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The Impact of Digital Resources on English Language Learning at the HSC Level in Bangladesh: A Student-Centric Study

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Abstract

The digital revolution has transformed virtually every aspect of education, including the way English is taught and learned. Digital resources—from mobile applications and online dictionaries to virtual classrooms and AI-powered learning tools—have become integral to modern English language education. These tools offer flexibility, accessibility, and a wide range of interactive features that can greatly enhance the learning experience. This study examined the impact of various online tools on the English language acquisition of HSC level students in Bangladesh. Purposive sampling was employed to select 70 students from three colleges in Magura District. This study conducted interviews 10 students and surveys with 70 participants to examine how the utilization of online tools influence their English listening, speaking, reading, and writing skills. The questionnaire yielded quantitative data, while the interviews offered subjective insights to enhance the findings. The quantitative data were analyzed using SPSS 26.0 and Microsoft Excel and, on the other hand, the researchers used thematic analysis technique to analyze interview data. According to student findings, the use of YouTube, digital language-learning applications, and educational websites enhanced the learners reading and listening comprehension skills tremendously while having less of an impact on speaking and writing skills because there were fewer opportunities for interaction. It is advisable to incorporate online structured activities into classroom instruction to facilitate the simultaneous development of all four skills.

I.   INTRODUCTION

With digital transformation, education systems worldwide are adding digital tools to their teaching and learning processes. All over the world, people use technology for language learning, so English instruction is not left behind. For educational websites, apps, video sites and interactive tools, people now have wider options for improving how they speak and write in a foreign language (Richards, 2015). Many in Bangladesh see that English is a key way to communicate internationally and this becomes especially clear during Higher Secondary Certificate (HSC) education, as knowing English well helps students succeed academically and later in their careers (Rahman, 2019). Because more people are using the internet and smartphones, students more often turn to online tools to support what they learn at school. Yet, it is not well known how well these tools support each of the four main English proficiencies, listening, speaking, reading and writing, in post-secondary education in Bangladesh. Even though online resources are getting easier to use, many HSC students have difficulty improving their English skills. Most students depend on in-class teaching as they learn a new language, but it may not be flexible enough for mastering language skills (Chowdhury & Ha, 2014). The rapid move to digital and hybrid learning during the pandemic made it clear that useful digital tools were essential for learning languages. Yet, some students are not able to use technology or learn with online resources as effectively as others. As a result, students' chances of learning differ and it becomes unclear how important online tools are for English growth.

The study is impeded by the scarcity of empirical evidence regarding online tools and English learning at the HSC level in Bangladesh. Research on the application of technology in education (Jeong, 2022; Khan et al., 2012) typically encompasses various forms of ICT; however, few studies have investigated the influence of online tools on the reading, listening, or writing skills of HSC students. Moreover, research predominantly focuses on university students or urban populations, neglecting the challenges encountered by HSC students in small towns and rural areas. This study is significant for various reasons. Initially, it addresses a research gap by gathering and disseminating information on utilizing online resources to enhance English proficiency for HSC students. The research findings offer valuable direction to policymakers, curriculum developers, and educators concerning the incorporation of online support into English instruction. Thirdly, the study identifies various challenges students encounter with technology, enabling schools to enhance their planning for all.

II.   OBJECTIVE OF THIS STUDY

This study aimed to investigate the impact of online tools on the development of English listening, speaking, reading, and writing skills among HSC students.

III.   LITERATURE REVIEW

Recently, using online tools for English language education has drawn increasing interest. Different research in schools and colleges has proven that digital resources can improve language abilities but also have their limitations. In this literature review, some significant studies that relate to the present research have been examined, with attention to

how online tools have an impact on listening, speaking, reading and writing for HSC students in Bangladesh. Richards (2015) highlighted the move toward learner-centered learning with the help of technology tools. He considered that learning activities on the Internet help learners take control of their studies, especially in foreign language classes. Although Richards talks about many countries, it is especially useful for Bangladeshi HSC students, because e-learning can help offset the problem of large classrooms. Rahman also noticed that Bangladeshi classrooms often lacked the use of the technology that was available to them. He discovered that while online resources are available, most learners struggle to use them well without proper guidance. So, in addition to tools, we should provide instructional support that helps digital content match the main goals of the curriculum.

Al-Jarf (2004) indicated that reading and writing skills for Saudi students improved a lot when web-based programs were taught. The analysis backs the idea that online tools can boost user involvement. Still, students in the HSC in Bangladesh might learn better with more support than their university peers. Sharma and Barrett (2007) encouraged using blended learning to build students' abilities in communication. They maintained that mixing classroom instruction with digital methods helps students learn language better. Despite the model seeming positive, the progress will depend on developing schools' infrastructure and education for teachers which are frequently poor in rural and semi-urban schools. Azarnoosh et al. (2016) asked whether audio-visual content increases comprehension and supports remembering words. They discovered that watching online videos such as TED Talks and YouTube lessons, can greatly improve how well students listen. Many Bangladeshi students think their listening skills get better after using these platforms, confirming results found in other countries. According to Menezes (2013), talking to others in speech practice clubs available online is essential to motivate hesitant students. Her research found that students felt less worried about speaking English in online environments. Although this could work well, a lack of quick speaking services and poor internet in Bangladesh mean such opportunities may be restricted. Instead, Zhang (2009) pointed out the potential for online tools to lead people to spend less time interacting face-to-face. The digital revolution plays a key role and I think that finding a balance is important. Isolation should be prevented in HSC students by adding structured peer talks and teacher input to online courses. Sun (2010) pointed out that blogs are helpful for improving how fluent and creative writers are. According to her study, students felt more confident about their writing when their work was available online. Students in Bangladesh who compared Google Docs and blogs to traditional methods said they found their writing skills had improved, despite having to use Google Docs and blogs regularly.

In their book, Warschauer and Kern (2000) studied how digital tools enhance language learning by bringing people together. It was suggested that fixing errors immediately helps learners improve their skills. Although the argument makes sense, in the HSC context in Bangladesh, many students are still unable to use the internet enough and receive the teacher support needed for social learning. Khan et al. (2012) also studied what stops Bangladesh from using ICT more. Trainees recognized that shortcomings in training, infrastructure and attitude were the main obstacles. Their research elucidates the context surrounding this study. Research indicates that although online tools are potent, their efficacy

will be diminished if systemic barriers are not addressed. Previous research unequivocally further indicates that online tools facilitate the enhancement of English language skills. However, there is limited research regarding HSC students in Bangladesh concerning their English learning context using digital tools. Besides, many researches are typically conducted at universities or in different cultural settings. This study aims to address this gap by examining the impact of online tools on the English listening, speaking, reading, and writing skills of HSC students across different locations in a Bangladeshi district. The method leverages established research and grounds the inquiry in the tangible obstacles encountered by college students in adopting digital education.

IV.   RESEARCH METHODOLOGY OF THIS STUDY

A mixed-method research approach was employed to examine the influence of online tools on the English language proficiency of HSC students. This study purposefully selected 70 students from diverse colleges situated in both urban and semi-urban regions of Magura district. In order to better understand the primary study objectives, the researchers chose participants for this study who were frequent users of online learning platforms. Data were collected through a structured questionnaire and a number of semi-structured interviews. The survey included mainly objective questions in the form of Likert-scale items to examine the impact of students' utilization of online tools, the types of tools employed, their frequency of use, and to measure the improvements that were observed in their listening, speaking, reading, and writing skills. The researchers conducted semi-structured interviews with 10 participants to gain insights into their challenges and successes throughout the course. The analysis of questionnaire data employed frequencies, percentages, and means to evaluate the efficacy of adaptive learning. The analysis of qualitative interview responses was employed to investigate analogous issues and corroborate the survey results. The application of mixed methods offered a comprehensive perspective and a thorough examination of online tools and language acquisition.

V.   FINDINGS OF THIS STUDY

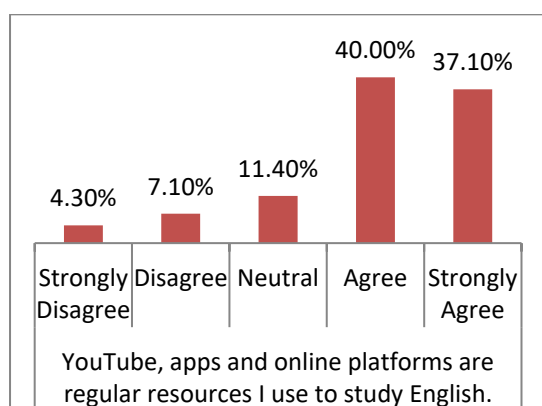**Findings from the Questionnaire Survey**

Response to S1 and S2

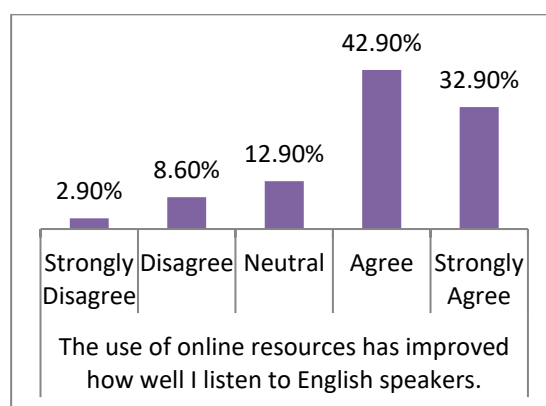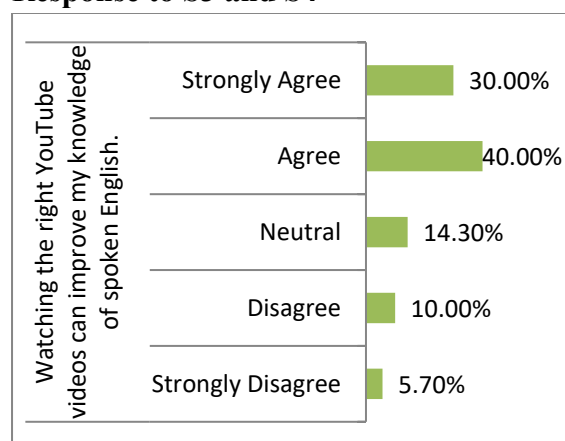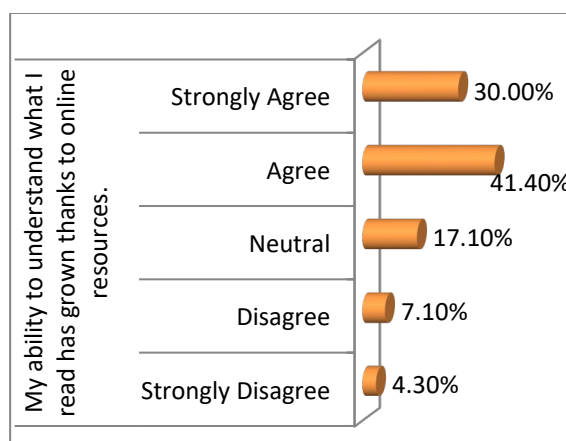**Chart 1**

Chart 2

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
YouTube, apps and online platforms are regular resources I use to study English.	70	1	5	3.70	1.147
The use of online resources has improved how well I listen to English speakers.	70	1	5	3.44	1.199
Valid N (listwise)	70				

Table 1

The first statement looked into how often the learners relied on YouTube, apps and the internet to study English. Chart one suggests that over a third (31%) gave a strong endorsement and about 40% expressed support for the statement. A mean score of 3.70 with Std. Deviation 1.147 also shows that most respondents agreed with the statement. Alternatively, the second statement investigated whether online materials helped the participants improve their listening abilities in English. Nearly a third of the people surveyed indicated strong agreement with the statement on Chart two. Also, in connection with this question, almost 43% of the participants agreed that learning with online resources improved their listening skills in English. The data in Table 1, including a mean score of 3.44 with Std. Deviation 1.199, match up well with the above frequency map.

Response to S3 and S4

Chart Three

Chart Four

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Watching the right YouTube videos can improve my knowledge of spoken English.	70	1	5	3.79	1.153
My ability to understand what I read has grown thanks to online resources	70	1	5	3.86	1.067
Valid N (listwise)	70				

Table Two

Statement three looked at whether watching the right videos on YouTube helps respondents improve their spoken English skills. In chart three, 30% of participants strongly agreed while 40% agreed with the claim as well. The vast majority of respondents, 84%,

found that statement believable. Table 2 also shows that the mean score 3.79 with Std. Deviation 1.153 demonstrates that respondents are in favor of using YouTube clips to improve their spoken English. Statement four explored whether the ability of the respondents to understand what they read grows because of online resources. According to Chart four, just over half of the respondents agreed with the stated claim and this included a large group (30%) strongly agreeing. Only a small group of participants, totaling 11%, disagreed or strongly disagreed with what was said. Table 2 also shows that the mean score of 3.86 with Std. Deviation 1.06 demonstrates respondents are positive toward using online resources for reading improvement.
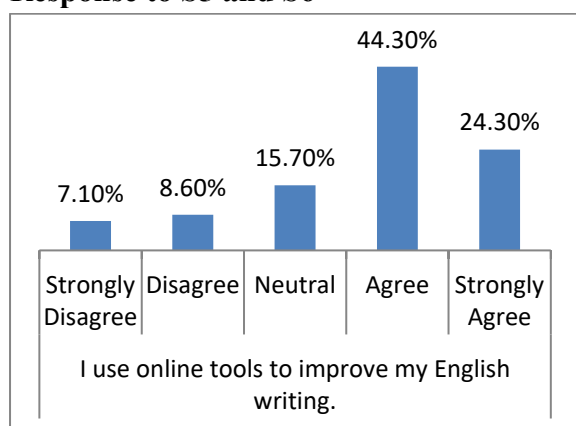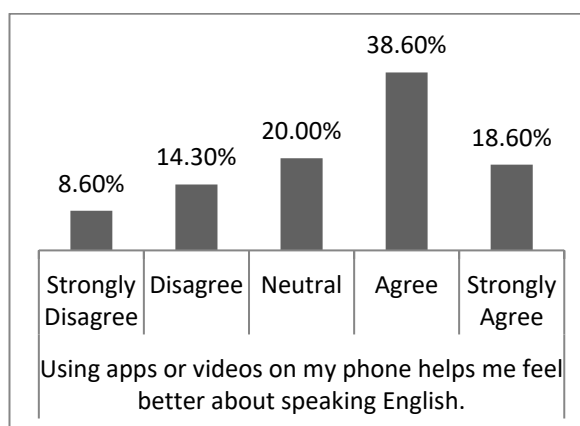
Response to S5 and S6

| | Chart Five | | | | Chart Six |

Chart Five   **Chart Six**

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
I use online tools to improve my English writing.	70	1	5	3.70	1.147
Using apps or videos on my phone helps me feel better about speaking English.	70	1	5	3.44	1.199
Valid N (listwise)	70				

Table Three

Statement five examined if the respondents turn to online resources to strengthen their English writing. In chart five, it is clear that 24.3% of participants strongly agreed and that the largest group, 44.3%, agreed. On the other hand, just 7.1% strongly said they are against the idea and 8.6% said they are not which means resistance is limited. Nearly one in six people stated that they were neutral. With an average score of 3.70 and a standard deviation of 1.147, it is clear that participants have a good attitude toward using online tools for improving their writing skills, although there are some differences in their views. This statement looked into whether using apps or videos on mobile phones improve the respondents' confidence with English. In Chart Six, 18.6% strongly agreed with the statement, while most participants, 38.6%, agreed. By contrast, 8.6% strongly disagreed, 14.3% disagreed and 20% remained neutral. Although the statistics (Mean = 3.44; SD =

1.199) suggest a positive response, the region is somewhat less enthusiastic than several other regions. It shows that a broad range of opinions is present among people.
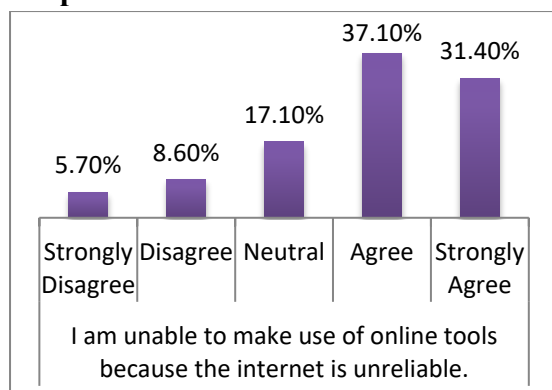
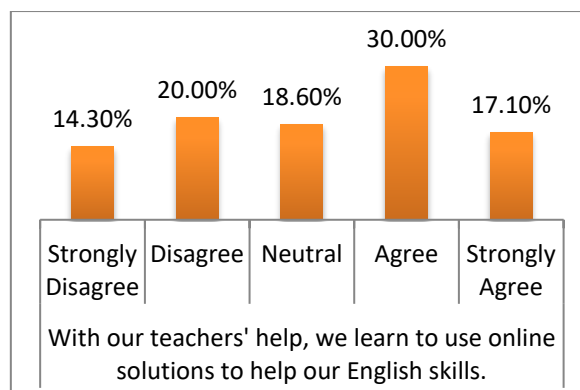**Response to S7 and S8**

Chart Seven

Chart Eight

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
I am unable to make use of online tools because the internet is unreliable	70	1	5	3.80	1.150
With our teachers' help, we learn to use online solutions to help our English skills	70	1	5	3.29	1.446
Valid N (listwise)	70				

Table Four

Statement seven examined whether unreliable internet access prevents respondents from using online tools. Chart Seven shows that 31.4% of the participants strongly agreed and the largest proportion, 37.1%, agreed with the statement. By comparison, not many people strongly disagreed, only 5.7%, and only 8.6% disagreed. 17.1% voted for the middle choice. The average response of 3.80 and a standard deviation of 1.150 suggest that most people felt the same way. Because of this, facing internet problems is a main challenge for students trying to find online learning content. It was studied if teachers assisted learners in using online tools to improve their English. Statement eight assessed whether learners are guided by their teachers to use online solutions for improving English skills. Chart Eight shows that 17.1% of the participants strongly agreed and most, 30%, agreed with this statement. In comparison, just 14.3% strongly disagreed and 20% disagreed. 18.6% of all respondents were neutral. People's responses to this question were more varied, as seen by the mean of 3.29 and higher standard deviation of 1.446. From these results, it is clear that student experiences in digital learning with teachers are not equal.

Response to S9 and S10
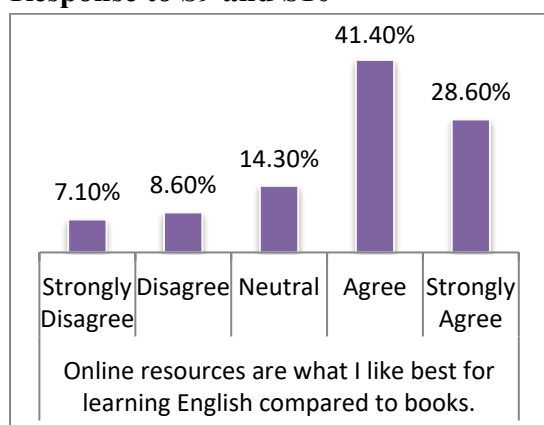
Chart Nine
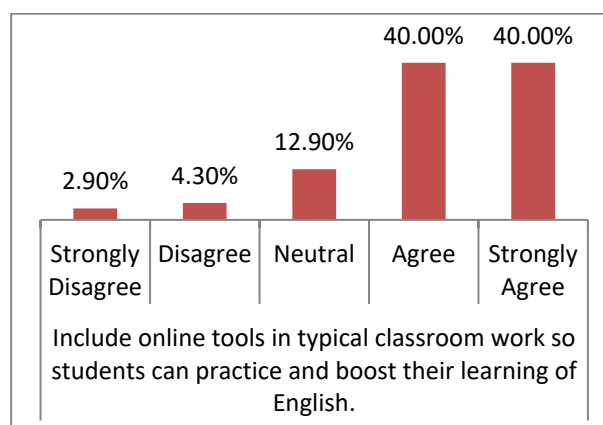
Chart Ten

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Online resources are what I like best for learning English compared to books.	70	1	5	3.76	1.173
Include online tools in typical classroom work so students can practice and boost their learning of English.	70	1	5	4.10	.980
Valid N (listwise)	70				

Table Five

Statement nine explored whether respondents prefer online resources over traditional books for learning English. 28.6% of people strongly agreed with the statement on Chart Nine and 41.4% agreed. Instead, 7.1% of the respondents strongly disagreed and another 8.6% disagreed. 14.3% were neutral. Given a mean score of 3.76 and a standard deviation of 1.173, most respondents generally approved of online learning tools. Statement ten examined if using online tools in regular lessons can improve student learning of English. According to Chart Ten, 40% of the volunteers strongly agreed and the biggest share, 40%, was not too far behind. In comparison, nearly three percent said they strongly disagreed, while just over four percent disagreed. Another twelve percent were neutral. Out of all items, this statement received the highest mean score of 4.10 with a relatively low standard deviation of 0.980, indicating strong agreement and less variation in responses. The data demonstrates that many teachers believe using technology in class helps make learning more practical.

Findings from Interview

Semi-structured interviews with ten HSC students provided rich qualitative data, supporting and expanding on the quantitative findings. Thematic analysis of their responses revealed several key trends across the four English language skills, along with broader issues of access and attitudes. All ten students reported marked improvement in their listening skills due to online tools. Platforms like YouTube, BBC Learning English, and TED Talks were

commonly used. Respondents noted that regular exposure to native speakers helped them better understand spoken English and expand their vocabulary. One student remarked, "Watching English videos every day improved my listening a lot." Despite initial struggles with fast speech or unfamiliar accents, the ability to pause and replay videos made comprehension easier. Improvement in speaking skills was modest. Seven students said online tools helped with pronunciation through apps like HelloTalk, Google Translate, or YouTube, but did not provide real interaction. Many lacked confidence or access to speaking partners. One student commented, "I can mimic pronunciation, but I do not get enough chance to speak with others." Technical issues and limited access to live conversation platforms also hindered speaking practice. Eight respondents reported significant gains in reading ability. Online resources such as grammar blogs, e-books, and news websites (e.g., VOA Learning English, Newsela) helped increase reading speed and comprehension. Students also learned to use strategies like skimming and scanning, often picked up through repeated exposure to online texts.

Writing showed the least improvement. Only four students felt they had advanced in this area. While many used Grammarly or Google Docs, they did so mainly for error correction rather than understanding writing mechanics. One participant observed, "Grammarly fixes my mistakes but doesn't explain why." The lack of teacher feedback and structured practice limited their progress. Urban students benefited more from stable internet and better devices. In contrast, students from semi-urban areas faced connectivity issues and lacked digital literacy. Those with family support or training were more confident in exploring diverse tools. Most students viewed online tools positively but stressed the need for teacher guidance. They recommended integrating digital resources into classroom learning to maximize benefits and ensure equitable access.

Summary of Key Interview Insights

Skill Area	Perceived Improvement	Major Tools Used	Challenges Reported
Listening	High	YouTube, BBC Learning English, TED	Fast speech, unfamiliar accents
Speaking	Low to Moderate	YouTube, HelloTalk, Google Translate	Lack of interaction, shyness, poor internet
Reading	Moderate to High	VOA English, blogs, news articles	Inconsistent practice, distractions
Writing	Low	Grammarly, Google Docs, blogs	No feedback, lack of writing practice
Accessibility	Varied	Smartphone apps, browsers	Rural students face more barriers
Overall Attitude	Positive	All listed platforms	Need for guidance and structured integration

VI.   DISCUSSION ON THE FINDINGS

It was observed from interview results and the survey that online tools contribute greatly to building listening and reading skills among English students in the HSC. Results from the survey show that most students use online tools from YouTube and language apps (Item 1) and they also support bringing these into their lessons (Item 10) at a high level (with the highest mean score of 4.10). It is becoming clear that digital learning habits are increasing, while people rely less on textbooks and seek more technology-based education. Participants showed the greatest improvement in listening. Most students or 75.8%, believed that the use of online tools helped their listening and gave them an average mean score of 3.94 (Item 2). All ten students in the study said that regularly watching YouTube, TED Talks and BBC Learning English helped them understand and speak English better. They pointed out that controlling the video can slow down difficult speech or make seldom-used accents simpler.

Many participants also reported a major growth in reading, with 71.4% agreeing in Item 4 and an average score of 3.86. Reading faster and remembering more was encouraged by using grammar blogs, e-books and online news articles. According to interviewees, they use these strategies because they have learned them from all the time they spend reading online. Still, improvements in speaking and writing were not as strong. A small percentage of participants or 57.2%, felt more confident using English as a result of using online tools, with a mean of 3.44 for that item. The interviews showed that although practicing by following video lessons was useful for pronunciation, taking part in real conversations remained difficult. Results from writing were the weakest: Thick Group had a mean of 3.70 and only 68.6% recognized a gain (Item 5). With Grammarly, students were able to make corrections, except they believed that their knowledge of grammar rules was not much and support was too general.

For 68.5% of participants, not having good internet access made using technology online especially difficult (Item 7). It was confirmed through interviews that both rural and semi-urban students experienced greater challenges like poor infrastructure and limited device access. Only 47.1% reported that their teachers helped them with using online tools (Item 8) and this scored the lowest of all statements (3.16). Many people interviewed reported that including teachers more in digital tool use would help them become more effective. Generally, students use online resources with great interest, but increasing their speaking and writing skills depends on closer contact with teachers, useful training and new academic structures.

VII.   CONCLUSION

Online tools have a major role in helping HSC students in Bangladesh develop better listening and reading skills in English. Although both YouTube and educational apps helped, speaking and writing skills improved very little as there was almost no live feedback and few practice opportunities. Pupils who could use digital tools more often were found to achieve higher standards. The results emphasize that knowing about technology is vital and all groups should have equal access to it. By using online resources in the curriculum, educators can help students develop core skills and deal with any organization problems faced by students with few resources.

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