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EVAULATION OF BEGINNING READING AND WRITING SOFTWARES[1]

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ABSTRACT

The purpose of this study to evaulate the beginning reading and writing software. In the study, documant review which is one of the qualitative research techniques was used. Nine beginning reading-writing softwares randomly selected from the education software CD's used in teaching of reading-writing in primary education of first grade students constituted the study group of the research. In analysis of the data, beginning reading-writing softwares were analysed through content analysed. The assessment instrument is formed of three parts including the use of software, the stages of teaching reading-writing and technical properties. As a consequence, it was observed that the softwares are not sufficient in terms of technical properties when the beginning reading writing educational softwares are examined. The activities to ensure the student participation were included in C, G and H softwares but the number of activities can be increased. The elements to boost the learner's motivation are much more needed. Reading practices were more included in the softwares than writing practices. Reading-writing stages were followed in C, G and H softwares. Student participation can be encouraged and feedback, photographs, active songs and animation to boost the student's motivation can be employed. The softwares where students can record what s/he has done, in which s/he can continue from where s/he left and where s/he can take the printouts of what s/he has done can be developed.

Key Words: Beginning reading and writing, softwares, reading and writing softwares, first gade.

INTRODUCTION

There is a widespread expectation that information and communication technologies will change the nature of instruction and provide the learners with cognitively challenging, attractive materials. Through the use of Internet, multimedia etc., learners can engage in individualized instruction where they can investigate and learn concepts and content to meet their specific needs (Kazancı & Okan, 2009). On the one hand, learning and teaching techniques gradually change and develop (Castellani, Jeff, 2001), on the other hand it becomes easy to reach computer at schools and homes that form the child's environment (Haugland, 1997a; Judge, Puckett and Bell, 2006; Nikolopou, 2007; Sawyer, 1999).

[1] A part of this study was presented at the 10th National Training Symposium of Classroom Teacher, in Sivas.

Educational software is one of the most important elements of computer-aided education. These are the softwares prepared in computer environment and intended for shortening the teaching process making the topic more visual and audial by taking advantage of computer environment in teaching a certain topic or problem (Kazu & Yavuzalp, 2008: 113).

The growing use of computers and technology in schools and the educational software beginning to flood the market demands careful examination of the quality of the software that children are exposed to (Shamir & Korat, 2006:541). The use of educational software in the school setting is not a simple task. Evaluating the software before applying it is even more difficult especially if the software claims that it blends education and entertainment in order to create a motivating and successful environment for learning (Kazancı & Okan, 2009:36).

As Haugland (2005) stated only about 20 % of the software and web sites available are developmentally appropriate. Developmentally appropriate software empowers children to become active participants in their own learning. It enables children to control the learning process and through exploration construct concepts and knowledge (Haugland & Ruiz, 2002).

According to Polonoli (2000:11), educational software packages all share four essential elements: (1) their conception is graunded in accepted learning theory, (2) they employ gaming features; (3) they are culturally sensitive, and (4) they posses the ability to elicit an emotional response from learner. On the other hand Haughland suggets diffrent feauters for educational softwares. Three issues are important considerations when selecting or updating software and/or web sites for children's use in classrooms or computers labs. The first issue is computer integration: products need to mesh with the goals or standards identified by the school, district or state. Second, violence should be avoided, especially if children initiate and control the violence. Third, the developmental appropriateness of programs is an essential consideration (Haugland, 2005:329). In the field are studies in which the researchers assessed the educational softawares, which they created, by employing scales (Haugland, 2005; Haugland & Ruiz, 2002; Haugland, Bailey & Ruiz, 2002; Kazancı & Okan, 2009; McKenzi, 2003; Nikolopoulou, 2007; Polonoli, 2000) and had the teachers assess them (Kazu & Yavuzalp, 2008).

The softwares in accordance with the items of pointless, nonstandard, robotic, glib, static, disneyfied, flashy and empty are evaluated in the educational software scale which McKenzi (2003) developed. Kazancı and Okan (2009), in their studies where they assessed the English teaching programmes developed for children, used the assessment instrument developed by McKenzi. Kazancı and Okan (2009) analyzed the English language teaching programme by including the evaluations of two researchers.

Haugland (2005:329), Haugland and Ruiz (2002:126), Haugland, Bailey and Ruiz (2002:191), and Nikolopoulou (2007) who used Haugland's scale, in their studies in which they evaluated educational softwares, they divided sofwares into two age groups (3-8 and 9-14) and evaluated them under the head of 8 programmes (creativity, language, math and science, multicultural, problem solving, thematic and teacher resource). In the studies, developmental appropriateness of the softwares are separately assessed in compliance with Haugland Developmental Scale for Software. The highest point in the assessment is 10, and the points between 7-10 demonstrate that software is developmentally appropriate for children. Also, the properties that software possesses is explained.

There has been a close relationship between literacy, technology and literacy instruction (Karchmer, 2001). Technology has affected both the structure and the content of books for youth that reflect the "radical change" principles of interactivity, connectivity and access (Dresang & McClelland, 1999:164). On the otherhand it is called electronic literacy. Electronic literacy refers to literacy activities that are delivered, supported, accessed, or assessed digitally through computers or other electronic means rather than on paper (Topping & McKenna,

1999:107). Internet (Karchmer, 2001), elektronic e-books and electronic talking books (Karamaker, Pitchford & O'Malley, 2010; Medwell, 1998; Oakley, 2002), the programmes improving reading (i.e. computer-aided collaborative strategic reading, Kim, Woodruff, Klein & Vaughn, 2006) and software programmes (Balajthy, 2005; Biggs, Homan, Dedrick & Minick, 2008; Jimenez, 1997; Lovell & Phillips, 2009; McKenna, 2002; Santoro & Bishop, 2010; Sawyer, 1999; Underwood, 2000; Wepner & Bowes, 2004) are used for the purpose of improving students' reading.

The categories of software for reading and writing are: drill-and-practice software, electronic books, tutorials and multiple category. Tutorials provide initial instruction in a skill or strategy, often with some amount of drill and practice. The multiple category has a variety of types of software that are included in the same program (Balajthy, 1997:1). According to McKenna (2002:94, 95) implications for software are:1. Instruction should be systematic and direct. 2. Good phonics software facilitates teacher monitoring. 3. Good phonics software helps children progress from alphabetic to orthographic decoding.4. Good phonics software employs onset-and-rime formats. 5. Good phonics software employs make-and-break activities. 6.Good phonics software progresses from monosyllabic to multisyllabic words. 7. Good phonics software maximizes time on task. According to Baker (2003), the framework involves four levels of evaulation: theoretical perspectives of literacy, stances toward integrating literacy and technology, aspects of literacy, and types of educational software.

In additon, there are studies regarding the evaluation of reading software. Lovell and Phillips (2009), evaulated 13 commercially available, authorized software programs for teaching reading and writing in the primary grades. These programs were assessed on interface design, content, instructional design, whether manufacturers' educational claims were supported by the programs, and appropriateness to supplement reading and writing instruction. Santoro and Bishop (2010) evaluated the beginning reading softwares of the children having difficulty in reading in the first reading period. In the study where 31 products were evaluated, content analyses were used. In the study, four primary criteria were employed in order to evaluate the software. They are interface design, instructional desing, phonological awareness skills and alphabetic understanding. The headings of learner design, affordances, aesthetics and motivation were included in interface design; instructional sequences, practice activities and progress monitoring in instructional design; sound level, sentence level, word level, syllable level, onset-rime level and phoneme level in phonological awareness; letter-sound correspondence, blending, segmenting and word reading in alphabetic understanding.

Sound-based sentence method, cursive handwriting which has come to be used in Turkey since 2005 have started to increase use of technology in teaching beginning reading and writing. Publishers developed a number of booster sources to support beginning reading writing teaching and they added software cd's including beginning reading sets in addition to the books. There are different reading and writing softwares prepared by different publishers for the teaching of beginning reading-writing.

The softwares are prepared in accordance with beginning reading-writing stages. The sound-based sentence method according to Primary Education Curriculum of 2005 is made up of the stages of hearing and recognizing the sound, reading and writing the sound, syllables from the sounds, words from the syllables, forming sentences from words and composing texts from sentences. Sounds of letters, but not their names, are taught. Teaching sounds are performed in compliance with the sound groups. In the first sound group are e, l, a and t; in the second sound group i, n, o, r and m; in the third sound group u, k, ı, y, s and d; in the fourth sound group ö, b, ü, ş, z and ç; in the fifth sound group g, ç, p and h; and in the sixth sound group ğ, v, f and j. The computer software prepared is arranged in accordance with sound teaching stages.

It is important that softwares should be suitable for the beginning reading-writing stages and for the development of student, and should ensure the student's participation. Besides, according to Case and Truscott (1999), selecting the appropriate software is crucial for optimal success. When the studies are examined, no study has been encountered which analyzed the qualities of teaching softwares of reading-writing and their

appropriateness to the beginning reading-writing education programmes. The purpose of this study to evaulate the beginning reading and writing software.

METHOD

In the study, documant review which is one of the qualitative research techniques was used. Document analysis is a systematic procedure for reviewing or evaulating documents both printed and electronic material (Bowen, 2009:27). A, B, C, D, E, F, G and H (A1, Açı, Batu, Berkay, Birset, Coşku, Okyanus, Saray and Top publications) beginning reading-writing softwares randomly selected from the education software CD's used in teaching of reading-writing in primary education of first grade students constituted the study group of the research. Publishers give teacher's set along with beginning reading-writing student sets. Beginning reading-writing CD of teaching software exists within the teacher's and student's set. The CDs in which reading-writing softwares exist were taken from the teachers in consequence of the talks made with the class teacher.

In analysis of the data, beginning reading-writing training softwares were analysed through content analysed. Content analysis involves identifying coherent and important examples, themes and patterns in the data (Patton, 1987:149). Content analysis includes the stages to be followed step-by-step such as the stages of preliminary analysis (Bilgin, 2006), encoding (Bilgin, 2006; Yıldırım & Şimşek, 2005), categorizing, or in other words, finding the themes (Bilgin, 2006; Yıldırım & Şimşek, 2005), coordination of codes and themes (Yıldırım & Şimşek, 2005), inference, that is, identification and interpretation of the discoveries (Bilgin, 2006; Yıldırım and Şimşek, 2005). According to Patton (1987:149), several readings of the data usually necessary before it can be completely indexed.

At the stage of analysis, primarily softwares were examined and notes were taken. At the second stage, the softwares were analyzed in detail. After this stage, encodings from the notes and the categories from encodings were constituted. In consequence of the study of reading-writing softwares and educational software, an assessment instrument was developed. The assessment instrument is formed of three parts including the use of software, the stages of teaching reading-writing and technical properties.

In the study, deep focus (internal validity) data were collected (Yıldırım & Şimşek, 2005). In this context, the researchers tried to discover some patterns by continually comparing, commenting and conceptualizing the results they obtained with each other (Yıldırım & Şimşek, 2005:267). In addition, the researcher analyzed the teaching of reading-writing softwares for along time, thus interacting with the softwares for a long time (Yıldırım & Şimşek, 2005).

The two researchers evaluated six softwares out of eight softwares using the assessment form developed. After that, the assessments the researchers made were compared. The number of agreements and disagreements in these comparisons was identified and inter reliability of the data of this study was calculated with Miles and Huberman's Formula. Reliability was calculated using Miles and Huberman's (1994) formula of "Reliability = Consensus/(Consensus + Dissension). Reliability percentage at the level of 90% was obtained as a result of application of the formula.

FINDINGS

The analysis of eight beginning reading-writing teaching softwares (A, B, C, D, E, F, G, H) were included in this part. The softwares are examined according to use of software, reading-writing teaching stages and the technical properties.

A software

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Use of Software. It automatically opens up when CD is inserted in the computer. Main menu comes on the screen (Figure 1). Sound groups were included in the main menu. Each of the sound groups was written in different colors. Figure-2 comes on the screen when the sound taught within the sound groups is clicked. On the sound teaching page, there are buttons of "turn to main menu" on the left, then, there are the buttons of "watch the story", "writing of the sound" and "syllable/word/sentence" respectively.

Fig.1 Main page

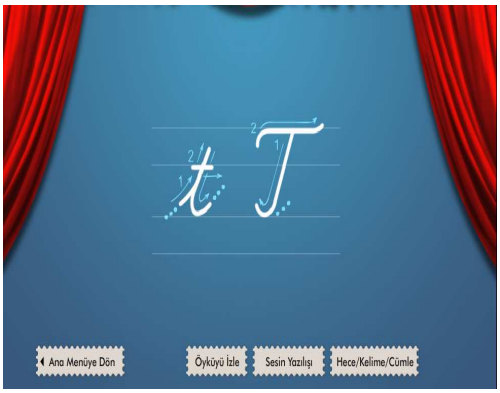

Fig. 2 Sound page

Teaching Stages

***Watch the story*.** In order to make the sound to be heard, a story in which the sound was intensively used is told with an animation. The characters were dubbed. The stories are mostly informing texts. On the screen where the story is appeared, there are the buttons of "turn back" and "watch full screen".

***Writing of the sound*.** Lower case and upper case letter taught are given side-by-side in line. When you click the "show" button on the lower case letter, writing of the letter is shown with a pencil. Similarly, when you click the "show" button on the upper case letter, writing of the letter is shown with a pencil. On the bottom-side, on the other hand, is the button of "turn to sound menu". Pictures are rarely used in the software.

Syllable/word/sentence. When syllable/word stage button is clicked, syllables or words come on screen. Writing of the syllable/word is shown and the syllable/word is read when any of syllable or word is clicked. Consonant letters are read. In some sounds, syllable and word stage are thought together and in others there is only syllable or word stage. On the bottom-side of the screen there are "turn the sound menu", "Syllable/word" and "Sentence" buttons respectively.

Sentences stage. When sentences stage is clicked, "sentence 1, sentence 2, sentence 3, sentence 4" come on the screen, respectively. For example if "sentences 1" is clicked, sentence 1comes on the screen and is read.

Technical Properties

It is seen that the reading-writing software which A publisher prepared is appropriate for color usage and dubbing. In this software, the actvities carried out are not registered and their printouts are not taken. The option for "Help" and the "guidelines" to direct the student are also included. "Main character" was not used in the software. When the images used are analyzed, it is observed that instead of photographs of living things and objects, their cliparts were used. In a reading-writing software, transitions between the stages are done by clicking the buttons of "backwards and forwards". In the course of teaching, the student can not participate in the process, s/he only watches. The elements and statements to boost the learner's motivation were not used.

B Software

Use of Software

Teaching of the sounds is made up of 29 videos. Each video is at the length of 48-100 seconds. The videos proceed automatically. The video can be controlled using the "play" and "stop" buttons in order to prevent the transition from one sound to the other.

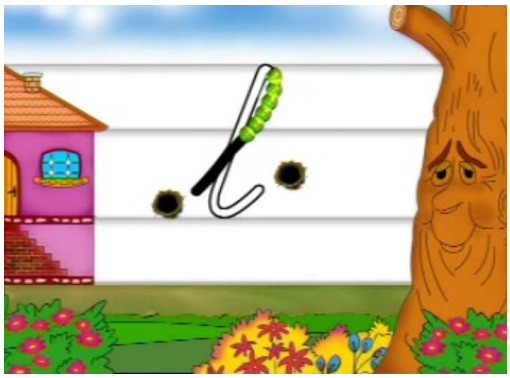

Fig. 3 Sound page

Fig. 4 Example of text

Teaching Stages

Making the students hear the letter sound. First, a picture of living things or objects in which the letter sound is taught is shown to the students. Then, two examples are given to the pictures of living things, objects which contained the sound and the writing of their names in cursive writing.

Reading-writing the sound: Writing of the sound taught (Figure 3) is illusrated with an "apple worm". First, writing of the lower case letter, then the upper case letter are shown. First, singly writing of the small letter, then its writing with other letters by combining it with them are shown. Capital letters are taught utilizing proper nouns. Only vowels are read while the letters are being written.

Text stage: At the last stage, the text comes on the screen, yet reading is not performed. The texts' not having integrity in the teaching of first sounds can be understood, but integrity is observed in the texts in the proceeding sounds. When the text in Figure-4 is examined, it is observed that the text has no unity while a meaningful text is expected to be formed because the sound "d" is included in the third group.

Technical Properties

It is seen that the reading-writing software prepared by B publisher is appropriate in terms of color usage and dubbing. In this software, the actvities carried out are not registered and their printouts are not taken. The option for "Help" and the "Guidelines" to direct the student are not included. "Main character" was not used in the software. When the images used are analyzed, it is observed that instead of photographs of living things and objects, their cliparts were used. In B reading-writing software, the videos proceed by itself. It is necessary to click the "stop" button to stop the video and the "play" button to start it. In the course of teaching, student does not participate in the process, but only watches. The elements and statements to boost the learner's motivation are not used. Also, in B software there is a music in the background during the sound teaching.

C Software

Use of Software

CD automatically opens up when it is inserted in the computer. Main menu comes on the screen (Figure 5). In the main menu, the buttons of "I'm Learning the Sounds", "Word Bank" is included on the left, and "I'm Learning the Numbers" and "Activities and Evaluations" on the right. While the page is opening up when the buttons are clicked with the mouse, the segment you entered, that is, the one on which the button is printed is also sounded vocally. When "I'm Learning the Sounds" is clicked, six sound groups come on the screen. Each of the sound group is written in different colours (Figure-6).

Fig. 5 Main page

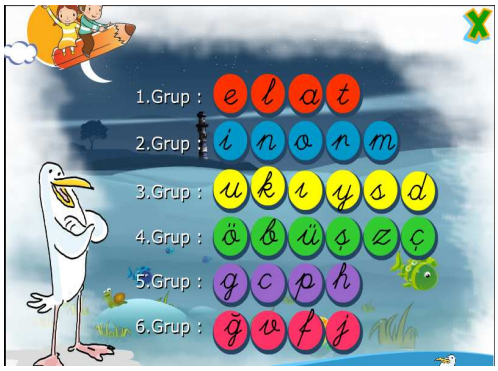

Fig. 6 Sound groups page

Teaching Stages

Making the students hear the letter sound. Teaching of the letter sound starts with a song about the sound. The song is sung by the children. The same composition is used in all of the songs. Only the lyrics change according to the sound taught. The song is sung monotonously. An open notebook comes on the screen while the song about the sound taught is sung (Figure-7). On the left page of the notebook, the sound's lower case or upper case writing is seen on the screen, changing. On the right page of the notebook, on the other hand, pictures of the objects starting with the sound, their writing and their manuscript-capital, manuscript-small, cursive-small, cursive-capital writings come on the screen respectively.

On upper right of the screen is off button and on the right bottom (from left to right) are the buttons of main character, repetition, back and forward. When the main charecter Picture is clicked, the interface in which the sound groups are included comes on the screen. The pictures which contains the sound taught are exemplified, the students are asked to mark whether the sound is heard "at the beginning, in the middle or at the end".

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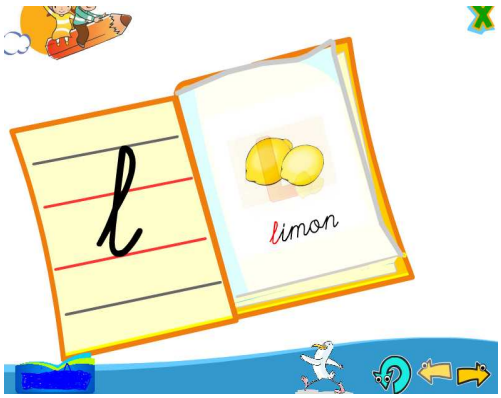

Fig. 7 Learning sound

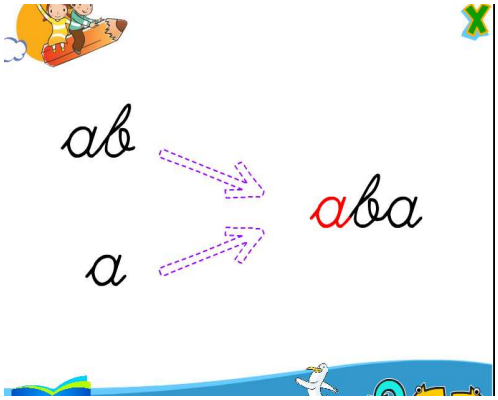

Fig. 8 Syllable page

Writing of the sound. First of all, written form of the sound comes on the screen. At the second stage, main charecter writes by slipping over the sound. At the third stage, it is written with a pencil. At the last stage, the combined writing of the sound is made. By continually clicking "forward" button, the next phase was proceeded.

Syllable/word Stage. Syllable/word is formed combining the sound or syllables with an arrow. Sounds/syllables are read separately, they are also read when forming syllable/word. Incorrect spelling is taught to the students (Figure-8). Syllable or word is incorrectly spelled, while is must be as "a-ba", it is taught as "ab-a".

Sentence stage. Sentences come on the screen. The students are asked to read the sentences. After reading the sentence, students can control their pronounciation by clicking on "play" button at the beginning of the sentence (Figure 9).

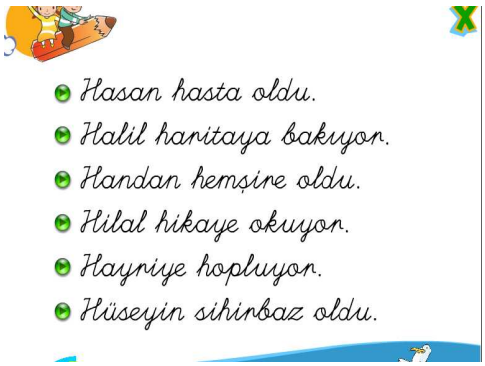

Fig. 9 Reading sentences

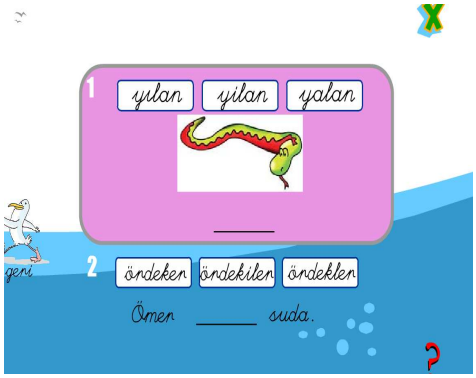

Fig. 10 Examples of drills

Activities and evaluations. The practices made in the "activities and evaluations" sections on the main menu are organized according to the sound groups. For example, when you click the second sound group, the activities belonging to this group can be performed. In the first example, the picture of the object which is given is selected and it is moved to the blanks below. The word driven by the mouse does not fill to the blanks if it is incorrect, if it is correct, it fill the blanks and heard positive sound.

In the second practice, three words are given. Of these three words, one is correctly written, and the other two are incorrectly written. For instance, it is necessary that among the words of **"dukcs, dkucs, ducks"**, the

appropriate word be selected by the students and moved to the place left empty. However, the first grade student may not select the correct word among the three words given because the words are similarly written to each other.

The number of activity in each sound group cannot be known. In the first sound group are the words composed of the sounds the students have not learned. For instance, the sound “p” which is included in the word “ip” is not taught in the first sound group. Instead, the picture of “ip” can be given instead of the word in which the sound “p” is heard. Under the last activity regarding the each sound group is “try again” button. On the left is “backward” button, on the rigth buttom, “help” and upper right “shutdown”.

Word bank. When the word bank button is clicked, sentences come on the screen. The student is asked to read the sentences. The student can use the “play” button given at the beginning of sentence to control what s/he read.

Technical Properties

It seen that the reading-writing software prepared by C Publisher is appropriate in terms of color use and dubbing. In this software, the student can not record the actvities s/he carried out and s/he cannot take the printouts. In the C software there is the option of “help”, apart from the other softwares. The “guidelines” to direct the student are included vocally. With the help of “main caharacter”, voice/sound teaching is performed in the software. When the images used in the software are analyzed, it is observed that instead of photographs of living things and objects, mostly their cliparts were used. In the C reading-writing software, transitions between the stages are done by clicking the buttons of “backwards and forwards”. In the course of teaching, except for activities and evaulation student does not participate in the process, but only watches. The statements to boost the learner’s motivation were not used.

D Software

Use of Software

Teaching of the sounds is made up of 31 videos. Each video is at the length of 120-136 seconds. The Cd opens up with a media player programme. The video proceeds automatically. The videos can be taught in parallel with sound booklets the publisher prepared. The main character tells the things to be done by introducing itself. It indicates the things to be done with the same words in teaching of the each sound.

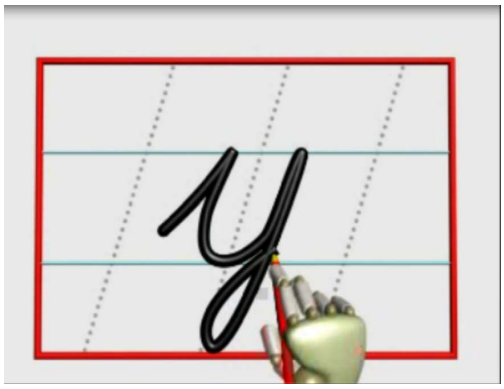

Fig. 11 Writing sounds

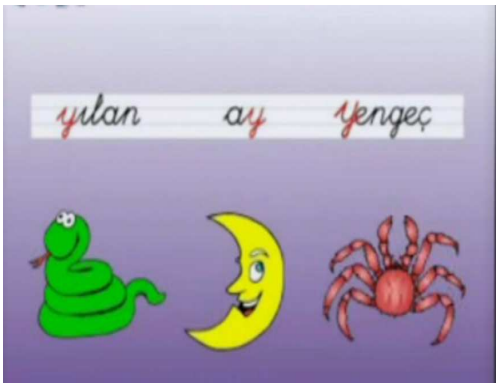

Fig. 12 Example of words

Teaching Stages

Making the students hear the letter sound. In the CD of "D" software, there are not any practices for having the letter sound heard such as story or song in which the sound is used.

Reading-writing the sound. The main character shows writing of the sound, in the meantime it reads it. At the same time, the student is asked to write the sound in the air. Small and capital form of the sound is given simultaneously. Pictures of the words where the sound is heard and their written forms are given together. Consonants are read when they are thought.

Syllable/word stage. There is no syllable/word stage, the sentence stage is directly gone on.

Text stage. Text stage and sentence stage are mixed. While the text with headings are given in teaching of some sounds, only sentences are given in teaching of some sentences. In addition, some texts are not appropriate for student's level, abstract sentences/texts are included. At the end of the teaching of each sound, main character beams up the sound board to the space.

Technical Properties

It is observed that the reading-writing software prepared by D publisher is appropriate for color use and dubbing. In this software, the actvities carried out can not be recorded and their printouts cannot be taken. There is not an option of "help" in the D software. The "guidelines" to direct the student are included vocally. With the help of "main caharacter", sound teaching is performed in the software. It is observed that when the images used in the software are examined, mostly the cliparts were used. In the D reading-writing software, transitions between the stages are done by clicking the buttons of "backwards and forwards". In the course of teaching, student does not participate in the process, but only watches. The elements and statements to boost the learner's motivation were not used. Additionally, in the D software, music is used in the background during the sound teaching.

E Software

Use of Software

The CD opens up automatically when it is inserted in the computer. The buttons of "I'm reading, I'm writing, Easy reading, reading according to the themes, writing book with leading lines, product file, teacher's guidebook" come on the screen (Figure 13). When any of these buttons is clicked, sound is heard. For instance, when "I'm reading and writing" buton is clicked, booklets come on the screen. When any of these booklets is clicked, first sound of school bell is heard. When the "forward" arrow in bottom right-hand corner and the "backward" arrow in bottom left-hand corner are clicked, one can visit pages of the booklet. The Publisher transferred its books into digital environment. Student is able to study with pencil and eraser on the page (Figure 14).

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Fig. 13 Main page

Fig. 14 Drill just like on paper

Teaching Stage

Having the letter sound heard. The studies for having the letter sound heard does not exist because it is page of the book, but there is only the writing and pictures.

Reading-writing the sound. The studies for reading the sound and showing its writing were not included. Capital letters are thought upon to the curriculum.

Syllable/word stage. There is no syllable and word stage, all of these practices are included in a written form.

Text Stage. There is no text stage, it is also included in a written form.

Measurement and evaluation. There is a part of assessment and evaluation, but it is given in a written form. The student cannot control what s/he has done.

Technical Properties

It is seen that the reading-writing software prepared by E publisher is appropriate for color use and dubbing. Dubbing was not performed since the books were transferred into digital environment one-to-one. In this software, the actvities carried out can not be recorded and their printouts cannot be taken. There is no option for “help”. The “guidelines” to direct the student are provided in a written form as they were in the books. “Main character” was not used in the software. It is observed that when the images used in the software are examined, mostly the cliparts of living things and objects were used instead of their photographs. In the E reading-writing software, transitions between the stages are done by clicking the buttons of “backwards and forwards”. In the course of teaching, student does not participate in the process, but only watches. The elements and statements to boost the learner’s motivation were not used.

F Software

Use of Software

The CD opens up automatically when it is inserted in the computer. The main menu in which the buttons of letter box, magical letters, I’m learning the numbers and games in the bottom right-hand corner, and the buttons of switch off and full screen in upper right-hand corner come on the screen (Figure 15). The involved buton is clicked according to the exercise to be performed with the students.

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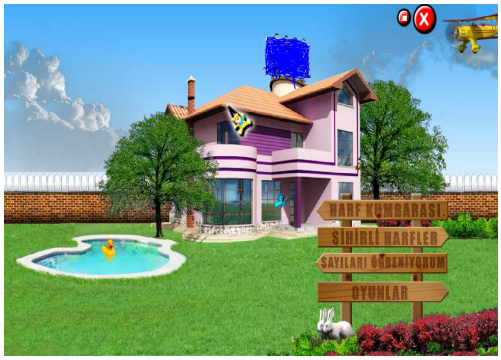

Fig. 15 Main page

Fig. 16 Writing sound

Teaching Stages

Having the letter sound heard. A song related to the letter sound is sung in the study of having the letter sound heard (Figure 16). On the bottom left-hand corner are "forward" and "backward" signs, and bottom right-hand corner is the "main page". Upper left-hand are "stop" and "play" buttons beside the square papers where the letters are written, and upper right-hand is the repeat button. On the right-hand of the screen is the "letter menu" button. When the letter menu button is clicked, the sounds appear in accordance with the groups and alphabetical order.

Reading-Writing the sound. The practices for writing the sound is only performed by writing capital "t" and small "t" letter in cursive under it to the papers hung on the upper left-hand on the screen while a song related to the sound is sung. Writing of the sound in cursive can be repeated by clicking the sign "repeat" on the left hand of the papers. Manuscript style of the letters are also thought. Also, first small then capital of the sound taught comes on the screen on an unlined board after the song is sung. In the mean time, the consonant sounds are read.

The samples of the words where the sound is used. The samples of the words in which the sound is used after the sound is read are seen on the screen together with their pictures and shapes in the forms of cursive writing and the words are read.

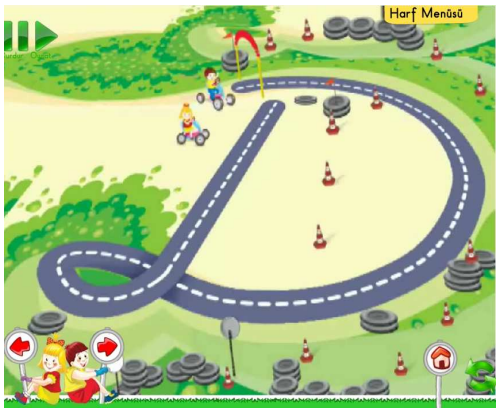

Fig. 17 Writing the sound

Fig. 18 Game page

The Magical Letters. In the magical letters, for instance, the path the student created while going home forms "a" sound written in cursive. In the meantime, information is also provided about the walking child. "B" is likened to eye glass or the path the children created with their bicycles is likened to "d" sound (Figure 17). However, rather than likenings, the shape developed on the screen is linked to the shape of sound taught as a result of a certain action of the main character. Information about the topic is given in the formation of each letter. A little more attention could have been paid to the shape to which the letters are likened, some letters have nothing to do with the shape of the letters.

The Games. When "games" button is clicked in the main menu, two game options come on the screen as shown in Figure 18. The games are card matching and jigsaw puzzle. In jigsaw puzzle game, the shapes of sounds created in the magical letters are given as the pieces of jigsaw puzzle. There is button of "give clue". However, when "give clue" button is clicked, nothing can be seen. How the game can be played is told in a written way, and there is not any audible help. When jigsaw puzzle is completed, writing of "you completed, congratulations" comes on the screen flashing. In card matching game, as will be understood from its name, the game of finding matches is played by opening the reversed cards.

Technical Properties

It is observed that the reading-writing software prepared by F publisher is appropriate for color use and dubbing. In this software, the actvities carried out can not be recorded and their printouts can not be taken. There are no option for "help" and the "guidelines" to direct the student. "Main character" was not used in the software. It is seen that when the images used in the software are examined, the cliparts of living things and objects were mostly used instead of their photographs. In the F reading-writing software, transitions between the stages are done by clicking the buttons of "backwards and forwards". In the course of teaching, student does not participate in the process, but only watches. The elements and statements to boost the learner's motivation were used in the F software. In addition, in the F software, music is used in the background during the sound teaching.

G Software

Use of Software

The CD opens up automatically when it is inserted in the computer (Figure 19). The main menu consisting of the buttons of painting, line exercises, numbers, letters, listen and read, word game and close come on the screen. When the Mouse is taken into each division, what is written is read vocally.

Fig. 19 Main page

Fig. 20 Painting

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Teaching Stages

Painting. There are eight pictures in this section. The desired color on the paint is clicked with the brush drifted with the help of Mouse. Then, the related part of the picture is painted by clicking it to the desired part of the picture (Figure 20).

Line Practices. When line practices is clicked in the main menu, nine line practices come on the screen. When the selected line practice is clicked, the directive of "friends, you also follow with your finger" is given.

The Letters. When letters is clicked in the main menu, six sound groups appear on the ballons in different colors on the screen. When the balloon of studied sound group is clicked, the balloon shines out on the screen. When one of the sounds on the balloon is clicked, the buttons of adumbration, syllable-word-sentence-text and assessment and evaluation come on the screen.

Fig. 21 Hear the sound

Fig. 22 Syllable/word/sentence/text page

Having the letter sound heard: When "adumbration" button is clicked, "listen to the song, natural sounds, words, writing of the sound and balloon game" sections come on the screen. These sections are seen in clouds in a written form. When the cloud in which "listen to the song" is written is clicked, the related section opens up. In the words section, the students are asked to provide an example for the name where the taught sound is used, to distinguish the related sound in the images where the taught sound is used and to provide example for the words in which the sound is used (Figure 21).

Reading-writing the sound: When "writing of the sound" button is clicked, small letter is written and read. On the upper right-hand, small and capital forms of the letter are given. Whichever forms of the letter, capital or small, is clicked writing of the sound is shown and the sound is read (Figure 21).

Balloon game: The students are asked to catch the learned sound in a flying balloon.

Syllable stage: In the syllable stage, while one of the sounds is being read, the other is covered with a cloud. Then, the sounds are combined and read. Right after this, assessment and evaluation section appears. The syllables are given in turn and the student is asked to read them. When the student fail to read or would like to check what s/he read, s/he can check it with "listen" button. At the last syllable, "play again" button comes on the screen next to "listen and continue" buttons (Figure 22).

Word stage: In the word stage, while one of the syllables is being read, the other is covered with a cloud. Then, the syllables are combined and the composed word is read. Images of the word come while it is being read. Later, writing of the word is shown on a single line. Right after this, assessment and evaluation part comes on the screen. The student is asked to write what is seen on the picture thanks to the given sound. When the student cannot read or would like to check what s/he read, s/he can check it through "listen" button. At the last syllable, play again button comes on the screen next to "listen, continue, check and clean" buttons (Figure 22).

Sentence stage: In the sentence stage, sentences come on the screen in turn. The student is asked to read the sentences and then to check them by clicking on "listen" button (Figure 22).

Text stage: In the text stage, the student is expected to read the text appearing on the screen and to write it on his/her notebook (Figure 22).

Measurement and evaluation: There is an assessment and evaluation section. At the last section, the student is asked to read the sentences written on the screen and to have an adult or someone older then him/her to check it. In the directive given later, an older person is asked to read and the student is asked to write what the older person read.

Technical Properties

It is observed that the reading-writing software prepared by G publisher is appropriate for color use and dubbing. In this software, the actvities carried out can not be recorded and their printouts cannot be taken. There is no option for "help" in this software. The guidelines are vocally given via main character. "Main character" was used in the software. It is seen that when the images used in the software are examined, the pictures of living things and objects were mostly used instead of their actual photographs. In the G reading-writing software, transitions between the stages are done by clicking the buttons of "backwards and forwards". There are elements and statements to boost the learner's motivation in the G reading/writing software.

H Software

Use of Software

The CD opens up automatically when it is inserted in the computer. Primarily, the main character and the writing of "I'm learning reading and writing" come on the screen, then the sounds are arranged in accordance with the order of sound groups. At the upper right-hand corner is the switch off button, and two flower figures at the bottom left-hand. In one of these flowers, "abc" is written, and there are book symbols in the other one. When "abc" is clicked, three lines comes on the screen. At the bottom left-hand corner is the sign of returning the main menu and the clavier appears when the two flowers in the area near to the middle are clicked. There are the buttons of "print" and "save" at the bottom right-hand corner. The student, if s/he wishes, can use his/her own computer's clavier, or if s/he wishes, s/he can use the screen clavier. When the symbol of book is clicked, the Publisher is introduced. In the Cd, there are sorted flowers at the bottom of the page on the whole training teaching pages. In addition to forward-backward buttons, the next page can be viewed by clicking these flowers. Any directive as regards the use of buttons in the main menu is not given.

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Fig. 23 Main page

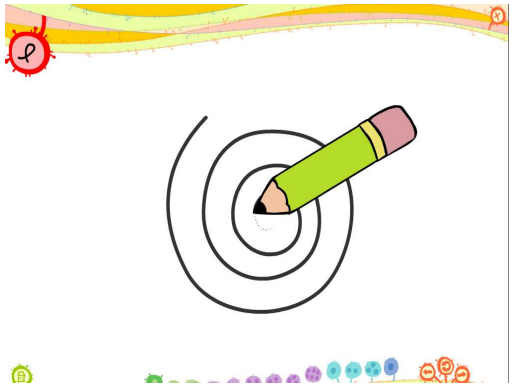

Fig. 24 Line practices

Teaching Stages

Line Practices. When the symbol located at the beginning of the sounds in the main menu is clicked, line practices come on the screen. There are 13 line practices in the section. One can proceed in the line practices by clicking the flowers located under the page. The dots are combined by crossing with the pencil over the dotted lines. It is understood from the symbol at the upper left-hand corner in which section the person works. At the bottom left-hand corner is the sign of main menu and at the bottom rigth-hand corner are the symbols of backward, repeat and forward in three flowers.

Having the letter sound heard. When the taught sound is clicked in the main menu, a song primarily aiming at having the sound uttered by the main character and its friends. While the main character is singing the song, the words to motivate the student are pronounced. Besides, samples are given for the words in which the sounds are used, images are shown and the student is asked to repeat them. At the second stage of adumbration, pictures of the objects where the sound is heard are shown, and the student is asked to tick up the images where the sound is heard. Warning sound is heard when the student does a mistake and the sign cross (X) comes on the screen, when s/he does correct, a possitive warning sound is heard and the sign tick (V) comes on the screen. One can proceed by clicking the flowers, but it is necessary to process by clicking the forward button at the third flower. The flowers stand for the sections. Therefore, it is necessary to proceed by clicking “forward” and “backward” buttons so as not to skip some stages.

Fig. 25 Example of incorrect spelling

Fig. 26 Example of drills

Reading-writing the sound. One of the characters bears the taught sound when the forward button is clicked or the flowers are clicked. Writing of the sound is firstly performed on an indistinct letter, then performed directly with a finger and finally done by a pencil over dotted letter. Writing of the sound is repeated until the forward button is clicked. Student is provided with loud directive as to how s/he will write it. Also, the student is asked to write with finger and the pencil in the air respectively. Finally, the sound's continually cursive writing is written with a pencil. Apart from the other softwares, there is a sound button at the upper right-hand corner on this screen. The sound is read while it is being written. However, consonant letters are not read while vowel letters are being read.

Syllable stage. In the syllable stage, firstly a sound appears on the screen and it is read. At the second stage, the other sound appears at the bottom of the screen and it is read. At the third stage, the sounds are combined with an arrow and they constitute a syllable. However, consonant letters are not read. Incorrect spelling is taught in the syllable section (such as in-i, al-i, nar-in, mor-al, em-el, iz-i, bal-on, üt-ü, ad-a, kal-em, ıl-ı, an-ıl, ay-a, at-eş, çek-iç, ağ-a, ag-a, ev-e, gün-eş, ec-e, can-er, ip-i, pil-ot, ah-a, hak-em, gör-ev, ef-e, af-iş...) and then the spelling taught incorrectly is tried to be corrected.

Word stage. In the word stage, first of all, a syllable comes on the screen, and then it is read. At the second stage, the other syllable appears on the screen at the bottom, and then it is read. At the third stage, the sounds are combined with an arrow and they form a word, then it is read. At the word stage, a sample is given to the forms of two words which are perpendicularly and cursively written (including the forms of capital and small forms the taught sound).

The studies of evaluation are carried out at the end of word teaching from "n" sound onwards. In the first exercise, the student is asked to combine the syllables given in the box by dragging them with the Mouse and to form a word. A positive warning sound is heard and green tick comes on the screen when the word is correctly formed. When a wrong word is formed, a negative warning sound is heard and red cross comes on the screen. In the second exercise, the student is asked to write the object, whose picture is given, by dragging the disorderly given letters and correctly ordering them at the bottom row. When the word is incorrectly written, a positive sound is heard, and green tick (√) and shape/form of the perpendicularly and basically written word comes on the screen. When the word is incorrectly written, a negative sound is heard and red cross comes on the screen.

Sentence stage. In the sentence stage, first of all, the practice of "listen to the sentence and repeat it" is performed. Secondly, the student is asked to complete the missing words of the sentence given below with the words provided. Then, the student is asked to compose a sentence in the following line by dragging the given words with the Mouse. If the sentence is correct, a positive sound is heard and green tick (√) comes on the screen, and if the sentence is wrong, then a negative sound is heard and red cross (X) comes on the screen. The sentences are also given with perpendicular, basic writing from "g" sound onwards. The sentences are only given with the perpendicular, basic writing from "ğ" sound onwards. In the H reading-writing software, transitions between the stages are done by clicking the buttons of "backwards and forwards" or by clicking the flowers given below.

Text stage. In the text stage, the student is primarily asked to analyze the picture and to tell what s/he sees. At the second stage, the student is asked to listen to the text coming on the screen. At the third stage, the text and the image come on the screen together, and the student is asked to read the text. Headings of the texts and the text are related to each other. All of the texts constitute an integrity. However, the number of words repeated in the texts are few, and this situation makes the texts, particularly the initial texts, difficult for the students. The texts are taught through manuscript handwriting style after the "Ğ" sound.

Measurement and evaluation: There is not an assessment and evaluation section. In the word and sentence stages, the practices made after the instruction can be considered within the evaluation studies.

Technical Properties

It is observed that the reading-writing software prepared by H publisher is appropriate for color use and dubbing. In this software, the practices written on a empty page with the clavier can be saved and the printouts can be taken. There is no option for "help". The guidelines are audibly given thanks to the main character. Main character is used in the software. It is seen that when the images used in the software are examined, the pictures were mostly used. There are elements and statements to boost the learner's motivation in the H reading/writing software. For instance, the students are tried to be motivated by the statements such as "you are wonderful, superb".

CONCLUSIONS

Computer and educational softwares have become an important art of education today. Computer experiences which are developmentally appropriate make it possible for the child to explore, gain experience and reflect them and to compare with others. In addition, the softwares that are developmentally appropriate enable the children to control their own learning processes (Haugland, Bailey & Ruiz, 2002; Haugland & Ruiz, 2002).

The assessment, while buying a software or using a web page, helps the users make reasonable decisions which suit with their reading and writing targets (Baker, 2003:195). In the selection of softwares, teacher's role is important because s/he will choose the most appropriate software for his/her class, will organize the learning activities and also will organize his/her class (Nikolopoulou, 2007:178). For this reason, the appropriateness of educational softwares, e-books and web pages for the student's level, his/her developmental characteristics and programme are a significant research topic. Thus, the purpose of this study is to assess the beginning reading-writing educational softwares.

Nine softwares were examined in the study. The softwares were assessed in terms of use of the software, teaching reading-writing stages and technical properties. It is seen that the use of color and dubbing in A, B, C, D, E, F, G and H softwares are appropriate. It was determined that in the software prepared by E publisher, the same of book pages was included and dubbing did not exist. Haugland (2005:330) states that computer experiences should not be electronic worksheets and this is a poor use of a powerful leaning tool. Different from other softwares, in the software prepared by H publisher, password was used on entry in teaching of each sound in order to prevent the students from moving on to the sounds that they did not learn.

The student cannot save the activities included in A, B, C, D, E, F, G and H softwares after s/he has done them, however, in the H software, the student can save the writing practices of lines s/he has done on an empty page in lines and can take their printouts. According to Haugland (1997), printing and saving are important technical properties. The printouts are records of computer experiences of the child, especially those who cannot tell his/her experiences, and these printouts can also be put in the portfolio files. Besides, if the student can save what s/he has done, s/he can continue from the point where s/he left. Haugland and Ruiz (2002) state that when students are given an opportunity to share the things which s/he has done in the computer, they far better learn the topics and that rich and social environment in which they discuss their experiences, achievements and opportunities enhance their critical thinking skills as well as their problem-solving skills.

While there is no option for "help" in A, B, D, E, F, G and H softwares, C software has an option for "help". The fact that there is no option for "help" in the softwares cause the student to proceed on his/her own by trying the buttons. This situation can slow down the student. The "guidelines" is given through the "main character" in F and G softwares, while it is audibly given in C, D, G and H softwares.

In all of the softwares, mostly the cliparts of living things and objects are used instead of their photographs. In A, C, E, F, G and H softwares, one can proceed by clicking "forward-backward" buttons, nevertheless, one can also proceed by clicking the flowers icon given at the bottom of page as it happens in H software. The Cds belonging to B and D softwares automatically proceed. The reason for this is that they are prepared via "flash player". While there is no main character in A, B, E and F softwares, sound teaching in C, D, G and H softwares is performed under the guidance of main character.

Student participation is not favored in A, B, D, E and F softwares, it is only supported in the softwares prepared by C, G and H publishers. Student, by complying with the directives, try to do what are taught in the software or does the activites on his/her own. Only in the C, G and H softwares, the student is given feedback as regards what s/he has done when s/he completes the activity. Lovell and Philips (2009) state that reading-writing educational softwares do not include the student in the process and do not provide feedback. In G and H softwares, there are elements to boost the student's motivation. For instance, in the H software, student is tried to be motivated by the main character with the statements like "you are wonderful, superb".

The stages of beginning reading-writing are preparation, hearing and recognizing the sound, reading and writing the sound, syllables from the sounds, words from the syllables, sentences from the words and last reading and writing. While teaching stages are separately included in some softwares, in some softwares the stages are mixed or they are not included in the software. For example, in some softwares, syllable stage and word stage, sentence stage and text stage are given together. In their study in which they assessed reading softwares, Santoro and Bishop (2010), by departing from phonetic awareness and from the points of understanding the alphabet, established that software developers focus their attention on one of the early reading skills. In addition to this, reading practices are more included in the softwares than writing practices.

In beginning reading-writing softwares, a preparation study is carried out before moving on reading-writing stage. The line studies, which mostly prepare students for writing practices and aim to develop the students' small muscles, are not included in the softwares. Students are given instruction for drawing in the air in the line studies of G and H softwares. Besides, only G software has the painting practice in order to develop the students' small muscles.

When beginning reading writing softwares are examined in terms of hearing and recognizing the sound, the sound is tried to be heard through a story told with an animation in A software, through pictures in B software, via a song, Picture and likening in C software and thanks to a song in F software. Also, images of the sound, where the sound is used, are exemplified in F and G softwares. In B and G softwares, a separate song Cd is given in beginning reading writing educational software kit in the use of sound teaching. There are no stages of having the sound heard in D and E softwares.

In the stage of writing of the sound, writing of the sound is taught in different ways in each softwares. Writings of capital and small letter are shown on lines together in A software, in B software writings of first small then capital letter are shown on lines by an apple worm. In C software, the letter's written form comes on the screen. Later, the letter is written on lines with a pencil while the main character is writing it by slipping on the sound. Finally, the continual writing of the sound is demonstrated on lines. In C software, instruction of capital letter is performed by making use of proper name according to the programme after the instruction of small letter. Capital letter is written over the dotted letter with a pencil on lines. Writings of both small and capital form of the sound on lines are shown respectively in D software. Writing of the sound, in F software, is demonstrated on lineless papers in the form of square contained in the left of the screen, including capital form of the letter above, small form of it below, at the stage of having the sound heard. In the corner of square papers is repeat button. In G software, on the other hand, writing of the sound is shown on lines. Capital/small form of the letter to be written on lines is decided by clicking either capital or small forms of the sounds

contained in upper-right hand corner. In H software, writing of the sound is demonstrated first with finger over shadow of sound included in lines, at the second stage with finger on lines, at the third stage with a pencil over dotted line and at the fourth stage with a pencil over the letters in order. In D, G and H softwares, student is given an instruction to participate in the practices of drawing in the air. Instruction of capital letter, in B, C, E and H softwares, is performed in accordance with the programme.

Syllable stage was thought together with word stage in C software, nevertheless, it is given separately in A, G and H softwares. On the other hand, syllable stage was not included in B, D and F softwares. Syllable or word is formed by combining sound or syllables with arrow. Stages of syllable and word are separately included in G and H softwares. The syllable to be read is covered by cloud while the syllable or word is being constituted in G software. Then, the syllable to come out appears and the student is asked to read first syllable then the whole of it. In H software, arrows are made use of as it happens in the C software. In C and H softwares, syllables are taught to the students by making wrong spelling. The reason for this is that in the curriculum of Turkish lesson in the first grade elementary education, the syllable to be used in order to move from closed syllable (el, al, at….etc.) to open syllable (ele, ala, ata….etc.) is taught. The instruction in this way causes the student to read the word by spelling wrong. Akyol (2006) states that it is difficult for a syllable taught in the form of "El-a" to corrected, therefore it is truer for the word to be taught in the form of "E-la". In the softwares as well, syllables or words can be written and read by giving correct spelling, without including the wrong spelling. Thus, the reading errors that might occur in students' reading can be prevented.

While the sentence stage is separately included in A, C, G and H softwares, in D software it is included in the text stage. On the other hand, there is no sentence stage in B, E and F softwares whatsoever. However, only in written form are sentence and text stages included in E software. Sentences are given in C, G and H softwares, then student is asked to read the sentences, and the student is able control whether the thing that s/he reads is correct by clicking the control button contained beside the sentence. In A software, the sentences are read while they are being given. Sentence and text stages are mixed in D software. In H software, the student is asked to perform the stages of reading the given sentence, completing the sentence and forming the sentence.

Text stage is included in B, E, G and H softwares. On the other hand, it is not included in A, C and F softwares. There is text stage in B software, but it is not read or the student cannot check what s/he read. In D software, text or sentence stages are mixed. In E software, text stage is given only in written form as it is in the book. While student is expected to write and read the given text in G software, the text is first read, then the student is expected to read in H software.

While there is no measurement and evaluation stage in A, B, D and F softwares, it does exist in C, E and G softwares. The evaluation practices included in the sound teaching stages in H software. However, in E sofware the section of measurement and evaluation is the same of that of the book. In some softwares, the evaluation paractices are included in each section, for instance, in sound, syllable, word or sentence. In C, F and G softwares, a game is included in the software for the purpose of supporting the sound teaching.

As a consequence, it was observed that the softwares are not sufficient in terms of technical properties when the beginning reading writing educational softwares are examined. The activities to ensure the student participation were included in C, G and H softwares but the number of activities can be increased. The elements to boost the learner's motivation are much more needed. Reading practices were more included in the softwares than writing practices. Reading-writing stages were followed in C, G and H softwares. The instruction wrong spelling was included in C and H softwares. The reading practices of manuscript handwriting were very little. The practices such as game, song and story can be selected more carefully.

Beginning reading writing educational softwares can be improved in terms of technical properties such as color, sound, saving, printing, help and guidelines. Student participation can be encouraged and feedback,

photographs, active songs and animation to boost the student's motivation can be employed. In addition, the student should only watch the teaching and the softwares should also enable the student's individual use. The softwares where students can record what s/he has done, in which s/he can continue from where s/he left and where s/he can take the printouts of what s/he has done can be developed. An instruction can be programmed in accordance with reading-writing stages, and particularly the writing facilities can be increased. Much more places can be devoted to measurement and evaluation sections.

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