and also the availability of relational database systems (RDBMS) and broad data integration efforts.

Source: Thearling, Kurt. (2002), “An Introduction to Data Mining”, in Parimi, Sashikala (Ed.), Data Mining Vol. I, ICFAI Books, ICFAI Press, Hyderabad, 2002, p. 01. (Modified)

Table - I: Steps in the Evolution of Data Mining Technology

Evolutionary Step	Business Question	Enabling Technologies	Product Providers	Characteristics
Data Collection (1960s)	“What was total revenue in the last five years?”	Computers, tapes disks	IBM, CDC	Retrospective, static data recovery
Data Access (1980s)	“What were unit sales in Mumbai zone during last March?”	RDBMS, SQL (Structured Query Language) ODBC	Oracle, Sybase, Informix, IBM, MS	Retrospective, dynamic data delivery at record level.
Data warehousing and Decision Support (1990s)	“What were unit sales in Mumbai zone last March? Drill down to Pune area.”	OLAP, Multi-D databases, data warehouses.	Pilot, Comshare, Arbor, Cognos, Microstrategy	Retrospective, dynamic data delivery at multiple levels.
Data Mining (Emerging fast at present) (late 1990s and 2000s)	“What’s likely to happen to Pune unit sales next month?, Why ?	Advanced algorithms, multiprocessor computers and massive databases	Pilot, Lockheed, IBM, SGI, numerous start-ups (nascent industry)	Prospective, proactive information delivery.

Source: Thearling, Kurt. (2002), “An Introduction to Data Mining”, in Parimi, Sashikala (Ed.), Data Mining Vol. I, ICFAI Books, ICFAI Press, Hyderabad, 2002, p.03. (Modified)

The concept of data mining gradually evolved from business data collection efforts in the 1960’s, proceeded towards data access in the 1980s, and further to data warehousing and decision support in the 1990s and finally is emerging towards data mining as it stands now (late 1990s and 2000s). (Table I) From the perspective of the businesses (users), the above four phases (shown in Table I) are evolutionary in nature because each phase allowed new business questions to be answered accurately and quickly.

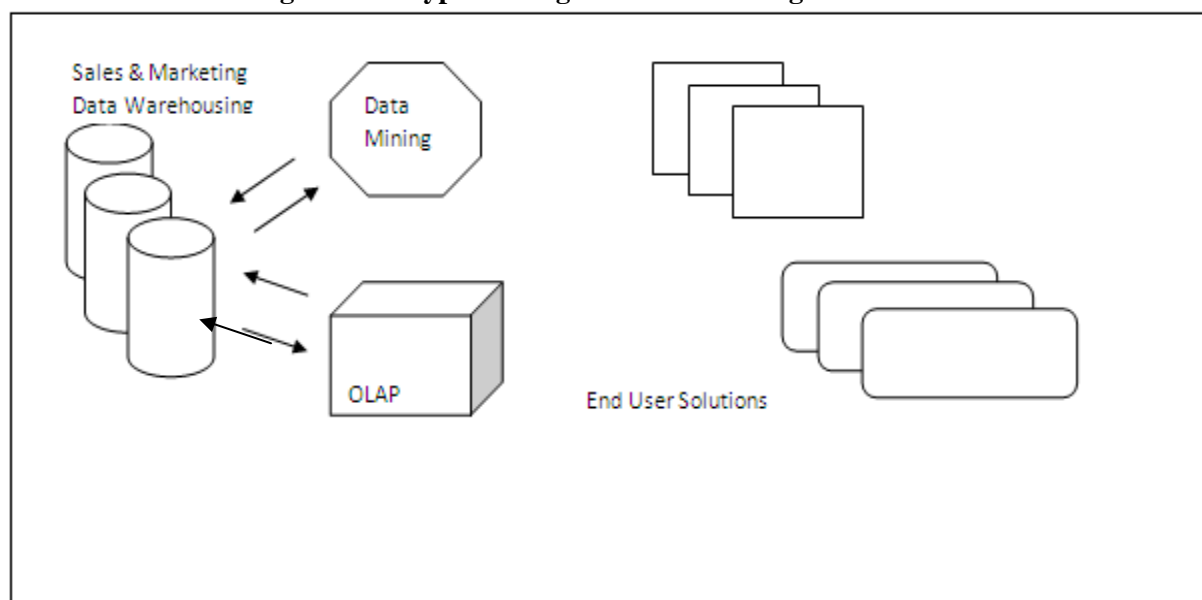
Today, progressive companies the world over, including banks and financial institutions, retail businesses etc. utilize data mining tools to refine their large quantities of data to get relevant information and knowledge, and hence to make wise and meaningful business decisions. Data mining tools can be implemented in two ways;

viz. (1) these could be implemented quickly on existing software and hardware platforms, and hence the value of existing information resources can be enhanced, or (2) these could be integrated with new products and systems as they are brought on-line. Further, if these are implemented on high performance client server or parallel processing computing systems, they can provide more powerful information inputs through processing of massive databases. Such advanced information inputs include, inter alia, answers to prospective questions like, “Which all clients are likely to respond to my next promotional mail, and why?”

5.1 Data Mining: The Process and a Typical Architecture For Data Mining

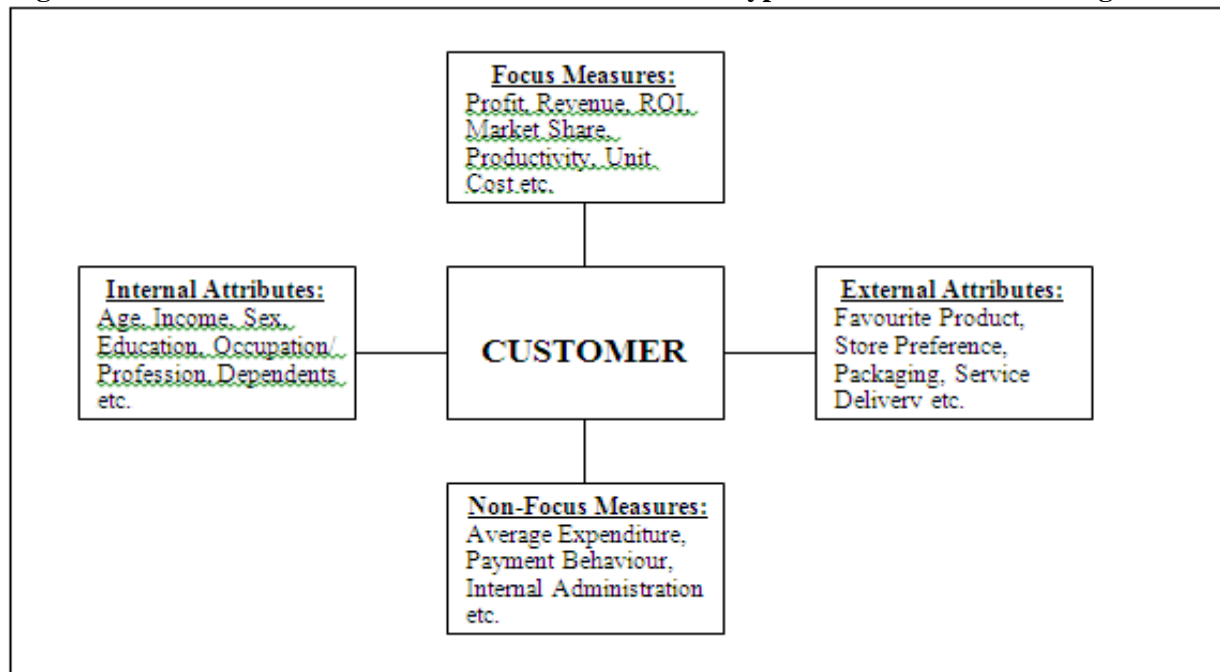
The technique underlying the process of data mining is called ‘modeling’. Modeling is simply the act of building a model in one situation where one knows the answer and then applying it to another where he doesn’t. Data mining finds two major kinds of applications viz. (i) Data mining for prospecting, and (ii) Data mining for predictions. For most desirable results data mining techniques have to be fully integrated with a data warehouse as well as flexible interactive business analysis tools. Currently, there are many data mining tools that operate outside the data warehouse, requiring extra steps for extracting, importing, and analyzing the data. However, if at all new insights require operational implementation, integration with the warehouse simplifies the application of results from data mining. The analytic data warehouse that results from the above procedure can be conveniently employed to improve business processes throughout the organization. Such a warehouse finds applications in areas like promotional campaign management, fraud detection, new product rollout etc. A typical data mining architecture for advanced analysis in a large data warehouse is shown in Figure I.

Figure-I: A Typical Integrated Data Mining Architecture



In a typical data mining architecture as shown above, the ideal starting point would be the data warehouse containing a combination of (i) internal data – tracking all customer contacts, and (ii) external market data – relating to competitor activity. Further, background information on potential customers would provide an excellent basis for prospecting kind of data mining. The on-line analytical processing (OLAP) server as shown in the figure can facilitate a more sophisticated end-user business model which can be effectively used for navigating the data warehouse. An OLAP data mining system can mine along multiple dimensions and such a system being aware of patterns along these dimensions merges them to interact with the user in an intelligent manner. An integrated and multidimensional architecture as above permits the user to analyze the data the he wants it to be, like, by region, product line, customer segments and other relevant business parameters. Thus, by integrating the data mining server with the data warehouse and the OLAP server, a number of business analyses can be effectively embedded with the above architecture, eg. Return on Investment (ROI) based financial analysis. In a typical multi-dimensional business application based on OLAP system, the analysis rotates around a star with a number of dimensions, with the focus dimension at the centre and the other dimensions around the same; the above architecture being often referred to as ‘rotational schema’. For a modern customer centric service organization like a bank, a five-dimensional rotational schema may be suitable as shown in Figure II. Here, the focus dimension viz. Customer is at the centre and the four other attributes around it, viz. (i) Focus measures (profit, revenue etc.), (ii) Internal attributes (age, income etc.), (iii) External attributes (favourite product, store preference etc.), and (iv) Non-focus measures (average expenditure, payment behaviour etc.)

Figure-II: A Five Dimensional 'Rotational Schema' for a Typical Customer Centric Organization



In short, currently comprehensive data warehouses that integrate operational data with customer, supplier and market information have resulted in an explosion of information. Because of ever growing competition, timely and sophisticated analysis on an integrated array of relevant data. The requisite technological leap for doing the above sorts of analyses could be provided by the data mining technology. Accordingly, world over data mining tools are increasingly being integrated with current information systems for very meaningful and quantifiable business benefits. Practical examples of data mining applications include, inter alia, the following: (i) A credit card company can utilize its vast warehouse of customer transaction data to identify customers who are likely to be interested in a new credit card product that they want to launch, (ii) A large consumer goods company can apply these tools to improve its sales force to retailers, (iii) A diversified transportation company with a large direct sales force can apply data mining to identify the best prospects for its services, (iv) A pharmaceutical company using data mining tools to analyze its recent sales force activity and their results. Accordingly, it can determine which marketing activities will have the greatest in the next few months. The practical applications of data mining tools in banking business id dealt in detail in the next session.

6. APPLICATIONS IN COMMERCIAL BANKS IN A COMPETITIVE SCENARIO

Data mining technology finds vast applications in modern commercial banking, because of its ability to tremendously improve the effectiveness of customer relationship management (CRM), efficient credit risk management, scientific approach to marketing by focusing on specific customer segments etc. Two of the most important applications of data mining in banking business are briefly discussed below:

6.1. Data Mining for Effective Credit Risk Assessment and Management

Data mining tools can tremendously improve the quality of credit risk assessment scientifically. Modern knowledge management (KM) systems that incorporate data mining tools and can provide meaningful inputs as to the risks associated with loan proposals. Such KM systems make use of latest Knowledge Discovery and Data mining (KDD) software, which can extract unknown useful information from different databases and use the same in the given application. Accordingly, these systems can predict the repayment behaviour, credit risks etc. of loans and hence can help making informed and scientific credit decisions. Often two different types of data mining models are used in practice, viz. predictive models and descriptive models. The features of these two models are briefly discussed below:

- (i) Predictive Models – These models can predict the value of a particular attribute. These are two different types viz. classification models and regression models. For a classification model (classifier), the prediction relates to the membership in a particular class; whereas a regression model (regressor) predicts a number from a wide range of possible values. (Predictive models are quite often descriptive also. Sometimes, the descriptive aspect of a predictive model could be higher than its predictive ability)
- (ii) Descriptive Models – These models are not predictive in nature, but they can facilitate clustering and association of data. Accordingly, there are two types of descriptive models viz. clustering models, and

association models. Clustering (segmentation) model lumps together similar people, things, or events into groups viz. clusters; whereas association model involves determination of affinity i.e. how frequently two or more things occur together. Different types of models and their common uses are shown in Box III.

Box III: Different Kinds of Data Mining Models and some Typical Applications

Predictive Models		Descriptive Models	
Classification Models	Regression Models	Clustering Models	Association Models
Eg. (i) Likelihood of a person applying for a loan (say, applicant Vs. non-applicant) (ii) Likelihood of a cash credit client to be fraudulent (say, legitimate Vs. fraud)	Eg. Revenue earned from a housing loan customer during the next financial year. (say, Rs.895685-00)	(+) Reduce complexity Eg. Easier to design one marketing plan each for five (say) different market segments, instead of one plan for all the 2 lakh customers	(+) Shows degree of affinity Eg. 75% of home loan borrowers opt for additional loan for repairs.
Typical Applications of Data Mining in Credit Risk Management			
<ul style="list-style-type: none"> Patterns that distinguishes borrowers who repay promptly from those who don't.- Trends over the years. Who will default in repayments, and When? Who all existing customers be offered additional loans? Predicting how your marketing clients are likely to respond to your proposed promotional campaign. Segmenting the customers, so that specific marketing plans could be designed for each segment. Likelihood of the title deeds of a home loan applicant (say, business class type) be fraudulent. etc. etc. 			

6.2. Customer Centricity through Data Mining Technology

Data mining tools find extensive applications in ensuring customer centricity in business model and also to make the CRM function more effective. Banks in India, particularly the PSBs and also OPBs to a large extent are lagging behind their other two counterparts viz. FBs and NGPBs. It is well-accepted fact that in today's world of cut-throat competition, customer-centricity has emerged as a strategic imperative for all organizations, especially for service organizations like banks. Consequently, firms are vying with each other for enhancing their customer service by putting in place latest management practices like CRM. Data mining tools particularly when used in conjunction with KM system can be used as a very powerful enabler of robust CRM systems. The application of the CRM concept on the entire organization as well as all the customer touch points gives rise to Enterprise Customer Relationship Management (Enterprise CRM). This cyclical, closed loop business process seeks to identify, maintain, and enlarge the "best" customers of an organization. Further, it seeks to drive its business growth & profitability through creation of life-time value and long-standing relationships with such customers. Enterprise CRM results in development of "must have" products and services and also in customer optimization.

For supporting sound CRM systems in banks, what is expected out of KM is proper maintenance of relevant and up-to-date customer data base by the use of latest IT application packages which in turn enables the generation of meaningful reports and statements. Thus, decision-making on such aspects as launching new and innovative products, modifying the existing ones, customer segmentation based on various parameters, selection of the right customer groups / segments for specific products (based on their track-record, eligibility etc.) and so on becomes very scientific and meaningful. Further, this ensures customer optimization and better operational efficiency. Currently, very advanced software is available for data-mining, which can be used for acquiring customers, increasing value of customers and also for retaining good customers. These are being used very constructively gainfully by some of the dynamic banks and foreign banks. Data mining also helps in marketing of bank products since it helps to target the right customers groups or segments more accurately.

7. STRATEGIES FOR BANKS TO REMAIN COMPETITIVE IN EMERGING SCENARIO

In view of the foregoing discussions, an attempt is made here to offer a few strategies for banks in India, especially the PSBs and OPBs to be more competitive in the emerging scenario. It is worth pointing out here that these strategies are, directly or indirectly, related to adoption of advances in ICT by banks, like for instance, data mining tools.

- **Technology:** An advanced technological platform that can support such competitive tools as data mining and knowledge discovery is an imminent need for any progressive bank for its survival and growth. It should enable high level of customer engagement and also facilitate targeting different customer segments with tailor-made products. Fast emerging payment technologies like RFID (Radio Frequency Identification) need

to be promoted to remain competitive. ICT investments, further, should focus on improving responsiveness, resiliency and enterprise-wide collaboration. Consolidation in the industry will ensure that technology investments more meaningful and cost effective. Strategic tie-ups and resource sharing among the banks can bring in enhanced efficiency in the use of technology.

- **Customer-Centricity:** Customer centricity has got a pivotal role to play in any service business in the days to come. Sustainable business strategies that ensure continued customer loyalty ie. long term relationships need to be followed consistently.
- **Business Models that Facilitate Ongoing Product, Process and Market Innovation:** Because of the rapidity of technological advances and also increasingly discerning nature of customer demands of today's globalized markets, innovation of all types on an ongoing basis is a basic requirement for retaining and attracting the market. Further, each and every product has to be designed based on a clear understanding of the customer's quality value proposition. Some of the value-added options for products innovation for Indian banks could be, inter alia, (i) Mortgages (including housing finance, (ii) Service packaging (by product and service integration, and bundling of current offerings through de-commoditization; leading to increased scope for cross-selling, higher customer borrowings and reduced risk for the banks, and reduced account maintenance costs for the customers), and (iii) Customer integration (by providing integrated or 'all-in-one' accounts, clubbing savings account, current account, cash account etc.)
- **Specializing in Key Customer Segments:** In future banks will need to focus on specialized customer segments, as a 'one-size-fits-all' policy no longer applies to increasingly discerning customers who need highly specialized services with options exactly fitting to their requirements. To identify the target customer segments banks will have to adopt scientific market research studies and also utilize the advanced ICT tools like data mining. More importantly, it is essential to frame suitable counter strategies to effectively defend the threat by specialized (niche) players.
- **Enhanced Operational Efficiency and Productivity:** To enhance the operational efficiency and productivity, the most appropriate and workable strategy appears to be that of improving cost effectiveness by reduction of transaction costs through ICT adoption.
- **Internet Banking, Mobile Banking and other Hi-Tech Banking Products:** As modern customers are very discerning high technology (Hi-Tech) products and more delivery channels are imperatives for survival and growth, rather than options. The growing trend in computer literacy and the ever-growing affinity to modern products among the younger generation make the above strategy more meaningful.
- **Growing Cyber Crimes and Frauds – Need for Information (Cyber) Security:** Side by side with growing adoption of ICT-based applications and financial technology (Fin Tech) by banks, there are growing instances of scams, information/cyber security issues, data leakages, frauds etc. Hence, putting in place sound systems for management of risks associated with information/cyber security should be one topmost priority for all banks.
- **Human Factor (Human Touch):** Whatever may be the level of ICT adoption, banking service needs a human touch in order to be holistic and comprehensive. This human factor must ensure adequate customer touch points for all products through meticulous planning.
- **Other Strategies:** All the above strategies which have got a direct bearing on the technological base of the respective bank as well as application of tools like data mining. Some other strategies for superior performance of banks include enhanced transparency and strict corporate governance, increased accountability, compliance with international standards in accounting and reporting etc. More flexible human resource management policies are required, especially for the PSBs, that enable low cost and highly flexible labour options like off-shoring. Besides, strategies to attract and retain the talent are also required, which in turn needs more functional autonomy for the banks concerned.

CONCLUDING REMARKS

In spite of issues like growing NPAs, need for recapitalization etc., particularly for the public sector banks (PSBs) in India, it may be noted that still Indian banking system is adequately stable, resilient and reasonably equipped to comply with international regulatory norms. Economic growth in India has been reasonably good over the last few years, in spite of the adverse impacts Demonetisation (DeMo) drive in November 2016 and abrupt implementation of Goods and Services Tax (GST) in July 2017. In fact, Indian economy is now gradually picking up from the adverse effects of DeMo and GST. However, in respect of banking technology, there appears to be good scope for further enhancing the level of technology adoption by Indian banks,

particularly by the PSBs – which are still the backbone of the Indian banking system in spite of their losing prominence. Similar is the case of Old Private sector Banks (OPBs) also. In fact, such an added thrust on ICT has become an imperative for all Indian banks for their survival and growth in the emerging scenario, leave alone the PSBs and the OPBs. Another imminent need is to remain competitive in the emerging globalised regime is that of consolidation in the banking industry to give way to a very few number of big sized banks. Interestingly technological upgradation and industry consolidation are mutually reinforcing in nature leading to significant cost savings. Besides, the above sort of consolidation has already been initiated in India, particularly among the PSBs. As banks will have to be more customer-centric in the future, the need for putting in place sophisticated technological tools like data mining need not be overemphasized. Strategies for restructuring the banking system with a strong customer orientation on a robust technological platform assumes utmost significance in this context.

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SWITCHING BEHAVIOUR OF THE STUDENTS IN THE PURCHASE OF SMART PHONE

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ABSTRACT

This paper aimed to analyse the switching behaviour of students in the purchase of smart phone. The sample respondents are college students from Pondicherry State. Descriptive research is applied. For collecting the primary data, questionnaire method survey was employed. By using convenience sampling technique, 187 students were surveyed. Frequency of switching of smart phone purchased, price range of the smart phone, purchased model, preferred manufacturing companies, reason for having smart phone and purchase place were analysed. Descriptive statistics is applied to answer the research objectives. It is found that students are highly preferred the Samsung smart phone with the price of below Rs. 20000. Most of the students are influenced by their friends to switch over the smart phone.

Keywords: Switching Behaviour, Brand, Price, Reason, Influencers.

INTRODUCTION

Today, Marketing has the new sense of satisfying customer needs and wants (Kotler and Armstrong, 2008). It is implied that, if the companies want to gain long-term benefits from its customers, they have to understand marketing in the new sense of satisfying customer needs. If the companies are able to satisfy the needs and expectations of its customers, then customers will repurchase the products or services of a particular company. After that, customers they exhibit loyalty towards the company, regardless of competitors efforts to distract customer attention towards them.

Now-a-days, mobile phone has become an integral part of human life. In today modern live mobile phone plays a predominant role. Because, these days mobile phones are used by people at all levels across the world. The mobile telecommunication sector has been an exceptional factor for economic growth in both developed and developing markets. It has been one of the important aspects for the development of information technology. Because of mobile phones, various businesses like hotels, services, travel and tourism, airlines, and many more has been positively flourished their businesses. Hence, mobile services have become an indispensable part for the direct impact on the function of economy (Deloitte, 2012).

The consumer switching behaviour is highly dependent on the cause-effect relationship (Njite, Kim and Kim., 2008, Zikiene and Bakanauskas, 2006 Bhasin, 2010). For example, the multiple causes like consumer demographics, marketing offers, economy stage, previous experience and type of consumer needs are reflecting their effects in shape of switching consumer behaviours. India has one of the fastest growing telecommunication markets in the world. This sector has seen significant development. People living in India have a broad variety of alternatives when it comes to select a mobile phone. However it is not very obvious as to what motivates them to select a cellular phone.

PROBLEM STATEMENT

Today the mobile phone market is one of the most turbulent markets due to more competition and change. Hence, there is a growing concern and need to understand the consumer buying decision process and to cast light on what attributes influence consumer choices between brands, (Karjaluto, Karvonen, Kesti, Koivumaki, Manninen, Pakola, Ristola and Salo, 2005).

The smart phone industry emerged out of the cellular industry and was subject to rapid adoption by consumers, as well as change in the technological landscape. Due to the technological landscape developing and advancing at a rapid rate, with both gradual and radical innovations, smart phone designers are continually operating in an increasingly competitive environment (Elsdorfer and Hsu, 2011). Companies that are not market leaders and which are technologically outperformed by competitors find it difficult to catch up (Elsdorfer and Hsu, 2011). They, further find it difficult to lead the market into a switching mentality over to their products, resulting in millions being wasted in research and development. This has an associated bankruptcy risk in such a volatile market.

In the smart phone industry, where products frequently look, feel and function in similar ways which often hardly distinguishable, apart from their brand and other latent features. There are a number of product attributes that entice a customer to engage in purchase behaviour. However, the problem is that in the fast paced technology industry, the time taken to switch a customer to a competing brand is often destroyed by other competitors' releases. Glasscock and Wogalter (2006) stated that manufacturers release so-called 'useful

features' that makes application sense, there are no citations that support these claims and without actual supporting data. However reasonable these claims may seem, they may be incorrect. Products need to have the right attributes based on research which are driven by consumer need and communicated through visual cues, triggers, and associations the first time round (Shirgaonkar, 2004).

The exponential growth that this industry has been further marked with the rise and fall of smart phone designers such as Palm, Blackberry, and Nokia. This could be the result of a number of factors, ranging from over supply or lack of product attributes, to lack of innovation. Generational change is another issue that has played a role in recent failures, where the changing generational landscape has upset regular marketing strategies, product strategies and understanding of how to switch and or retain a customer in this industry (Reisenwitz and Iyer, 2009). Hence, there is a need for study about students purchase behaviour towards smart phone.

OBJECTIVE OF THE STUDY

This study aimed to analyse the students purchase behaviour in the purchase of smart phone at Pondicherry region.

METHODOLOGY ADOPTED FOR THIS STUDY

In order to answer the research objective, descriptive type research applied. Because, students perception was described relating to their smart phone purchase, students are considered as the sample respondents. A sample of 200 students was approached by convenience sampling method. Questionnaire survey method was used to collect the data from the students. The study variables such as frequency of switching the smart phone, mobile phone previously owned, smart phone purchased at present, price range of smart phone, purchased model, reason for having smart phone and who influenced to purchase the smart phone are considered. 200 questionnaires were distributed, out of 200, 187 sample respondents answer was fit for further analysis. The collected data entered into SPSS version 17. Further, descriptive statistics like mean and standard deviation applied to know the students behaviour in the purchase of smart phone.

RESULTS AND DISCUSSION

Table-1: Frequency of Switching the Smart Phone

Frequency	No. of Students	Percent
Less than 6 months	89	16.0
6 months to One year	305	54.8
One year to two year	119	21.4
Above two year	44	7.9

Source: Primary Data Computed

Students are asked to how often they are switching their smart phone. Switching frequency is analysed with less than six months, six months to one year, every one year and above one year. Further, frequency analysis is carried out. The result is displayed in the Table 1. From the analysis, it is noted that 54.8 percent of the college students stated that they are changing their smart phone every six months to one year. 21.4 percent of the college students stated that they are changing their smart phone one year to two year. 16.0 percent of college students stated that they are changing their smart phone every six month once and very few (7.9) of them are having habits of changing smart phone, whenever they are needed or after one year. It is inferred that the most of the college students are changing their smart phone every six months to one year and some of the students are changing the smart phone every one year.

Table-2: Mobile Phone Owned Previously

Brands	Frequency	Percent
Nokia	123	22.1
Sony	87	15.6
Motorola	72	12.9
LG	22	3.9
Samsung	152	27.3
Iphone	22	3.9
HTC	13	2.3
Blackberry	22	3.9
Others	44	7.9

Source: Primary Data Computed

Table 2 explains the students had the brand of phone before switching the current smart phone. Here, the open choice was given to the students to write their old mobile phone brand. After collecting the data, the researcher grouped the brands in the nine major brands, such as Nokia, Sony, Motorola, LG, Samsung, i- phone, HTC, blackberry and others like OPPO, Gionee, Karbon, etc are marked in the others category. From the frequency analysis, it is observed that 27.3 percent of the college students had the Samsung brand mobile phone followed by 22.1 percent of the college students had Nokia brand mobile phone, 15.6 percent of the college students had Sony brand mobile phone, 12.9 percent of the college students had Motorola brand mobile phone, other brands like Oppo, Gionee, karbon (7.9%), LG and i-phone (3.9%) and HTC (2.3%). It is showed that the majority of the respondents had the Samsung, Nokia, Sony and Motorola phones. However, Oppo, Gionee, Karbon brands were also had by the college students.

Table-3: Brand of Smart Phone Switched by the Students

Brands	Frequency	Percent
Nokia	53	9.5
Sony	22	3.9
Motorola	31	5.6
LG	22	3.9
Samsung	165	29.6
Iphone	99	17.8
HTC	31	5.6
Blackberry	31	5.6
Others	103	18.5

Source: Primary Data Computed

Students are asked to mention their brand of smart phone switched at present. They are asked to write the brand name of smart phone purchased in the open choice. After, investigating the collected data, the brands purchased by students are classified into nine categories. There are Nokia, Sony, Motorola, LG, Samsung, i- phone, HTC, blackberry and others brands such as OPPO, Gionee, Karbon, etc. It is pointed out that majority of the students purchased Samsung brand (29.6%) followed by other brands like Oppo, Gionee, Karbon (18.5%), i-phone (17.8 %), Nokia (9.5%), Motorola, HTC and Blackberry (5.6%) and Sony, LG (3.9 %), respectively.

It is inferred that college students are preferred the Samsung smart phone, followed by OPPO, Gionee, Karbon, etc and i- phone. The least preferred brands were LG, Sony, HTC and Blackberry.

Table-4: Price range for a Smart Phone Purchased

Price ranges	Frequency	Percentages
Less than 10000	97	17.4
10001-20000	305	54.8
20001-30000	89	16.0
Above 30000	66	11.8

Source: Primary Data Computed

Students are asked to mention their price range of smart phone purchased. They are asked to write the price range of smart phone purchased. Further, the smart phone purchased price range was categorised into four groups namely as less than Rs.10000, Rs.10001 to 20000 and Rs.20001 to 30000 and more than Rs.30000. It is pointed out that majority of the students were purchased the smart phone as the price range of Rs.10001 to 20000 (54.8 %) followed by the students purchased smart phone price range of less than Rs.10000 (17.4%), the students purchased smart phone price range of Rs.20001 to 30000 (16.0%) and college students purchased smart phone price range of more than Rs.30000 (11.8%).

It is inferred that the majority of the college students are purchased smart phone as the price range of Rs.10001 to 20000 and the least preferred price range was more than Rs.30000.

Table-5: Purchased model

Purchase model	Frequency	Percentages
Same brand another model	53	9.5
Other brand	504	90.5

Source: Primary Data Computed

Table 5 explains the students purchased the brand of mobile phone. Here, the students asked to write their purchased smart phone. After collecting the data, the researchers found that, the majority of college students (90.5%) are to purchased other brand of smart phone instead of their old brand followed by 9.5 percent college students to purchase the same brand with another model.

Table-6: Preferred Companies

Company	Frequency	Percentage
Multinational companies	425	76.3
Indian companies	22	3.9
Not a factor (Local Company)	110	19.7

Source: Primary Data Computed

Students are asked which company brands of smart phone are preferred to purchase .The result is displayed in the table 4.7. From, the analysis, it is noted that 76.3 percent of the college students stated that they are preferred multinational company brand of smart phone. 19.7 percent of the college students stated that manufactured companies are not a factor and 3.9 percent of college students stated that they preferred their smart phone manufactured by Indian company. It is infrared that the most of the college students are preferred multinational company brand of smart phone and some of the students are preferred either local company or multinational company.

Table-7: Reasons for Owing a Smart Mobile phone

Reasons	Frequency	Percent
Necessity	88	15.8
Social Status	403	72.4
Luxury	66	11.8

Source: Primary Data Computed

Students are asked the reason for having the smart phone. Reasons are grouped namely necessity, social status and luxury. Further, frequency analysis is carried out. The result is displayed in the table 4.8. From the analysis, it is noted that 72.4 percent of the college students stated that they are having smart phone due to social status. 15.8 percent of the college students stated that they own smart phone for necessity. 11.8 percent of college students stated that they are having smart phone for luxury. It is infrared that the most of the college students are having smart phone due to social status necessity.

Table-8: Influencer of purchase the smart phone

Purchase intention	Frequency	Percent
Family	22	3.9
Friends	318	57.1
Relatives	120	21.5
Self	97	17.4

Source: Primary Data Computed

Table 4.9 shows that who influence the students to purchase the smart phone. The influences are family, friends, relatives and self. Further, frequency analysis is carried out. It is noted that 57.1 percent of the college students stated that they are influenced by their friends. 21.5 percent of the college students stated that they are influenced by their relatives. 17.4 percent of college students are influenced by themselves and 3.9 percent of college students stated that family members are influenced to purchase the brand of smart phone. The majority of the students are influenced by their friend and relatives in the purchase of smart phone.

Table-9: Purchase Place of Smart Phone

Purchase place	Frequency	Percentages
Service provider shop	44	7.9
Authorized retailer shop	340	61.0
Manufacturer retailer shop	76	13.6
Other shop	97	17.4

Source: Primary Data Computed

Table 9 explains the purchase place of smart phone among the students. The places are namely mobile service provider shop, authorized retail shop, manufacturer retailer shop and others shop such as online. Further,

frequency analysis is carried out. From the analysis, it is noted that 61.0 percent of the college students stated that they are purchased the smart phone from the authorized retailer shop. 17.4 percent of the college students stated that they are purchased at other shop like online. 13.6 percent of college students stated that they are purchased at manufacturing retailer shop and 7.9 percent of college students stated that they are purchased at service shop provider. It is inferred that the most of the college students stated that they are purchased the smart phone from the authorized retailer shop.

FINDINGS AND RECOMMENDATION OF THE STUDY

Most of the students are switched over the smart phone every six months to one year. Samsung and Nokia were the brands dominated in the market before the smart phone introduced in the market. However, in the smart phone market, Samsung, oppo, gionee are leading the Pondicherry market. The usage of a phone also increased among the students. Most of the students preferred to purchase the smart phone in the price range of less than Rs. 20,000. Majority of the students switched over their old brand to another brand of smart phone and also preferred multinational companies brand. Students are felt that having the smart phone, as their social status. Friends are highly influenced the students to purchase the smart phone. Students were influenced by brand, price, model and products features in the purchase of personal electronic products (Solayappan and Jothi Jayakrishnan, 2010). Brand performance is also the key factor for switch over the other brand (Vetrivel, et. al., 2015). Samsung smart phone is the leader of the market in the Pondicherry region students. Hence, company have a strategy to retain the customers. But, other brands such as oppo, gionee, usage is found to be high. Hence, these brands have the opportunity at students market. It is recommended that these brands should capture the market.

CONCLUSION

One of the most important aspects when launching a new product involves identifying features of the product that will allow it to garner the largest market share (Floyd and Lydia, 2012). In the Smartphone industry this is a delicate balancing act, as too many features lead to feature fatigue, while too little lead to a user needs mismatch. The smart phone industry is very much a technology push driven industry, where products are often created ahead of the recognition of existing recognised consumer needs. Thus, mobile phone development is based on consumers' possible future needs. The organisations that best predict the technologies and features of the future will be the leaders in the discipline (Karjaluoto, et, al., 2005). An understanding of future consumer needs is critical in matching demand with supply. The smart phone becomes the de facto in mobile telecommunication, a match between Smartphone features and consumer need is required to ensure sales success and some aspect of customer fulfilment.

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DEVELOPMENTS IN THE LAW OF CRYPTOCURRENCIES: A SOUTH AFRICAN PERSPECTIVE

Dr. Angus Lloyd Hornigold

INTRODUCTION

The development of crypto-currencies has been much in the news of late. This is because they have given those who have purchased them excellent growth and also they have acquired somewhat of a reputation for being sources of criminal activity. This article will seek to explore the South African regulatory framework to see whether these regulate the crypto-currencies.

It will conclude with certain suggestions as to what legislation lawyers are likely to expect from government should they elect to regulate these currencies.

The approach that will be adopted is to consider the nature of these currencies. To some extent a looseness of terminology will be employed. This is done with an awareness of the problems involved. The reason is that the most well-known of these currencies is Bitcoin but there are over 800 of these currencies and they do differ from one another and it is impossible to discuss all of them. Bitcoin will often be used as a focal point because it is both the first and most representative of those currencies based on distributed ledger technology which has much wider application than crypto-currencies and potentially represents a significant disruptive technology within the legal sphere. Secondly, much of the case law that has emerged has dealt with Bitcoin. Bitcoin, as will become apparent is not anonymous at all although there are other currencies which are anonymous. For example, Monero. The term crypto-currency will often be used since this is a commonly used term on the internet.¹ The term virtual currency (VC) will also be used but this tends to be a legally defined term in the EU.² The two terms may, for reasons of convenience, be used interchangeably.

The outline will be to explore the nature of these currencies, the possible South African laws that could impact upon it, the European position and the position in the USA. As will be apparent this is a rapidly changing area of the law.

THE NATURE OF CRYPTO-CURRENCIES

In order to understand some of the legal debates around Bitcoin and other crypto currencies it is necessary to give a brief overview of the functioning of the Bitcoin system. For these purposes extensive reference will be made to the Financial Action Task Force (FATF) publication of June 2014 "Virtual Currencies

Key Definitions and

Potential AML/CFT Risks".³ The FATF is an intergovernmental organization initiative of the G7 to develop policies to combat money laundering. The FATF Recommendations are recognised as the global anti-money laundering (AML) and counter-terrorist financing (CFT) standard.

The first definition employed is as follows:

"Virtual currency is a digital representation of value that can be digitally traded and functions as (1) a medium of exchange; and/or (2) a unit of account; and/or (3) a store of value, but does not have legal tender status (i.e., when tendered to a creditor, is a valid and legal offer of payment)⁶ in any jurisdiction. It is not issued nor guaranteed by any jurisdiction, and fulfils the above functions only by agreement within the community of users of the virtual currency. Virtual currency is distinguished from fiat currency (a.k.a. "real currency," "real money," or "national currency"), which is the coin and paper money of a country that is designated as its legal tender; circulates; and is customarily used and accepted as a medium of exchange in the issuing country. It is distinct from e-money, which is a digital representation of fiat currency used to electronically transfer value denominated in fiat currency. E-money is a digital transfer mechanism for fiat currency—i.e., it electronically transfers value that has legal tender status.

¹<https://www.google.co.uk/search?q=cryptocurrency&oq=crypto&aqs=chrome.0.0j69i57j69i60l2j69i59j69i60.3695j0j7&sourceid=chrome&ie=UTF-8>

² See below

³ <http://www.fatf-gafi.org/media/fatf/documents/reports/Virtual-currency-key-definitions-and-potential-aml-cft-risks.pdf>

Digital currency can mean a digital representation of either virtual currency (non-fiat) or e-money (fiat) and thus is often used interchangeably with the term “virtual currency”. In this paper to avoid confusion, only the terms “virtual currency” or “e-money” are used.”

These crypto-currencies can be convertible to fiat currency or they may not be. The former are called convertible and the latter non-convertible. The former would include Bitcoin and similar crypto currencies and the latter are used in closed systems such as online computer games. However, the latter may be traded in secondary black markets effectively making them convertible.

The next important distinction is that of centralisation or decentralization of administration. Centralized currencies have a single administrator. The administrator “issues the currency; establishes the rules for its use; maintains a central payment ledger; and has authority to redeem the currency (withdraw it from circulation. The exchange rate for a convertible virtual currency may be either floating—i.e., determined by market supply and demand for the virtual currency--or pegged—i.e., fixed by the administrator at a set value measured in fiat currency or another real-world store of value, such as gold or a basket of currencies.”

The decentralized currencies are “distributed, open-source, math-based peer-to-peer virtual currencies that have no central administrating authority, and no central monitoring or oversight. Examples: Bitcoin; LiteCoin; and Ripple.” It is the introduction of block-chain technology which may result in major shifts in the legal profession and warrant a paper in their own right. A brief explanation of the function of block chains is necessary.

BLOCK CHAINS

Many important systems within the legal and financial sector maintain an independent third party ledger in order to protect the participants in particular industries. An example of this is a credit card company which acts as intermediary between a buyer and seller. The seller does not have to rely on the credit of the buyer only on the credit of the credit card company who acts as an intermediary. A further example is the deeds register in South Africa. A purchaser or credit grantor is able to access the records in the deeds registry and determine if the counter party is owner of the property in question and if so what encumbrances there are over the property. However, the deeds based system in South Africa operates on the basis that it offers only proof of registration and not proof of owner ship. There are many cases in which fraudulent transactions have led to the deeds register being incorrectly relied upon. Some of these examples include *Menka v Markom*,⁴ *Legator McKenna inc v Shea*,⁵ *Meintjies NO v Coetzer*.⁶

The blockchain technology seeks to remove the intermediary as a necessary party to maintain trust between two persons acting as arm's length. Every record or transaction is written on a block chain ledger and contains an unique unhackable key to confirm it. The record is written by the party who is currently a holder of the relevant information and is trusted by virtue of earlier transactions. Each record that is written contains a full record of previous transactions but is then also encrypted and assigned a unique key. This applies to every record so that all the information relating to the previous record are incorporated including the previous key and a new key is then assigned. Thus, all the transactions are chained together. If any tampering occurs anywhere in the record this is immediately apparent when the necessary algorithm is applied. Each industry is writing to a common ledger and this is continually scanned by the appropriate algorithm to check that there has been no inappropriate tampering with previous transactions. Only good records are preserved. This leads to an immutable distributed ledger which is accessible to all and validated by consensus.⁷ This is a quote from the original paper which created the Bitcoin and bolckchain model:

“A purely peer-to-peer version of electronic cash would allow online payments to be sent directly from one party to another without going through a financial institution. Digital signatures provide part of the solution, but the main benefits are lost if a trusted third party is still required to prevent double-spending. We propose a solution to the double-spending problem using a peer-to-peer network. The network timestamps transactions by hashing them into an ongoing chain of hash-based proof-of-work, forming a record that cannot be changed without redoing the proof-of-work. The longest chain not only serves as proof of the sequence of events witnessed, but proof that it came from the largest pool of CPU power”

⁴ 2008 (2)SA 120 (SCA)

⁵ 2010 (1) SA 35 (SCA)

⁶ 2010(5) SA 186 (SCA)

⁷ <https://bitcoin.org/bitcoin.pdf> Bitcoin: A Peer-to-Peer Electronic Cash System, Satoshi Nakamoto

Each unit of the currency is uniquely identified and to prevent any unit being forged each unit records all previous transactions and encrypts them. To prevent double spend “we proposed a peer-to-peer network using proof-of-work to record a public history of transactions that quickly becomes computationally impractical for an attacker to change if honest nodes control a majority of CPU power.”

The importance of a block chain in eliminating trustworthy intermediaries such as credit card companies and deeds registers becomes immediately apparent. See for example the joint press release between the Estonian government and Bitnation launching the e-nation initiative based on blockchain for notarization.⁸ The importance of block chain is noted by the European Parliament which stated that

“Notes that DLT’s potential to accelerate, decentralise, automate and standardise data-driven processes at lower cost has the potential to alter fundamentally the way in which assets are transferred and records are kept, with implications for both the private and the public sector, the latter being concerned in three dimensions: as a service provider, as a supervisor and as a legislator”;⁹

Block chain therefore provides a greater level of trust where the ledger is not reliant on a single registrar but on a widely distributed common ledger.

Commodity currencies such as gold, silver or copper have been replaced by fiat currencies which are based solely on confidence and trust in central governments.¹⁰ A trust that may be eroded in a high inflationary environment.¹¹ Thus, in certain circumstances there is a risk that crypto-currencies may replace fiat currencies because they represent a higher level of trust.

FURTHER IMPORTANT CONCEPTS

A user is a person/entity who obtains virtual currency and uses it to purchase real or virtual goods or services or send transfers in a personal capacity to another person (for personal use), or who holds the virtual currency as a (personal) investment.

Virtual currency wallet is a means (software application or other mechanism/medium) for holding, storing and transferring Bitcoins or other virtual currency. This wallet can be hot (online) or cold (offline).

Various tools and services, such as darknets and mixers, designed to obscure the source of a Bitcoin transaction and facilitate anonymity. (Examples: Tor (darknet); Dark Wallet (darknet); Bitcoin Laundry (mixer)).

IS BITCOIN MONEY

This topic has been debated by Max Kubát¹² where he concludes that it differs from fiat currency since it is not generally accepted as a medium of exchange within borders of any particular nation nor does it represent the theoretical claim on the central bank of a particular nation. He argues that it also does not satisfy the empirical definition of money because it does not satisfy any of the criteria with that definition.

“The aim of the empirical definition of money is to deal with the “relationship between quantitative development of money and other macroeconomic variables. Therefore, in addition to the definition of money, it copes with the question what money is and what is not in circulation. In order to monitor the development, monetary aggregates are constructed and they represent the sum of cash with a certain degree of liquidity” The author explains that because a number of factors it is impossible to determine the number of Bitcoin in circulation. It therefore fails this test.

⁸ <https://bitnation.co/blog/pressrelease-estonia-bitnation-public-notary-partnership/>

⁹ European Parliament

¹⁰ <http://fessud.eu/wp-content/uploads/2013/04/Commodity-Currencies-vs-Fiat-Money-Working-paper-No.44.pdf> FESSUD FINANCIALISATION, ECONOMY, SOCIETY AND SUSTAINABLE DEVELOPMENT Working Paper Series No 44 Commodity Currencies vs Fiat Money –Automaticity vs Embedment Kenneth Hermele Lund University

¹¹ <http://home.uchicago.edu/rmyerson/research/weimar.pdf> POLITICAL ECONOMICS AND THE WEIMAR DISASTER By Roger B. Myerson first version: July 1998 final version: January 2004

¹² 3rd Economics & Finance Conference, Rome, Italy, April 14-17, 2015 and 4th Economics & Finance Conference, London, UK, August 25-28, 2015 Virtual currency bitcoin in the scope of money definition and store of value Max Kubát, Procedia Economics and Finance 30 (2015) 409 – 416

As an illustration of his point the author then turns to Czech legislation and concludes that despite the fact that the users of the currency may consider it money it does not meet the legal definition of money. He reaches a similar conclusion for the definition of money in Germany. After studying the trading history of Bitcoin and its high volatility he finally concludes by saying that:

“It was showed by comparing the characteristics of Bitcoin with commonly used definitions of money (theoretical, empirical and legal) that although Bitcoin is widely reported to be money, it does not meet criteria of used definitions. Legal definitions rather ignore the nature of Bitcoin and in the case of Bitcoin being explicitly mentioned in the law”

How then is Bitcoin and other crypto-currencies treated in Europe? The ECB in an opinion commenting on a on a proposal for a directive of the European Parliament and of the Council amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing and amending Directive 2009/101/EC stated that:

The term ‘virtual currencies’ is defined under the proposed directive as meaning ‘a digital representation of value that is neither issued by a central bank or a public authority, nor necessarily attached to a fiat currency, but is accepted by natural or legal persons as a means of payment and can be transferred, stored or traded electronically¹³

First, ‘virtual currencies’ do not qualify as currencies from a Union perspective (Consistent with the approach, which has either already been adopted, or is currently being considered, by other jurisdictions regulating virtual currency exchange platforms, including Canada, Japan and the United States, the ECB recommends defining virtual currencies more specifically, in a manner that explicitly clarifies that virtual currencies are not legally established currencies or money

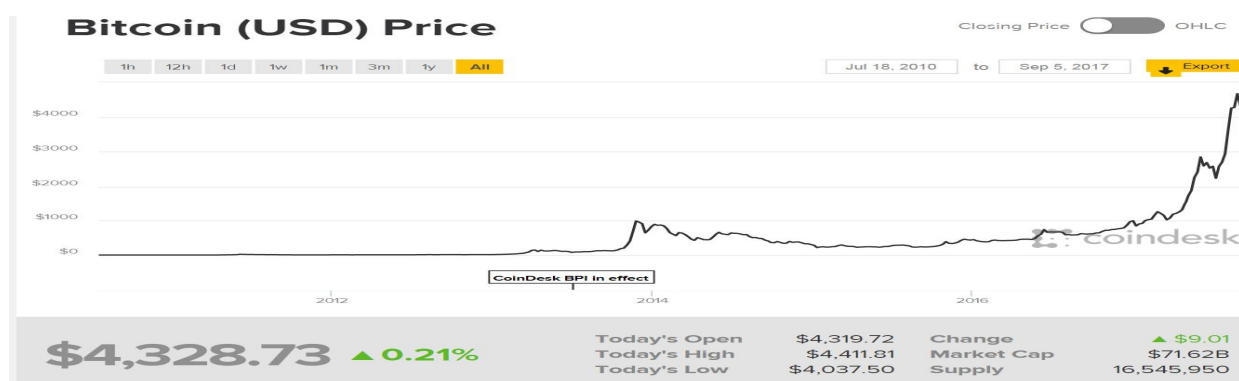
Second, given that virtual currencies are not in fact currencies, it would be more accurate to regard them as a means of exchange, rather than as a means of payment. Additionally, the proposed directive's definition of ‘virtual currencies’ as a means of payment does not take into account that in some circumstances virtual currencies can be used for purposes other than that of a means of payment.

As noted by the Bank for International Settlements (BIS), the distributed ledger technology underlying many digital currency schemes could have a much broader application beyond payments in this respect, the FATF has noted that non-payment uses of virtual currencies may include store-of-value products for savings or investment purposes, such as derivatives, commodities, and securities. More recent digital currencies, which are based on more sophisticated distributed ledger and blockchain technology, have a large array of uses that go beyond payment , including for example, online casinos. In the light of the above, the ECB suggests that the proposed directive also refers to other possible uses of virtual currencies in the proposed definition of that term.

As will be noted from the above these currencies are not considered to be money but may represent a means of exchange and possibly investment.

THE SOUTH AFRICAN POSITION

Given the meteoric rise in value of these crypto currencies it has drawn the attention of the general public. See figure 1 which shows the increase in value this year alone.¹⁴



¹³ EUROPEAN CENTRAL BANK OPINION OF THE EUROPEAN CENTRAL BANK of 12 October 2016 <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016AB0049&from=EN>

¹⁴ <https://www.coindesk.com/price/>

This has drawn the attention of a greater number of people who are interested in the VCs.

Turning to the question whether these currencies constitute money as legally defined? The National Payment System Act 78 of 1998 defines 'money' as follows:

means a banknote or coin issued by the Reserve Bank in terms of Section 10 (1) (a) (iii), read with section 14 of the South African Reserve Bank Act. Section 10 (1) (a) (iii) of the South African Reserve Bank Act provides that The Bank may ...issue banknotes and coins, or cause banknotes and coins to be issued, for use in the Republic; and section 14 provides that (1) The Bank shall have the sole right to issue or cause to be issued banknotes and coins in the Republic:

Thus, clearly these currencies are not money as defined and therefore do not have legal status.

The question is what regulations exist to protect the consumer.

The following are possible sources of protection for either the consumer or society:

1. Exchange control regulations¹⁵
2. Financial Advisory and Intermediary Services Act
3. Financial Intelligence Centre Act
4. Financial Services Board Act

Exchange control Regulations. The exchange control regulations in South Africa were enacted in terms of the Exchange Control Regulations, 1961¹⁶ are promulgated in terms of the Currency and Exchanges Act, 1933 (Act No. 9 of 1933).

In term so section 2 of the regulations there is a restriction on purchase, sale and loan of foreign currency and gold. The regulation provides as follows:

2. (1) Except with permission granted by the Treasury, and in accordance with such conditions as the Treasury may impose no person other than an authorised dealer shall buy or borrow any foreign currency or any gold from, or sell or lend any foreign currency or any gold to any person not being an authorised dealer.
- (2) (a) An authorised dealer shall not buy, borrow or receive or sell, lend or deliver any foreign currency or gold except for such purposes or on such conditions as the Treasury may determine.
- (b) The Treasury may, in its discretion, by order prohibit all authorised dealers or any one or more of them –
 - (i) from selling, lending or delivering to, or buying, borrowing or receiving from, any specified person, fund or foreign government any foreign currency or gold; or
 - (ii) from so selling, lending, delivering, buying, borrowing or receiving any foreign currency or gold for any specified purpose or except for such purposes or on such conditions as the Treasury may determine.
- (3) Every person other than an authorised dealer desiring to buy or borrow or sell or lend foreign currency or gold shall make application to an authorised dealer and shall furnish such information and submit such documents as the authorised dealer may require for the purpose of ensuring compliance with any conditions determined under sub-regulation (2) of this regulation.
- (4) No person other than an authorised dealer shall –
 - (a) use or apply any foreign currency or gold acquired from an authorised dealer for or to any purpose other than that stated in his application to be the purpose for which it was required; or
 - (b) do any act calculated to lead to the use or application of such foreign currency or gold for or to any purpose other than that so stated.
- (5) If a person has, as a result of an application in terms of sub-regulation (3) of this regulation, obtained from an authorised dealer any gold or foreign currency and no longer requires all or any part of such gold or foreign

¹⁵ (as promulgated by Government Notice R.1111 of 1 December 1961 and amended up to Government Notice No. R.445 in Government Gazette No. 35430 of 8 June 2012)

¹⁶ (as promulgated by Government Notice R.1111 of 1 December 1961 and amended up to Government Notice No. R.445 in Government Gazette No. 35430 of 8 June 2012)

currency for the purpose stated in his application, he shall forthwith offer for sale to the Treasury or an authorised dealer that gold or foreign currency which is not so required, which may be repurchased at the price at which it was sold to him or such other price as the Treasury may determine.¹⁷

FOREIGN CURRENCY MEANS

"foreign currency" means any currency which is not legal tender in the Republic, and includes any bill of exchange, letter of credit, money order, postal order, promissory note, traveller's cheque or any other instrument for the payment of currency payable in a currency unit which is not legal tender in the Republic;

"money" includes foreign currency or any bill of exchange or other negotiable instrument;

Virtual currencies therefore do not qualify as money or foreign currency as defined.

Thus it appears to provide a mechanism through which wealth can be transferred off shore without any form of regulation. This would explain stories in the media such as these reported in Biznews¹⁸:

“JOHANNESBURG — A potentially seismic event happened in South Africa’s financial industry last week, but it barely caused a flutter because it occurred on a little-known cryptocurrency exchange and has been surrounded by mystery. Global websites that track cryptocurrency trading volumes picked up on a bizarre trading event last week. One such website, Trustnodes.com, reported that there was a \$2.5bn (R32.6bn) trading volume in a low-profile cryptocurrency called E-Dinar (EDR) on a little-known crypto exchange called ‘Localtrade’. Looking at the data, Trustnodes reported that South African rands were used in this particular trade as the EDR/ZAR trading pair showed massive volumes. “

The response of the Reserve Bank can be seen on this page as well:

“For any large value transactions processed through bank accounts, existing rules and processes require regulatory reporting. In this regard, no Authorised Dealer (i.e. commercial bank) in South Africa has brought to the SARB’s attention the outward flow of rand for a transaction to the value of R32.6 billion. We rely on the formal financial system, which includes authorised dealers, on reporting to the Reserve Bank on all foreign exchange transactions. Authorised dealers are banks that have the right to buy and sell foreign exchange, subject to conditions and within limits prescribed by the Financial Surveillance Department. The other category of authorised dealers in foreign exchange are those with limited authority including Bureaux de Change, for the sole purpose of facilitating travel related transactions.

In South Africa, crypto currencies are currencies not backed by the South African Reserve Bank, hence offer no recourse or protection to consumers thereof. Any party or actor involved in the purchase or trading of crypto currencies does so at its own risk.”

In other words, it would appear that crypto currencies potentially undermine the exchange control system currently overseen by the reserve bank.¹⁹

Quite clearly it is none of these which explains why luna.com which is South Africa’s biggest online dealer is able effectively to sell virtual currency, which can be used to export forex without any form of criminal sanction, in excess of seven million rand per day.

The next possible source of regulation may come from Financial Intelligence Centre Act which seeks to:

“combat money laundering activities and the financing of terrorist and related activities; to impose certain duties on institutions and other persons who might be used for money laundering purposes and the financing of terrorist and related activities”

¹⁷ EXCHANGE CONTROL REGULATIONS, 1961 (as promulgated by Government Notice R.1111 of 1 December 1961 and amended up to Government Notice No. R.445 in Government Gazette No. 35430 of 8 June 2012) It is hereby notified that the State President has, in terms of section nine of the Currency and Exchanges Act, 1933 (Act No. 9 of 1933), made Exchange Control Regulations as contained in the Schedule in this Notice

¹⁸ <http://www.biznews.com/global-investing/2017/08/28/r33bn-transfer-uae-linked-edinar-edr-cryptocurrency/>

¹⁹ Exchange control regulations 3rd Economics & Finance Conference, Rome, Italy, April 14-17, 2015 and 4th Economics & Finance Conference, London, UK, August 25-28, 2015 Virtual currency bitcoin in the scope of money definition and store of value Max Kubát *Procedia Economics and Finance* 30 (2015) 409 – 416

Firstly, the accountable institutions are set out in schedule 1 to the Act. It is not necessary to consider all the accountable institutions but the only possibility which may cover VCs is “money remitter”. This is undefined in the Act as is the phrase money. Cash however is defined:

'cash' means-

(a) coin and paper money of the Republic or of another country that is designated as legal tender and that circulates as, and is customarily used and accepted as, a medium of exchange in the country of issue;

(b) travellers' cheques;

The proper definition of money must therefore be as set out in the National Payment System Act 78 of 1998 referred to above. As discussed VCs are not money as defined. Furthermore, the relevant provisions which seek to Control Measures for Money Laundering and Financing of Terrorist And Related Activities as set out in sections 21-45 will not be triggered by the VC's since the reporting duties only apply to Reporting Institutions. These duties include the “know your client” provisions (s21), the duty to keep records (ss 22-26) and reporting duties and access to information (ss 27-41).

Finally there is the Financial Advisory and Intermediary Services Act 37 of 2002. Broadly, in terms of FAIS:

“2. A provider must at all times render financial services honestly, fairly, with due skill, care and diligence, and in the interests of clients and the integrity of the financial services industry.”

The question is whether the purchase and sale of VCs falls within these provisions which seek to protect the consumer of financial products.

In terms of FAIS

"advice" means, subject to subsection (3)(a), any recommendation, guidance or proposal of a financial nature furnished, by any means or medium, to any client or group of clients-

(a) in respect of the purchase of any financial product; or

(b) in respect of the investment in any financial product; or

(c) on the conclusion of any other transaction, including a loan or cession, aimed at the incurring of any liability or the acquisition of any right or benefit in respect of any financial product; or

(d) on the variation of any term or condition applying to a financial product, on the replacement of any such product, or on the termination of any purchase of or investment in any such product, and irrespective of whether or not such advice-

(i) is furnished in the course of or incidental to financial planning in connection with the affairs of the client; or

(ii) results in any such purchase, investment, transaction, variation, replacement or termination, as the case may be, being effected;

“financial product” means, subject to subsection (2) -

(a) securities and instruments, including -

(i) shares in a company other than a “share block company” as defined in the Share Blocks Control Act, 1980 (Act No. 59 of 1980);

(ii) debentures and securitised debt;

(iii) any money-market instrument;

(iv) any warrant, certificate, and other instrument acknowledging, conferring or creating rights to subscribe to, acquire, dispose of, or convert securities and instruments referred to in subparagraphs (i), (ii) and (iii);

(v) any “securities” as defined in section 1 of the Financial Markets Act, 2012 (Act No. 19 of 2012);

Act No. 19 of 2012 Financial Markets Act, 2012 defines securities as follows:

“securities” means—

(a) listed and unlisted—

(i) shares, depository receipts and other equivalent equities in public companies, other than shares in a share block company as defined in the Share Blocks Control Act, 1980 (Act No. 59 of 1980);

(ii) debentures, and bonds issued by public companies, public state-owned enterprises, the South African Reserve Bank and the Government of the Republic of South Africa;

(iii) derivative instruments;

(iv) notes;

(v) participatory interests in a collective investment scheme as defined in the Collective Investment Schemes Control Act, 2002 (Act No. 45 of 2002), and units or any other form of participation in a foreign collective investment scheme approved by the Registrar of Collective Investment Schemes in terms of section 65 of that Act; and

(vi) instruments based on an index;

(b) units or any other form of participation in a collective investment scheme licensed or registered in a country other than the Republic;

(c) the securities contemplated in paragraphs (a) (i) to (vi) and (b) that are listed on an external exchange;

(d) an instrument similar to one or more of the securities contemplated in paragraphs (a) to (c) prescribed by the registrar to be a security for the purposes of this Act;

(e) rights in the securities referred to in paragraphs (a) to (d),

but excludes—

(i) money market securities, except for the purposes of Chapter IV; or if prescribed by the registrar as contemplated in paragraph (d);

(ii) the share capital of the South African Reserve Bank referred to in section 21 of the South African Reserve Bank Act, 1989 (Act No. 90 of 1989); and

(iii) any security contemplated in paragraph (a) prescribed by the registrar;

VCs clearly do not fall into any of the above categories and therefore sale of these products by unscrupulous operators will be unregulated.

Finally, the Financial Services Board Act 97 of 1990 will not apply because anyone who acts as a VC exchange does not fall within this definition:

“financial institution” means-

(i) any pension fund organisation registered in terms of the Pension Funds Act, 1956 (Act No. 24 of 1956), or any person referred to in section 13B of that Act administering the investments of such a pension fund or the disposition of benefits provided for in the rules of such a pension fund;

(ii) any friendly society registered in terms of the Friendly Societies Act, 1956 (Act No. 25 of 1956), or any person in charge of the management of the affairs of such a society;

(iii) a collective investment scheme as defined in section 1 of the Collective Investment Schemes Control Act, 2002, a manager, trustee, custodian or nominee company registered or approved in terms of that Act, and an authorised agent of such a manager;

(v) any ‘external authorised user’, ‘external central securities depository’, ‘external clearing house’, ‘external clearing member’, ‘external exchange’, ‘external participant’ or ‘external trade repository’, or any person referred to in paragraphs (a) to (h) and (j) of the definition of ‘regulated person’, as defined in the Financial Markets Act, 2012 (Act No. 19 of 2012);

Again, the VC exchanges are therefore unregulated. This would also explain why Bitcoin exchanges like Luno.com which has offices in Cape Town is not a registered FAIS intermediary nor a registered financial institution despite trading \$1,663,130 worth of Bitcoin per day.²⁰

Thus, the market, which is a significant market, seems to be wholly unregulated. For the purposes of this article it will be instructive to see how Europe and the USA have approached this problem.

²⁰ <https://coinmarketcap.com/exchanges/luno/>

EUROPE

The following figure (see figure 2) appeared in the European Banking Authority 2014 Opinion on ‘virtual currencies’. This is a summary of some of the more prominent risks posed by virtual currencies.

C) Risks to financial integrity	Money laundering and terrorist financing	C01	Criminals are able to launder proceeds of crime because they can deposit/transfer VCs anonymously	High
		C02	Criminals are able to launder proceeds of crime because they can deposit/transfer VCs globally, rapidly and irrevocably	High
		C03	Criminals/terrorists use the VC remittance systems and accounts for financing purposes	High
		C04	Criminals/terrorists disguise the origins of criminal proceeds, undermining the ability of enforcement to obtain evidence and recover criminal assets	High
		C05	Market participants are controlled by criminals, terrorists or related organisations	High
	Financial crime risks	C11	Criminal uses VC exchanges to trade illegal commodities and abuse regulated financial sector at point of entry	High
		C12	Restorative justice of victims of crime is hindered by criminal using VCs to avoid seizure of assets, confiscation and financial sanctions	High
		C13	Criminal can use VCs for anonymous extortion	High
		C14	Criminal organisations can use VCs to settle internal or inter-organisational payments	Med
		C15	VCs make it more feasible for individuals to engage in criminal activity	High
		C16	Hacking of VC software, wallets or exchanges allows a criminal to implicate others in the criminal activities they commit	Me
		C17	Criminals, terrorist financiers and even entire jurisdictions are able to avoid seizure of assets, confiscation, embargos and financial sanctions (incl. those imposed by IGOs)	Med
		C18	Criminals are able to create a VC scheme	High
		C19	Tax evaders are able to obtain income in VCs, outside monitored FC payment systems	Med
	D) Risks to payment systems in FCs	D01	Payment service providers (PSPs) that use FC and also provide VC services suffer losses due laws that render VC contracts illegal	Low
		D02	PSPs that use FC and also provide VC services fail due to liquidity exposures in their VC operations	Low
		D03	PSPs that offer VC payment services suffer loss of reputation when VC payments fail, because they gave the impression that VCs were regulated	Med
		D04	Businesses in the real economy suffer losses due to disruptions in financial markets that were caused by VC assets blocked, delayed, etc.	Low
E) Risks to regulatory authorities	Reputation risks	E01	Regulators decide to regulate VCs but the chosen regulatory approach fails	Med
		E02	Regulators do not regulate VCs but the viability of regulated financial institutions is compromised as a result of their interaction with VCs	Med
		E03	Regulation and supervision of conventional financial activities is circumvented by unregulated ‘shadow’ activities that incur the same risks	Med
	Legal	E11	Regulator is subject to litigation as a result of introducing regulation that renders pre-existing contracts illegal/unenforceable	Low
	Risks to competition objectives	E21	Should the regulator decide to regulate VCs more leniently than FCs, an unequal playing field in the market for payment services will emerge	Med
		E22	If an unequal playing field is retained, the intensity of competition in the market for FC payment services diminishes as providers exit FC markets	Med
		E23	Regulators prevent potential new entrants to payment services market if the regulatory approach to VCs is excessive	Med
	To authority issuing FC (out of scope of)	E31	Should VCs gain widespread acceptance, central bank as issuer of FC can no longer steer the economy, as the impact of its monetary measures become difficult to predict	Low

The European Union has regularly updated its anti-money laundering legislation. The most recent update is the Fourth Anti-Money Laundering which was enacted on 25 June 2015. This legislation is to be implemented by member states within two years.²¹

The fourth AMLD is contained in Directive (EU) 2015/849 of the European Parliament and of the Council of 20 May 2015.²² The preamble provides:

- 1) Flows of illicit money can damage the integrity, stability and reputation of the financial sector, and threaten the internal market of the Union as well as international development. Money laundering, terrorism financing and organised crime remain significant problems which should be addressed at Union level. In addition to further developing the criminal law approach at Union level, targeted and proportionate prevention of the use of the financial system for the purposes of money laundering and terrorist financing is indispensable and can produce complementary results.
- 2) The soundness, integrity and stability of credit institutions and financial institutions, and confidence in the financial system as a whole could be seriously jeopardised by the efforts of criminals and their associates to

²¹ http://europa.eu/rapid/press-release_IP-17-1732_en.htm

²² http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:JOL_2015_141_R_0003&from=ES

disguise the origin of criminal proceeds or to channel lawful or illicit money for terrorist purposes. In order to facilitate their criminal activities, money launderers and financiers of terrorism could try to take advantage of the freedom of capital movements and the freedom to supply financial services which the Union's integrated financial area entails. Therefore, certain coordinating measures are necessary at Union level. At the same time, the objectives of protecting society from crime and protecting the stability and integrity of the Union's financial system should be balanced against the need to create a regulatory environment that allows companies to grow their businesses without incurring disproportionate compliance

- 3) The use of electronic money products is increasingly considered to be a substitute for bank accounts, which, in addition to the measures laid down in Directive 2009/110/EC of the European Parliament and of the Council (4), justifies subjecting those products to anti-money laundering and countering the financing of terrorism (AML/CFT) obligations

‘electronic money’ means electronically, including magnetically, stored monetary value as represented by a claim on the issuer which is issued on receipt of funds for the purpose of making payment transactions as defined in point 5 of Article 4 of Directive 2007/64/EC, and which is accepted by a natural or legal person other than the electronic money issuer;

Directive 2007/64/EC of the European Parliament and of the Council of 13 November 2007 in point 5 of Article 4 states:

‘payment transaction’ means an act, initiated by the payer or by the payee, of placing, transferring or withdrawing funds, irrespective of any underlying obligations between the payer and the payee;

Although electronic money does not expressly exclude VCs it is clear that the EU authorities do not consider VCs as electronic money as will emerge below. In June 2017 the European Union began the process of amending their anti-money laundering legislation with the Revision of the Fourth Anti-Money- Laundering Directive. This is colloquially referred to as the Fifth Anti-Money Laundering Directive (5 AMLD) and it will seek to amend 4 AMLD. This proposal is scheduled to be discussed by the EU Parliament on 23-26 October 2017.

A copy of what is referred to as the European’s Compromise Text (“5AMLD”) that was issued on 28 October 2016 can be found here: <http://data.consilium.europa.eu/doc/document/ST-13872-2016-INIT/en/pdf>

A further and updated proposal was published on 9 March 2017 that expressly provides that “competent authorities should be able to monitor the use of virtual currencies,” and in which it is recognized that anonymity would be a “hindrance than an asset for virtual currencies” when used for criminal purposes.²³

See point 6 of report which expressly states that²⁴

Providers of exchange services between virtual currencies and fiat currencies (that is to say currencies declared to be legal tender) as well as custodian wallet providers for virtual currencies are under no obligation to identify suspicious activity. Terrorist groups are thus able to transfer money into the Union's financial system or within virtual currency networks by concealing transfers or by benefiting from a certain degree of anonymity on those platforms. It is therefore essential to extend the scope of Directive (EU) 2015/849 so as to include virtual currency exchange platforms and custodian wallet providers. Competent authorities should be able to monitor the use of virtual currencies. This would provide a balanced and proportional approach, safeguarding technical

²³ <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONGML+REPORT+A8-2017-0056+0+DOC+PDF+V0//EN> REPORT on the proposal for a directive of the European Parliament and of the Council amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing and amending Directive 2009/101/EC (COM(2016)0450 – C8-0265/2016 – 2016/0208(COD))

²⁴ <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONGML+REPORT+A8-2017-0056+0+DOC+PDF+V0//EN> on the proposal for a directive of the European Parliament and of the Council amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing and amending Directive 2009/101/EC (COM(2016)0450 – C8-0265/2016 – 2016/0208(COD))

advances and the high degree of transparency attained in the field of alternative finance and social entrepreneurship.²⁵

The proposed amendment further makes it clear that the notion of electronic money did not include VCs by changing the relevant provisions:

(c) the following points (18), (18a) and (18b) are added:

"(18) "virtual currencies" means a digital representation of value that is neither issued by a central bank or a public authority, nor attached to a legally established fiat currency, which does not possess a legal status of currency or money, but is accepted by natural or legal persons, as a means of exchange, and possibly also for other purposes, and which can be transferred, stored or traded electronically.

(18a) 'electronic money issuer' means an institution as defined in point (3) of Article 2 of Directive 2009/110/EC.

(18b) "custodian wallet provider" means an entity that provides services to safeguard private cryptographic keys on behalf of their customers, to holding, store and transfer virtual currencies."

As can be furthermore be observed from the amendment the purpose of the new directive is to allow for the full regulation of the VC market.

1. Member States shall ensure that providers of exchanging services between virtual currencies and legally established currencies, custodian wallet providers, currency exchange and cheque cashing offices, issuers, administrators, intermediaries and distributors of virtual currencies, administrators and providers of systems for online payments, and trust or company service providers are licensed or registered, and that providers of gambling services are regulated, including by the implementation of measures on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing.

Thus, VCs will soon be fully regulated, in the same way as other money in the EU from a money laundering perspective..

There is one case in the ECJ decision regarding the use of Bitcoin and that is in the matter of *Skatteverket v David Hedqvist*.²⁶ The court in that case was concerned with the question of whether the exchange of Bitcoin for fiat currency was a good or service that attracted VAT in terms of Articles 2(1) and 135(1) of Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax. If it was a good or service then those transactions would attract VAT. If on the other hand the exchange of Bitcoin into fiat currency and vica versa was simple currency exchange then it would be exempt from VAT in terms of Article 135(1) (d) to (f) of the relevant VAT Directive. The court divided the question into two. The service for performing the exchange did attract VAT however the currency exchange part of the transaction was to be regarded as a traditional exchange between fiat currencies and therefore attracted no VAT. This was the case even though the directive did not specifically mention VCs.

USA

Legislation

In the USA there is currently certain legislation which exists and deals with the question of virtual currencies.

Washington State Uniform Money Services Act²⁷ in the pre-ample provides that:

"It is the intent of the legislature to establish a state system of licensure and regulation to ensure the safe and sound operation of money transmission and currency exchange businesses, to ensure that these businesses are not used for criminal purposes, to promote confidence in the state's financial system, and to protect the public interest."

In the definition section

²⁵ <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+REPORT+A8-2017-0056+0+DOC+PDF+V0//EN> REPORT on the proposal for a directive of the European Parliament and of the Council amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing and amending Directive 2009/101/EC (COM(2016)0450 – C8-0265/2016 – 2016/0208(COD)) 8/126

²⁶ 22 October 2015 <http://curia.europa.eu/juris/document/document.jsf?docid=170305&doclang=EN>

²⁷ Revised Code of Washington Title 19 Chapter 19230

(18) "Money transmission" means receiving money or its equivalent value (equivalent value includes virtual currency) to transmit, deliver, or instruct to be delivered to another location, inside or outside the United States, by any means including but not limited to by wire, facsimile, or electronic transfer.....

(30) "Virtual currency" means a digital representation of value used as a medium of exchange, a unit of account, or a store of value, but does not have legal tender status as recognized by the United States government. "Virtual currency" does not include the software or protocols governing the transfer of the digital representation of value or other uses of virtual distributed ledger systems to verify ownership or authenticity in a digital capacity when the virtual currency is not used as a medium of exchange.

19.230.040

Application for a money transmitter license

(1) A person applying for a money transmitter license under this chapter shall do so in a form and in a medium prescribed in rule by the director.

(5) For business models that store virtual currency on behalf of others, the applicant must provide a third-party security audit of all electronic information and data systems acceptable to the director.

19.230.200

Maintenance of permissible investments

(1)(a) A money transmitter licensee must maintain, at all times, permissible investments that have a market value computed in accordance with generally accepted accounting principles of not less than the amount of the licensee's average daily transmission liability. Average daily transmission liability means the sum of the daily amounts of a licensee's outstanding money transmissions, as computed each day of the month divided by the number of days in the month.

(b) A licensee transmitting virtual currencies must hold like-kind virtual currencies of the same volume as that held by the licensee but which is obligated to consumers in lieu of the permissible investments required in (a) of this subsection.

(c) A licensee transmitting both money and virtual currency must maintain applicable levels and types of permissible investments as described in (a) and (b) of this subsection.

19.230.370

Virtual currency licensees—Disclosures

(1) Virtual currency licensees must provide to any person seeking to use the licensee's products or services the disclosures required by subsection (2) of this section.

19.230.180

Money laundering reports

Every licensee and its authorized delegates shall file all reports required by federal currency reporting, recordkeeping, and suspicious transaction reporting requirements with the appropriate federal agency as set forth in 31 U.S.C. Sec. 5311, 31 C.F.R. Part 1022, and other federal and state laws pertaining to money laundering. Every licensee and its authorized delegates shall maintain copies of these reports in its records in compliance with RCW 19.230.170.

License suspension, revocation—Receivership

(1) The director may issue an order to suspend, revoke, or condition a license, place a licensee in receivership, revoke the designation of an authorized delegate, compel payment of restitution by a licensee to damaged parties, require affirmative actions as are necessary by a licensee to comply with this chapter or rules adopted under this chapter, or remove from office or prohibit from participation in the affairs of any authorized delegate or any licensee, or both, any responsible individual, executive officer, person in control, or employee of the licensee, if:

(a) The licensee violates this chapter or a rule adopted or an order issued under this chapter or is convicted of a violation of a state or federal money laundering or terrorism statute;

(b) The licensee does not cooperate with an examination, investigation, or subpoena lawfully issued by the director or the director's designee;

(c) The licensee engages in fraud, intentional misrepresentation, or gross negligence;

(d) An authorized delegate is convicted of a violation of a state or federal money laundering statute, or violates this chapter or a rule adopted or an order issued under this chapter as a result of the licensee's willful misconduct or deliberate avoidance of knowledge;

CALIFORNIA LEGISLATURE— 2017–2018 REGULAR SESSION has proposed the following bill which is not yet law.

ASSEMBLY BILL No. 1123

(b) (1) “Virtual currency” means any type of digital unit that is used as a medium of exchange or a form of digitally stored value.

(2) Virtual currency does not include the following:

(A) Digital units that are used solely within online gaming platforms with no market or application outside of those gaming platforms.

(B) Digital units that are used exclusively as part of a consumer affinity or rewards program.

(C) Digital units that can be redeemed for goods, services, or for purchases with the issuer or other designated merchants, but cannot be converted into, or redeemed for, fiat currency.

(c) “Virtual currency business” means maintaining full custody or control of virtual currency in this state on behalf of others.

(d) “Fiat currency” means government-issued currency that is designated as legal tender through government decree, regulation, or law, that customarily refers to paper money and coin and is circulated, used, and accepted as money.

The purpose of the bill appears in the pre-amble and is stated as follows:

Existing law, the Money Transmission Act, prohibits a person from engaging in the business of money transmission in this state, or advertising, soliciting, or holding itself out as providing money transmission in this state, unless the person is licensed by the Commissioner of Business Oversight or exempt from licensure under the act.

This bill would enact the Virtual Currency Act. The bill would prohibit a person from engaging in any virtual currency business, as defined, in this state unless the person is licensed by the Commissioner of Business Oversight or is exempt from the licensure requirement, as provided..... This bill would require each licensee to maintain at all times such capital as the commissioner determines, subject to specified factors, is sufficient to ensure the safety and soundness of the licensee, its ongoing operations, and maintain consumer protection. The bill would require each licensee to maintain a bond or trust account in United States dollars for the benefit of its consumers in the form and amount as specified by the commissioner. This bill would authorize the commissioner to examine the business and any branch office of any licensee to ascertain whether the business is being conducted in a lawful manner and all virtual currency is properly accounted for. With regard to enforcement, among other things, this bill would, if it appears that a licensee is violating or failing to comply with these provisions or conducting business in an unsafe or injurious manner, authorize the commissioner to order the licensee to comply or discontinue those practices. The bill would also authorize the commissioner to issue an order suspending or revoking a license, or placing a licensee in receivership, if after notice and an opportunity for a hearing, the commissioner makes a specified finding.....This bill would require a licensee to provide a specified consumer protection disclosure and receipt to its consumers.....This bill would make these provisions including the Virtual Currency Act operative on July 1, 2018.

CASE LAW

An effort will be made to present a chronological study of the criminal cases emerging from the USA. The cases in question are concerned mainly with the nature of Bitcoin viz whether it is a security, money or funds? The difficulty is attempting to fit crypto currencies into traditional definitions. The reasons this is necessary is for the purposes of prosecuting individuals for either soliciting investments into the VCs, money laundering or the facilitation of criminal transactions.

In *SEC v Trendon Shavers*²⁸ the court was concerned with whether or not the court had jurisdiction pursuant to Sections 20 and 22 of the Securities Act of 1933 and Sections 21 and 27 of the Exchange Act of 1934. In essence Shavers conducted a Ponzi scheme operated under the name of Bitcoin Savings and Trust ("BTCST"). He used various mechanisms in order to have members of the public invest Bitcoins with him and he promised them a return of 1% per day. He used new investor's Bitcoins to pay the older investors who sought to withdraw funds and stole much of what he received. Shavers raised the point that the court had no jurisdiction because Bitcoins did not constitute securities as defined.

"The SEC asserts that Shavers made a number of misrepresentations to investors regarding the nature of the investments and that he defrauded investors. However, the question currently before the Court is whether the BTCST investments in this case are securities as defined by Federal Securities Laws. Shavers argues that the BTCST investments are not securities because Bitcoin is not money, and is not part of anything regulated by the United States. Shavers also contends that his transactions were all Bitcoin transactions and that no money ever exchanged hands. The SEC argues that the BTCST investments are both investment contracts and notes, and, thus, are securities.

The term "security" is defined as "any note, stock, treasury stock, security future, security-based swap, bond ... [or] investment contract ..." 15 U.S.C. § 77b. An investment contract is any contract, transaction, or scheme involving (1) an investment of money, (2) in a common enterprise, (3) with the expectation that profits will be derived from the efforts of the promoter or a third party. *SEC v. W.J. Howey & Co.*, 328 U.S. 293, 298-99 (1946); *Long v. Shultz Cattle Co*, 881 F.2d 129, 132 (1989). First, the Court must determine whether the BTCST investments constitute an investment of money. It is clear that Bitcoin can be used as money. It can be used to purchase goods or services, and as Shavers stated, used to pay for individual living expenses. The only limitation of Bitcoin is that it is limited to those places that accept it as currency. However, it can also be exchanged for conventional currencies, such as the U.S. dollar, Euro, Yen, and Yuan. Therefore, Bitcoin is a currency or form of money, and investors wishing to invest in BTCST provided an investment of money."

The Court found that the BTCST investments met the definition of money and investment contract, therefore they were securities and accordingly had jurisdiction in terms of the Securities Act and the Exchange Act.

18 U.S. Code § 1960

18 U.S. Code § 1960 has become one of the more prominent sections used in the prosecution of those who conducted the business of Bitcoin exchanges. The relevant section prohibits unlicensed money transmitting businesses and provides as follows:

(a) Whoever knowingly conducts, controls, manages, supervises, directs, or owns all or part of an unlicensed money transmitting business, shall be fined in accordance with this title or imprisoned not more than 5 years, or both.

(b) As used in this section—

(1) the term "unlicensed money transmitting business" means a money transmitting business which affects interstate or foreign commerce in any manner or degree and—

(A) is operated without an appropriate money transmitting license in a State where such operation is punishable as a misdemeanor or a felony under State law, whether or not the defendant knew that the operation was required to be licensed or that the operation was so punishable;

(B) fails to comply with the money transmitting business registration requirements under section 5330 of title 31, United States Code, or regulations prescribed under such section; or

(C) otherwise involves the transportation or transmission of funds that are known to the defendant to have been derived from a criminal offense or are intended to be used to promote or support unlawful activity;

(2) the term "money transmitting" includes transferring funds on behalf of the public by any and all means including but not limited to transfers within this country or to locations abroad by wire, check, draft, facsimile, or courier; and

(3) the term "State" means any State of the United States, the District of Columbia, the Northern Mariana Islands, and any commonwealth, territory, or possession of the United States.

²⁸ <https://h2o.law.harvard.edu/cases/4293> SECURITIES AND EXCHANGE COMMISSION v. TRENDON T. SHAVERS and BITCOIN SAVINGS AND TRUST Case No. 4:13-CV-416.

Therefore the important question is whether Bitcoin constitutes money. As will be seen there are broadly two schools of thought which has led to conflicting decisions.

US v Faiella^{29 30} is related to the now famous case of the website "silk road". The Silk Road website operated in the area known as the darkweb or darknet. It was operated as a Tor hidden service which means that very specific browser is required in order to access it. Furthermore, monitoring traffic to and from the website is extremely difficult and so is locating the server on which the site is hosted. The accused in the Silk Road case was Ross William Ulbricht and used the pseudonymous "Dread Pirate Roberts". Ulbricht was convicted of eight charges related to Silk Road in U.S. Federal Court in Manhattan and was sentenced to life in prison without possibility of parole.

Faiella used the online pseudonym "BTCKing," and operated as a Bitcoin exchanger. His co-accused was Charlie Shrem who was the former Chief Executive Officer and Compliance Officer of a Bitcoin exchange company. Both of the accused pled guilty to operating an unlicensed money transmitting business, through which they knowingly transmitted money intended to facilitate drug trafficking on the "Silk Road" website.

Manhattan U.S. Attorney Preet Bharara said:

"Robert Faiella and Charlie Shrem opted to travel down a crooked path – running an illegal money transmitting business that catered to criminals bent on trafficking narcotics on the dark web drug site, Silk Road. The approximately \$1 million in Bitcoins Faiella and Shrem sold to these outlaws cost them a lot more than they bargained for and bought them today's convictions."³¹

One of the points in limine taken by the accused was that Bitcoins do not qualify as money and therefore they committed no crime. The relevant and important aspects of the judgment are as follow:

"First, "money" in ordinary parlance means "something generally accepted as a medium of exchange, a measure of value, or a means of payment." MERRIAM-WEBSTER ONLINE, <http://www.merriamwebster.com/dictionary/money> (last visited Aug. 18, 2014). As examples of this, Merriam-Webster Online includes "officially coined or stamped metal currency," "paper money," and "money of account" - the latter defined as "a denominator of value or basis of exchange which is used in keeping accounts and for which there may or may not be an equivalent coin or denomination of paper money" Id. Further, the text of Section 1960 refers not simply to "money," but to "funds." In particular, Section 1960 defines "money transmitting" as "transferring funds on behalf of the public by any and all means."

18 U.S.C. § 1960(b) (2) (emphasis added). Merriam-Webster Online defines "funds" as "available money" or "an amount of something that is available for use: a supply of something." MERRIAM-WEBSTER ONLINE, <http://www.merriam-webster.com/dictionary/fund> (last visited Aug. 18, 2014). Bitcoin clearly qualifies as "money" or "funds" under these plain meaning definitions. Bitcoin can be easily purchased in exchange for ordinary currency, acts as a denominator of value, and is used to conduct financial transactions. See, e.g., SEC v. 2 Both "money" and "funds" are ordinary English words and should be given their ordinary meanings. The parties make reference, instead, to Black's Law Dictionary, which would only be relevant if Congress intended that these terms be given special meanings as legal "terms of art" - something not remotely suggested in Section 1960. In any case, several of the definitions in Black's Law Dictionary support the rulings here....

Shavers, 2013 WL 4028182, at *2 (E.D. Tex. Aug. 6, 2013) ("It is clear that Bitcoin can be used as money.")

The next case is that of State of Florida v Espinoza.³² This case involved a sting operation set up by the US Secret Service Miami Electronic Crimes Task Force. They conducted various transactions in which they

²⁹https://www.manatt.com/uploadedFiles/Content/4_News_and_Events/Newsletters/BankingLaw@manatt/Faiella%20et%20al.%20v.%20United%20States.pdf 14-cr-243 (JSR) southern district of New York

³⁰https://www.manatt.com/uploadedFiles/Content/4_News_and_Events/Newsletters/BankingLaw@manatt/Faiella%20et%20al.%20v.%20United%20States.pdf UNITED STATES OF AMERICA –v ROBERT M. FAIELLA, a/k/a "BTCKing," and CHARLIE SHREM UNITED STATES DISTRICT COURT SOUTHERN DISTRICT OF NEW YORK

³¹ <https://www.justice.gov/archive/usao/nys/pressreleases/September14/FaiellaShremPleasPR.php>

³²

[http://www.miamiherald.com/news/local/crime/article91785802.ece/BINARY/Read%20the%20ruling%20\(PDF\)](http://www.miamiherald.com/news/local/crime/article91785802.ece/BINARY/Read%20the%20ruling%20(PDF)) Criminal Division F14-2923

accused met the undercover agents in coffee shops and hotel lobbies in order to exchange USD for Bitcoins. He was finally arrested following an elaborate operation in which he was filmed conducting these operations. His business was to buy and sell Bitcoins with a 15% spread. He bought them at a 5% discount and then re-sold them for cash at a 10% profit. He was charged under Title XXXIII, Regulation of Trade, Commerce, Investments, and Solicitations, Chapter 560, Money Services Businesses. This law provides that "a person may not engage in the business of a money services business or deferred presentment provider in this state unless the person is licensed or exempted from licensure under this chapter. A deferred presentment transaction conducted by a person not authorized to conduct such transaction under this chapter is void, and the unauthorized person has no right to collect, receive, or retain any principal, interest, or charges relating to such transaction."

The charges related to being an unlawful money transmitter and for money laundering. Regarding the first charge the accused was acquitted because the court found that Bitcoin is not money. The second charge is of no relevance because it turned on the definition of certain terms in the legislation unrelated to this article. This case therefore found that Bitcoin does not constitute "money" as contemplated in the relevant legislation.

The next case of relevance is that of *US v Ross William Ulbricht*³³ which has been referred to above. This case was concerned with the illegal trade of drugs or narcotics using a fairly anonymous darknet website called the "silk road". The court summarized the charges as follows:

"According to the government, between 2011 and 2013, thousands of vendors used Silk Road to sell approximately \$183 million worth of illegal drugs, as well as other goods and services. Ulbricht, acting as DPR, earned millions of dollars in profits from the commissions collected by Silk Road on purchases. In October 2013, the government arrested Ulbricht, seized the Silk Road servers, and shut down the site."

Prior to the main trial the defence brought a motion to dismiss certain of the charges relating to money laundering. This point was heard by Judge Catherine Forrest.³⁴ The Judge rejected this argument that Bitcoin is not money and held that:

"Bitcoins carry value – that is their purpose and function – and act as a medium of exchange. Bitcoins may be exchanged for legal tender, be it US dollars, euros, or some other currency. Accordingly, [the defense's] argument fails."

She further held :

"There is no doubt that if a narcotics transaction was paid for in cash, which was later exchanged for gold, then converted back to cash, that would constitute a money laundering transaction. One can launder money using Bitcoin."

Ulbricht's pleaded not guilty on all charges

The trial was heard in 2017 *United States v. Ulbricht and Ulbricht* was convicted of most of the charges and sentenced to a life sentence without the possibility of parole.

The next case which the involved Bitcoin was the case of *United States v. Brown*. The case has an unusual set of facts. The accused modelled himself on the fictional character from the cinematic movie *Austin Powers: International Man of Mystery*. The accused employed the pseudonym "Dr. Evil," and demanded \$1 million in Bitcoin in exchange for an encryption key to Mitt Romney's unreleased tax returns. The accused claimed that he stolen Romney's returns from PricewaterhouseCoopers. Furthermore, he posted a digitally altered image of Mike Myers's Dr. Evil, wearing a Secret Service badge in the entrance hall of the accounting firm's relevant offices. He was found guilty of extortion and the issue of whether Bitcoin was money or not was not raised.

In Section I of the judgment the court held that:

On August 28, 2012, a padded envelope arrived at the Franklin, Tennessee office of PricewaterhouseCoopers, an accounting and professional services firm. The envelope contained a flash drive and a letter, which explained

³³ United States Court of Appeals, Second Circuit. *UNITED STATES OF AMERICA, Appellee, v. ROSS WILLIAM ULBRICHT, a/k/a DREAD PIRATE ROBERTS, a/k/a SILK ROAD, a/k/a SEALED DEFENDANT 1, a/k/a DPR, Defendant-Appellant*. Docket No. 15-1815 Decided: May 31, 2017 <http://caselaw.findlaw.com/us-2nd-circuit/1862572.html>

³⁴ United States Court of Appeals, Second Circuit. *UNITED STATES OF AMERICA, Appellee, v. ROSS WILLIAM ULBRICHT, a/k/a DREAD PIRATE ROBERTS, a/k/a SILK ROAD, a/k/a SEALED DEFENDANT 1, a/k/a DPR, Defendant-Appellant*. Docket No. 15-1815 Decided: May 31, 2017

that the anonymous sender had gained access to the firm's network and stolen the unreleased tax documents of Republican presidential nominee Mitt Romney and his wife Ann. To "Stop Release" of those tax records, all PricewaterhouseCoopers had to do was deposit one million dollars in Bitcoin—a virtual, sovereign-free currency—into a specified account."

Bitcoin was also mentioned in a case known as *Matter of Warrant to Search a Certain E-Mail Account Controlled & Maintained by Microsoft Corp*. In a dissenting judgment Judge Jacobs remarked obiter that:³⁵

To enforce the warrant, there is no practical alternative to relying upon access, and no need to seek an alternative. We can conclude that warrants can reach what their recipients can deliver: if the recipient can access a thing here, then it can be delivered here; and if statutory and constitutional standards are met, it should not matter where the ones-and-zeroes are "stored".

Localizing the data in Ireland is not marginally more useful than thinking of Santa Claus as a denizen of the North Pole.

Problems arise if one over-thinks the problem, reifying the notional: Where in the world is a Bitcoin? Where in my DVR are the images and voices? Where are the snows of yesteryear?

In the matter of *United States v. Petix*,³⁶ at *5 (W.D.N.Y. Dec. 1, 2016)³⁷ the court that concluded that for the purposes of § 1960 Bitcoin is not money. The court held that:

"The above context demonstrates that Bitcoin is not "money" as people ordinarily understand that term. Bitcoin operates as a medium of exchange like cash but does not issue from or enjoy the protection of any sovereign; in fact, the whole point of Bitcoin is to escape any entanglement with sovereign governments. Bitcoins themselves are simply computer files generated through a ledger system that operates on block chain technology. See, e.g., Shahla Hazratjee, *Bitcoin: The Trade of Digital Signatures*, 41 T. Marshall L. Rev. 55, 59 (2015) ("The Bitcoin system operates as a self-regulated online ledger of transactions. These transactions are currently denoted by the change of ownership in Coins. This ledger, also referred to as the 'block chain,' has certain built-in mechanisms that eradicate the risk of double spending or tampering with the master record of all transactions."). Like marbles, Beanie Babies™, or Pokémon™ trading cards, Bitcoins have value exclusively to the extent that people at any given time choose privately to assign them value. No governmental mechanisms assist with valuation or price stabilization, which likely explains why Bitcoin value fluctuates much more than that of the typical government-backed fiat currency.

The ordinary understanding of money, and Bitcoin's status outside of that understanding, bring the Court back to the case at hand. The Government's aphorisms aside (Dkt. No. 24 at 2), there might be ways to prosecute Petix if he had conspired with others to engage in activity that violated other criminal statutes. Here, though, and as noted above, the Government has chosen to focus on the transfer of Bitcoins in itself. The Government's theory of prosecution requires treating Bitcoin as money in the ordinary understanding of that term. Because Bitcoin does not fit an ordinary understanding of the term "money," Petix cannot have violated Section 1960 in its current form. As a matter of law, then, Count Two fails no matter what amount of factual evidence the Government might have at its disposal."

The conflicting decisions regarding the nature of Bitcoin continued in the matter of *United States v. Murgio*.³⁸ The charges again related to the operation of an unlicensed money transmitting business, in violation of 18 U.S.C. § 1960.

The accused sought to challenge the charges under Section 1960 which makes it a crime to "knowingly conduct, control, manage, supervise, direct, or own all or part of an unlicensed money transmitting business." The accused was charged as a result of conducting an unlicensed Bitcoin exchange called Coin.mx. The question was whether Coin.mx handled "funds," and if so, whether it "transferr[ed]" them on behalf of the public". In order to prove that the business operated as an "unlicensed money transmitting business" under § 1960, a it was necessary to prove that the business a) transferred, on behalf of the public, b) funds, and c) do so in violation of

³⁵ https://www.justice.gov/sites/default/files/briefs/2017/06/28/17-2_microsoft_corp_petiton.pdf see p 163

³⁶ No. 15-CR-227A, 2016 WL 7017919

³⁷ <http://assetforfeiturelaw.us/wp-content/uploads/2016/02/Petix.pdf>

³⁸ <https://cdn.arstechnica.net/wp-content/uploads/2016/09/murgio-order.pdf> 209 F. Supp. 3d 698, 707 (S.D.N.Y. Sep. 19, 2016)

state or federal licensing and registration requirements, or with knowledge that the funds were derived from a criminal offense.

The relevant point in limine that Bitcoins do not qualify as "funds" under § 1960 was rejected. The court held that:

Section 1960 does not specify what counts as "money" that is "transmitted," other than to note that it "includes ... funds." 18 U.S.C. § 1960(b)(2). This raises the question of whether Bitcoins are "funds" under the statute. The Court concludes that they are.

"When a term goes undefined in a statute," courts give the term "its ordinary meaning." *Taniguchi v. Kan Pac. Saipan, Ltd.*, 132 S. Ct. 1997, 2002 (2012). The ordinary meaning of "funds," according to Webster's Dictionary, is "available pecuniary resources." Webster's Third New International Dictionary 921 (2002). "Pecuniary" is defined as "taking the form of or consisting of money." *Id.* at 1663. And "money," in turn, is defined as "something generally accepted as a medium of exchange, a measure of value, or a means of payment." *Id.* at 1458. This definition of "funds," and the corresponding definition of "money," have consistently been adopted by courts in this circuit. In *United States v. Faiella*, Judge Rakoff defined "funds," in the context of interpreting § 1960, as "'available money' or 'an amount of something that is available for use.'" 39 F. Supp. 3d 544, 545 (S.D.N.Y. 2014) (citation omitted). And as the Court does here, he also defined "money" as "something generally accepted as a medium of exchange, a measure of value, or a means of payment." *Id.* (citation omitted). Similarly, Judge Forrest has explained that "'[funds] are defined as 'money, often money for a specific Case 1:15-cr-00769-AJN Document 198 Filed 09/19/16 Page 5 of 36 purpose,'" and that "'[m]oney' is an object used to buy things." *United States v. Ulbricht*, 31 F. Supp. 3d 540, 570 (S.D.N.Y. 2014) (citation omitted). Although Judge Forrest reached that conclusion in a case involving a different statute-18 U.S.C. § 1956, which prohibits money laundering-she did so by engaging in the same analysis the Court must perform here. See *id.* (noting that "'[f]unds' is not defined in the statute and is therefore given its ordinary meaning"). In light of this consensus as to the term's ordinary meaning, the Court concludes that "funds," for the purposes of § 1960, means pecuniary resources, which are generally accepted as a medium of exchange or a means of payment.

Applying that definition here, it is clear that Bitcoins are funds within the plain meaning of that term. Bitcoins can be accepted "as a payment for goods and services" or bought "directly from an exchange with [a] bank account." Getting started with Bitcoin, Bitcoin, <https://Bitcoin.org/en/getting-started> (last visited Sept. 16, 2016). They therefore function as "pecuniary resources" and are "used as a medium of exchange" and "a means of payment." As Judge Rakoff explained, Bitcoins "clearly qualif[y] as 'money' or 'funds'" under § 1960 because they "can be easily purchased in exchange for ordinary currency, act[] as a denominator of value, and [are] used to conduct financial transactions." 39 F. Supp. 3d at 545; see also *Ulbricht*, 31 F. Supp. 3d at 570 (holding that Bitcoins are "funds" because they "can be either used directly to pay for certain things or can act as a medium of exchange and be converted into a currency which can pay for things"). Courts considering other virtual currencies have reached the same conclusion-those currencies also count as "funds" under § 1960. See *Budovsky*, 2015 WL 5602853, at* 14 (relying on *Faiella* for the proposition that "LR," another virtual currency, "qualifies as 'funds' for purposes of § 1960"); see also *United States v. E-Gold, Ltd.*, 550 F. Supp. 2d 82, 88 (D.D.C. 2008) (noting that "[s]ection 1960 defines 'money transmitting' broadly to include transferring 'funds,' not just currency, by 'any and all means'").

The legislative history of § 1960 supports the conclusion that Bitcoins fall within the statute's purview. Section 1960 was enacted to address the fact that "money launderers with illicit profits ha[d] found new avenues of entry into the financial system." S. Rep. No. 101-460"

CONCLUSION

What type of legislative amendments are South Africans to see if any? It is submitted that it will be critical to regulate the industry. It is highly likely that these currencies may be used to circumvent either FICA type legislation or Exchange Control Regulation. Furthermore, in the current environment there is no protection for consumers against those who engage in activities that involve the promotion of these currencies and take advantage of their ignorance. It is submitted that any attempt to rely on the existing framework, as the Americans appear to have done, is not a wise route. As can be seen there are conflicting decisions that have emerged regarding the nature of these currencies.

The prudent approach appears to be to define them as virtual currencies as the Europeans have done and then to amend the relevant legislation. The legislation most likely to be amended are the FICA, FAIS and exchange control regulation.

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3. Manuscripts should be typed in 12 font-size, Times New Roman, single spaced with 1” margin on a standard A4 size paper. Manuscripts should be organized in the following order: title, name(s) of author(s) and his/her (their) complete affiliation(s) including zip code(s), Abstract (not exceeding 350 words), Introduction, Main body of paper, Conclusion and References.
4. The title of the paper should be in capital letters, bold, size 16” and centered at the top of the first page. The author(s) and affiliations(s) should be centered, bold, size 14” and single-spaced, beginning from the second line below the title.

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5. The abstract should summarize the context, content and conclusions of the paper in less than 350 words in 12 points italic Times New Roman. The abstract should have about five key words in alphabetical order separated by comma of 12 points italic Times New Roman.

Examples of References

All references must be arranged first alphabetically and then it may be further sorted chronologically also.

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