Acceptance of E-banking technology by senior citizen

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Abstract— **Technology can be considered as a combination of techniques, skills, methods and process. However technology has evolved rapidly over the past years. In our modern day usage of technology is something which is unavoidable. We have widely seen that the young generation has adopted or accepted the changing technology at a very brisk pace. However the usage of E-Banking technology among the senior citizens was looked upon as a concern.**

The purpose of the study is to understand the E-Banking technology acceptance in senior citizens using a systematic literature review. Study focuses on incorporating the articles published recently on the topic and to identify the scope for future research.

Keywords—senior citizens, elderly, e-banking, technology, internet

1.   INTRODUCTION

People around the world are witnessing a increasing ageing population. It is estimated that the world's senior population is estimated to increase than three times by 2050 .The turn of the world has seen an rapidly ageing population with respect to the increasing information technology. Te ageing population being not familiar with the IT implies the issue to pertain the acceptance of technology. Additionally, their perception of internet security impacts the acceptance of this online financial service. Furthermore, savings of resources and self-actualization determine senior citizens' usefulness perception, but computer anxiety and computing support are perceived ease of use [1]

Acceptances of E-Banking technology is about a person's intention to use the technology and if she starts and keeps using it happily. It is influenced by many factors, such as, prior experience with technology, self voluntariness of use and purchasing power. It is difficult to change those factors. Fortunately, other factors can be influenced more easily.[2]

Among the old population who use the internet for online banking services it is said that The people who goes online is 71% and it is said that 11% of the people go online four to six times every week . Almost 79% of old people who use the internet agree that "most of the people who does not have internet access are at a real lose because of the relevant information that is not reaching them at the right time to , the other 94% of the people agrees with the statement that "the internet makes people more advanced to find information in the present than the past in the Banking sector or financial services."[3]

As the age increases the aged population undergoes many health issues like vision, hearing, cognitive functions, and their mobility. The Technology Acceptance Model and its variables of perceived ease of use and usefulness, influenced by the product and services offered by the web site, the usability and the senior's ability to use the e-commerce, determine their feeling and attitude towards behavioral intention to using websites for banking services for personal and professional purpose.

Ease Internet usage and, the constructs website usability are the two factors which influence the Gen-x perception. There are two independent constructs that shows the coefficient in the path, i.e. Internet usability does not exerts as website usability. It becomes the usability of the website that exerts the most influence when a senior is confident enough that he/she can use the Internet for acceptance of E-banking services among senior citizens. [4]

The researcher observed that seniors found difficult to use certain websites and it was found that it is more difficult to use the travel websites than the online bookstores for online purchase through e- banking. However, it was found that, the old people will attempt to try overcoming any usability issues if a website, products and their services which offer perceived usefulness. The researcher found that that if they can overcome computer and Internet usability barriers, they could become more, enthusiastic and willing to adapts these technologies to increase more usage of e-banking technology among senior citizens.

2.   METHODOLOGY

The systematic literature review consists of three phases adopted from Tranfield*et al.* (2003).

In the first phase, leading databases such as Pro Quest, and Google Scholar were searched to collect papers related to Senior citizens and Technology towards E-Banking services.

During the second phase, the contents of these approximately 35 papers will be studied and then classified based on their, keywords, research methodology and country of research and year of publication.

During the last and final phase, the papers will be grouped under three classifications as journals, demography and research methodology. These classifications will be further analyzed in a comprehensive way and tabulated followed by the result in the form of graphical representation and interpretation. In the next section of the article the gaps were identified.

The systematic literature review consists of a four-step process adopted from Tran field, (2003).

3.   FINDINGS

a.   **Time distribution of acceptance of e-banking technology by senior citizens**

With the rapid growth in technology and applications, many concepts have emerged.

In the year of 2003, the number of publications was low as the concept of e-banking technology was not much familiar to the elderly population. There is a considerable growth in publications since 2006. Since then, the following years are witnessing a growth in the publications by conducting a trend analysis; there is a scope to come up with more articles in the mere future related to the topic.
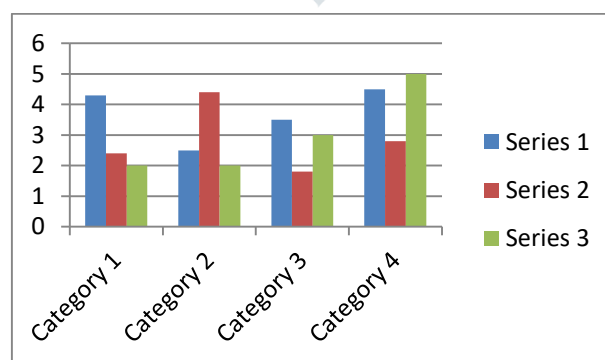

Figure 1: Year wise trend in publications
For this study, the articles collected and reviewed are more from journal
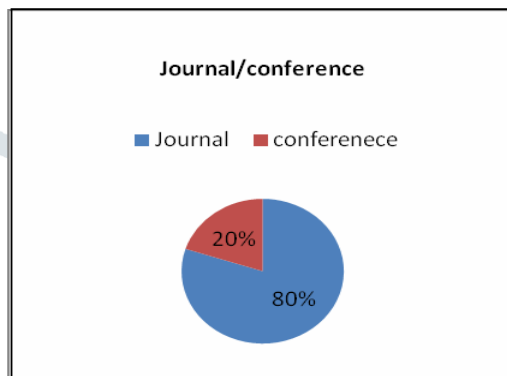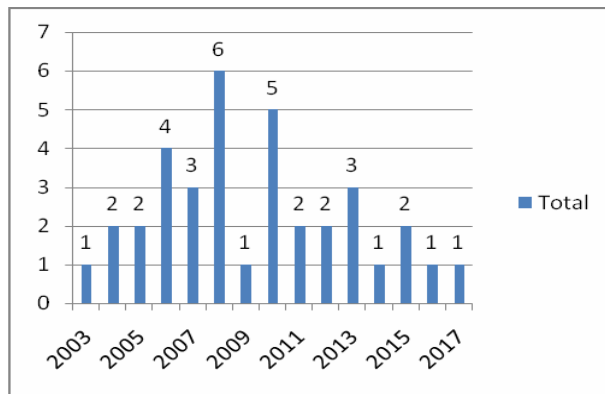
Figure 2: Contents taken from journals and conferences

The number of conferences held in the year between 2003 to 2017 was just 7 (20%) and the number of journals published were 28 (80%) with respect to the total number of collected data. (Figure 2).

B. Distribution of publications across different countries

The study shows the spread of the publications across various countries and the number of authors. The figure shows 17 countries have multiple publications till the present (Figure 3). Out of 35 articles, 30% of the publications are contributed by USA, topping the list which is followed by UK, Netherlands and India with 7% of contribution. Other countries like Germany, London, Japan etc were found with 3% contribution. (Figure 3).
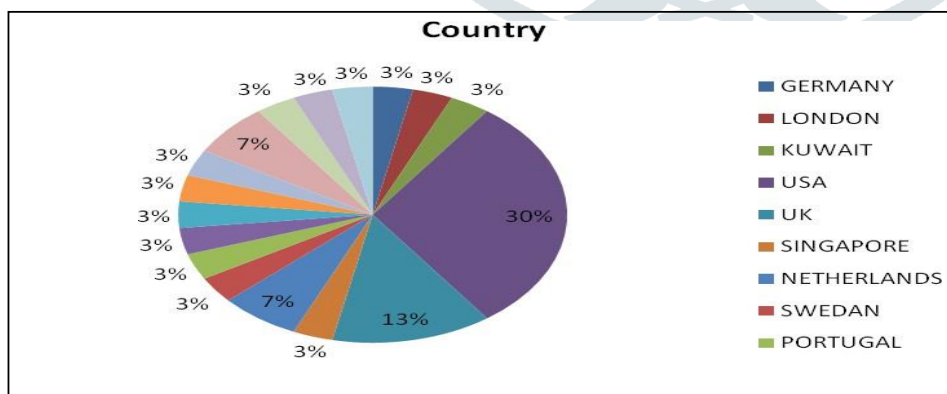

Figure 3: Country wise spread of research

Analysis of research methodology

In this study, out of 35 articles, 24 articles (69 percent) of articles were quantitative and 11article (31percent) qualitative. (Figure 4)
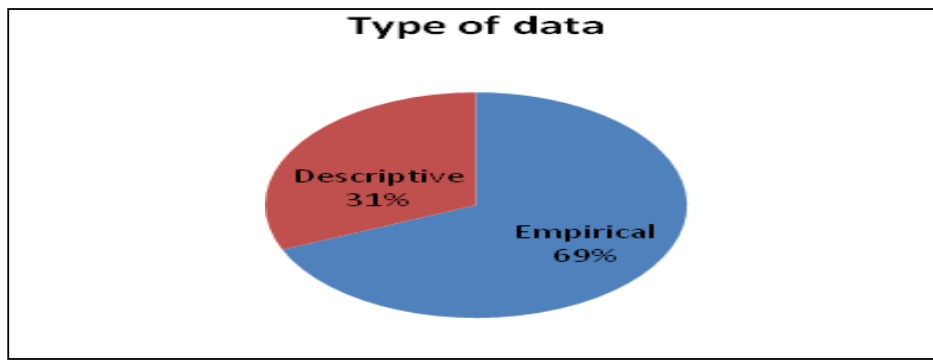
Figure 4: Types of data used for research

Out of 35 articles, 27articles (77 per cent) were contributed by academicians, 6 articles (17   per cent) were contributed by professionals and 2 articles (6 per cent) were contributed by both academicians and professionals together (shown in (Figure 5).
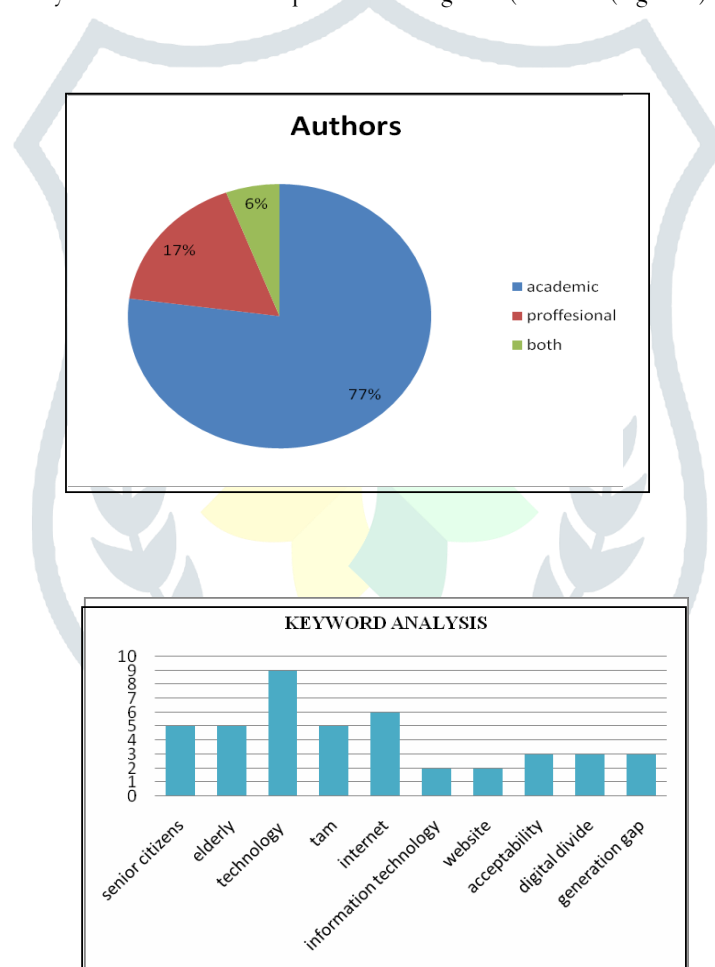

Figure 5: Authors background

Figure 6: Keyword Analysis

Keywords of the papers were gathered to understand as to how authors have positioned their articles. Keywords conveying attributes related to the topic were selected and grouped together (as shown in Figure 6). Multiple relevant keywords were also selected from the same article. Technology and elderly related keywords topped the list by appearing in majority of the papers (9 papers) respectively followed by keywords such as senior citizens, tam, and internet in 6 and 5 papers respectively.

The total number of articles that used the keyword is technology is 32 percent .21 percent of the articles used the keyword Internet followed by TAM 18 percent and 11 percent digital divide.

4. DISCUSSION

Literature Review – gaps and agenda for future research
From the review, the author has found gaps from the articles.

They are as follows:

- Improve usefulness and ease of use awareness must be generated in to their mind set.

- The benefits of the technology must be rightly demonstrated to the user for e-banking services

- Convey the value privacy and data security towards online transaction through online banking.

- Reduce financial costs and risks for senior citizens through e-banking technology.

- Offer training and support to increase usage of e-banking technology.

To study the acceptance of e-banking technology by senior citizens using a systematic literature review. The study has identified the journal, demography and research methodology.

Some of the papers on technology acceptance and senior citizens might have been left out of the review because of the criteria for exclusion and inclusion which the researchers had developed to improve the accessibility of journals.

Most of the articles have data driven approach rather than descriptive approach. TAM model is been used in many of the articles which has its own implications.

The journals being analyzed should also increase authors with professional background. Hence, future researches can be done by analyzing the gap.

5. CONCLUSION

The paper presents a review of 35 research papers on acceptance of e-banking technology by senior citizens during the year of 2003-2017. The review focuses on the articles spread by analyzing the author profile, articles' time distribution, research methodologies, and keywords.
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Following conclusion can be drawn from the review:

- Countries like the USA, UK, Portugal, India, Italy, Japan etc. have published more papers related to the topic. USA being the world leader and the major publisher and India is the major publisher in Asia.

- More research is based on empirical studies rather than descriptive studies.

- Most of the articles focused on the data driven approach compared to descriptive which shows that it has a strong analytical base but qualitative context to be improved

- The success of technology acceptance depends on the ease of use and usefulness culture in the organization and work practices

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