Examining the Adoptability Prospects and Implications of Digital Methods of Writing and Reading

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Abstract

The development of tools plays a significant role in the shift of mode and ethics of any process. Therefore, the story of literacy which began with craving unsteady lines on stones, has reached at sophisticated structures beautifully composed on cutting-edge technology equipment. Interestingly the journey does not end here; keeping in view the past progress it is safe to believe that it is yet a beginning of human literary. The modern gadgets and software are bracing to substitute the traditional tools of literary as they did with their predecessors. The convincingly convenient speech recognizing software, cheap and accessible, is strongly assumed as the potential antagonist of pen and typing hassle. It will allow anyone and everyone to write! Similarly the audio books will make all the illiterates the other way round with a click. The researchers aim to explore the potential existence and influence of digital tools in the domain of teaching literacy. The research is fuelled with the objectives whether or not do we still need to focus on teaching reading and writing as the prerequisites of literacy. The research aims to weigh the claim of a few researcherswho believe that the digital world will engulf these two basic skills and liberate the society from the slavery of lines and dots. This research is an observatory one based on the investigations conducted by various researchers and thinkers on the paradigm of digital reading and writing.

Keywords: Modern, Digital, Speech recognizing programs, E-reading and writing

Introduction

Tools define the methods of any action, so is with writing. Since the discovery of true writings, we started writing on wooden slates and stones with knives and sharp objects that is why most of the ancient wittings are written in lines. Later, when more convenient tools like pen and ink were applied, more sophisticated fonts and shapes came into existence. Similarly, with the invention of computer and digital writing devices, we enter an age where one can write without using a pen and paper (Buriro, Charan, & Buriro, 2013). There has been a lot of significant progress in redesigning the methods of writing and reading since the beginning of twenty-first century. Social networking, increased and convenient access of digital technology, infinite space for reading, writing and more importantly sharing, are the signs which harbinger a new era in the methods of writing and reading.

Today technology has inevitably become an integral part of education (Zhu & Goldberg, 2009). The emergence of social media and an easy access to digital tools of communication has encouraged the students to exploit the digital world for learning skills like writing.

Within the short span of time, digital methods of writing and reading have drawn the attention of academicians towards a new form of literacy. And this time this literacy is not forwarded from any scholar's desk but form the side of young students who are helplessly enamored towards this method of writing and reading (DeVoss, Eidman-Aadahl, & Hicks, 2010).

Literature Review

At the advent of computer technology, the computer was never considered for the academic fields or languages. It was a device designed to help make certain calculations faster and better. Even when computer subject was inducted in the curriculum, it was never correlated with communication. Its programs were designed for laboratory use and the only relation with writing as associated through its Word-processing program (Andrews & Smith, 2011). Here the key board was play the interface role of pen between the thought and the completed written piece and believed that like pen, the interface role of key board will disappear once the writers gain a significant skill on it (ibid).

Through digital method whether online or offline, an individual is connected to a constantly progressive literacy network (Leander &

Lovvorn, 2006). Moreover, the interest factor in digital methods allows an individual to venture across the space for transliteracy (Thomas el at 2007). The digital methods liberate writers from the barriers of spelling, handwriting and fluency (MacArthur, 2006).the students rapidity on the adaptability of technology advocates in the favour of the claim that the modern methods of writing and reading which have significant impact on our future outlook and objectives of literary (Haas, 2013). Through the help of speech recognizing soft wares we see a hybrid form of writing as it connects the oral and written representation of text (Marielle Leijten & Van Waes, 2006).

The researchers identify that the modern literacy is more than an expression of an individual. The digital tools have provoked the idea of a community involvement (Henry 2006, 4). Henry and his colleagues have found this striking contribution of modern literacy due to the indolent of digital tools of reading and writing. The digital tools have altogether changed to disposition of literacy. The modern literacy is identified with the features like play, performance, simulation, appropriation, multitasking, distributed cognition, collective intelligence, judgment, transmedia navigation, networking, negotiation and visualization.

Today most of the teenagers spend a significant amount of time writing and reading on computer screen without realizing what they are creating is a real form of writing. Moreover, they not only just realize the importance of electronic reading and writing but they also have a better skill on the modern tools too (Lenhart et al., 2008, 2). The critics call it the digital revolution because it is not about the digital tools but the application of use of these tools in writing and reading. It is natural that tools have hanged the idea of writing and reading from chalk to pen and from pen to type writer. But the current wave of highly sophisticated digital tools like speech recognizers and audio-text ideas have in real sense revolutionized the idea of writing and reading in real sense.

Present developments

Although the Speech Recognizing soft wares were developed a decade ago but recently rather convenient and handy versions of the software are designed such as Dragon, IBM and Philips. The programs were actually developed to navigate applications through voice commands as AT&T. another program named Genie was launched by Microsoft as an interactive model of speech recognition (BANSAL & BAHETY). The CMU speech

recognition program the SPHINX based on the Hidden Markov Models (HMM) has the ability to recognize the acoustic and language models (Lee, Hon, & Reddy, 1990). Apart from these there are many other programs such as: the *SONIC, X-voice* and many more yet to come.

Similar to all inventions, development of the speech recognition software has been always doubted and questioned in the face of countless challenges. One of them is the background noise which created confusion for the program to recognize the right command or sound. A program actually designed for robots enables it to recognize the right sound despite the heavy unimportant noise (Nishimura, Nakano, Nakadai, Tsujino, & Ishizuka, 2006). This program is devised by using a noise-type-dependent acoustic model for the correspondence of a voice operated motion robot.

For making it energy friendly, an HP Smart Badge IV embedded system is underway to make the minimum use of energy consumption without compromising the quality of application. On the other hand another system is in the pipeline for DSR (Distributed Speech recognition) which will reduce the computational load while demanding minimum bandwidth requirements on the server (Srinivasamurthy, Ortega, & Narayanan, 2001). Similarly, the latest developments in telecommunication like Voice Banking and Directory Assistance are also expected to complement the existing ongoing struggle on designing a more convenient and handy applications for writing (Rabiner, 1997).

Rationale

It is a fact that hardly any research is conducted to find out the cognitive implications of moderns tools on writing (Honeycutt, 2003). The modern tools as new input mode for writing have launched a debate on the future shape of writing mode and the future of writing and reading (Mariëlle Leijten & Van Waes, 2005). Through this study the researchers intended to explore the possible scope of the adaptability of digital methods of writing and reading. This descriptive study tries to highlight the possible benefits and challenges of the digital tools which are being used or have the potentiality to be adopted in the fields of literary. Chiefly it was also aimed to investigate the impact of digital tools in convincing the shift of literacy disposition and description as professed by other researchers.

Research Methodology

The actual research objective was a doctoral thesis on the topic of exploring the problems in academic writing faced by the students of English literature studying in the public universities of Sindh. There were separate questionnaires designed for teachers and students to obtain their point of view. The questionnaires were separately treated for reliability and validity and pilot tested before approaching the sample of research population. Keeping in view the current scenario of writing, the researcher added digital writing as one of the variables. The collected responses were statistically analyzed by applying the person's test of coefficient of correlation and t-test at the 0.05 level of significance. After the collection of data, the whole data was carefully transferred to SPSS program. IBM SPSS Statistics 22 version has been used for the data analysis. Due to the sophisticated nature of the data, the whole data transformation is done solely by the researcher himself. For the discourse analysis, all scripts were transcribed and processed through readability ease program available in Microsoft office. Following data analysis procedures were taken during the research.

- Cronbach's Alpha for the reliability of research instrument

- r- test of coefficient or correlation for teachers' questionnaire

- t-test on students' questionnaire

The responses on the items on this variable were extremely encouraging and motivating to develop a separate paper on this topic. A comprehensive research on a related topic was conducted by the researcher, the above all methods were applied on the questionnaires for the data analysis. In this paper only the relevant descriptive statistics are given.

Instrument

The questionnaire was designed on the five point rating of Likert Scale. There were ten questions related to digital writing and reading methods. The cumulative score was later test on R test with other variables of actual research. In this paper these questions were separately analyzed through descriptive research method.

Research Questions

- Is it possible to adapt to digital methods of writing and reading?

- Will the digital methods implicate any major changes on the concept of literacy?

- Is it feasible in country like Pakistan to adopt digital writing and reading as a method of literary?

Data Collection Procedure

In the interest of results, the researcher used cluster sampling technique as the initial step towards assembling. The researchers selected a considerable percentage of students from each campus; hence he took 55 students from University of Sindh and 45 students from Karachi University as these universities have the highest population in the researcher's interest area. Similarly the researcher approached 60 students of Shah Abdul Latif University Khairpur and 50 students from Shaheed Benazir Bhutto University Nawabshah. From the two campuses of the University of Sindh, the researcher approached 50 students. From the selected sample 40% participants will female whereas, 60% were male participants. These students were invited to participate in controlled writing activity which was later on utilized for analysis of writing problems.

Among these students 70% students were either from third or final year whereas, the remaining 30% freshman or sophomore. There was not any participant who was aspiring to join the literature Department nor any ex-student.

Table No.01: Sample details of students

University	SBBU	UoS	SALU	KU	Total
Boys	25	30	30	20	105
Girls	25	25	30	25	105
Total	50	55	60	45	210

Graph No.01: Sample details by gender, age and university
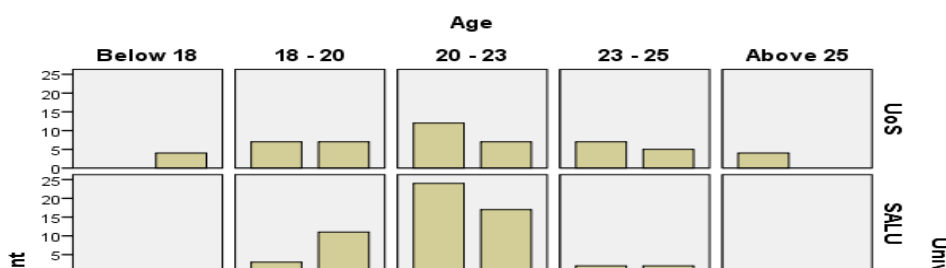
Data Analysis

A general question was asked if they preferred the digital methods of writing and reading over the traditional methods. The responses are given as under:

Table No. 2 Age, Method Cross Tabulation

Students				Teachers			
Age	**Yes**	**No**	**Total**	**Age**	**Yes**	**No**	**Total**
Below 18	2	4	6	**Below 25**	4	0	4
18 – 20	50	8	58	**25 – 35**	3	1	4
20 - 23	110	12	122	**35 – 45**	4	1	5
23 - 25	15	2	17	**45 - 55**	2	2	5
Above 25	4	1	5	**Above 55**	2	1	3
Total	181	27	208*	**Total**	17	5	22

On the question that you use digital tools for writing, following response was recorded on the questionnaires

Table No. 3 Data table on using tools for writing

Students				Teachers			
Gender	**Yes**	**No**	**Total**	**Gender**	**Yes**	**No**	**Total**
Male	98	7	105	**Male**	11	1	12
Female	83	20	105	**Female**	6	4	10
Total	181	27	208*	**Total**	17	5	22

*Two students did not respond to this question.

The table shows that almost 87% students use digital tools for writing and only 13% rely on traditional methods of writing for academic purposes. The similar ration is depicted on the teachers' side as well.

On the question if they use speech recognizing programs for writing and reading, the answers were as under:

Yes   11%

No   89%

Discussion

It is found that students are more convinced to use digital methods of writing and reading than teachers. The cross tabulation sheets reveal that younger people use digital methods more than the older ones. It shows the youth have developed a significant synchronization with the features of adoptability, facility with the digital tools and the infinite possibilities of forms, functions, options, interests and above all audience.

The collected data reveals that modern tools of writing are commonly in use by the teachers and students. The literature review shows that writing and reading by digital tools have different cognitive implications than traditional methods. On the one hand, digital tools have helped to read and write with more convenience, on the other hand, it is indirectly discouraging for hand-writing. In most of the exams students have to write by hand. Hence, it is a living issue in front of academicians to determine the role of modern methods and conventional methods.

In view of the available research and data collected, it is concluded that modern methods are costing significant change on the concept of lit

eracy. The digital tools with the help of screen and video literature are producing a generation which cannot be placed in the circle of illiteracy.

The data shows the encouraging figures on the use of digital methods in Pakistan. The students from all participating universities are almost equally using it.

Recommendations

Strategies should be taken to integrate the digital tools of writing and reading to promote the literacy.

- The new and changing dynamics of modern literacy should be identified

- The curriculum should be revisited and redesigned to encompass the objectives of modern literacy.

- Scope and limitations of hand written exams should be revised.

- The screen literacy should be recognized and dully acknowledged by incorporating in our curriculum.

- The changing definitions of literacy should be determined.

- The implications of digital methods on literacy identity should be rationalized.

Conclusion

The research depicts a significant induct of digital tools in our academic lives. It also raised the concern that this issue must be considered by the stake holders to facilitate the upcoming generations. The traditional methods of writing and reading are rarely used by the learners. There is no harm in saying that writing and reading tools are going through a transition. But how would they look like is yet to be determined. The earlier and timely efforts will facilitate our students. The research opens forum to the fundamental question that since we have developed the speech recognizing tools and audio text tools, do we will need to focus with same emphasis on learning reading and writing as we do today.

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