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Utilizing Mobile Computer Devices in Urdu / Hindi Language Programs to Enhance Language Learning

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Utilizing Mobile Computer Devices in Urdu / Hindi Language Programs to Enhance Language
Learning.

Shagufta Khan

Action Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of
Arts in Education

California State University Monterey Bay

May 2015

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UTILIZING MOBILE DEVICES IN URDU/HINDI LANGUAGE PROGRAMS

Utilizing Mobile Computer Devices in Urdu / Hindi Language Programs to Enhance
Language Learning

By

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UTILIZING MOBILE DEVICES IN URDU/HINDI LANGUAGE PROGRAMS

Abstract

Mobile computer devices, such as laptops, hand-held devices like iPads, and smartphones, have become an integral part of learning, today. In this study, effects of mobile computer devices to facilitate language learning were explored. Students from a university were surveyed for their beliefs, behaviors, preferences and practices with respect to using mobile computers devices to learn Urdu/Hindi languages. How students use various types of devices; which language skills (listening, reading, speaking) are affected and enhanced the most; how mobile devices facilitate differentiated instruction for varying learning styles; how they foster self-organized learning environments (SOLE) and support universal design for learning (UDL), were observed and tracked to see the impact of mobile devices on language learning. Key findings indicate that: (a). students use mobile devices to find various language related material for language learning; (b). the portability and quick accessibility aspects help in language learning, inside and outside of classroom; (c). they have varying degrees of impact on listening, reading and speaking skills; (d). they make self-organized learners and support universal design for learning that aids language acquisition, immensely. Overall, it is evident from the study that the use of mobile computer devices enriches a language learner's experience and plays an integral, supportive role in the language learning process.

Keywords: mobile computer devices, language learning, SOLE, UDL, portability, language skills

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Chapter 1

Today, in the Information Age, teaching and learning language through the use of digital medium has become pivotal. In fact, language departments in universities across the United States are actively changing the face of second and foreign language learning by integrating technology into their language programs; some universities even encourage students to use an iPad and smartphone in the classrooms. However, the question is: how and in which way, does the use of mobile devices facilitate or improve language learning? According to the Pew Foundation survey 64% of American adults have a smartphone; 84% young adults, between the age 18 to 29, which is presumably a college-going group, have smartphones (Smith, 2015). For the purpose of constant connectivity with the students, language teachers, as well as teachers in general, are using electronic means, such as texts and emails, to send and receive homework assignments, conduct classroom activities and answer students' questions, etc. Additionally, mobile devices, such as laptops, hand-held devices like iPads, and smartphones, readily provide access to authentic materials and online resources, making language programs dynamic, expediting the learning process, and making them increasingly successful. Educational technologies are making eLearning as the key feature of the twenty-first century's education system. Fostering self-organized learning environment (SOLE) and supporting universal design for learning (UDL), more and more programs are gearing towards eLearning. For this purpose, students behavior and belief with respect to the usefulness of technology need to be studied. Standards for the efficient use of portable digital devices in language teaching would be beneficial for the discipline of language arts. Therefore, it is crucial to know the behaviors of language learners with respect to mobile devices in order to formulate or endorse strategies regarding their usage. The purpose of the study is to observe, how mobile computer devices impact Urdu/Hindi students' language learning.

About Urdu and Hindi

Urdu

Urdu is the language spoken by a large percentage of the people in South East Asia, especially in Pakistan and Northern India. The language has approximately 60 to 70 million native speakers, worldwide (Brereton, n.d). The word "Urdu" literally means "army." Beginning in the 11th Century A.D., the influx of the conquerors from the western regions of the sub-continent, such as Persia and the present-day Afghanistan, laid the foundations of the Urdu language. The soldiers of the armies that invaded the Sub-continent were from various regions and spoke different languages. During these pursuits, the soldiers started to interact with the local population of the region. From this social interaction for the purpose of communication a new local variety of language developed. This language had native syntax but its vocabulary was drawn from a number of languages, such as Persian, Arabic, Sanskrit and Turkish. The amalgamated language that formed is now called Urdu (Asani & Hyder, 2007; Laal, 2012). Urdu, therefore, is a complicated language to learn because it incorporated various languages and their grammar rules at times. It is therefore, considered a category three language in the government language difficulty ranking system--on the scale of one to four. These categories are established based on the length of time it takes for an English speaking learner to achieve a level 2+/3 proficiency in speaking on the Interagency Language Roundtable (ILR) scale (See Appendix A). The more time it takes to achieve that proficiency level, the higher is the category assigned to that language (Thompson, 2014).

Hindi

The origins of Hindi are estimated to go back to the eighth through tenth centuries. It is postulated to have developed from Khari boli—a language spoken around Delhi. With more and more incorporation of loanwords from Persian and Arabic in to Khari boli, Urdu developed;

while on the other hand, the language of the indigenous Indians continued on a path where it became more and more Sanskritized by incorporating Sanskrit words-it is the present day Hindi language.

The syntax of Urdu and Hindi are identical. However, Urdu is written in Perso-Arabic script while Hindi uses Devanagari script. The two languages have a common colloquial form called Hindustani (Thompson, 2014). Urdu and Hindi belong to the category of less commonly taught languages. However, in recent years, Urdu and Hindi language programs have been growing; enrollment continues to increase every year. According to The Modern Language Association of America (MLA) survey in a web publication, enrollment for Hindi-Urdu language programs increased from 393 student in the year 2006 to 639 students in year 2009 (Furman, 2010). The reason for a greater interest in these languages is due to the geo-political environment of the regions where these languages are spoken. In this study, we will be observing the effects of mobile technology on language learning; for this purpose, Urdu and Hindi languages will be considered as one language (unless otherwise noted) and their differences will remain out of the scope of this research.

The Stakeholders

A successful language programs at any institution are important to all its stakeholders, i.e. the institution, the students, as well as the teachers. Therefore, as an institution, East American University¹ does everything to make its language programs successful. It invests human and monetary resources into its Elementary to Advance courses for Urdu and Hindi languages. In 2001, it was the first university that started separate language program tracks for Urdu and Hindi. Later, many other universities followed its footstep in the wake of increasing

¹ This is a pseudonym for the university to maintain confidentiality

demand and funding from U.S. government. The East American University (EAU) makes great efforts to establish connections with the local language communities; provides teacher training programs for Urdu/Hindi language teachers, runs summer programs for schools in nearby areas, and integrates technology within the language classrooms.

From the students' perspective, a good language program is also important. Most universities have foreign language requirement for undergraduate degrees. To satisfy this requirement students need a solid program so that they can pass the courses on their first attempt due to the money as well as time they have invested in taking these courses. With respect to Urdu/ Hindi languages, passing with higher proficiency gives students an edge in the job market, especially in international organizations that have vested interests in South Asia.

Teachers are stakeholders in the success of the language program. They invest human capital, i.e. their time and energy in preparing lessons and choosing material that is level appropriate, authentic, timely, and rich in ways that can help the students learn the language nuances as well as understand its culture and history. A successful program builds a good reputation for the instructor, which is an important element of a teacher's job satisfaction.

Statement of the Problem

The Urdu and Hindi language program at East American University (EAU) scaffolds language learning by facilitating access to online resources for a dynamic and efficient language learning experience. The paper handouts are complimented by the digital materials in audio and visual form. The interactivity and fast accessibility aspects provided by mobile devices such as laptops, iPads or smartphones, create a richer language learning environment. Traditional textbook instruction is limited when learning a complex foreign language such as Urdu/Hindi. Multiple pathways, which compliment students learning styles (auditory, visual, tactile and

kinesthetic), are essential so that the learners can access pertinent information to increase understanding as well as their knowledge base. Although desktop computers have played a key part in learning second languages through the use of videos, interactive programs, music etc., they still required the user to be desktop bound. This is not the case for the use of mobile computer devices that provide instant accessibility, making learning real-time and salient. However, there is a lack of research on the efficacy of mobile devices in second language learning, especially in learning Urdu and Hindi. Therefore, there is a need to identify key mobile devices that enhance learning across multiple learning styles and pathways to increase learning efficiency and effectiveness, leading to higher proficiency in not only comprehending the language but also in using it with relative ease and appreciation for its nuances and prosody. There is also a need to know how these mobile devices are currently used by learners and teachers in order to devise better applications and better curricula that is efficiently compatible with mobile computer devices.

Statement of Purpose

The primary purpose of this study is to analyze whether the use of mobile computer devices such as laptops, iPads or smartphones, make the Urdu-Hindi learner's experience, dynamic, helping them learn the language better and efficiently in all modalities (listening, reading and speaking). Mobile computer devices give the students quick access to various computer applications and tools that are designed to facilitate language learning in comparison to when the students have paper textbooks which are thought to provide a more limited form of accessibility. This study intends to explore the level of usefulness and effectiveness that the portability of mobile devices provide with respect to continuous language exposure inside and outside of classroom. The study intends to see how students are using and integrating mobile

computer technology for Urdu and Hindi language learning. In other words, the study will analyze how efficient language learning really is through the use of these devices.

The results of the study will inform the university on the usefulness of mobile technology integration for efficient language learning and may propose some measures to further increase this integration through the its program curriculum and teacher training. Gaining student perspectives on CALL/MALL will aid in various policy decisions related to the integration technology into the program curriculum.

Research Questions

- How do learners use their mobile devices for language learning purposes?
- How does the use of mobile computer devices such as laptops, iPads or smartphones, facilitate Urdu and Hindi students' language learning?
- Does the use of mobile devices affect the learning of some modalities more than others? For example, are mobile devices more useful at improving the proficiency level of "listening" rather than "writing"?
- Do Urdu /Hindi learners use SOLE and UDL models to boost language learning with the help of computers/mobile devices?
- What are learners' perceptions about the effectiveness of such devices with respect to language learning?
- How does use of mobile devices facilitate differentiating instruction for varying learning styles?

Theoretical Model

Second language (SL) learning, mobile/computer assisted language learning (CALL/MALL), and differentiated instruction (DI) theories provide the foundational research for

the case study on the use of mobile computer devices for language learning in Urdu/Hindi language program at East American University. The theoretical framework, based on the studies of Krashen (1981), Long (1981), Terrell (1977) Chomsky (1965) and Van Essen, Jager and Nerbonne (2014), furnish a model for analysis and a proposition to build upon. Terrell (1977) states,

Language knowledge stems from two sources: what is learned and what is acquired.

Learning is the conscious process of studying and intellectually understanding the grammar of L2. Acquisition, on the other hand, refers to the unconscious absorption of general principles of grammar through real experiences of communication using L2. It is the basis for most first language ability and in terms of L2 is commonly known as 'picking up a language' (p. 327).

The language learning phenomenon occurs more commonly in the language classroom than language acquisition does since acquisition is best possible when the language is being provided in the most natural form; however, providing "intake" that is in form of context-based material is a difficult task to achieve. Also, real acquisition and learning can happen best if production is not forced at first, rather the learner is submerged into the "intake" and is allowed to internalize it. Very much like how a "caretaker" communicates with a child, where the speech is not constructed or intended to teach a language to the child; rather, the main purpose is to communicate meaning and foster comprehensibility. Second language acquisition depends on a caretaker-like "intake" method, which is not produced with the intention of language teaching; rather, its purpose is communication (Krashen, 1981; Terrel, 1977). Keeping in-line with this concept, exposure to authentic material that is not intended for language teaching, is best suited for second language acquisition. As Krashen (1981) says,

My analysis of what intake is predicts that what is called 'meaningful' and 'communicative' drills or exercises can be more efficient in producing language acquisition. These are activities in which students can really communicate or in which communication can be simulated...In order to qualify as intake, these exercises must be understood, be at the appropriate level, and be 'natural'. I have tried to come up with activities that fit these requirements as an ESL teacher, and I found it very difficult to think up interesting, natural communicative situations in which to contextualize "the structure of the day. (p.108)

It is therefore apparent that the method and material used for second language teaching has to be natural and for the purpose of communication. Thus authentic materials, in the form of newspapers, advertisements, reports, editorials, sitcoms, songs, movies, talk shows, speeches and city hall meeting coverage, etc. all can be utilized to facilitate language acquisition and learning. Along these lines, Long (1981) says that natural settings, where there is a native speaker (NS) and a non-native speaker (NNS) interaction, is where language acquisition begins.

Using the differentiation method with material in form of "natural intake" that is comprehensible, with a minimum push towards production of language, will push students towards language learning and acquisition. To provide that "intake" through various means of presentation, practice and production, using computer and mobile technology can immensely assist the process. Hall (2002) emphasizes this concept when he states,

An approach to teaching and learning so that students have multiple options for taking in information and making sense of ideas. The model of differentiated instruction requires teachers to be flexible in their approach to teaching and adjusting the curriculum and presentation of information to learners. (p. 1)

Differentiated Instruction (DI) is an effective way to accommodate diverse student needs. To differentiate instruction is to first recognize that the student population is diverse, and that every student comes with a different skill set, preferences, interests, and knowledge. Teachers have to work flexibly and adjust the curriculum and how they present the material to the student keeping in mind the diversity of their pupil so that each student has an equal opportunity to realize his/her true potential, and achieve optimal success (Hall, 2011).

It is apparent that the method and material used for second language teaching has to be natural and for purpose of communication. However, the design of the language program is very important to determine the best approach to teaching a language. According to Chomsky (1965) there is competence versus performance to be considered when teaching or learning a language. “Performance” is comprehension and production of the language, while “competence” is the representations of internalized linguistic rules and grammar. If communication and production is the main aim of a language program, then it has to be performance based; but then to excel in a language and increase learner’s proficiency level, grammar and linguistic rules need to be internalized to develop competency and achievement of higher proficiency level. Based on the works of Stephen Krashen (1981), Tracy D. Terrell (1977), and Noam Chomsky (1965) as discussed above, two main approaches of language teaching-the humanistic approach and the content-based, communicative approach- are the most prevalent in today’s language teaching arena.

Van Essen, Jager and Nerbonne (2014) talk about CALL and its benefits. According to them CALL provides various benefits for efficient L2 learning; it is fast, needs less scheduling, cuts human cost of having instructors available, reliable, and also more easily updated than the print material and other sound medium files. Also, CALL facilitates student-centered exploratory learning, easy access to authentic material, as well as quick use and finding of digital audio and

video files "to present contextualized, spoken samples from target community, allowing dynamic peer interaction" (Van Essen, Jager & Nerbonne, 2014). Chinnery (2006) talks about how 1960s behaviorist influences in language learning brought drill-based computer-assisted instruction which, with the advent of Internet in 1990s, furthered the development of computer-mediated communications. As technology advances, its tendency to reduce the size of computer devices is augmented. Chinnery (2006) confirms that use of technology, mobile or other, has become pivotal for language instruction; however, referring to Copaert (2004) he "emphasizes the importance of developing the language learning environment before deciding on the role of mobile technologies and further emphasizes focusing on the learner ahead of the technology.... [He also adds that] they [technology devices] are not in and of themselves instructors; rather, they are instructional tools. And the effective use of any tool in language learning requires the thoughtful application of second language pedagogy." (p. 9)

Leaver (2004) ties the Task-based instruction (TBI) to the foreign language computer-assisted study (CAS) and explains that in today's digital age, "'interactive learning units, including lessons, modules and the like (Mayadas, 2001)' are very effective. In-line with UDL guidelines, thematically designed, task-based activities provided to the learner through digital means, in various forms, give them the ability to personalize their learning'" (p. 181-197). However, Leaver (2004) recognizes the challenges of developing "interactive, communicative, learner-centered online course[s] Involving both reception and production of skills [,] will require continuous experimentation and further advances in such areas as broadband delivery, true speech recognition, artificial intelligence, and virtual reality simulation" (p. 197-200).

This case study aims to analyze how mobile computer devices such as laptops, iPads or smartphones facilitate "caretaker" like "intake" for the purpose of language learning and acquisition for adult language learning. It hopes to evaluate how the use of mobile devices

facilitate language learning by providing quick access to authentic materials and real-life scenarios so language could be learnt in an in-context environment for communicative purposes. It also hopes to link differentiating instruction and task-based instruction, and how they provide a level field for language learners with varying learning styles and abilities.

Researcher Background

I started tutoring while I was still a college student. However, formally I took-up teaching as a profession in 2007-2008. With a minor in South Asian Studies in my bachelor years, I jump-started my career in foreign language teaching by completing the STARTALK Intensive Teacher Training program at New York University, run jointly by the National Security Agency and the University of Maryland. I attained numerous certificates and attended various trainings related to foreign language teaching. I gained practice experience as a teaching assistant. I have been involved with curriculum development, assessments, educational technology integration and various language research projects. I have completed an instructional course for language teaching that trained instructors to conduct student-centric classrooms, integrate technology, facilitate group work in a task-based learning environment; and contextualization of language, in a communicative, structured lesson with clear goals and objectives.

Since 2011, I have been working on a special project to develop the Urdu Language Basic Urdu course curriculum. Working with a curriculum development team, I developed Urdu course work for novice to advance level courses. The course work contains listening, reading, speaking, writing and grammar lessons and activities, developed with various themes. I am currently reviewing the new curriculum. As a second language educator, I have experienced many facets of planning, designing, teaching, reviewing and publishing for foreign and second language programs.

Definition of Terms

- **Computer-Assisted Language Learning (CALL):** study of applications of the computer in language teaching and learning. (Thomas & Peterson, 2014)
- **Mobile-Assisted Language Learning (MALL):** mobile device as wireless, handheld or nomadic devices which are being used for mobile learning or m-learning With MALL, students are able to access language learning materials and to communicate with their teachers and peers at anytime, anywhere. (Chinnery, 2006)
- **Differentiated Instruction (DI):** is a framework or philosophy for effective teaching that involves providing different students with different avenues to learning (often in the same classroom) in terms of: acquiring content (Carol, 2001. <http://www.ascd.org>).
- **Educational Technologies:** the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources (<http://www.cjlt.ca/index.php/cjlt/article/view/527/260>).
- **Higher Order Thinking Skills (HOTS):** In Bloom's taxonomy, skills involving analysis, evaluation and synthesis (creation of new knowledge) are thought to be higher order skills, requiring different learning and teaching methods, than the learning of facts and concepts (ww2.odu.edu/).
- **Learning Styles:** Learning styles group common ways that people learn (learning-styles-online.com).
- **Metacognition:** It refers to higher order thinking which involves active control over the cognitive processes engaged in learning. Activities such as planning how to approach a given learning task, monitoring comprehension, and evaluating progress toward the completion of a task are metacognitive in nature (gse.buffalo.edu).

- **Task-Based Instruction (TBI):** focuses on the use of authentic language and on asking students to do meaningful tasks using the target language
(www.uhu.es/antonia.dominguez/docs/tareas.pps).
- **Technology Integration:** The ISTE, defines technology integration as the infusion of technology as a tool to enhance the learning in a content area or multidisciplinary setting... Effective integration of technology is achieved when students are able to select technology tools to help them obtain information in a timely manner, analyze and synthesize the information, and present it professionally. The technology should become an integral part of how the classroom functions — as accessible as all other classroom tools. The focus in each lesson or unit is the curriculum outcome, not the technology
(nces.ed.gov).
- **Web 2.0:** it is the term given to describe a second generation of the World Wide Web that is focused on the ability for people to collaborate and share information online
(Webopedia.com).
- **Universal Design of Learning (UDL):** is a framework to improve and optimize teaching and learning for all people by providing various forms and means of engagement, presentation, and action and expression (www.cast.org).

Summary

Chapter 1 provides an overview of the purpose of study on the usage of mobile computer devices in Urdu/Hindi language learning programs. In the following Chapter 2, literature that pertains to the action research will be discussed and overviewed.

Chapter 2: Literature Review

This chapter presents significant research on computer-assisted language learning (CALL), second/ foreign language learning (SLA/FLA), differentiating instruction (DI), Task based Instruction (TBI), learning styles, and educational technologies. The chapter will explore the philosophy as it relates to mobile computer devices use in language programs. The concepts and methods of educational technologies and differentiating instruction will be explored as it specifically relates to second language learning and acquisition, mobile computer device use for language learning and learning styles.

Computer/Mobile Assisted Language Learning (CALL & MALL)

Today, computers infiltrate every field imaginable; the field of language learning is no exception. However, the trends, the impact, and the use of computers in a computer technology integrated language classroom are yet to be fully understood and explored in the context of exponentially changing computerized devices and their growing use for the purpose of L2 acquisition. According to Thomas and Peterson (2014), "It is still not clear to what extent they (computers) are being used in international language learning contexts and how effective they are for learning, collaboration and learner motivation"(pp. 269-306).

Recently, in CALL classrooms the new Hypertext Markup Protocol (HTML) interactive interface such as the Web 2.0 has become very popular. Web 2.0, is the "second generation of the World Wide Web that is focused on the ability for people to collaborate and share information online. Web 2.0 refers to the transition from static HTML web pages to a more dynamic web that is more organized and is based on serving web applications to users" (www.webopedia.com). These computer technology renovations impact CALL by increasing the interaction between the language learners and the web application. The proponents of technology integration in language classrooms are finding a voice through such innovative research on the

positive impact of CALL that provides a concrete argument in its favor. Myers (2011) suggests that successful second language acquisition is tied to diverse exposure to current topics, issues and authentic language samples through different mediums; therefore, in the current computerized world, technology provides many opportunities to acquire a new language and improve skills.

A number of other research studies are showing positive outcomes of technology integration in language classroom. Research on Online Language Learning (OLL), CALL and MALL are getting serious attention from language educators because of their potential in making L2 learning much more effective. Through social computing, i.e. computer aided communication, language games, and CALL, language learning experiences are enhanced. It is found that there is complementary relationship between "tutorial CALL and computer-mediated communication" in modern-day language instruction (Blake, 2011). Even though the assessment of the impact of OLL is still not well documented or proven, there is increasing evidence showing that OLL and CALL provide learning environments conducive to L2 acquisition when integrated properly into the curriculum (Blake, 2011; Myers, 2011). Hoffman (1996) agrees that CALL gives an opportunity to L2 learners via social medium, email, and other online and digital communication mediums to interact with real audiences for the purpose of information exchanging, and generating authentic responses for communication. In closing, it may be said that computer mobile devices such as laptops, iPads or smartphones, through online language resources, applications and software etc., facilitate and scaffold L2 learning and acquisition.

In the realm of Mobile Assisted Language Learning (MALL), Chinnery (2006) defines mobile devices as wireless, handheld or nomadic devices which are being used for mobile learning or m-learning which is a subset of e-learning movement. Cell phone features like voice messaging, texting, internet search, camera, audio and video recording, provide communicative

interaction, practice and use of authentic material and accomplishing task for tasked-based learning. Referring to Kiernan and Aizawa's study on the usefulness of mobile phones as a language learning tools for task-based learning, Chinnery (2006) argues that "second language acquisition is best promoted through the utilization of tasks, which require learners to close some sort of gap, thereby focusing the learner on meaning" (p. 10). Mobile technology clearly provides practical uses for language learners: 1). They are portable devices and can be available anywhere, 2). Portability provides ready access to media of all kind anytime, 3). They can be used inside and outside of classrooms, 4). They expand the presence of social exchange, which is vital for language learning (Chinnery, 2006, p. 13).

Educational Technologies

To push towards the 21st century designs for education, there is a great emphasis on self-organized learning environment (SOLE), where the students are encouraged to be self-motivated learners and universal design of learning (UDL) is consciously used, both by educators and students (see appendix for detailed UDL guidelines). UDL stresses: 1) Provide multiple mean of representation; 2) Provide multiple mean of action and expression and; 3) Provide multiple mean of engagement (CAST. 2014). Educational technologies are an integral part of the education system, today which support SOLE and UDL models of learning. There are three main categories of educational technologies: 1) technology as a mind tool, 2) technology as a tutor, and 3) technology as a conversation support. The three categories provide and cover what an educational institute could offer to its students at a campus; the only difference is that now students are only a click away from accessing these resources. Taking it further, mobile device make the process more fluid—the string of being desktop bound is, thus, broken. Web resources, programs and applications such as online database, free libraries, free universities, Skype,

Facebook, and Twitter, all make language learning available in real-time--anytime and anywhere.

Second Language Learning (SLA)

Second language acquisition (SLA) is not a simple process. There are two distinct processes that occur in Second language learning: acquisition and learning. According to Terrell (1977),

“learning” and “acquiring” are different from each other: “Learning is the conscious process of studying and intellectually understanding the grammar of L2. Acquisition, on the other hand, refers to the unconscious absorption of general principles of grammar through real experiences of communication using L2. It is the basis for most first language ability and in terms of L2 is commonly known as “picking up a language”.”
(p.327)

Even though both are vital for language education, the language learning phenomenon occurs more commonly in a language classroom than language acquisition does (Terrell (1977)).

Explaining language acquisition, Krashen (1981) says,

More central than language learning in second language performance...the major function of the second language classroom is to provide intake for acquisition. This being a very difficult task, one could also say that the major challenge facing the field of applied linguistics is to create materials and contexts that provide intake. (p.100)

Second language acquisition depends on “caretaker”-like “intake”, which is not produced with the intention of language teaching; rather its purpose is communication. Keeping in-line with this concept, exposure to authentic material that is not intended for language teaching, is

best suited for L2 education. Events or incidents that can stimulate communicative activities such as discussions, information gap activities, debts, etc. will foster L2 acquisition. Such activities that qualify as "intakes" should be "natural". However in real-time it is difficult to come up with interesting and natural situations spontaneously which contextualize daily classroom activities (Krashen, 1981). Proving the point that language acquisition occurs best in natural settings where communication is the goal, Krashen refers to Upshur's (1968) empirical study which suggests that direct language instruction hardly contributes towards language acquisition.

Krashen (1981) explains that language acquisition is the comprehension or the ability to understand what is being conveyed; acquiring a new language is the understanding of a language which is above one's current level of proficiency. In other words, pushing upward on the proficiency ladder to reach above the comfort level of understanding is the way to increase language proficiency. However, he also points out that $i+1$, where "i" is the learner and "+1" is the level above current proficiency, may not be as efficient as it is believed. He also suggests that having optimal acquisition, $i+1$ may "not be exactly matched to the acquirer's developing competence: "rough tuning" may be optimal. Simply aiming for $i+1$ may be less efficient, as one's aim may miss, less review is provided, and where there is variation in rate of acquisition, fewer acquirers may be accommodated by the same input" (Krashen, 1981, p.108). In this context the second language classroom may work best when they have structured activities. Free conversation and purely mechanical drill alone do not work to optimize language acquisition. (Krashen, 1981). A more focused and structured activity that enhances language acquisition is the task-based instruction.

Heritage Learners

Valdes (2001) explains that the label and definition of heritage language learner is a complicate matter that plays on the notions of identity, social inclusion and exclusion. There is trilateral view of the definition: 1). Definition by the educational program, 2). Definition by the community's perspective, 3). Definition by sociolinguistic angle. However, he states that for pedagogical reason his definition: " a heritage language speaker is someone who has been 'raised in a home where non-English language is spoken' and 'who speaks or merely understands the heritage language, and who is to some degree bilingual in English and the heritage language' " (Valdes, 2001 p.45).

Task-based Instruction (TBI)

Task-based instruction (TBI) is when learners perform activities that are meaningful and goal-centered, that are aimed towards solving problems, completing tasks or reaching a decision. The new methodology of task-based language instruction provides for the opportunity for L2 acquisition. The use of task-based language instruction can enhance language acquisition if it is incorporated into the curriculum via activities that enhance structure, function, and content proficiency (Seyyedi & Ismail, 2012). Along the same lines, Candlin (1987) states that "task-based language learning is not only a means to enhancing classroom communication and acquisition but also the means to the development of classroom syllabi" (p.5). To make the most out of task-based instruction, the tasks have to be well defined and "their means of operationalization explained" (p.5)). Explaining task-based learning, Long and Porter (1985) connect task-based instruction to group work. They suggest that group work provides opportunities for language practice, and fosters communication among peers to complete a project or goal:

There are at least five pedagogical arguments for the use of group work in second language (SL) learning...for increasing the quantity of language practice opportunities, for improving the quality of student talk, for individualizing instruction, for creating a positive affective climate in the classroom, and for increasing student motivation.(Long & Porter, 1985, p. 207)

Differentiated Instruction (DI)

Today's classrooms are getting more and more diverse. Furthermore, diversity is an integral element of the eLearning environment. Thus, to cater to the students from so many different backgrounds, cultures, languages, and social norms, differentiated instruction can provide equal and optimal learning experience to each learner and suit his/her needs. In terms of CALL integration in L2 (i.e. second language) classroom, differentiated instruction (DI) can play an extremely important role. Differentiated instruction provides different options to different students that can then be tailored to fit their ability, proficiency, and need. For L2 learning, differentiation of instruction, i.e. method and material, with emphasis on it being natural and for communicative purposes, optimizes language acquisition. Hall (2002) states that, "differentiated instruction applies an approach to teaching and learning so that students have multiple options for taking in information and making sense of ideas. The model of differentiated instruction requires teachers to be flexible in their approach to teaching, leading them to adjust the curriculum and presentation of information to learners" (p. 1).

Learning Styles

Everyone learns in a different way. The most common way of learning are collectively called learning styles (learning-styles-online.com). For the purpose of this study only four major categories of learning styles will be considered which are: visual, auditory, kinesthetic and tactile

learner (see Appendix C). Visual learners learn through seeing and understanding ideas, they like to visualize everything because that helps them understand better. They work well with diagrams and illustrations. Auditory learners, use hearing as the way to understand ideas. You will see these learners listening to lectures more than reading an article (www.ldpride.net). Then there are Tactile learners who learn from manipulating objects. These learners can benefit from hands-on activities, art, and writing. On the other hand, there are Kinesthetic learners who also like physical activity and are good at learning by experiencing. These learners benefit from activities like playing games, drama, role play, memorizing while playing with a pencil or pacing etc. (bcps.org)

Conclusion

In second language classroom, authentic materials, provided through various mediums of communication, such as e-mail, social media, newsletters, billboards, internet, magazines, newspapers, or physical mediums, such as meetings, conferences, and social gathering of any kind can be utilized to facilitate language acquisition and learning. The purpose of computer assisted language learning is to provide many opportunities to L2 learning's in terms of medium, material and accessibility to real-world, authentic situations. However, an integral part of this equation are the teachers. To optimize the opportunities computer technology provides, teachers need to be trained in the pedagogy of teaching a CALL classroom. To have an efficient CALL classroom, teacher's ability to differentiated instruction, using technology, is the face of the twenty-first century second language education.

Chapter 3: Methodology

This is a qualitative study that will be conducted on mostly bilingual, Urdu and Hindi heritage learners at East American University. The goal of this study is to analyze the use and impact of mobile computer devices such as laptops, iPads or smartphones, on Urdu and Hindi language learning and acquisition. The study's goal is to evaluate whether students' use of mobile devices to help them learn the languages efficiently in all modalities, such as listening, speaking, reading, and writing or whether one modality is affected more profoundly than the others. It also aims to answer questions, such as what aspects of UDL and SOLE optimize the program's success and increases student performance in the Urdu and Hindi programs? And, how does differentiated instruction using mobile devices help to provide equal opportunities to Urdu and Hindi language learners with differing learning styles? The study will also examine how mobile devices scaffold student learning by providing easy accessibility to online authentic material. Since the researcher is not directly involved in students' grading; therefore the students would be more comfortable and open in expressing their feelings and perceptions about the use and impact of mobile computer devices on their language learning process.

Study Location

The location of the study is East American University (EAU), New York.

Description of the General Setting

The majority of the student population is comprised of heritage learners enrolled in Elementary, Intermediate and Advance courses for Urdu and Hindi, having a proficiency ranging from novice-mid/ o+ to advanced/ 2+ levels, measured on the American Council for Teaching of Foreign Languages (ACTFL) and Interagency Language Roundtable (ILR) scale (see Appendix A for proficiency scale reference). Language instruction hours vary from 2- 4 hours per week.

Passing requirements are course level specific: Elementary, Intermediate and Advance level proficiency, as described by the proficiency scales, are required for respective courses.

Research Design

The overall research approach will be to carry out mixed method research. To get qualitative data, opinion survey will be conducted. The students will be surveyed on their usage of mobile devices such as laptops, iPads or smartphones. The element of interactivity and accessibility provided by a mobile device with respect to accessing Urdu/Hindi lessons, materials and other resources, will be evaluated. Quantitative analysis will also be conducted by using an online survey to get quantifiable data. Student responses in terms of how often, how much, how many times, etc., will be acquired and projected into quantified values with the use of bar and pie graphs. Data will be analyzed for: correlation between the amount of time the subjects spend on using mobile devices for Urdu and Hindi language learning; their patten of use of mobile devices for accessing online language related materials; their perception of increasing language capabilities in various modalities; and their behaviors which leads to overall increase in Urdu/Hindi language learning. Student responses will be used to find common trends, practices and preferences that are prevalent with respect to the use of mobile computer technology.

Participants

There will be 60-70 potential participants from 17-25 years of age. The participants in this study will be Urdu and Hindi language learners enrolled in East American University (EAU) in elementary, intermediate and advance level of courses. The students are mostly bilingual heritage learners who come from South Asian, ethnic and socio-economic backgrounds. Age, gender, health and ethnicity will not be considered as factors for inclusion or exclusion from the study. Ethnicity, religion or any other personal identifier will not be a determining factor to be a

participant in this research. Volunteering students will be selected for the study solely based on the fact that they are second language learners at East American University (EAU) Urdu and Hindi language programs.

Procedures

The study will contain an online survey that will have general opinion questions about the use of technology in the Urdu and Hindi language programs. An online survey, created with Google Forms called *Mobile Computer Device Use for Urdu/Hindi Language Learning* (see Appendix E) will have in-depth quantifiable questions regarding students' beliefs, preferences, behavior and patterns with respect to the use of mobile computer devices used for Urdu and Hindi language learning. The survey will include close and open-ended questions, providing first-hand information on how students use or may recommend to use mobile computer technology in the classroom and beyond. The survey will be collected and kept by the researcher.

Data Collection. The study will last 3 weeks. Students from all three course levels will take the survey. Two types of data collection will be used for the purpose of this research: qualitative and quantitative data.

Qualitative data. This data will be collected, using open-ended questions on the online survey. Questions will ask participants to evaluate their beliefs, behaviors, practices and preferences with respect to the use of mobile devices for language learning.

Quantitative data. Quantitative analysis of the data will provide an objective analysis for the studied phenomenon. Quantitative approach quantifies the data in terms of *how often*, *how many*, *how much*, etc.; it will measure, and identify the cause and effect relationship between two or more ideas being studied; such as in case of analyzing the effect of mobile accessible audios on listening skill it would be evaluated how more time spent on

using authentic audios via mobile computers is perceived by the student to have improved their listening skill.

Instrument: An online survey on Google Forms will be designed to rate student responses using a sliding scale from 5 to 1 representing the extent to which they "agree" or "disagree" with the statements on quantifiable preferences, duration and frequency of use of mobile computer devices.

Data Analysis. Data analysis consists of interpretation of words and statistics to find patterns of behavior. It requires several steps to correlate and see if a relationship exists between variables.

Qualitative data. Each entry will be analyzed, looking for patterns, revealing similarities between student experiences, dominating behaviors and routines.

Quantitative data: Modeling traditional action research, quantitative data will be analyzed and compared for trends using bar and pie graphs.

Summary

Chapter 3 lays down the methods used for this study. The following Chapter 4 will record collected data and analyze it, looking for trends related to: the efficiency of CALL/MALL; student beliefs and preferences, the modality enhanced the most by instantaneous and real-time learning environment fostered by mobile devices; mobile devices, SOLE and the UDL environment; as well as the use of mobile devices to differentiate instruction for student with varying learning styles.

Chapter 4: Findings

In this chapter, the results of my action research study will be presented. The sample size contained seventy students in total, out of which fifty-six students took the survey that contained forty-two questions. The research study was focused on the following research questions: 1). How do learners use their mobile devices for language learning purposes? 2). How does the use of mobile computer devices such as laptops, iPads or smartphones, facilitate Urdu and Hindi students' language learning? 3). Does the use of mobile devices affect the learning of some modalities more than the others? For example, are mobile devices more useful at improving the proficiency level of "listening" rather than "speaking"? 4). Do Urdu /Hindi learners use UDL and SOLE models to boost language learning with the help of computers/mobile devices 5). What are learners' perceptions about the effectiveness of such devices with respect to language learning? This is important to find out because knowing students' perceptions would, among other things, help to shed light on their expectations from such technology, and in turn researchers can measure the compatibility or the discrepancy between the actual versus perceived effectiveness. The data did not reveal any useful information with respect to the research question: How does use of mobile devices facilitate differentiating instruction for varying learning styles? It will be discussed in the limitation section of Chapter 5.

From the data collected, it is important to note that out of the fifty-six students that took the survey, 48.2% were enrolled in an Elementary course, 42.9% were enrolled in an Intermediate, and 8.9% were enrolled in an Advance course. Thus, our findings will give a good sample of how students in beginner and intermediate level use mobile devices. It is also of interest that 82.1% of the students had previously learned another language prior to learning Urdu/Hindi. As a result, most students understood the processes of second language/ foreign

language learning. The following sections will present the qualitative and quantitative data collected, analyzed and cross-validated in relation to my research questions:

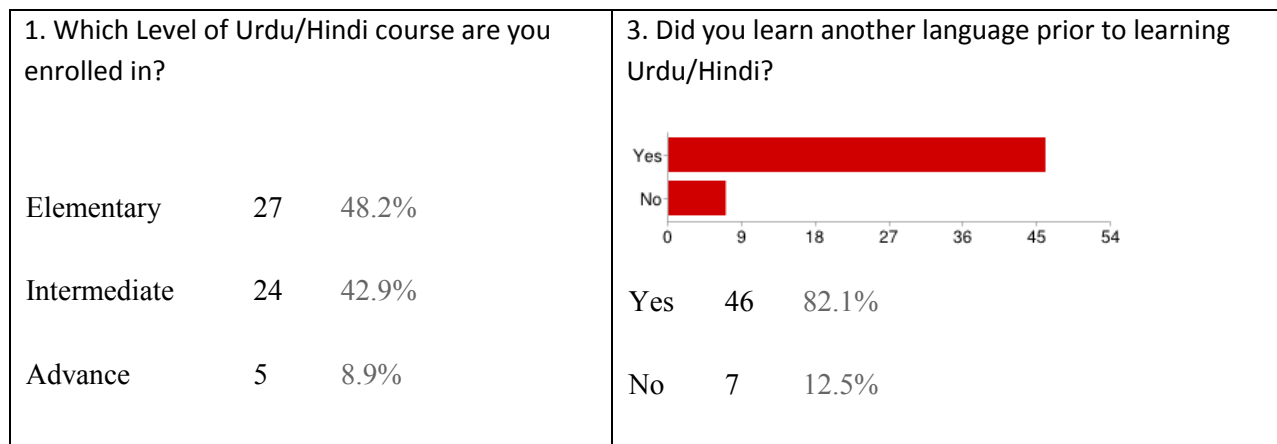


Figure 1. Participant profile for Urdu/Hindi students.

Language Learner’s Use of Mobile Devices for Language Learning

It is evident from the data collected that Urdu/Hindi students use mobile computer devices for language learning and find it useful. Finding show that 41.1 % student found that quick accessibility which mobile devices provide for retrieving language material is “much” beneficial for language learning. The students were asked how useful it is to retrieve audio, visual and reading material via mobile devices for language learning; following are the ratings students gave on a scale of 1 to 5 (5 being the most favorable), respectively.

For audio material: 37% rated it at 4, 28.6% rated it at 3 while 23.2% rated it at 5;

For visual material: 35.7% rated it at 5, 33.9.6% rated it at 4 while 21.4 % rated it at 3;

For reading material: 39.3% rated it at 4, 25% rated it at 5, while 21.4 % rated it at 3;

It is clear that all three types are accessed by students for language learning. It is also evident that the inclination for accessing all types of materials via mobile devices is more towards the most favorable rating of 5. This means that most student find quick accessibility to

audio, visual and reading materials useful for language learning. Detailed graphs, and charts representing the data are given in Figure 2, below:

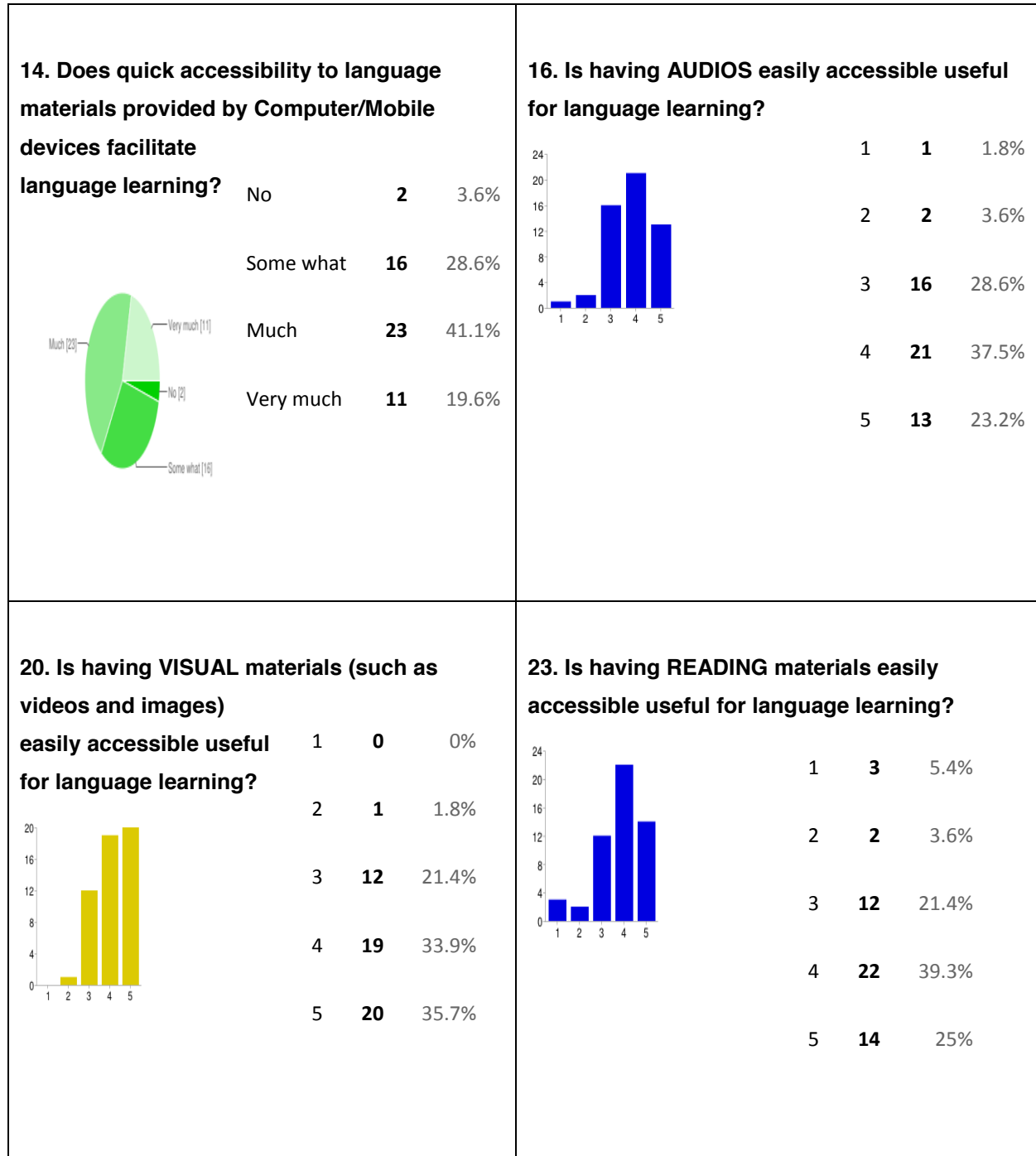


Figure 2. Efficacy of easy and quick accessibility to language material with the mobile devices for language learning.

The Use Of Mobile Devices For Urdu/Hindi Language Learning

It is evident that Urdu/Hindi students use all kinds of mobile computer devices for learning languages by accessing various form of material through these devices. The mobility and accessibility aspect of portable devices help in language learning inside and outside of classroom. Students can quickly find audios, texts, and videos wherever they are and use them for learning language. However, students' frequency of using various forms of material, varies. Figure 3 shows the trends among students with respect to accessing listening, reading, and speaking material via mobile devices.

The survey data shows that 58.9% of the students use computer/ mobile devices for accessing reading material, "occasionally" and 21.4% use them "few times a week" and no one uses them "every day." For listening material, 44.4% of the students use computer/ mobile devices, "occasionally"; 32.1% use them "few times a week", and 1.8% of students using them "every day." For speaking material, 41.1% of the students never use computer/ mobile devices, 41.1 % uses them occasionally; 14.3% use them few times a week, but no one uses them daily. Overall trend is that 78.5% student are using mobile devices for accessing listening material at some point; 80.3% student are using mobile devices for reading at some point; while only 55.4% student are using them at some point for speaking materials. From data, it is evident that more students are using these devices for accessing listening and reading materials. Detailed graphs and charts representing that data are given in Figure 3, below:

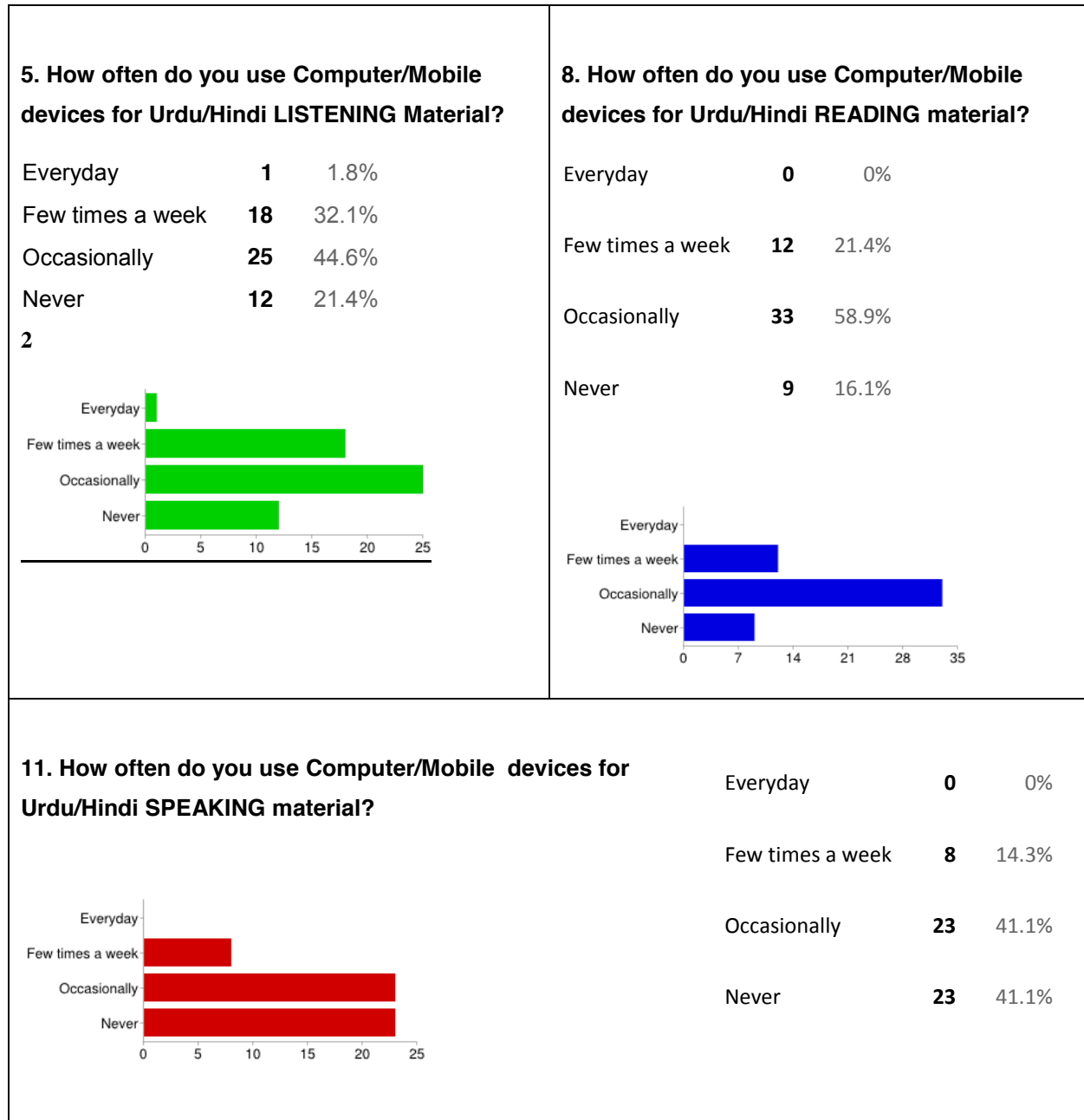


Figure 3. Participants' frequency of use of mobile computer devices for Urdu/Hindi material.

Which Mobile Device Do Students Use For Audio, Visual And Reading Material?

To see which mobile computer device students were using more for accessing audio, visual and reading material, they were categorically asked. The data emerged as following:

For Audio material: Laptop was used by 64.3%; Smartphone were used by 14.3%; TV was used by 10.7 percent; Hand-held device such as iPad were use by 5.4%

For visual material: Laptop was used by 62.5%; TV was used by 12.5 %; Smartphones were used by 10.7%; Hand-held device such as iPad were used 7.1%

For reading material: Laptop was used by 60.7%; Smartphones were used by 16.1%; Hand-held device such as iPad were used by 8.9%; TV was used by 5.4 %

The overall trend is that laptops are used most by students for audio, visual and reading materials respectively: 64.3 %, 62.2%, and 60.7%. Smartphones are the students' second choice.

Detailed graphs and charts representing the data are given in Figure 4 below:

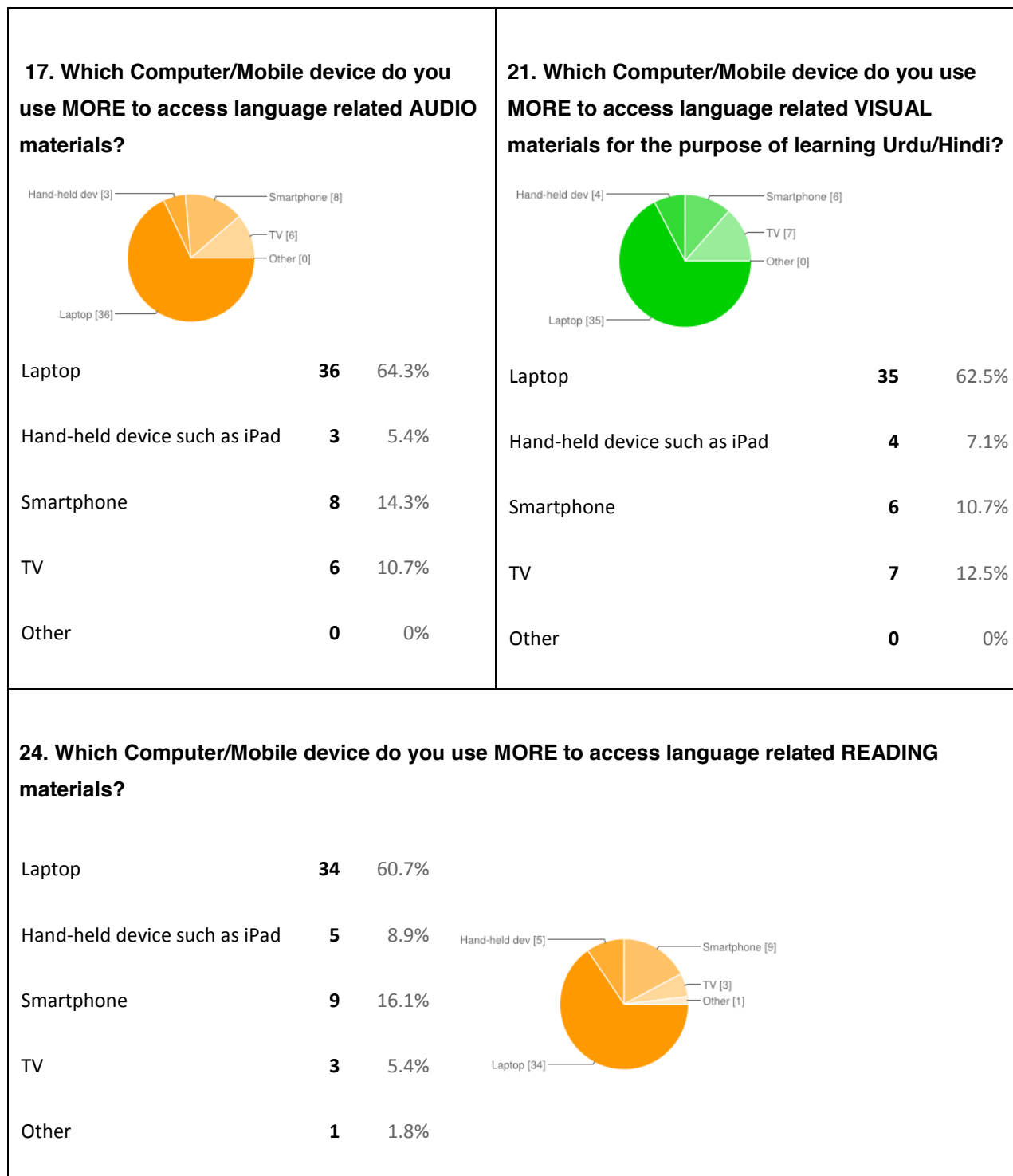


Figure 4. Usage of various mobile computer devices for audio, visual and reading material by the participant.

Computer/ Mobile Devices Affect Some Learning Modalities More Than Others

Proficiency in a language modality is directly related to the exposure, and practice in that modality. It is evident from the data collected that mobile computer devices have varying degree of impact on various learning modalities. The data shows that majority of students (57%) find accessing Urdu/Hindi material online, Easy. If they can get language related materials “moderately easy” then that would mean that they are getting good exposure to language for their learning. Drawing upon the data shown in Figure 3, it is evident that majority of students are use mobile devices for language listening and reading material either “occasionally”, or “few times a week”. However, when it comes accessing speaking material there is an equal divide between student that use mobile devices (41.1%) and the students who never use mobile devices to access speaking materials (41.1%); possible reason for this divide will be discussed in chapter five. Figure 5, gives the data in detail.

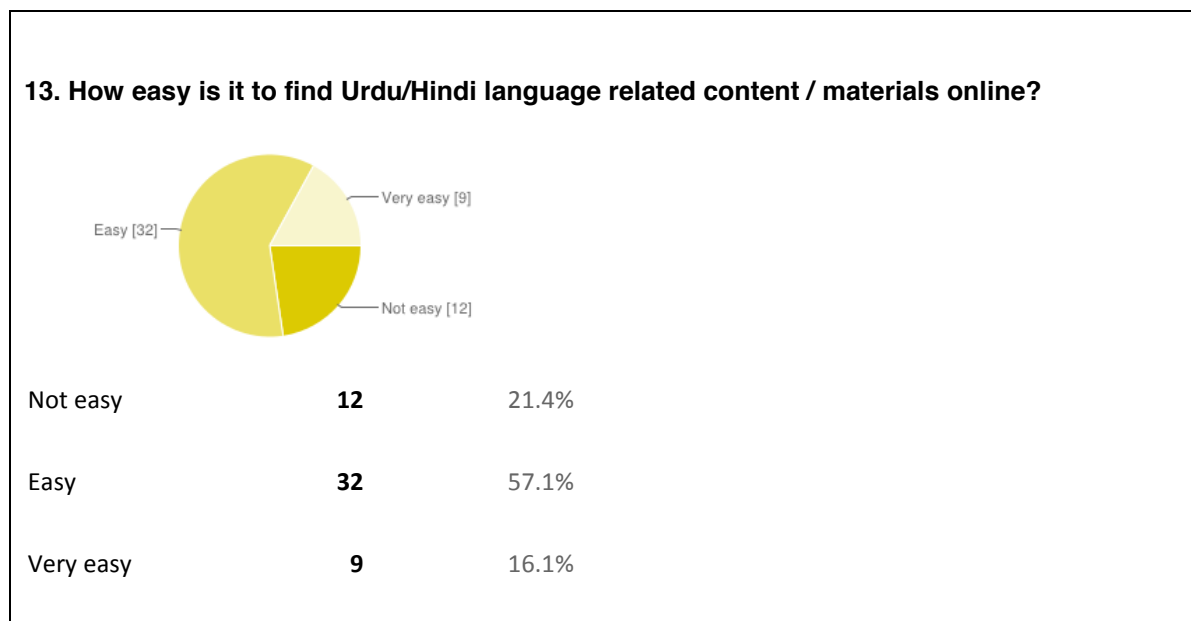


Figure 5.
Availability of Urdu/Hindi materials online.

It is evident from Figure 3 that students were accessing Urdu/Hindi material with “moderate easy” and that most students were accessing reading and listening comparatively more than speaking materials. To see how this is affecting their language modalities, students were asked how they believed that mobile devices enhance certain language skills. The following statistics show how students use mobile computer devices with various purposes:

To enhance listening: 39.3% rated the use of mobile device at level 4 out of 5;

To enhance reading: 30.4% rated the use of mobile device at level 3 out of 5;

To enhance speaking: 26.8% rated the use of mobile device at level 3 out of 5 and 21.4% rated it the lowest at level 1 out of 5.

The findings manifest that using mobile devices to enhance listening skills is the popular trend, behavior and belief found in students, followed by reading. Students were asked how quick and ready accessibility to language-related audio, visual, and reading material enhanced modalities. From the statistics, it is apparent that students believe that listening skills are enhanced most with the use of mobile computer devices. The following are student responses in detail: 50% said listening skill; 25% said reading skill; 12.5% said speaking skill; 1.8% said writing skill; 3.6% said other skill. Detailed graphs and charts representing that data are given in Figure 6:

Q4. In your opinion, do Computer/Mobile devices enhance LISTENING skills?			7. In your opinion, do Computer/Mobile devices enhance READING skills?		
1	3	5.4%	1	4	7.1%
2	6	10.7%	2	11	19.6%
3	12	21.4%			
4	22	39.3%			
5	10	17.9%			

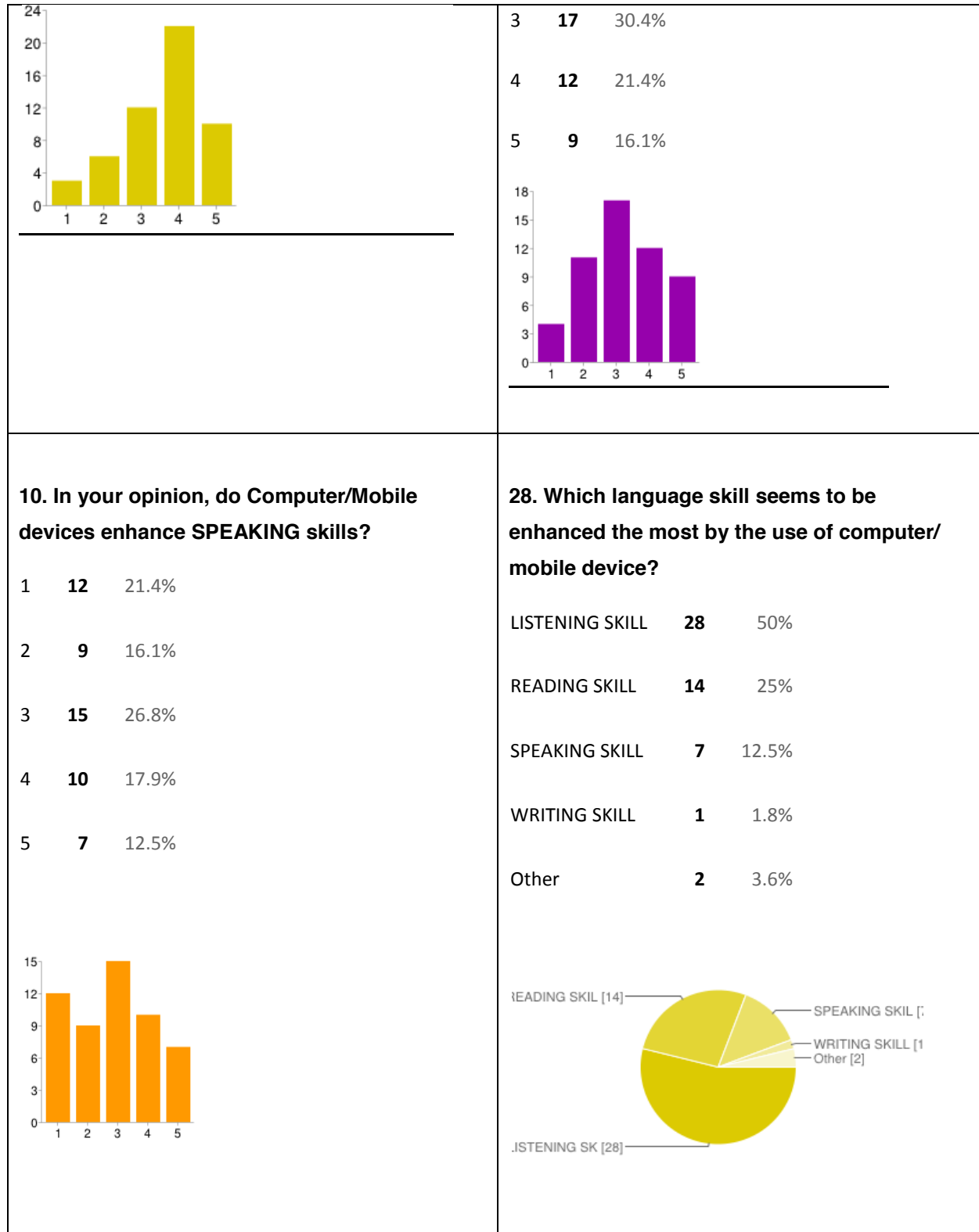


Figure 6.
 How do mobile computer devices enhance listening, reading and speaking skill; which modality is affected the most by this usage?

To validate the data in questions Q6, Q9, and Q12 students were asked how mobile devices help in listening, reading or speaking practice. Some favorable responses are given in Table 1 though the statistical data given in Figure 4. shows that only 41% student were ever using mobile devices for speaking material, structure responses of the student shows student’s understanding as to how mobile devices may/may not be used for speaking materials to enhanced speaking (for a complete list of responses see Appendix E)

Table 1 <i>Mobile computer devices help in practicing Urdu/Hindi language skills</i>	
	Q 6. How does use of Mobile computer devices help Urdu/Hindi LISTENING practice?
Student Responses	By watching movies and reading online exercises we can become more familiar with the grammar and Repetition of auditory cues; slow, mechanical pronunciation breakdowns
	We watch movies and YouTube clips, learning important material , paying attention to grammar, all in one gives a very good comprehensive practice of listening.
	they create visuals which can help further understand and grammar structure .
	it helps us hear a human voice - recorded of course - so it gives us ore opportunities to understand/follow human dialogue..
	By hearing sentences again and again, you automatically pick up on the sounds and language.
	One can listen to words being said with context to understand both the meaning and pronunciation.
	At this day and age mobile technology facilitates all types of learning. It helps to hear on-demand another language to correct any doubts that would be present without.
	Hearing how the words words sound allow me to understand Urdu better and how I would be able to write the word
	Q 9. How does use of computer /Mobile devices help Urdu READING practice?

Student	It is often clearer than print outs.
Responses	allows the reader to use an online dictionary.
	The audio and visuals help further understand the spelling of particular words
	Again, it helps by providing us with a wide array of material from the internet for us to practice with.
	read online stories helps us read together as a group
	It helps by having on-demand visuals.
	The pages that we read off of the computer allows us to learn the different types of scripts that are used in Urdu. It helps with my own writing
	It makes it easily accessible
	Seeing uniformly written letters helps engrain the images in my mind.
	Sometimes I may get a whatsapp message of Hindi jokes, but not very often do I see hindi script in mobile computer devices.
	I have read Urdu material on my phone as additional practice, I also downloaded an app with helps with connecting words and reading them..
	Looking up words that you may not know and brushing up on stories that you may not know.
Student	Repetition, pronunciation, technical feedback
Responses	Using Tellagami, my speaking skills were improved because my professor can hear a recorded version of me speaking and can correct from there.
	Many of the things we read on the computer we use in our everyday speech. Therefore it enhances our ability to conduct conversations in Urdu.
	Speaking into certain apps help achieve proper diction and accentuation for the Urdu language.
	Listening to dialogue in movies is helpful in understanding sentence structure.

	You can correct your pronunciation after hearing/reading it online.
	Since they help further understand grammar structure they also further speaking and sentence flow.
	Helps you listen to the words and this way when you repeat it your saying it right.
	An understanding of context and pronunciation in speaking is developed.
	Playing movies and clips to display conversational Urdu or Hindi helps.
	Possibly the same way it would help with hearing, to better understand the pronunciation & vocabulary.
	The videos we watch allow me to think in hindi and be able to present what I think in hindi and these videos help me process and then speak properly.

SOLE and UDL Optimized Language Learning

Self-organized Learning Environment (SOLE)

Students were asked to specify where and when they were using mobile devices for language learning to see if student are self-motivated learner and are using computer//mobile devices inside and most importantly, outside of the classroom. Out of fifty-six students, forty students were using mobile device out of their classroom. Students were also asked how they saw themselves as SOLE learners of Urdu/Hindi language outside of school environment. Such statements (Table 2) as, “I like to learn about issues affecting south Asian cultural groups so sometimes I watch documentaries. Otherwise I watch many hindi films which has trained my ear for the language.” and “I watch movies and I listen to bollywood music in order to relate to the popular and more common side of the language. I also try and watch [sic] hindi news to see the more formal and sobre [sic] side of the language and how it can be used professionally” show how student are driving their own learning outside of classroom. Some favorable responses to

questions Q40, and Q42 are given in Table 2, below. (for a complete list of responses see Appendix E)

Table 2 <i>Use of mobile devices showing portability and various ways they support SOLE</i>	
	Q 40. Specify typically when and where (such as school, library, dorm, home, bus stop, etc.) you use mobile devices for language learning.
Student	School and library
Responses	home, walking, school, class, bus stops, everywhere.
	everywhere - iphone LTE is the best
	Dorm
	School, home, library, dorm, class.
	I use my laptop at school and home for language learning and my phone if I don't have my laptop on me.
	home, walking, school, ALWAYS
	School during the day, home afterwards
	Dorm and Class and on the toilet
	Q 42. Self-Organized Learning Environment (SOLE) is where the students are encouraged to be self-motivated learners (CAST, 2011). How do you see yourself as SOLE learners of Urdu/Hindi language outside of school environment? For example, what are some of the activities that you do to learn the language and its culture (i.e., activities or studies that may be quite different from those that are required by the language program in which you are enrolled)?
Student	Singing Indian songs and ghazals in urdu
Responses	I interact with my family and family friends in Urdu. Other than that, I'm not involved in any language learning outside of class.
	films help a ton with both language and culture since the point of an urdu film is to capture reality or some sort of life in urdu spoken households/families

	I think SOLE learning could be useful for Hindi learners, especially if they can do activities that will help them outside of the classroom, like visiting South Asian neighborhoods, temples, and restaurants to practice speaking and to learn new material.
	Every day I go and listen to carnatic music, especially songs sung by Nithyasree Mahadevan. I watch old Tamil movies from the '50's. I also am on a Bhangra team, so I know songs from a lot of Punjabi musicians. Every year, I try to attend Holi Hai, which my Bhangra team also dances at.
	I am apart of the local Indian Hindu organization in my town so I occasionally get people asking questions in hindi!
	bollywood dance, listen to music
	I like to learn about issues affecting south Asian cultural groups so sometimes I watch documentaries. Otherwise I watch many hindi films which has trained my ear for the language.
	i attend events such as diwali, garba, and holi throughout the year. these events are organized by Hindu student council, etc.

Universal Design for Learning (UDL)

UDL requires that students are provided multiple mean of representation, engagement, and action and expression. With respect to providing multiple means of representation and expression, the survey provides some information in form of structured response and statistics. The Urdu/Hindi language learners do have the option of various forms of materials such as editorials, movies, novels, hence multiple forms of information intake. It is evident that the popular trend to acquiring Urdu/Hindi in through visual-aural representations of information via movies (91%), and Songs (73.2%). The most common website visited and activities engaged in are: YouTube and watching movies. In terms of means of action and expression, from responses to Q27 we see students are using multi media for communication, and have various means of constructing, composing and responding using mobile devices. Students also have multiple ways of engagement by using various platforms such as social media sites, chat rooms, interactive language learning applications etc. The data collected also shows self-regulation and sustained effort for learning. In reference to the UDL, Figure 7 and Table 3 shows all language related

material that students use, websites they most visit and language related activities engaged in via mobile devices, showing various forms of representation, action and expression:

25. For Urdu/Hindi, do you use a Computer/ mobile device to access the following? Check all that apply.		
Movies	51	91.1%
Dramas	30	53.6%
News	21	37.5%
Opinion editorials	5	8.9%
Talk shows	19	33.9%
Songs	41	73.2%
Urdu/Hindi online Dictionaries	34	60.7%
Informational	12	21.4%
Magazine	6	10.7%
Encyclopedia	8	14.3%
Novels	1	1.8%
Short Stories	17	30.4%
Urdu/Hindi language learning websites/tutorials	32	57.1%
Other	5	8.9%

Figure 7.
Various types of Urdu/Hindi materials accessed for language learning

Table 3 <i>Language related websites visited and language related activities engaged in via mobile devices, showing various forms of representation, action and expression as proposed by UDL</i>	
	Q 26. What Urdu/Hindi language related websites do you visit the most? Provide names and/or websites of at least top five.
Student	Movies on netflix http://www.learning-hindi.com/ youtube for certain videos
Responses	Hamriweb Google

	bbc urdu tifleer youtube - urdu stuff facebook urdu group hamariweb
	Geo ARY Hum Dunya News UrduOne
	Twitter--> follow narendra modi on twitter and he tweets in hindi which helps my reading skills especially for complicated vocabulary words
	I use Youtube the most for Hindi videos, songs and such. I also use shabdkosh.com for the dictionary. Google Input to type in Hindi. Hindi tutorial sites that I googled for additional grammar help.
	Youtube? Facebook posts sometimes. Netflix. NYUvirtualHindi Google Translate Not many others on a regular basis.
	Tellegammi, NYU Virtual Hindi
	Hamari Web Google translate Urdu English dictionary Google search Bushra
	Bbc Urdu, youTube, facebook, MySpace, google translate
	Shabdkosh, Google, Hindi websites, Language Websites, and applications on Hindi on phone
	Youtube Rosetta stone google translate mylanguages.org various other tutorial sites
	einthusan.com, saavn.com, google translate, bollymeaning.com, bollynook.com
	Q 27. What other language related activities have you been doing on your Computer/Mobile devices?
Student Responses	Using websites that help with Hindi grammar.
	Streaming hindi movies
	Chatting
	Netflix
	Besides reading stories, watching movies, and listening to songs to practice understanding and speaking, not much.

	Practice making simple sentences and when to use the correct verb tense
	Duo lingo
	Reading passages
	watching tutorials
	Duolingo is a language learning app I use for Spanish & German
	Reading digital handouts and watching Urdu language videos mainly.
	Taking pictures or scanning writing to send to professors/classmates

Learners’ Perceptions About the Effectiveness of Mobile Devices

Knowing students’ perceptions would, among others, help to shed light on their expectations from technology, and in turn researchers can measure the compatibility or the discrepancy between the actual versus perceived use of mobile devices for language learning purpose with respect to Urdu/Hindi learners at NYU. For this purpose, student were asked about their ability to use mobile computer devices, the ease of use, advantage and disadvantages of screen size, computer application they access via computer and mobile device and their overall outlook with respect to use of mobile computer devices for language learning. Figure 8 gives all student rating for each kind of device and its screen size. From data, it is evident that highest number of student rate the screen size as 3, or 4, which clearly means that screen size affects language learning and most student have stated that it better for reading purpose. Some favorable and unfavorable student responses are given in Table 4. To refer to all the responses, see Appendix E.

31. Does screen size of your mobile device(s) affect Urdu/Hindi language learning?

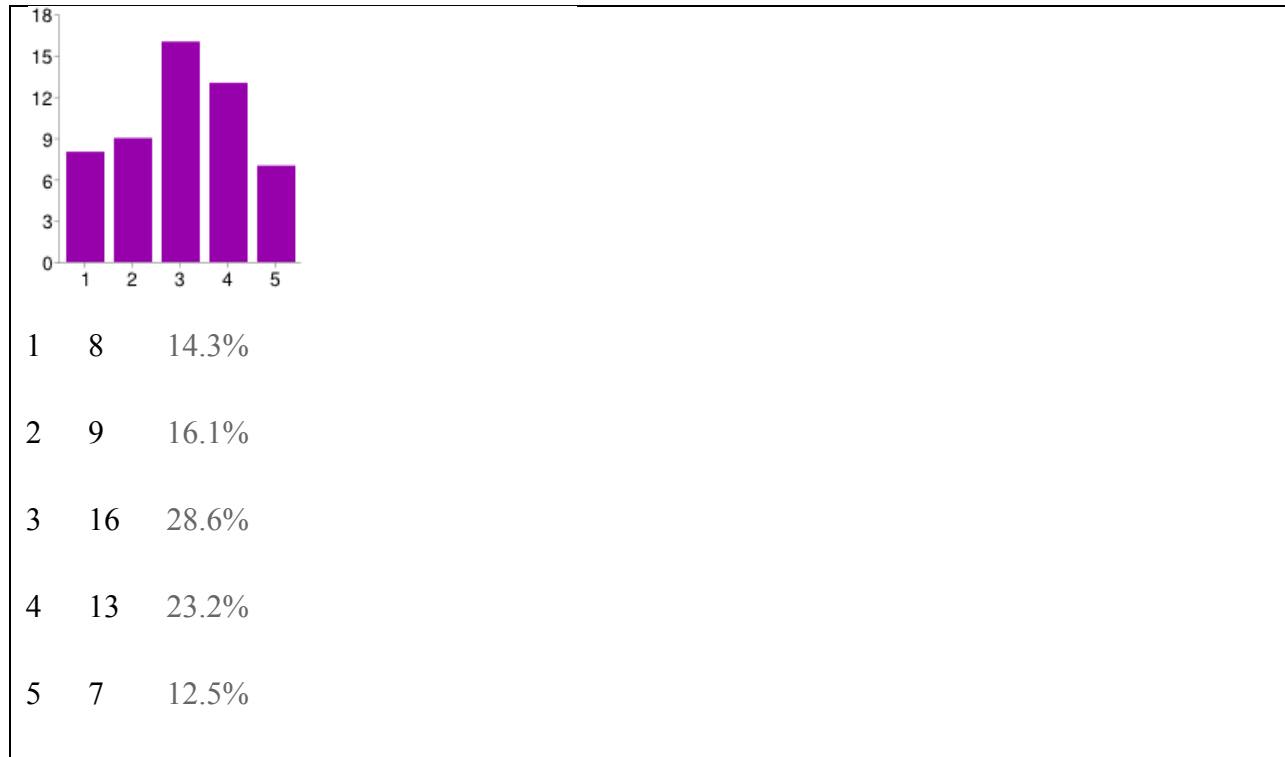


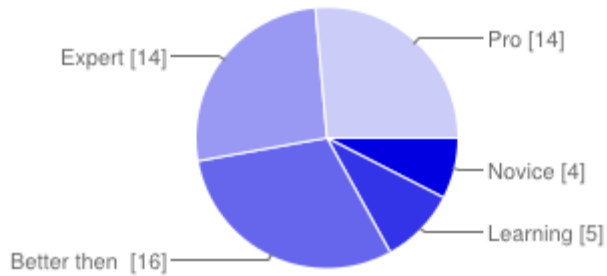
Figure 8. Screen size of mobile computer devices and how they affect learning.

Table 4 Advantages and disadvantages of screen size	
	Q 32. What Urdu/Hindi language related websites do you visit the most? Provide names and/or websites of at least top five.
Student Responses	The only disadvantage would be that a small screen would not fit as much material.
	A bigger screen, like a computer, is usually better but I find that personally it doesn't make that much of a difference for me.
	Bigger screens allow us to see the Urdu characters clearer
	lsrge screen size better for viewing
	Large screen size better for viewing
	the screen is smaller, so naturally the text becomes smaller and harder to read.

	I think while understanding and seeing it properly, you use and think properly with the bigger font
	easier to read the script on larger screens
	It does not make a difference
	I often prefer larger screens so that I can read the text more clearly.

With respect to downloading and using applications on mobile devices, the data shows that most students rate themselves as “better than most”, “expert”, or “pro” respectively: 28.6%, 25%, 25%. Also out of the 56 students who took the survey, 25 students use some type of application for Urdu/ Hindi language learning. However, a closer look at the data shows that there are not many applications available for Urdu/Hindi languages and this area needs further development. The data and responses in Figure 9 and Table 5 below give the details:

33. How would you rate your ability to download and use apps for Computer/Mobile devices?



Novice	4	7.1%
Learning	5	8.9%
Better than most	16	28.6%
Expert	14	25%
Pro	14	25%

Figure 9. Participants' ability to download and use mobile computer applications.

Table 5
mobile applications used for Urdu/Hindi language learning

	Q 34. What apps to learn Urdu/Hindi, if any, have you been using?
Student	Rosseta Stone
Responses	Google Translate
	Google translate, YouTube, and Facebook
	Saavn
	There aren't many apps I have found
	Hamariweb

	Hindi dictionary apps and the Tellagami app that was introduced to us.
	shabdkosh
	Ive been using the hindi dictionary app on my phone

The survey collected students’ preferences towards printed material in form of paper books verses digital material on mobile devices. The data shows that a majority of students prefer a combination of using both (46.4%) for language learning. A large number of students also believe that fast material accessibility aspect of mobile devices, as compared to printed material, enhance the language learning experience. They also understand the portability aspect of mobile devices; therefore, 39.3% students believe that mobility aspects of mobile devices enhance their language learning experience, which is evident from student’s comments such as “Yes, being able bring these learning tools with us almost anywhere is definitely a positive aspect”; “I think I learn better with devices because I can find anything on the internet that I can focus on which allows me to learn”; “having a smart phone is potentially like having a translator. It is just very hard to do, but it is possible.” “Enhances it by a lot because I have the ability to look up material and get extra clarification if needed.” Some favorable responses are given in Table 6. To refer to all the responses, view Appendix E.

30. Comparing printed material in a book form to Computer/Mobile device accessible material in digital form, which one is more effective for language learning?			
Computer	16	28.6%	
Book	12	21.4%	
A combination of both	26	46.4%	
38. Everything else being equal, does the fast		36. Does the MOBILITY aspect of	

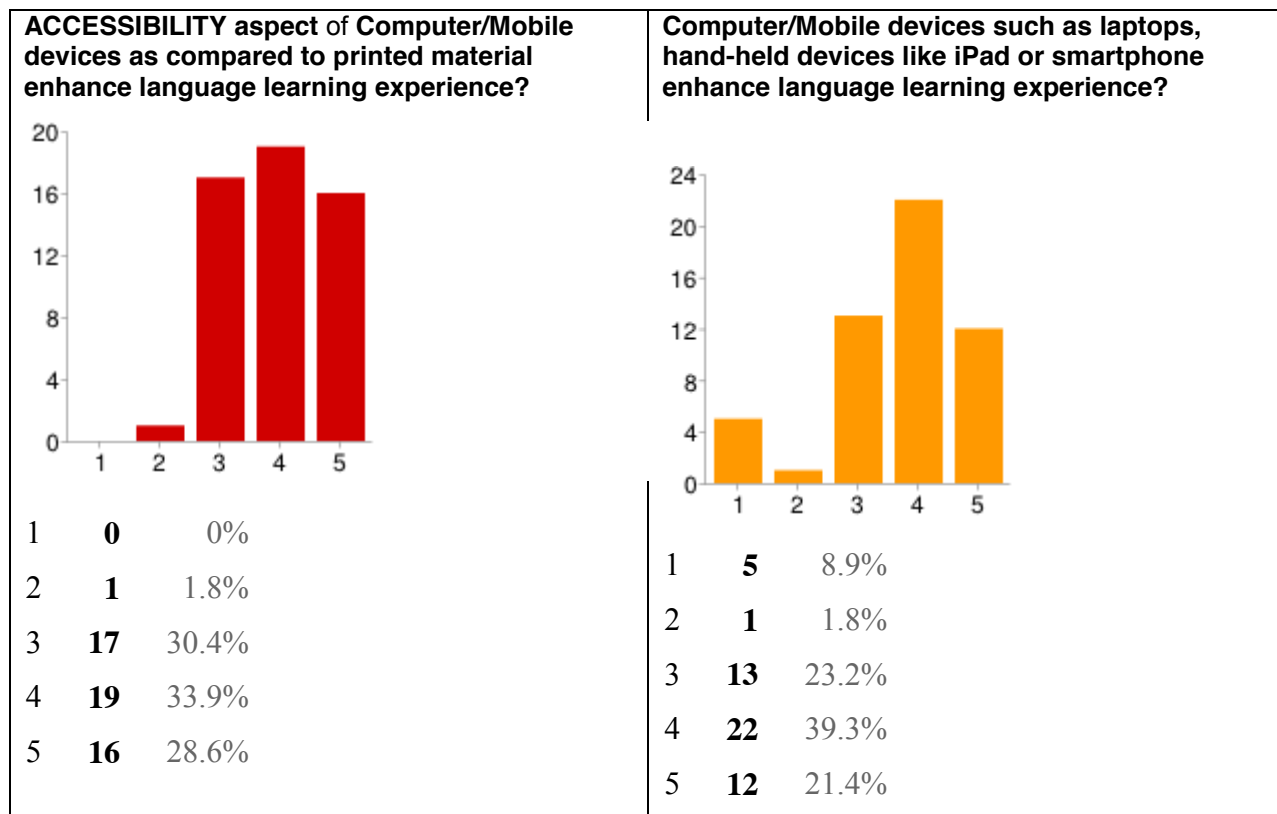


Figure 10. Comparing efficacy of printed material to portable digital material accessible via mobile devices.

Table 6 How digital material accessible via mobile devices enhance Urdu/Hindi language learning	
	Q 37. Considering your response to the previous question, please explain how or why?
Student Responses	<p>I think I learn better with devices because I can find anything on the internet that I can focus on which allows me to learn</p> <p>having a smart phone is potentially like having a translator. It is just very hard to do, but it is possible.</p> <p>Because they make all languages easily acceble and hindi and urdu are not any exceptions. They are great tools.</p> <p>if i have questions i can easily look anything up on my computer</p> <p>Yes, being able bring these learning tools with us almost anywhere is definitely a positive aspect.</p>

	Can take learning on the go
	You can use these devices outside of the classroom to learn Hindi.
	You can take it out anywhere, this is convenient. You never know when you need it so it's always on you
	You can learn in different places, wherever you are. You aren't limited to having a book or physical material.
	I can look up translations anywhere.
	You have it with you all the time; easy to pull out device and read information

The overall belief about using mobile computer devices for language learning are positive as many of students' comments make it obvious: "I think these devices definitely enhance overall learning. By providing us with so many resources and allowing us to work at our own pace I think they are a great complement to in class learning"; "They make it easier to access materials, both visual and audio."; "just hearing people talk hindi in a structured context about a particular idea is very nice"; "I can hear the way the language [*sic*] is supposed to sound and I can attempt to fix errors with tense and grammar"; "Facilitates reading and listening"; "easier access anywhere"; "They are an added tool to make the learning process easier". Table 7 gives all detailed responses showing students' beliefs, behavior and preferences about language learning experience using mobile device. Students also have recommended the kind of application they feel would be useful for them in the future, such as a student commented "language learning can be enhanced by using mobile devices, for example duolingo[*sic*]. But it is a harder language to learn so perhaps a different app could be tailored to Urdu". All favorable responses are highlighted in Table 7 below.

Table 7

<i>Digital resources enhance overall Urdu/Hindi language learning via Mobile computer devices</i>	
	Q 35. In your opinion, how do Computer/Mobile devices enhance overall language learning, please give your opinion?
Student Responses	I can hear the way the labguage is supposed to sound and I can attempt to fix errors with tense and grammar.
	just hearing people talk hindi in a structured context about a particular idea is very nice.
	language learning can be enhanced by using mobile devices, for example duolingo. But it is a harder language to learn so perhaps a different app could be tailored to Urdu
	It helps because there's a lot of material on the internet, but at the same time, if you're learning from scratch, you definitely can't only learn from the internet, because there's so much that a teacher has to tell you. Proper pronunciation, especially Hindi pronunciation, no matter how much research you do on where to put your tongue in your mouth or whatever, you probably will sound a bit wrong.
	Facilitates reading and listening
	easier access anywhere
	Can help in access to material to read
	Ive watched videos and listened to songs over the years and association of words heard to actions performed have helped me learn words.
	They allow for easy access and exposure to Hindi, which otherwise might not be easily accessible without mobile computerdevices and the connection to the internet.
	Enhances it by a lot because I have the ability to look up material and get extra clarification if needed.
	I thiknk I use it well, I use games and then focus on what I think I want to learn more.
	just makes urdu materials and learning resources easily accessible so it' a solid tool
Mobile computerdevices are helpful for supplementary learning but not as a	

	substitute for a physical person and book.
	Q 39. What types of applications, capabilities, or resources would you like to see available on/for Computer/Mobile devices that you think would help you with Urdu/Hindi language learning?
Student Responses	More writing practices online that give instant response to whether I have written the word right or not.
	More application of the lessons learned in class with examples. Somewhat similar to an online textbook but less dense.
	Urdu to English dictionary where you can type in the Urdu word to find its English meaning
	An Urdu learning app
	Articles with English translation, urdu-English dictionary app
	Study guides Simple answer, it allows for us to get answers to questions that we would normally have to ask in person.
	I would like something that pronounces a word slowly so that I can learn how to pronounce different sounds and words.
	more dictionary sources - such that we know a word how it sounds but we do not how to spell it - so a reverse dictionary of some sort - or phonetic dictionary of some sort
	An app to learn correct pronunciations
	Maybe handouts that teach grammar, writing, reading. Something that is more explanatory.
More grammar examples and games maybe	

Summary

This chapter provides qualitative and quantitative findings to my action research. The main ideas that have emerged in relations to my research questions, are that students: Student use mobile computer devices to find all forms of Urdu and Hindi material to help their language learning; The mobility and quick accessibility aspect of portable devices help in language

learning inside and outside of classroom--listening and reading materials are accessed the most; Computer/ Mobile devices have varying degrees of impact on various learning modalities--listening skills are believed to be most affected; Urdu/Hindi students are self-motivated learners—they continue their language learning outside of classrooms with the help of mobile devices by accessing various forms of materials, in various genre, through various programs and websites; The use Computer/ mobile devices provides Urdu/ Hindi language learners multiple mean of representation and expression; Overall, the use of computers/mobile devices enrich language learner's experience and playing an integral supportive role in language learning process—with room for the development of more applications for Urdu/Hindi languages. Student responses have provided important information about what to consider when thinking of integrating mobile computer devices in language programs. The next chapter will present a discussion of the overall action research study and the results. The next chapter will also discuss any limitations that may have impacted the study and further analyses if actions can be taken to further refine the study.

Chapter 5: Discussion

This chapter discusses the findings of the study, which are based on the following research questions: (a). How do learners use their mobile devices for language learning purposes? (b). How does the use of mobile computer devices, such as laptops, iPads or smartphones, facilitate Urdu / Hindi students' language learning? (c). Does the use of mobile devices affect the learning of some modalities more than the others? For example, are mobile devices more useful at improving the proficiency level of "listening" rather than "speaking"? (d). Do Urdu /Hindi learners use UDL and SOLE to boost language learning with the help of mobile computer devices (e). What are learners' perceptions about the effectiveness of such devices with respect to language learning? (f). How does use of mobile devices facilitate differentiating instruction for varying learning styles? The research study was conducted on Urdu/Hindi language student at EAU who were enrolled in Elementary, Intermediate, and Advanced level courses during the spring semester, 2015. The student population during the study was 70 students; out of which a total of 56 students participated in the research study through an online survey. Qualitative and quantitative data was extracted from student responses and analyzed for behavior, patterns and beliefs. A summary of the purpose and the main literature that relates to the study will be reiterated. Next, discussion of the results from a personal viewpoint, action plan and limitations, will be carried out.

Summary

The primary purpose of this study was to analyze whether the use of mobile computer devices such as laptops, iPads or smartphones make the Urdu/Hindi learner's experience, dynamic, helping them learn the language better and efficiently in all modalities (listening, reading and speaking). Additionally, the study was to observe students' preferences, beliefs and behaviors with respect to using mobile devices. The study aimed to observe how quick and easy accessibility to language material (as compared to printed material and other sources of auditory material such as CD, radio and TV) and the portability aspect of mobile computer devices (laptops, hand-held devices such as iPads, and smartphones) make a Urdu/Hindi language student's learning easier, faster and richer; thus by extension, affect language modalities of

listening, reading and speaking, positively. The study investigates how students were using and integrating mobile computer devices inside and outside of classroom and how they perceive their usefulness for the purpose of language learning. The study also considers students' recommendations for language-related computer application development. The data is expected to modify Urdu/Hindi programs at EAU to support a language learning environment that aligns with students' belief, behaviors, preferences and learning styles as well as the 21st century models of learning. The study may be used for laying down the foundation for Urdu/Hindi eLearning program as well.

Previous works in the realm of second/foreign language learning and (SLL and FLL), Differentiated Instruction (DI), and computer-assisted language learning (CALL) are reiterated in the following section as they relate to this action research. SLL foundational theories suggest that language is learnt or acquired by consciously studying the structural feature of the language and absorbing it through real experiences of communication (Terrell, 1977). Language acquisition depends on a caretaker-like "intake," which is not produced with the intention of language teaching; rather, its purpose is communication (Krashen, 1981; Terrell, 1977). Krashen (1981) also says "what intake is predicts that what is called 'meaningful' and 'communicative' drills or exercises." It is evident that the method and material used for second language teaching has to be natural and for communication purposes. Thus authentic materials, in the form of newspapers, editorials, movies, reports, sitcoms, songs, talk shows, speeches etc., all facilitate language acquisition and learning. It is evident from the study that mobile computer devices provide fast, and easily searchable resources for such materials. Mobile computer devices also facilitate differentiated instruction and task based learning. In this context, Hall (2002) emphasizes the importance of DI when he says that it is "an approach to teaching and learning so that students have multiple options for taking in information and making sense of

ideas” (p. 1). DI facilitated multiple means of presentation of information—an important element of UDL. With DI, educators recognize that the student population is diverse, and that every student comes with a different skill set, preferences, interests, and knowledge. To teach in the 21st century, with a diverse student population, differentiating instruction is a crucial tool that supports SOLE and UDL. Since Urdu/Hindi students use SOLE and UDL, it can be said that they differentiate instruction by themselves.

Task-based instruction (TBI) increases meaningful language exposure for the purpose of real-life tasks which leads to language acquisition and learning. Mobile computer devices provide great resources for TBI and learning. Accessing information, searching related materials, organizing information, providing visual aids for the task—all aspects of task-based learning are immensely improved. Leaver (2004) ties TBI to the foreign language computer-assisted study (CAS) and explains that in today’s digital age, “interactive learning units, including lessons, modules and the like (Mayadas, 2001)” are very effective. In-line with UDL guidelines, thematically designed, task-based activities assigned to the learners through digital means, in various forms, give them the ability to personalize their learning (Leaver, 2004. p. 181-197). In the realm of language learning via CALL, Blake (2011) says that through social computing, i.e. computer aided communication, language games and CALL, language learning experiences are enhanced. He says that there is a complementary relationship between "tutorial CALL and computer-mediated communication,” and in modern-day language instruction, Computer and mobile assisted language learning (CALL and MALL) have made language learning rich because of the instantaneous access to authentic materials via these device. In many ways mobile computer devices cut the processing time of finding materials of various levels and kinds. According to Van Essen, Jager and Nerbonne (2014), CALL facilitates student-centered exploratory learning, easy access to authentic material, as well as quick finding of digital audio

and video files "to present contextualized, spoken samples from target community, allowing dynamic peer interaction" (Van Essen, Jager & Nerbonne, 2014). However it is also clear that according to the students, books and computer go hand-in-hand, and that a combination of digital material via these devices plays a strong but supportive role. The need for printed material is still strongly perceived as needed by a large number of students.

Findings Reiterated

It is evident from the data that students believe that the use of mobile devices enrich language learning experience, playing an integral supportive role throughout the process. The overall belief about the usage of mobile computer devices for language learning is positive as student comments recorded in chapter 4 make it clear (see Appendix E for question # 35, 39 responses). With respect to using mobile devices and downloading applications that can facilitate language learning, most students rate themselves as "better than most", "expert", or "pro" respectively: 28.6%, 25%, and 25%. Out of the surveyed students, 25 students said that they were using some type of application for Urdu/ Hindi language learning. (See Appendix E for detail response for question #33). Even though a large number of students also believe that fast accessibility to all types of material via mobile devices, as compared to printed material, enhances overall language learning experience (39.3%), a large majority of student also prefer to use a combination of both digital and printed material (46.4%) for language learning. Students see the benefit of the portability of mobile devices, especially laptops and smartphones, and believe that they enhance the language learning experience the most (see appendix E for questions #17, 21, 24 responses).

Mobile devices are used for language learning inside and outside of classrooms. 41.1 % students find quick accessibility to retrieve language material "much" beneficial for language

learning and rated it as 5. It is clear that students find quick access to audio, visual and reading materials very beneficial for language learning. (See Appendix E for detail response for question # 14, 16, 20, 23). However, the data shows that there is a trend amongst student to use mobile devices more for listening (78.5%) and reading (80.3%) then for speaking (55.4%) practice. Laptops emerged as the top choice for mobile devices used to accessing audio, visual and reading materials respectively: 64.3 %, 62.2%, and 60.7%. Smartphones are students' second choice (see Appendix for detail response for question # 5, 8, 11, 17, 21, 24).

The study shows that mobile devices impact various learning modalities differently. Since proficiency is directly related to exposure and practice, and the highest number of students (57%) access Urdu/Hindi material online, easily, the exposure is clearly leading to enhanced listening and reading skills. When students were asked which skill was enhanced, 50% said listening; 25% said reading; 12.5% said speaking; 1.8% said writing; 3.6% said other skills (see Appendix E for detail response for question # 4, 7, 10, 28). In the case of enhancement of speaking skills, 41.1% students use them for speaking practice (see appendix for detail response for question # 13, 5, 8, 11). However, 41.1% of students never used mobile devices for speaking practice. Student responses to open-ended survey questions show that the reason for this high percentage of non-use is because students don't know how to use mobile devices to improve their speaking skills (see Appendix E for detail response for question # 17, 21, 24).

The study's data also shows that Urdu/Hindi students are self-motivated learners since most continue their language learning outside of classrooms with the help of mobile devices--out of the 56 student surveyed, 40 student were using mobile device out of their classroom. Statements like: "I like to learn about issues affecting south Asian cultural groups so sometimes I watch documentaries. Otherwise I watch many Hindi films which has trained my ear for the

language.” These responses show conscious effort on the part of the students to learn the language, continuously (see Appendix E for detail response for question # 40, 42).

The data shows that mobile devices provide Urdu/ Hindi language learners multiple means of representation, action and expression. With respect to UDL, Urdu/Hindi language learners do have the option of various forms of materials such as movies, novels, documentaries- - hence multiple forms of information intake. However the popular trend to acquire Urdu/Hindi is through visual-aural representation of information via movies (91%), and songs (73.2%).

In terms of means of action and expression, responses to Q27 show that students who are using multi media for communication, have various means of constructing, composing and responding using mobile devices. Students also have multiple ways of engagement by using various platforms such as social media sites, chat rooms, interactive language learning applications etc. The data collected also shows self-regulation and sustained effort for learning (see Appendix E for detail response for question # 25, 26, 27).

Discussion About the findings from a Personal Perspective

The study showed that the Urdu and Hindi language learners at EAU scaffold learning with the use of audio, visual and reading materials and online resources for a dynamic and efficient language learning experience. With the use of these materials, students are “learning” and “acquiring” language as Terrell (1977) states “learning is the conscious process of studying and intellectually understanding the grammar of L2. Acquisition, on the other hand, refers to the unconscious absorption of general principles of grammar through real experiences of communication using L2” (p. 327). From the study, it is evident that students engage in both conscious and unconscious absorption of language with the help of computer programs and

application like Skype, WhatsApp, twitter, social media sites, Google translate and other Urdu/Hindi language applications (see Appendix E for detail response for question # 26, 34, 39).

It is interesting to note that even though a large number of students are using some sort of mobile computer device, the importance of the printed materials and handouts are still ranked high amongst most. Student responses like: “I don't think its a replacement for books. I think online resources should only be supplemental to books and text.” And “It helps because there's a lot of material on the internet, but at the same time, if you're learning from scratch, you definitely can't only learn from the internet, because there's so much that a teacher has to tell you. Proper pronunciation, especially Hindi pronunciation, no matter how much research you do on where to put your tongue in your mouth or whatever, you probably will sound a bit wrong” (see Appendix E), indicate clearly that mobile devices are considered complimentary tools that facilitate language learning by providing fast access to materials and quick search options, but are not considered stand-alone language tutors. Student do understand and appreciate the interactivity, accessibility and portability aspects of mobile devices and believe that it does enrich their language learning experience and enhances proficiency by increasing understanding as well as their knowledge base.

The study shows that laptops are the top choice mobile device that students are using for language learning; the second most used device is a smartphone. A closer look into this may reveal that student are either using laptops—which gives portability (but less than other mobile devices), bigger screens, ease with working functionalities such as typing and searching; or, they are using smartphones on the go—which give maximum portability, however smaller screen and less ease with working functionalities such as typing and searching. Interestingly, handheld devices like iPads, which were expected to be used at a far better rate, are not used as much as

expected. The reasons could be their size, which limits portability—they can't be carried in the pocket. So if student are carrying any larger mobile device with them, it is a laptop not an iPad; beside that, iPads are not as functional when it comes to working on documents. The students prefer laptops or smartphones over iPads. Yamaguchi (2005) confirms the finding when he states that " A computer is better than a mobile phone for handling various types of information such as visual, sound, and textual information, but mobile phone is superior to a computer in portability" (p. 57). With respect to the type and form of materials accessed most, the study shows that even though students can quickly access audios, texts, and videos wherever they are and use it for learning language, they access reading materials (80.3%) a little more than listening materials (78.5%). Perhaps, accessing topic related reading materials can be searched for faster via internet than topic-related listening materials.

However, when it comes to which skill is enhanced most, it turns out their students believe that their listening skills are enhanced most by using mobile devices, closely followed by their reading skills. With respect to speaking skills, it seems that half of students surveyed are not aware of how to use mobile devices to help them enhance this skill. The ones that do use them, seem to have some idea how to use technology to enhance their speaking modality. To help students understand and enhance speaking skills, the program can provide a short presentation during orientation, which gives step-by-step guidelines to help them utilize mobile technology to its optimum for all language learning skills.

The study shows the beliefs, behaviors, patterns and preferences of Urdu/Hindi student at EAU with respect to the usefulness of mobile devices for language learning purposes. Many have recommended the kind of applications they would like to see available for Urdu/Hindi languages. With respect to the program curriculum, it can be delineated from the study that

lessons can be redesigned and updated to clearly incorporate technology integration and use of mobile devices for task-based language learning which provides “intake” for “meaningful' and 'communicative' drills or exercises [which] can be more efficient in producing language acquisition" (Krashen, 1981). Also, teachers may be provided regular training to support CALL/MALL language classes that incorporate differentiated instruction for language students with various learning style. Training may be provided for CALL/MALL pedagogy so teachers can design daily lesson plans with the pedagogy in mind. Lastly, it may not be too ambitious for EAU to look into developing its first online Urdu/ Hindi eLearning program for Intermediate to Advance level courses..

Limitations

With respect to the research question: “How does use of mobile devices facilitate differentiating instruction for varying learning styles?” the data collected did not give any information about mobile device use for differentiated instruction to cater to varying learning styles. The survey questions were too broad which didn't tie learning style to how teachers were using mobile devices to DI. Since the study was not directed towards teachers, data for differentiate instruction could not be collected. Hence it cannot be concluded that mobile devices are helpful tools for tutors to differentiate instruction for various learning styles. The data in Figure 11 shows that 60% of the students were visual learners; while 50% of the student were auditory learners. From the pattern of use of mobile devices, it may be inferred that whether or not the instructors were differentiating instruction in classroom or giving students assignments according to the learning styles, students themselves were using mobile devices in ways that supports their learning style. An analysis of the data shows that since we have more visual learners, they use mobile devices most for visual learning. It can also be said that a majority of

the students are also using these devices for auditory learning, which directly related to students’ belief that listening is the modality that is affected most by the use of mobile devices (see Appendix E for detail response for question #28).

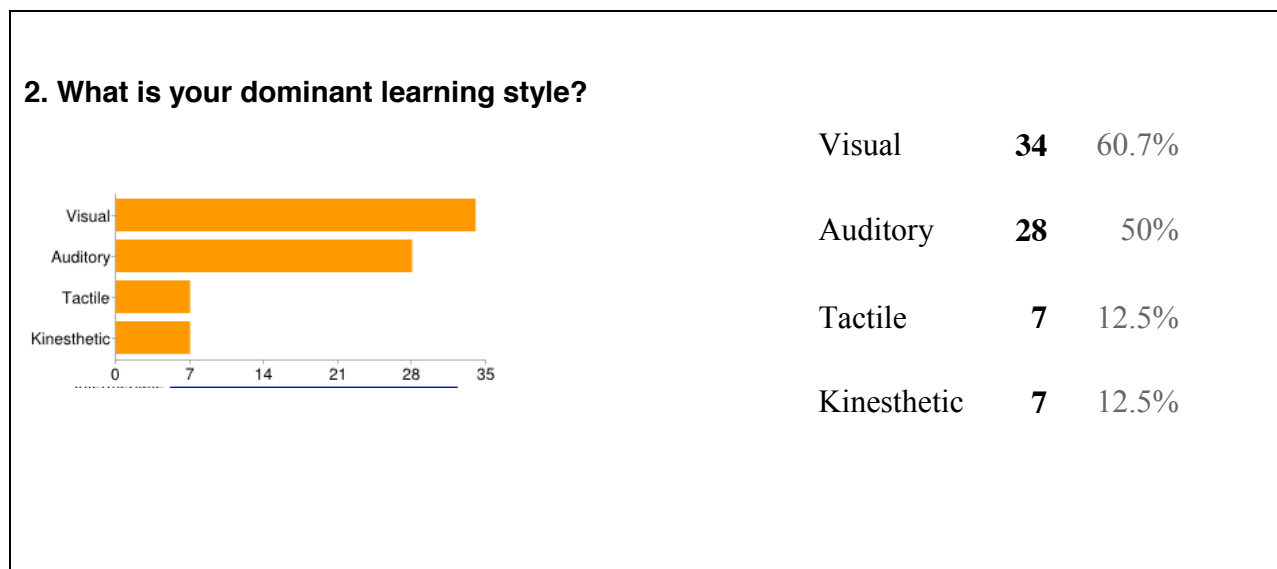


Figure 11.
Participants’ learning styles.

Another limitation for the study is that there cannot be a comparison drawn between students who had never used any mobile computer device for Urdu/Hindi language learning and students of today who carry a computer or mobile devices in one form or another.

Action Plan--Some Future Aspirations for Urdu/Hindi Language Programs at EAU

Student responses have provided important information about what to consider when thinking of integrating technology to support CALL/ MALL environments in language programs, especially at EAU. The results of the study give insight on the usefulness of mobile technology for efficient language learning. The study indicates some ways to further increase mobile computer technology integration via program curriculum and teacher training; for example, developing lessons in formats that lead to greater interactivity, modifying the

curriculum to incorporate explicit instructions to use mobile devices for task-based activities, include teacher trainings on how to use mobile computer devices for differentiated instruction and task-based learning etc. Student perspective aids in various policy decisions. Considering the overall receptive, positive attitudes and behavior of students, EAU may consider future curriculum design that is in alignment with CALL/MALL pedagogy. Most importantly, EAU may also consider the development of a hybrid eLearning program for Urdu/Hindi languages and/or the funding of similar programs for other less commonly taught languages.

Conclusion

It is evident from the research study that mobile computer technology is playing an integral part in every discipline including language learning. Mobile devices cut down processing time by providing fast search options to find authentic material, access wider range of language resources; quick assessment options, etc. They are being used by students for multiple purposes, inside and outside of classrooms. The various forms of information exchanged for communicative purposes are: students using web browsers, writing blogs, chatting online, listening to news, watching movies, listening to audios, using numerous apps, socially connecting to others via Twitter, Skype, Facebook and WhatsApp. Mobile computer devices readily provide Urdu/Hindi language program students at EAU these venues to learn various language skills through exposure to authentic listening and reading materials. Students also improve their speaking skills by listening to recordings of native speakers to improve articulation. At times they recording themselves to improve pronunciation. Language learning is aided by software and computer applications for faster information exchange in all three modalities of listening, reading and speaking. However, data collected from the study ranks

listening and reading as the modalities that the students believe are enhance most with the help of mobile computer devices.

It is evident that students understand and appreciate the interactivity, accessibility and portability aspects of mobile devices and believe that these aspects enhance proficiency by increasing exposure to language material as well as their knowledge base about the culture of the languages. Use of mobile devices also facilitates self-organized learning environment (SOLE) where the students are self-motivated learners; they also support the universal design of learning (UDL) environment that stresses the provision of: 1) multiple mean of representation; 2) multiple mean of action and expression and; 3) multiple means of engagement (CAST. 2014). However, it is also clear that student do not consider mobile computer devices as sole tutors. Overall, the study shows that students deem mobile computers devices as important tools that facilitate enhancement of various language modalities and ultimately enrich students' language learning experience.

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Appendix A: Proficiency Scales

ACTFL Scale	FSI/ILR Scale
SUPERIOR	<p style="text-align: center;">5 Native or bilingual proficiency</p>
	<p style="text-align: center;">4+</p>
	<p style="text-align: center;">4 Distinguished proficiency</p>
	<p style="text-align: center;">3+</p>
	<p style="text-align: center;">3 Professional proficiency</p>
ADVANCED HIGH	<p style="text-align: center;">2+</p>
ADVANCED	<p style="text-align: center;">2 Limited working proficiency</p>
INTERMEDIATE HIGH	<p style="text-align: center;">1+</p>
INTERMEDIATE MID	<p style="text-align: center;">1 Elementary proficiency</p>
INTERMEDIATE LOW	
NOVICE HIGH	<p style="text-align: center;">0+</p>
NOVICE MID	<p style="text-align: center;">0 No practical proficiency</p>
NOVICE LOW	

Appendix B: Online Survey

Mobile Computer Device Use for Urdu/Hindi Language Learning (Survey_2015)

Notes:

If for any reason you are taken out of the survey prematurely please click on "edit your response" at the page that opens. It will take you back to the survey where you left off.

Computer/Mobile devices are understood to include laptops, hand-held devices like iPad, and smartphones. The survey will take 30 min.

1. Which Level of Urdu/Hindi course are you enrolled in?

- Elementary
- Intermediate
- Advance

2. What is your dominant learning style?

For reference visit: <http://www.learning-styles-online.com/overview/>

- Visual
- Auditory
- Tactile
- Kinesthetic

3. Did you learn another language prior to learning Urdu/Hindi?

- Yes
- No

4. In your opinion, do Computer/Mobile devices enhance LISTENING skills?

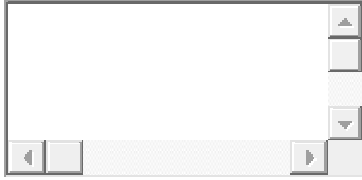
1 2 3 4 5

Least Most

5. How often do you use Computer/Mobile devices for Urdu/Hindi LISTENING Material?

- Everyday
- Few times a week
- Occasionally
- Never

6. How does use of Computer/Mobile devices help Urdu/Hindi LISTENING practice?



7. In your opinion, do Computer/Mobile devices enhance READING skills?

1 2 3 4 5

Least Most

8. How often do you use Computer/Mobile devices for Urdu/Hindi READING material?

- Everyday
- Few times a week
- Occasionally
- Never

9. How does use of Computer/Mobile devices help Urdu READING practice?



10. In your opinion, do Computer/Mobile devices enhance SPEAKING skills?

1 2 3 4 5

Least Most

11. How often do you use Computer/Mobile devices for Urdu/Hindi SPEAKING material?

- Everyday
- Few times a week
- Occasionally
- Never

12. How does use of Computer/Mobile devices help Urdu/Hindi SPEAKING practice?

13. How easy is it to find Urdu/Hindi language related content / materials online?

- Not easy
- Easy
- Very easy

14. Does quick accessibility to language materials provided by Computer/Mobile devices facilitate language learning?

15. Do Computer/Mobile devices make AUDIOS easily accessible?

1 2 3 4 5

Least Most

16. Is having AUDIOS easily accessible useful for language learning?

1 2 3 4 5

Least Most

17. Which Computer/Mobile device do you use MORE to access language related AUDIO materials?

18. Please give examples of VISUAL materials that help you learns the language and how?

19. Do Computer/Mobile devices make VISUAL materials (such as videos and images) easily accessible?

1 2 3 4 5

Least Most

20. Is having VISUAL materials (such as videos and images) easily accessible useful for language learning?

1 2 3 4 5

Least Most

21. Which Computer/ Mobile device do you use MORE to access language related VISUAL materials for the purpose of learning Urdu/Hindi?

22. Do Computer/Mobile devices make READING materials easily accessible?

1 2 3 4 5

Least Most

23. Is having READING materials easily accessible useful for language learning?

1 2 3 4 5

Least Most

24. Which Computer/Mobile device do you use MORE to access language related READING materials?

25. For Urdu/Hindi, do you use a Computer/ mobile device to access the following? Check all that apply.

- Movies
- Dramas
- News
- Opinion editorials

- Talk shows
- Songs
- Urdu/Hindi online Dictionaries
- Informational
- Magazine
- Encyclopedia
- Novels
- Short Stories
- Urdu/Hindi language learning websites/tutorials
- Other

26. What Urdu/Hindi language related websites do you visit the most? Provide names and/or websites of at least top five.

27. What other language related activities have you been doing on your Computer/Mobile devices?

28. Which language skill seems to be enhanced the most by the use of computer/ mobile device?

- LISTENING SKILL
- READING SKILL
- SPEAKING SKILL
- WRITING SKILL
- Other:

29. Please explain how Computer/Mobile devices enhance the skill that you picked in response to the previous question.

30. Comparing printed material in a book form to Computer/Mobile device accessible material in digital form, which one is more effective for language learning?

- Computer
- Book
- A combination of both

31. Does screen size of your mobile device(s) affect Urdu/Hindi language learning?

1 2 3 4 5

Minimally affects Immensely affects

32. What are the advantages and disadvantages of screen size of your mobile device(s) in learning Urdu/Hindi?

33. How would you rate your ability to download and use apps for Computer/Mobile devices?

34. What apps to learn Urdu/Hindi, if any, have you been using?

35. In your opinion, how do Computer/Mobile devices enhance overall language learning, please give your opinion?

36. Does the MOBILITY aspect of Computer/Mobile devices such as laptops, hand-held devices like iPad or smartphone enhance language learning experience?

1 2 3 4 5

Least Most

37. Considering your response to the previous question, please explain how or why?

38. Everything else being equal, does the fast ACCESSIBILITY aspect of Computer/Mobile devices as compared to printed material enhance language learning experience?

1 2 3 4 5

Least Most

39. What types of applications, capabilities, or resources would you like to see available on/for Computer/Mobile devices that you think would help you with Urdu/Hindi language learning?

40. Specify typically when and where (such as school, library, dorm, home, bus stop, etc) you use mobile devices for language learning.

41. Please write any comment that you may feel is relevant to the survey. If the comment is related to any of the questions in the survey, please indicate the question number that you are commenting about.

42. Self-Organized Learning Environment (SOLE) is where the students are encouraged to be self-motivated learners (CAST, 2011). How do you see yourself as SOLE learners of Urdu/Hindi language outside of school environment? For example, what are some of the activities that you do to learn the language and its culture (i.e., activities or studies that may be quite different from those that are required by the language program in which you are enrolled)?

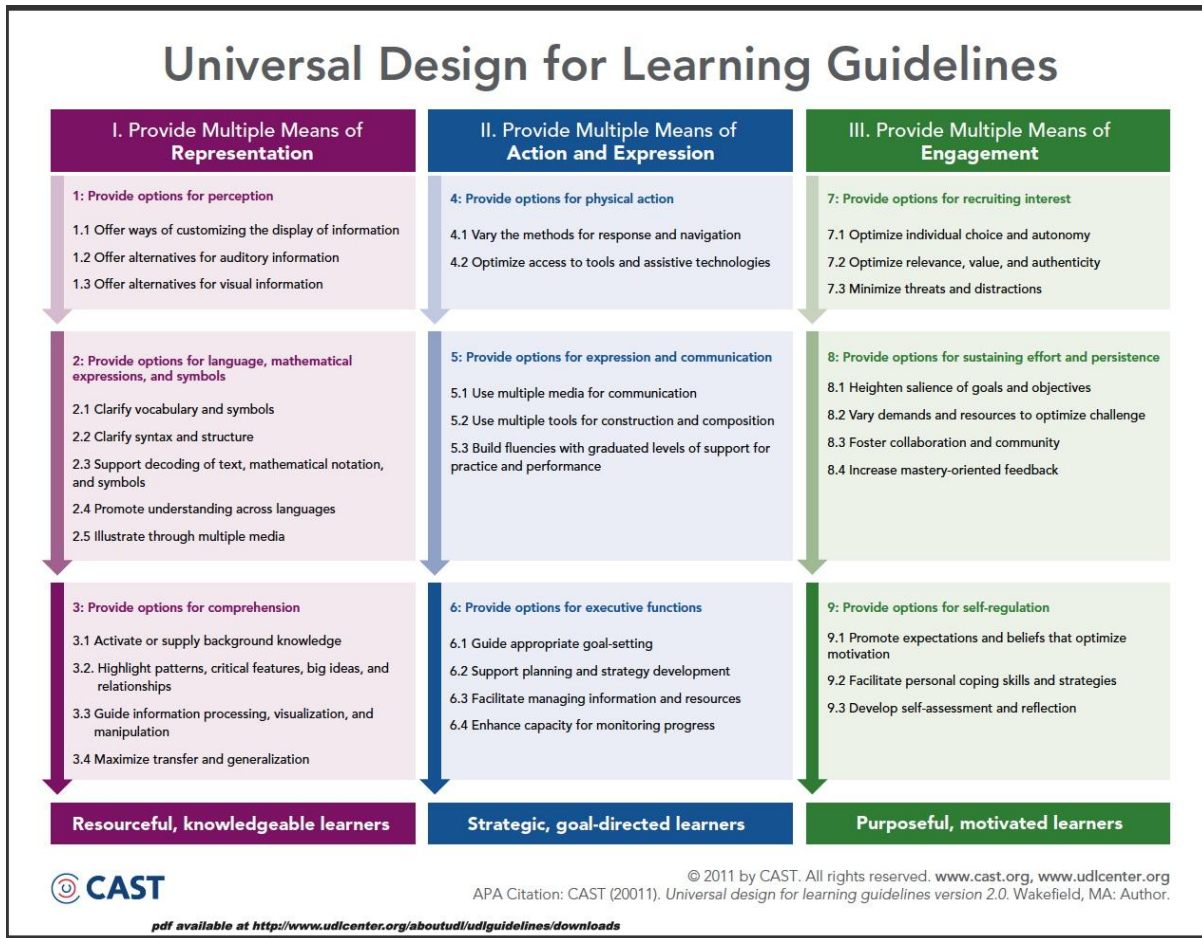
For reference on SOLE: <http://learningwithkhan.blogspot.com/>

Appendix C: Learning Style Reference Sheet

Learning Styles

Modality	Descriptors	Learn Best Through the Use of ...
Visual Learners (input)	<ul style="list-style-type: none"> • Learn by observation • Can recall what they have seen • Can follow written or drawn instructions • Like to read • Use written notes • Benefit by visualizing, watching TV/video/films 	<ul style="list-style-type: none"> • Charts, graphs, diagrams, and flow charts • Sight words • Flashcards • Visual similarities and differences • Pictures and graphics • Maps • Silent reading • Written instructions • Computer assisted learning
Auditory Learners (input) Verbal-Linguistic Intelligence	<ul style="list-style-type: none"> • Prefer listening and taking notes • Listen for patterns • Consult peers to ascertain that they have the correct details • Can recall what they have heard • Can follow oral directions • Repeat words aloud for memorization • Use oral language effectively 	<ul style="list-style-type: none"> • Discussion, dialog, debate • Memorization • Phonics • Oral reading • Hearing anecdotes or stories • Listening to tapes or CDs • Cooperative learning groups
Kinesthetic Learners (input)	<ul style="list-style-type: none"> • Are often physically adept • Learn through experience and physical activity • Benefit from demonstration • Learn from teaching others what they know 	<ul style="list-style-type: none"> • Playing games • Role playing • Read body language/gestures • Mime • Drama • Learn or memorize while moving (pacing, stationary bike, finger or whole body games)
Tactile Learners (input)	<ul style="list-style-type: none"> • Learn by touching and manipulating objects • Often learn inductively rather than deductively • Tend toward psychomotor over abstract thinking • Prefer personal connections to topics • Follow directions they have written themselves / that they have rehearsed • Benefit from demonstrations 	<ul style="list-style-type: none"> • Learning by doing • "Hands-on" • Creating maps • Building models • Art projects • Using manipulatives • Drawing, designing things • Writing / tracing

Appendix D: Universal Design for Learning (UDL)



Appendix E: Complete List Of Participant Responses

6. How does use of Mobile Computer/Mobile devices help Urdu/Hindi LISTENING practice?

I'm personally indifferent between the use of a computer for listening practice. I feel that it could be helpful on a case-by-case basis, but for me it could go either way.

It is often clearer than print outs.

You can watch videos and hear how the language is used.

It doesnt really help me.

Helps with reading but not listening

Listening to Hindi helps me to identify Hindi words which I am familiar with.

N/A

I don't use it for listening.

Pronunciation

Watching youtube videos

By watching movies and reading online exercises we can become more familiar with the grammar and sentence structure of the language.

I use it to listen to hindi songs

Repetition of auditory cues; slow, mechanical pronunciation breakdowns

We watch movies and YouTube clips, learning important material , paying attention to grammar, all in one gives a very good comprehensive practice of listening.

It helps you learn pronunciation.

they create visuals which can help further understand and grammar structure .

By hearing sentences again and again, you automatically pick up on the sounds and language.

One can listen to words being said with context to understand both the meaning and pronunciation.

Youtube videos and hindi films are very important in learning standard hindi well.

Helps me hear first what I have to say.

I can listen to songs on computer and my mobile.

Better understanding of the pronunciation & vocabulary.

The movies we watch with audio allow me to focus on what the words mean.

You actually hear the words said properly! Also movies with subtitles help figure out context of some words.

Listening to someone speak can help with the pronunciation of difficult words.

Using these electronic devices allows me to learn how certain words are pronounced and understand the phonetics of the individual characters.

It helps to hear what the words are supposed to sound like, which helps Pronunciation.

how to pronounce certain words

Personally, it helps me hear the correct pronunciation of the word and how it is used in a sentence.

I have not used such devices for Listening practices, so I cannot comment on their effect(s)

At this day and age mobile technology facilitates all types of learning. It helps to hear on-demand another language to correct any doubts that would be present without.

See question #29

It helps to hear other accents in the language.

Translations, listening to pronunciations

Listening to Bollywood music anywhere increases fluency

By watching bollywood clips and stuff you get more exposure to Hindi being spoken.

You can listen to the correct pronunciation

it helps us hear a human voice - recorded of course - so it gives us ore opportunities to understand/follow human dialogue.

I will listen to the pronunciation of words.

It does not

It helps us understand the pace at which the language is actually spoken.

Hearing the sounds over and over again help reinforce the sounds and spelling of the words.

Repetition of the sounds

It's nice to use computers to be able to hear or see correct ways to write or say the words etc.

Involves hearing the language at a slower pace.

It helps provide a tangible memory of how words are spoken.

It helps with listening comprehension.

It allows you to practice listening to Urdu/Hindi without the presence of a fluent speaker.

Hearing how the words words sound allow me to understand Urdu better and how I would be able to write the word.

they speak very clearly, making it easier to hear the distinction between letters.

9. How does use of Mobile Computer/Mobile devices help Urdu READING practice?

I particularly use google translate to help me translate a word to hindi.

It is often clearer than print outs.

online dictionary helps a ton

allows the reader to use an online dictionary.

The audio and visuals help further understand the spelling of perticular words

Again, it helps by providing us with a wide array of material from the internet for us to practice with.

The use of computers has actually been problematc for reading practice in class. We used a digital image for a reading exercise and found that the letters became very pixelated and difficult to read.

From this, I've began to felt that handwritten Urdu, especially that written in large print on a chalkboard, is easiest to read.

N/A

Sometimes the youtube videos we watch helps

I can look up passages to read online.

Not a lot, but it keeps the mind open

Look up how to pronounce words along with their meanings

It helps by having on-demand visuals.

Helps with spelling

I see the spelling of Hindi words.

Practice

Often it is easier to read and decipher something on screen than it is when the same material is printed.

It doesn't- reading online is very difficult.

Easier access to passages to read.

n/a

Typing in Hindi on a phone

Allows for standard pronunciation methods

We used the virtual Hindi website to read short stories. It is useful for reading more than a textbook.

It is almost the same as reading on paper, although, in my opinion, slightly less effective (the paper is a physical entity, while the screen may change)

I don't believe it really does.

Not particularly more than paper, but it's easier to disperse learning materials with smartphones and computers and printing several copies.

Ability to print the alphabets

how to spell words

read online stories helps us read together as a group

The virtual hindi stories helped slightly but we do not use computer devices that much.

Helps us see letters clearly.

Seeing the correct spellings help reinforce positive habits in avoiding mistakes.

See question #29.

-reading online texts

I like using devices that allow me to read and focus on the grammar of Hindi.

The pages that we read off of the computer allows us to learn the different types of scripts that are used in Urdu. It helps with my own writing.

It makes it easily accessible

Seeing uniformly written letters helps engrain the images in my mind.

Sometimes I may get a whatsapp message of Hindi jokes, but not very often do I see hindi script in mobile Computer/Mobile devices.

I have read Urdu material on my phone as additional practice, I also downloaded an app with helps with connecting words and reading them.

If you can't figure out a word you can type it in and have the computer say it for you.
 I don't really find it helpful, I prefer physical worksheets
 How words look
 they help you read
 I don't believe they do
 You can practice how to read and write using the many online resources available. It can be useful for comprehension as well.
 Flash card memory reinforcement, syntactical breakdowns, etc.
 I don't believe it helps with reading. Reading on a paper is same as reading online.
 Looking up words that you may not know and brushing up on stories that you may not know.

12. How does use of Mobile Computer/Mobile devices help Urdu/Hindi SPEAKING practice?

N/a
 Again, helps with pronunciation
 Repetition, pronunciation, technical feedback
 Since they help further understand grammar structure they also further speaking and sentence flow.
 They help because we can see someone saying it in the right way.
 N/A
 I speak to binduji and my friend in hindi on the phone.
 It is clearer than print outs.
 Look up how to pronounce words
 Speaking is practiced the best by speaking
 You can't really practice speaking with a mobile computer device.
 In terms of speaking practice, the use of computers seems to really have no place. The best practice for speaking comes from conversation with another person or the teacher. Computers have the potential to be helpful, but I can't imagine why they would be used.
 We will learn better pronunciation.
 An understanding of context and pronunciation in speaking is developed.
 I believe the only way to improve speaking skills is by speaking to another person.
 Helps you listen to the words and this way when you repeat it your saying it right.
 Repetition of sounds
 I haven't used Mobile Computer/Mobile devices for speaking but I think it would help somewhat to be able to practice speaking at your own pace. With the computer you can keep replaying what you don't understand whereas in class you might be delaying the professor.
 Using Tellagami, my speaking skills were improved because my professor can hear a recorded version

of me speaking and can correct from there.

n/a

Many of the things we read on the computer we use in our everyday speech. Therefore it enhances our ability to conduct conversations in Urdu.

Speaking into certain apps help achieve proper diction and accentuation for the Urdu language.

repeating what we heard on the computer

I don't use for speaking skills.

By hearing someone else say a correct sentence, you learn to say it too.

It will help only if prompted to practice or recite the lesson.

It does.

We used Tellagami to record our voice and then hear how we sounded.

no idea

My speaking improves more with the teacher speaking to me

No comment

It sort of doesn't help, because in order to learn how to speak properly you absolutely must converse with an actual person.

Listening to dialogue in movies is helpful in understanding sentence structure.

You can correct your pronunciation after hearing/reading it online.

Same as listening it can help with Youtube and other videos are very helpful.

The videos we watch allow me to think in hindi and be able to present what I think in hindi and these videos help me process and then speak properly.

Possibly the same way it would help with hearing, to better understand the pronunciation & vocabulary.

Playing movies and clips to display conversational Urdu or Hindi helps.

26. What Urdu/Hindi language related websites do you visit the most? Provide names and/or websites of at least top five.

Movies on netflix <http://www.learning-hindi.com/> youtube for certain videos

youtube.com zeetv.com desitvbox.com

Shabdkosh.com YouTube

learning-hindi.com

Hamriweb Google

bbc urdu tiflee youtube - urdu stuff facebook urdu group hamariweb

N/A

Youtube, saavan and netflix

Geo ARY Hum Dunya News UrduOne

I use Youtube the most for Hindi videos, songs and such. I also use shabdkosh.com for the dictionary.

Google Input to type in Hindi. Hindi tutorial sites that I googled for additional grammar help.
 Twitter--> follow narendra modi on twitter and he tweets in hindi which helps my reading skills especially for complicated vocabulary words
 Youtube? Facebook posts sometimes. Netflix. NYUvirtualHindi Google Translate Not many others on a regular basis.
 Bbc urdu Facebook groups for urdu
 I watch bollywood movies netflix.com tellegami virtual hindi youtube.com
 Tellegammi, NYU Virtual Hindi
 Google it
 youtube, shaadi.com, nyu virtual hindi, gujuratimatrimony, google translate
 Shabdkosh.com Einthusan.com Gmail.com (for keyboard)
 I do not remember the name of the websites.
 BBC Youtube Other newspapers Tabloids
 -shabdkosh.com
 Google translate.
 Youtube - bollywood movies
 youtube NYU virtual hindi movie downloading sites netflix
 Shabdkosh, google translate, YouTube
 Youtube Shaadi.com Match.com GujuratiMatrimony.com netflix.com
 mostly just songs off youtube
 Virtual Hindi Google Youtube
 YouTube
 Hamari Web Google translate Urdu English dictionary Google search Bushra
 Bbc Urdu, youTube, facebook, MySpace, google translate
 Shabdkosh, Google, Hindi websites, Language Websites, and applications on Hindi on phone
 Youtube Rosetta stone google translate mylanguages.org various other tutorial sites
 einthusan.com, saavn.com, google translate, bollymeaning.com, bollynook.com
 Google, Youtube, Google Input, and Hindi Dictionary
 The ones that include the short stories we are assigned in class, YouTube for watch movies and songs, online Hindi dictionaries.
 Shabdkosh
 BBC Urdu Tiflee Hamari Web YouTube Facebook
 saavn, buzzfeed india
 BBC, youtube
 shabdkosh.com
 YouTube Shabdakosh Google translate Wikipedia
 --
 Google translate YouTube
 I don't necessarily access urdu-specific websites, rather I access large websites that can happen to

have urdu resources. What I mean is that I can access YouTube for urdu videos, Facebook for an urdu study group, Google translate, BBC.pk, and so on.

YouTube, shabdkosh, einthusan, saavn

27. What other language related activities have you been doing on your mobile Computer/Mobile devices?

Watching Hindi movies.

I use games that help me focus on the Hindi language that helps me learn the letters and vocabulary of Hindi

French mobile app translate apps movies & readings on demand
youtube

Using websites that help with Hindi grammar.

Duolingo is a language learning app I use for Spanish & German

Just looking at learning/tutorial pages.

Nothing

Streaming hindi movies

Google translate.

N/A

None recently

Reading digital handouts and watching Urdu language videos mainly.

That is all I have done on my mobile computerdevice.

Watch Bollywood movies

Chatting

Watch Hindi movies. Read funny hindi jokes sent via WhatsApp

None

Netflix

Taking pictures or scanning writing to send to professors/classmates

n/a

Typing up email on Google in hindi

Urdu/Hindi movies

watching tutorials

N/A

Reading passages

Duo lingo

Practice making simple sentences and when to use the correct verb tense

watching videos listening to songs

movies/songs

I use google input to write things in hindi while preparing the script for class.

Movies, magazines, news

Google translate

I've been watching videos to help with writing because they help pronounce the sounds associated with the letter.

Making online flashcards, watching Bollywood movies, looking up grammar rules

youtube videos, watching hindi films

--

Besides reading stories, watching movies, and listening to songs to practice understanding and speaking, not much.

32. What are the advantages and disadvantages of screen size of your mobile device(s) in learning Urdu/Hindi?

large screen size makes it easier to read

The only disadvantage would be that a small screen would not fit as much material.

Bigger screens allow us to see the Urdu characters clearer

Quick and easy

too small screens suck for reading

It does not make a difference

Large screen size better for viewing

Large screen size better for viewing

I often prefer larger screens so that I can read the text more clearly.

not

Not much of a difference

Having a big screen size makes it aesthetically better to read and view.

No disadvantages,

the screen is smaller, so naturally the text becomes smaller and harder to read.

If it's hard for me to see what I'm even reading I probably won't read it

I think while understanding and seeing it properly, you use and think properly with the bigger font

eye strain **but more mobile and on the go**

larger print is easier to read

A larger screen is easier as it provides a larger screen to easily read

I watch videos and films on large laptop screens rather than small phone screens.

A bigger screen, like a computer, is usually better but I find that personally it doesn't make that much of a difference for me.

As long as it is big enough to see, size does not matter.

larger = better

It can fit less text

Advantage - I can zoom in wherever I want Disadvantage - Small screens

If it's a small screen size, it may be harder to read. A larger screen may help you absorb more information.

A bigger screen will help us see clearly.

none

Doesnt make a difference

can't read much on small screen

It is easier to see when the screen is larger.

Bigger screen is easier to read from

Might be too small to see, but can always zoom in

Bigger screen makes things easier to visualize.

bigger screen is easier to read and have clearer

The bigger the screen the easier it is to see the letters & easier it is to read/write/understand.

A small screen makes it harder to see the material

too small makes it hard to read, too big slows down the learning process

Screen size does not matter

I don't like to do serious reading on my handheld device. Reading for long periods of time on a laptop or phone screen is bothersome.

easier to read the script on larger screens

Im the size of the screen doesn't matter.

Sometimes small to see

If the screen is too small, for me personally, it hurts my eyes, and if there's a lot of text on a small screen, I tend to not want to even start reading.

You can see more clearly

34. What apps to learn Urdu/Hindi, if any, have you been using?

Rosseta Stone

Hindi dictionary apps and the Tellagami app that was introduced to us.

shabdkosh
 Hamariweb
 N/A
 Shabdkosh
 misc.
 There aren't many apps I have found
 Saavn
 Telligami
 Ive been using the hindi dictionary app on my phone.
 None
 Google translate, YouTube, and Facebook.
 None.
 Google Translate
 n/a
 I have used Telligami once to make a recording.
 None
 Telagami
 none
 YouTube
 Theres that one that was required. Forgot what it was called. Shabdkhosh, google translate.
 shabdkosh
 Tellegammi
 No particular apps
 None at the moment, but when I was first starting out in Hindi, I downloaded an app that helped me learn the letters.
 Google translate
 Google translate
 Hindi dictionaries, and also Hindi gaming applications that I like
 Telligami
 google translate shabd coach
 --
 tellagami

37. Considering your response to the previous question, please explain how or why?

I think I learn better with devices because I can find anything on the internet that I can focus on which allows me to learn
 having a smart phone is potentially like having a translator. It is just very hard to do, but it is possible.

Because they make all languages easily accessible and Hindi and Urdu are not any exceptions. They are great tools.

If I have questions I can easily look anything up on my computer

Yes, being able to bring these learning tools with us almost anywhere is definitely a positive aspect.

You can learn in different places, wherever you are. You aren't limited to having a book or physical material.

I prefer print over mobile, and the screen is too small

N/A

We don't use mobile Computer/Mobile devices

-

You have it with you all the time; easy to pull out device and read information

Helps one look easier at it

I can look up translations anywhere.

You can look up words on an online dictionary during class if you need to.

You can take it out anywhere, this is convenient. You never know when you need it so it's always on you

You can use these devices outside of the classroom to learn Hindi.

Computers aren't any more portable than a book, phones are

I don't believe mobility enhances language learning experience.

Because you can look up any questions no matter where you are. It takes much less time

All electronic devices I use are portable in some degree -- if they weren't I probably wouldn't use them as much. Thus, the portability is kind of a given.

Can take learning on the go

Doesn't make a difference whether you can move the laptop or not, doesn't affect my learning less bulky and easily accessible usage and thus can be used anywhere and more frequently mobility doesn't particularly matter as learning a language requires a classroom or a quiet setting.

I don't think it's a replacement for books. I think online resources should only be supplemental to books and text.

Because listening and watching videos can be done anywhere

Enhances it by a lot because I have the ability to look up material and get extra clarification if needed.

You can access the internet at any time using these devices, you do not need to wait till you get home

The more mobile the device is the more easy it can be accessed in class

Because it is easy to look up stuff on the internet when you are away from home. I commute, and I can easily access Hindi content on the internet while commuting on the bus or train.

It's nice listening to Hindi songs when I'm on the move

Easier to carry these types of devices

Easy to access all of these resources anywhere

I think that it is in the middle because you can just as easily transport a book.

You can do work whenever or wherever

Easy accessibility

35. In your opinion, how do Mobile Computer/Mobile devices enhance overall language learning, please give your opinion?

I can hear the way the labguage is supposed to sound and I can attempt to fix errors with tense and grammar.

just hearing people talk hindi in a structured context about a particular idea is very nice.

language learning can be enhanced by using mobile devices, for example duolingo. But it is a harder language to learn so perhaps a different app could be tailored to Urdu

I don't see their advantage over print besides access to many materials at once

They can standardize language learning such that one's knowledge of the language is more technical

They make it easier to access materials, both visual and audio.

they dont really enhance it

It helps because there's a lot of material on the internet, but at the same time, if you're learning from scratch, you definitely can't only learn from the internet, because there's so much that a teacher has to tell you. Proper pronunciation, especially Hindi pronunciation, no matter how much research you do on where to put your tongue in your mouth or whatever, you probably will sound a bit wrong.

They give us instant access to any query regarding the language

N/A

Makes easier

It exposes me to the real world way of speaking Urdu.

Make it clearer

sabdkosh

Helping me with words I didn't know, you tube clips in hindi help me

Not a lot. We do much more print work than we do technology so I have also gotten used to hard print sources.

Facilitates reading and listening

easier access anywhere

They are an added tool to make the learning process easier.

Makes listening material now easily accessible

They help in that I am given a greater amount of learning resources.

They allow us to look up translations quickly.

I think mobile Computer/Mobile devices has made language learning much easier. It gives you access to more materials, and different forms of learning.

it helps as it is more accessible and entertaining as well as interactive

more interactive, more fun to learn

They provide more diverse ways of engaging the material. It's an alternative to simply reading printed text and writing responses.

They help a lot.

Can help in access to material to read

Ive watched videos and listened to songs over the years and association of words heard to actions performed have helped me learn words.

They allow for easy access and exposure to Hindi, which otherwise might not be easily accessible without mobile Computer/Mobile devices and the connection to the internet.

Enhances it by a lot because I have the ability to look up material and get extra clarification if needed.

I thiknk I use it well, I use games and then focus on what I think I want to learn more.

just makes urdu materials and learning resources easily accessible so it' a solid tool

Easily accessible

they do. More resources for more students

I think these devices definitely enhance overall learning. By providing us with so many resources and allowing us to work at our own pace I think they are a great complement to in class learning.

increasing frequency of access and exposure to Hindi language

through the visuals and audio they offer

quicker to find translations

Mobile Computer/Mobile devices are helpful for supplementary learning but not as a substitute for a physical person and book.

39. What types of applications, capabilities, or resources would you like to see available on/for Mobile Computer/Mobile devices that you think would help you with Urdu/Hindi language learning?

Hindi apps and games on the ebsites and phones

additional stories w subtitles are useful, or short episodes instead of a full movie could be helpful also apps and flashcards as well as interactive writing and alphabet learning apps

a multiple choice thing where you select the correct sentence and it reads the sentence aloud once correctly selected.

Fun applications

Maybe more exercises that help us with grammar rules.

N/A

More writing practices online that give instant response to whether I have written the word right or not.

More application of the lessons learned in class with examples. Somewhat similar to an online textbook but less dense.

Urdu to English dictionary where you can type in the Urdu word to find its English meaning

An Urdu learning app

More Urdu apps in general.

whats available is fine

dictionary app, pronunciation app

Just more apps for learning the vocab would be nice.

I think what is available now is sufficient.

Word of the day

I can't think of any at the moment.

Articles with English translation, urdu-English dictionary app

More grammar examples and games maybe

Maybe handouts that teach grammar, writing, reading. Something that is more explanatory.

Movies/Videos

An app to learn correct pronunciations

more dictionary sources - such that we know a word how it sounds but we do not how to spell it - so a reverse dictionary of some sort - or phonetic dictionary of some sort

DuoLingo for Hindi

Dictionary, Videos, Hindi Language games

More Rosetta Stone type materials/online/lab stuff

Paragraph constructor

Maybe more beginner-friendly Hindi content, with more subtitles. Some content has no subtitles so it can get frustrating trying to make sense of the written content.

Organized and in depth grammar app

hindi keyboard

Enhanced translation applications and enhanced virtual Urdu keyboards to make typing easier.

Hindi apps.

Google translate

youtube, netflix, videos available to watch or listen to

I feel like I have all the resources I need

--

I would like something that pronounces a word slowly so that I can learn how to pronounce different sounds and words.

Study guides Simple answer, it allows for us to get answers to questions that we would normally have to ask in person.

40. Specify typically when and where (such as school, library, dorm, home, bus stop, etc.) you use mobile devices for language learning.

dorm, home, school

School and library

home, walking, school, class, bus stops, everywhere.

home, school, train

home, school before class

Dorm and Class and on the toilet

I use my laptop at school and home for language learning and my phone if I don't have my laptop on me.

Classroom i

Library, home

Home/library

I use mostly at home and school, I typically do my work on my computer, including language related homework.

Library and dorm.

More when I am on the move.

School, Library, Home

Dorm/Home and Library

School, library, home, and while commuting. Can use anytime during the day.

School, dorm, classroom

In my apartment most of the time and sometimes in class as well.

Home

I use mobile devices mostly at home when a teacher is not around.

In the bus or train. Or at home on my laptop to watch films and videos.

When I'm trying to study I use these devices in school, the library, and the dorm.

During class, and also throughout library

All of the above

Home

home, walking, school, ALWAYS

School, either in the library or the classroom.

School during the day, home afterwards

School, library, and home

School, home, library, dorm, class.

Dorm

everywhere - iphone LTE is the best

I really only use my computer at home, when doing homework.

All over campus like in class, libraries and even at home.

dorm, school.

everywhere and all the time

the bus, subway, dorm

school and at dorm

dorm and home

Class

Class. When computer not nearby

42. Self-Organized Learning Environment (SOLE) is where the students are encouraged to be self-motivated learners (CAST, 2011). How do you see yourself as SOLE learners of Urdu/Hindi language outside of school environment? For example, what are some of the activities that you do to learn the language and its culture (i.e., activities or studies that may be quite different from those that are required by the language program in which you are enrolled)?

Singing Indian songs and ghazals in urdu

I interact with my family and family friends in Urdu. Other than that, I'm not involved in any language learning outside of class.

The movies I watch and the people I talk to.

I watch many bollywood movies, listen to bollywood songs, and watch tv shows in hindi.

I talk to my family in hindi as much as possible and join a lot of clubs that help me immerse myself in indian culture and learn hindi further.

Speak the language at home

films help a ton with both language and culture since the point of an urdu film is to capture reality or some sort of life in urdu spoken households/families

I speak Urdu at home with my family and friends almost daily, thus I feel that I enhance my self learning from casual day-to-day interactions.

I watch movies and I listen to bollywood music in order to relate to the popular and more common side of the language. I also try and watch hindi news to see the more formal and serious side of the language and how it can be used professionally

I watch Hindi movies with my family. I get exposure to Hindi TV channels, which many of my family members watch. I also sometimes try and speak in Hindi with my family for fun.

I try to talk to family members who know the language well and as well as my friends.

Watch hindi movies

I watch bollywood movies.

Speak to parents

I think SOLE learning could be useful for Hindi learners, especially if they can do activities that will help them outside of the classroom, like visiting South Asian neighborhoods, temples, and restaurants to

practice speaking and to learn new material.

Every day I go and listen to carnatic music, especially songs sung by Nithyasree Mahadevan. I watch old Tamil movies from the '50's. I also am on a Bhangra team, so I know songs from a lot of Punjabi musicians. Every year, I try to attend Holi Hai, which my Bhangra team also dances at.

going to restaurants and watching movies helps me learn the culture

I am apart of the local Indian Hindu organization in my town so I occasionally get people asking questions in hindi!

I attend Indian cultural events, watch Hindi movies, and speak to family in Hindi from time to time. bollywood dance, listen to music

I speak to those who are flirt in the language

traveling, watching tv, reading

I sometimes encourage my friends to talk to me in Hindi so I can practice oratory skills and I also watch hindi movies to improve my vocabulary

I like to learn about issues affecting south Asian cultural groups so sometimes I watch documentaries.

Otherwise I watch many hindi films which has trained my ear for the language.

Speaking with family members

Speaking to friends/God in Hindi, auditing Hindi class, extensive Hindi movies and music

i speak to people who speak Urdu fluently and I practice writing

I watch a lot of Hindi movies and try to look up words that I don't understand.

No comment.

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i attend events such as diwali, garba, and holi throughout the year. these events are organized by Hindu student council, etc.