

Textbook: Focus on Students' National Identity

## Foreign Language Teaching Methods of Nowadays: Telegram-bot “Pardes”

Ilia L. Freidkin\* (a), Svetlana B. Ksenofontova (b)

(a) Peoples Friendship University of Russia (RUDN University)

(b) Kosygin Russian State University (Technologies.Design.Art) Institute «Maimonides Academy»,  
freidkin2001@gmail.com

---

### Abstract

Currently emerging computer programmes and training kits have contributed to foreign language studies. Domestic and foreign expertise in applying educational computer resources claims the latter introduced in the training process seek to change the role of training tools used in the process of teaching a foreign language – Hebrew, in particular. The article regards the Telegram-bot “Pardes” created by the author in September, 2019 to be launched in March, 2020 and become available to customers in April the same year. The course offers 128 academic hours of training, including 64 hours of lectures and 64 hours of self-studies. The period of 2019-2020 saw more than 1000 students using the bot. The practical relevance of the study is that the latter introduces the Hebrew training and resource kit “Pardes” based on LCMS technology in the Telegram-bot as well as checks the experimental data and recommendations on applying various educational computer programmes to boost cognitive activities of students studying Hebrew as a foreign language. Such educational computer programmes will prove relevant for teachers to select and opt for the training materials that boost cognitive development of students as well as contribute to their understanding of employing LMS и LCMS while studying foreign languages.

*Keywords:* foreign language, Hebrew, Telegram-bot, self-study.

© 2021 Ilia L. Freidkin, Svetlana B. Ksenofontova

This is an open access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Published by Moscow City University and peer-reviewed under responsibility of TSNI-2021 (Textbook: Focus on Students' National Identity)

### Introduction

---

\* Corresponding author. E-mail: freidkin2001@gmail.com

New computer programmes together with teaching aids have changed and all in all advanced foreign language studies. Findings of Russian psychologists, educators and linguists claim the necessity of employing educational computer technologies while studying foreign languages and developing training ways and methods that promote creativity and contribute to mastering self-study skills. The latter aim at having a proper command of foreign language as one of a general communication means (Azhel, 2016; Evdokimov, 2007; Kolzhaspirova, 2014; Haristiani, 2020)

Domestic and foreign expertise in applying educational computer resources along with theoretical aspects of incorporating ICT into education reveal that the training process supplemented with educational IT changes the role of training tools used in the process of teaching a foreign language – Hebrew, in particular, while employing IT in class contributes to upgrading the traditional structure of the educational process (Pham et al., 2019; Ruan et al., 2019; Wilson, Fuhrman & Turner, 2019).

Nevertheless, studying Hebrew is still challenging for a majority of students despite the growing opportunities for foreign language learning due to modern technologies. LMS (learning management system) и LCMS (learning content management system) are different though mutually beneficial systems that aim to tackle administrative issues concerning FL studies (Konobeev, 2020).

These systems encourage students “to access the educational portal that provides information on the subject as well as the opportunity to use electronic resources, and opt for extra materials” (Ivanova, 2014). Chatbots tend to make up constituents of “microeducation” (Dokukina & Gumanova, 2020).

Despite the growing number of various Internet-schools to study foreign languages, it is the chatbots that prove a continuously developing area of LCMS-technologies and offer a fundamentally new approach to training process. Students as if find themselves in a virtual classroom but with a real teacher to master their reading, speaking and writing skills. Mobile apps and chatbots aimed to study foreign languages makes the latter technically available: students need nothing but a usual smart phone with the Internet access. In other words, is the app is always at hand and students can access it at any moment convenient. Thus, the time devoted to language learning is increasing, while gamification promotes constant self-development. Classes can be divided into several units, which contributes to better data acquisition. As a rule, studying foreign language online appears less demanding, though students keep attending enough time to it to be successful.

### **Purpose and objectives of the study**

The hypothesis of the research claims educational computer technologies contribute to efficient and widespread Hebrew studies.

The object is innovative computer technologies for teaching foreign languages including Hebrew.

The research aims at analyzing the current trends in educational computer technologies as well as at developing a course in Hebrew relying on LCMS-technologies of the Telegram-bot.

Tackling the tasks to follow is relevant to achieve the abovementioned goal:

- 1) to analyze the existing expertise on the topic of computer training technologies;
- 2) to analyze popular commercial and academic LCMS-resources for learning foreign languages, including Hebrew;
- 3) to design an educational app relying on LCMS-technology of the Telegram-bot;
- 4) to assess how efficient the new educational computer technology is.

### **Literature review**

Today is welcoming chatbots design to be the most advancing LCMS-technology for foreign language learning.

Chatbot is a programme for computer-aided dialogues with a student. This programme relies on using neural networks and a large amount of previously accumulated information. In other words, this is the synthesis of responses based on the analysis of requests from users. The process implies human interaction is modeled with the help of a voice assistant similar to AppleSiri or Alisa in Yandex devices. Chatbot is possible to be incorporated into the app structure, the latter meeting work, communication and educational needs. For instance, it is common for Slack, Facebook or Telegram. Chatbots are currently employed in all kinds of communication: from e-commerce and industry to school and university education, from tourism to state services portal (Fryer et al., 2020; Tran, Tran & Nguyen, 2019). 2016 saw TheVilage interviewing Bill Gates who emphasized their growing relevance for organising educational process. He claimed even “the most difficult and specialized disciplines” benefit from digitalization and artificial intelligence integration. Bill Gates finds permanent availability of the virtual teacher along with the professional support to be of key importance in acquiring new competencies (Newton, 2016).

Recent years witness a visible leap in employing the Chatbots technology. Let us consider the principal reasons for chatbots growing popularity.

Dmitry Volkov, educational technology development director with Sberbank, finds “multiple research in the sphere of NLP (Natural Language Processing) beneficial to make communication with chatbots more natural” (Волков, 2018).

Another reason for chatbots being widely used is mobile apps prevailing. Modern people seek to get the most out of the basic app that is mainly one of the most popular messengers.

Another significant aspect is that chatbots are quite stimulating due to their innovative nature and gamification (Fryer, Nakaob & Thompsonc, 2019; Petrović & Jovanović, 2020).

Electronical format of the current contributed to foreign language studying growing available for millions of people around the world. Nevertheless, sociological findings claim only about 20% of students finish the training course (Khabibrakhimov, 2019). Students doing some Internet courses are rare to get feedback from their teacher as the classes are not online, but previously recorded. This adds to students decreasing motivation and lack of confidence in the knowledge gained. Language learning through the intermediary of a chatbot solves this problem by modeling possible questions and ensuring automatic verification of various competencies.

## **Methodology**

Chatbot “Pardes” for studying Hebrew had been drafted since September, 2019 to be launched in March, 2020 and to become available for customers in April the same year.

פרדס – Pardes in Hebrew – is an abbreviation for דרש סוד, רמז, פשט – which means four ways of interpreting the Bible. פשט stands for the direct interpretation, רמז is a hint, דרש is a comment, סוד is a secret or revealing the secret meaning, though in modern Hebrew the latter stands for “citrus plantation”.

834 students from around the world are training on the programme at the moment. The course has quickly gained momentum being recommended by Israel Ministry of foreign affairs. The latter posted information about the course on its official pages.

Moreover, many Jewish communities and educational centers suggested their sites visitors should use this Telegram-bot.

BINO (online language school) uses Telegram to organize classes with robot-teacher. Classes are conducted in chats for 2 students (in pairs) along with some gaming elements introduced.

The technique that has proved advantageous to teach religious texts in Yeshivas and been applied for thousands of years was adapted for foreign language self-study. The technique is unique as two students having the same level of knowledge add to each other's progress, having dialogues, sending and checking home assignments. Such a partner is called חבירוּתָּא in Hebrew – chavrusa.

The course offers 128 academic hours of training, including 64 hours of lectures and 64 hours of self-studies. Personal workload and abilities make students either speed up the training, or choose a slower pace instead.

The knowledge acquired correspond with Ulpan studies of Alef-1 level. Thus, Hebrew Study Centre with Israel Cultural Centre in Moscow “Nativ” introduces на первом уровне развитие writing, reading, basic grammar (verbs in the present tense and adjectives) and vocabulary skills on the first level of studies. The abovementioned skills are relevant for simple dialogue on the most common topics. The chatbot comes in concordance with the certain level.

The course will prompt mastering the skills to follow:

- brief history of Hebrew;
- reading and writing skills;
- 245 words employed in speech;
- simple letters and text messages in Hebrew;
- small talk (chavrusa) in Hebrew;
- declension of nouns and adjectives;
- verb conjugation in the present tense;
- verbal structures and conjugation (binyans);
- interesting facts about Israel and Judaism;
- counting;
- simple conversation topics – telling about one's family, home, conversations in the shop or market, in a café or restaurant.

## **Results**

The Telegram-bot implies files in the following formats are sent:

*Audio messages* – words, phrases and sentences being recorded (with or without translation).

*Video lessons* – letters spelled correctly (calligraphy), video lessons with teachers, dialogue from films, etc.

*Texts for studying* – articles, interesting facts for mastering the skills acquired with the studies words and letters substituted.

*Cards* – a picture accompanied with a text and its translation.

The student is encouraged to revise the material and send the answer into the chat which is followed by a chavrusa checking the answer (other tasks apart from calligraphy ones and essays are checked automatically). Teachers have the opportunity to listen to the students' answers and text back their comments and feedback (audio file + text or video).

Students are welcome to communicate with each other in the chat at any time. Those who are checking each other's tasks (chavrusa) may "push the SOS button" and send the partner's answer to the teacher for checking. Moreover, three essays are mandatory to be checked by the teacher.

Classes (students receive educational content) and tests may be held daily or according to the schedule. It is recommended to have no less than 4 classes along with no less than 2 tests per week.

Teaching pronunciation relies on built-in voice typing: the text is spoken and then sent to be checked by the bot. Further on, the bot uses verification tools to see to the correctness of the text spoken and signals if there are mistakes. Hence, the student masters pronunciation skills without oral communication with teacher.

Mastering writing and grammar skills requires students to do printable practical tasks sent in PDF (copybook with the alphabet designed by the author of the article, grammar tables for nouns (gender and number) as well as tables for verbs with schemes and examples. To assess students' knowledge there were marks introduced to check the acquired communication, vocabulary and grammar competences as follows:

*communication skills:*

- monologue (description, narration, commentary);
- dialogue (etiquette dialogue, inquiry, encouragement, opinion exchange and interview);
- listening (recorded texts comprehension);
- reading (scanning and reading for details);

- writing (questionnaire completion, congratulation, personal mail, text extract, oral presentation plan, written statements based on a sample);

*grammar:*

- noun (singular, dual, plural form) – שם עצם זכר ונקבה, רבים ורבות;
- article (used with nouns, adjectives, demonstrative pronouns) – היא הידיעה;
- pronouns (personal, demonstrative, indefinite) – שמות גוף;
- adjectives (comparative and superlative degree, noun-adjective agreement) – שם תואר;
- adverbs (adjective derivatives and the ones formed with the help of one-letter prepositions) – תואר

פועל;

- numbers (ordinal, gender agreement, gematria (the numerical meaning of letters) – מספרים;
- verb forms – פעלים;

the concept of root and root vowels – שורש;

verb classes (binyans) – בניין;

present tense – הווה ;

infinitive – שם פועל –

gizra in verbs of different binyans – גיזרה –

prepositions (one letter, multi-letter, pronominal);

syntax – מילת יחס –

- narrative sentences (affirmative, negative, constructions “אין” ו “יש”, impersonal sentence) – משפט חייווי;

- interrogations – משפט שאלה –

*vocabulary:*

- family – משפחה –
- friends – חברים –
- house – בית –
- city and kibbutz life – עיר וקיבוץ –
- travelling – טיולים –
- daily routine – סדר יום –
- Israel, traditions – ישראל ומסורת –
- shopping – קניות –
- food – אוכל –

There are 21 days of classes 3 academic hours each to tackle the issues to follow:

- 1 day (Introduction to Hebrew – פתיחה)
- 2 day (Reading in Hebrew – קריאה)
- 3 day (Self-presentation in Hebrew – הצג את עצמי)
- 4 day (Interrogative sentences – משפט שאלה)
- 5 day (Feminine and masculine gender, demonstrative pronouns – זה, זאת, אלה – שם עצם זכר ונקבה)
- 6 day (Plural form of nouns – שמות עצמרים ורבות)
- 7 day (Test – בדיקה)
- 8 day (My house – בית שלי)
- 9 day (Text “Dgania Kibbutz” – קיבוץ דגניה)
- 10 day (Geographical position of Israel – גאוגרפיה של ישראל)
- 11 day (Trip around Galilee – טיול בגליל)
- 12 day (Trip around Tel-Aviv – טיול בתל-אביב)
- 13 day (City description. Verbs – עיר. שם פועל – עיר)
- 14 day (Test – בדיקה)
- 15 day (Verbs with irregular infinitives – שם פועל)
- 16 day (Two-letter and modal verbs – יכול, צריך, פעל ל-, ל-)
- 17 day (Text “The noise of the city against the silence of village” – רעש של עיר ושקט של כפר)
- 18 day (Numbers, feminine 1-19 – מיספרים)
- 19 day (Numbers, masculine 0-19 – מיספרים)
- 20 day (Topic “Food in the café and mall – בקניון, בבית קפה, אוכל)
- 21 day (Final test – מבחן)

The bot features various tasks aimed to master certain competencies:

- Choose the right answer – multiple choice task based on the text (translate, which word (letter) is missing in the sentence (word), etc.;
- Translate the text you hear – a recorded text with multiple choice questions;
- Write and send back the answer – a video or a picture. The user is encouraged to write or repeat the text from the video and to send the photo into the chat;
- Make a script of what you hear – a recording in the studied language without translation with the possibility to fill in the answer;
- Repeat what you hear – a recording in the studied language with or without translation;
- Describe the photo relying on the example (writing an essay or making up a dialogue).

Let us focus on the tasks from “Pardes” course realized through the Telegram messenger to dwell on the ways

to form principle competencies, implies by the training and resource kit. The example comes corresponding with the order of skills being developed (listening, speaking, vocabulary and grammar skills, writing) instead of the order the materials are studied.

Listening and speaking skills are being developed throughout the course while listening to the texts recorded along with the voice typing which allows to check the correctness of words pronounced and to compare them with the task with the help of the technical means.

For example, here is a task from the lesson “Day 8” “My house - בית שלי” - it contributes to mastering skills of speech perception by ear, speaking and reading in Hebrew skills.

Having a perfect command of grammar implies a variety of skills formed and mastered. Grammar skill is understood as an ability to recall grammar means relevant for foreign language communication from the long-term memory. It is considered as a facility of employing grammar knowledge to address the current communication task, thus, of generating grammatically correct statements.

Let us regard the task from the lesson “Day 5” aimed at mastering a grammar topic “feminine and masculine gender of nouns”.

The lessons helps students to learn about the grammar categories of nouns in Hebrew שמות עצמרים ורבות (feminine and masculine gender). Further on there go examples of structures formed. Written drills completed by students are later on sent to chavrusa to be checked. Any number of drills necessary for students to master the skills are generated automatically by the bot.

The exercises on selecting function words (demonstrative pronouns) and pronouns-nouns agreement in gender and number are generated simultaneously. This skill is mastered while filling words in the sentences minding correct word order (narrative and exclamatory sentences), correct word forms and demonstrative pronoun – article correlation.

Thus, this is the way to advance grammar skills through putting the words in the correct order, selecting function words and particles, forming function words or selecting their forms from the paradigms that are commonly automated.

Let us now focus on vocabulary exercise. Lexical skills are conscious, meaning there is a deliberate control of words selected, collocations formed, word and phrase formation patterns employed.

Thus, the task in the lesson “Day 3” features a word list supported by an audio file. The way the words are

mastered is checked with the help of an automatic simulator or while reading a new text at the next lesson and studying a new topic. The task is done when there is a short essay written relying on the text and sent afterwards to chavrusa.

As a result, lexical competence implies introduction (translation, voicing), explanation, drilling and application, controlling the process of vocabulary skills being mastered while reading or writing an essay.

Hence, the chatbot “Pardes” provides mastering listening and pronunciation skills through communication with chavrusa and voice typing. Vocabulary units are learned while taking tests and doing written tasks. The bot also features grammar and syntax exercises. Grammar is studied while doing exercises generated by the bot together with the printable written tasks that can be sent to chavrusa or teacher if necessary for checking. Syntactic structures are picked up and checked while having a virtual dialogue with the bot in a certain topic. There is also an opportunity for a real conversation with chavrusa. There are open-answer exercises like to describe your room, the city you live in, compare city and village lifestyles relying on the text studied. These tasks may be also sent to chavrusa for assessment. Each unit finishes with an essay on a certain topic to be sent to the teacher. The chatbot features videos about Israeli landmarks in elementary Hebrew with subtitles. For instance, to master counting there is a video with people of different ages (from one to one hundred) saying how old they are. Tests are presented as games and riddles. There are interactive tables with verbs and numbers.

The following example demonstrates the whole range of methods and techniques applied.

The chatbot encourages students to get know Israeli principal cities and kibbutzes starting from Lesson 9 while studying the topic “Geographical position of Israel”. The tasks are also aimed at mastering cultural competence, students enlarge their knowledge of the country. The lesson includes a text about Kibbutz Degania.

קיבוץ דגניה.

בקיבוץ דגניה יש בתים וגינות.

אין קיוסקים בדגניה, אין סופרמרקטים ואין אוטובוסים.

בדגניה יש בית כנסת ויש גם בית ספר.

בבית הספר בקיבוץ יש ילדים וילדות מקיבוצים ליד דגניה.

בקיבוץ יש יום עבודה לילדים. ביום העבודה אין ילדים בכיתות, ואין מורים בחדר

המורים. ליד הקיבוץ יש שדות וגנים.

The students are to find the kibbutz along with other geographical objects on the map specially adapted for the course. The next step is to describe their location according to the example. The task aims at mastering map reading skills and scanning.

The task is formulated in the following way: find these geographical objects on the map and text your chavrusa where they are situated and what is nearby. Be sure to mention if it is the city area, kibbutz or moshav. You'd better have a printed version of the map to mark the objects there.

- |            |     |
|------------|-----|
| דגניה      | .1  |
| חיפה       | .2  |
| כנרת       | .3  |
| טבריה      | .4  |
| לבנון      | .5  |
| אילת       | .6  |
| ירושלים    | .7  |
| תל אביב    | .8  |
| כרם מהר"ל  | .9  |
| ים המלח    | .10 |
| הים התיכון | .11 |
| הר הכרמל   | .12 |

Answer sample:

- |   |    |
|---|----|
| זה קיבוץ דגניה. הוא בגליל ליד העיר טבריה. | .1 |
| זאת עיר .....                             | .2 |

Another objective of the lesson is to train syntactic skills like the use of prepositions (ליד, מ-, ל-, ב-), demonstrative pronouns (זה, זאת, אלה) and structures similar to there is /isn't (יש-אין). The goal is to learn to make up simple narrative sentences.

Assignment checking in turn is beneficial not only for the student whose mistakes are being controlled and corrected, but for the chavrusa as well, who while checking the task learns to distinguish correct statements from the ones with syntactic and grammar mistakes, to correct them and to avoid their own mistakes in prospect. It also contributes to understanding foreign speech, that is natural, thus, contains a number of mistakes (noises).

After chavrusa has checked the abovementioned task the assignment to follow is automatic reading comprehension – the sentences presented are grammatically correct while the students are to say if they are true or false concerning the content (e.g., if there is a newsagents at the corner of the street). The objectives are to drill the vocabulary stock, to answer the questions in the form of a dialogue. Answers are narrative and interrogatory, positive and negative ones.

The further task is to take the description of Kibbutz Degania as an example to describe their own district (the one the student lives in) and to send it to the chavrusa. The task aims to master monologue speech, report planning and written speech based on the sample. The chavrusa is to check the assignment as well.

The text of the task is the following: taking the text about kibbutz as an example describe the region or city you live in. Start with the phrases to follow:

בשכונה שלי יש ..... , בשכונה שלי אין .....

בעיר שלי יש ..... , בעיר שלי אין .....

Let us study the example of this task completed by Maya P., a student from Bucharest (Romania).

חיים ברומניה .

אני גרה בבוקרשט ברומניה, ואני רוצה לספר קצת על החיים פה..בוקרשט זאת עיר בירה ברומניה. זאת העיר לא גדולה ולא קטנה. היא לא אתיקה, אבל מעניינת מאוד. אין פה המרכז העיר אתיק, כי העיר הזאת מקום של סחר. יש שם הרבה בתי קפה, מסעדות וחנויות. יש מוזיאונים טובים. יש פה שלושה בתי כנסת בעיר, אבל בית הכנסת אחד זה מוזאון עכשיו.

יש בבוקרשט הרבה תיירים מכל העולם והרבה מלונות. יש גם פה הרבה תיירים מישראל. אני מדברת עם ישראלים בבוקרשט, בסיביו ובברשוב. רומניה זה מקום חם בקיץ, אבל יש גם גשם ושלג בחורף. בוקרשט זנת העיר מלוכלכת, אבל יש פה הרבה דברים יפים: הרבה

עצים, פרחים ופארקים מודרניים. אני חושבת שהמקום הכי יפה בכל רומניה - אלה הרים הרים! כל המשפחה שלי אוהבת ללכת להרים. יש שם אוכל טעים ויין טוב. ההרים ברומניה זה המקום של טבע ושקט. עם אני צריכה לחשוב ולנוח, אני נוסעת להרים. יש שם הרבה רחובות קטנים ועתיקים ברומניה. יש גם רחובות וכבישים ומודרניים מבוקרשט לים השחור ומבוקרשט לבודפשט.

The text is of 163 words, there are only 3 minor mistakes (underlined) – ayin and aleph are mixed while there is a voiced [O] instead of an aleph in the demonstrative pronoun. The city description is full and the topic of nearby sights is fully covered. The student relies on the previously studied text. The abovementioned proves the task deserves an excellent mark.

One of the tasks implies filling the table naming sights that are located in the city and those that are in the kibbutz relying on the text. The task seeks to drill the structure similar to there is /isn't (יש-אין).

Here is an example of such a task performed by David R. The data is later on used to make up a text describing photos of the city and the kibbutz. Such a sequential increasing complexity of assignments given serves to have a better command of the studied material, boosts narrative skills.

Table 1. An example of the assignment done

מַה	מה יש	עיר	כפר
1	הרבה מסעדות	יש	אין
2	הרבה אוטובוסים	יש	אין
3	הרבה שקט	אין	יש
4	הרבה אנשים	יש	אין
5	קניונים	יש	אין
6	הרבה חנויות	יש	אין
7	מוזאונים	יש	אין
8	הרבה רעש	יש	אין
9	הרבה מכוניות	יש	אין
10	הרבה בתי קפה	יש	אין

אין	יש	הרבה סרטים וקונצרטים	11
יש	אין	שדות	12
יש	אין	גנים	13
יש	אין	גינות ליד בתים פרטים	15
יש	אין	כולם חברים של כולם	14
יש	אין	אוויר נקי	16

Lesson 11 features a task of writing a letter home telling about visiting Tel-Aviv (10 sentences). The task includes photos of Tel-Aviv and implies saying what is in the photo and what isn't there. Thus, narrative positive and negative sentences ( יש or אין ) are drilled again employing new vocabulary and within the new framework. The texts are exchanged and each student is to retell the story relying on what another one has written and sent. It aids in mastering monologues, descriptions, report planning and written speech based on the sample.

Here is an exemplary text sent to chavrusa by one of Pardes students. The text describes an Israeli city and village relying on the photos enclosed and employing the previously studied vocabulary. The description includes 141 words.

זאת תל-אביב. אלה בתים בעיר. בעיר יש הרבה מגדלים – שם עבדים וגרים אנשים. בעיר יש הרבה בתים בית ליד בית ליד בית. ברחוב יש הרבה בתי קפה, חנויות ומסעדות. בעיר יש פארקים גדולים, קניונים יפים. בקניונים יש חנויות, סופרמרקטים, בתי קפה, קולנוע ויש שם הרבה אנשים בכל מקום. בכביש יש הרבה מכוניות ואוטובוסים. לפעמים יש פקקים בכביש. ויש רעש של העיר, ויש רעש של הרבה אנשים. בעיר יש הרבה מוזיאונים, תיאטרונים וקונצרטים.

זה כפר. אלה בתים בכפר. בכפר אין הרבה בתים. בכפר אין הרבה בתי קפה, חנויות ומסעדות. בכפר אין פארקים אבל יש הרבה גנים ושדות ליד מושבים וקיבוצים. ויש גינות ליד בתים פרטים. בכפר אין קניונים, בתי קלנוע, מוזיאונים, תיאטרונים, קונצרטים, ולפעמים גם אין בית ספר. בכפר אין אוטובוסים ואין הרבה מכוניות. בכפר אין הרבה אנשים, לכן אין רעש ויש שקת של כפר, יש אוויר נקי, וכולם מכירים זה לזה.

There are only 4 minor mistakes in text, related to the voiced [i] and [O] (underlined ). Such accomplishments are enough to say the task is completed.

Tasks are sent into a special chat assisted with the bot thrice a day – to have time for studies before and after work as well as during the lunch break.

The task aims to check speaking skills (reading implies voice typing, the result is compared to an ideal excluding punctuation marks).

Here is an example of task from Lesson 3: Read the dialogue to follow:

שלום! אני דניאל.

שלום! אני שרה.

מי את? את תלמידה?

לא! אני מורה לאנגלית! ואתה?

אני גם מורה לספורט!

And say if the statement is true (false statements are crossed out in the example):

~~דניאל מורה לאנגלית.~~

~~שרה תלמידה.~~

דניאל מורה לספורט ושרה מורה לאנגלית.

Thus, the chatbot is not only helpful in assessing vocabulary and text comprehension but grammar skills (structures) as well.

Let us consider the example task from Lesson 8: Consult the text and answer reading comprehension questions.

Put *יש* or *אין* as in the example:

דוגמה: בדגניה יש ילדים וילדות.

1. בדגניה \_\_\_\_\_ קיוסק.

2. בדגניה \_\_\_\_\_ בית כנסת.

3. בדגניה \_\_\_\_\_ גינות.

4. בדגניה \_\_\_\_\_ אוטובוסים.

5. בדגניה \_\_\_\_\_ בית ספר.

- .6 בדגניה \_\_\_\_\_ סופרמרקט.
- .7 בדגניה \_\_\_\_\_ מורים.
- .8 בדגניה \_\_\_\_\_ יום עבודה.
- .9 בבית הספר \_\_\_\_\_ כיתות.
- .10 בבית הספר \_\_\_\_\_ חדר מורים.
- .11 בבית הספר \_\_\_\_\_ קיוסק.

The task aims to drill the structure *יש* or *אין* as well as to revise the vocabulary and employ it in the narrative sentence.

Elementary students commonly find it difficult to find a counterpart of the same language speaking, lexical and grammar level. Moreover, the lack of communication practice triggers fear of being misunderstood or mistaken, thus, the students is more likely to keep silent rather than say something in a wrong way. Chavrusa technology is beneficial in addressing this issue, as both students are of the same level.

The prospects lie in designing a chatbot Aleph-2 students, which implies enhancing already acquired skills, vocabulary broadening, studying past and future tenses, more topics for discussion and preparation for the State Hebrew Proficiency Exam.

## Discussions

LCMS-technologies employed in foreign language studies contribute to teacher's increasing performance and boost the efficiency of educational process.

Chatbot studies are conducted in the form of a dialogue (chat) with the bot in the messenger. Chatbot provides training materials as well as tests the progress in various modes (simulator, exam). Such a dynamic dialogue and opportunity for self-study and revision ensure knowledge retention in students.

Chatbot creates an individual profile for each student in the framework of key competences. All kinds of educational content are tagged and the course finishes with the bot designing an individual educational paradigm for each student. Analyzing students' personal profiles helps to reveal their strong and weak points. It also assists in making up reports of all kinds of profiles: from students' to group or even school ones.

Chatbot is bilingual which adds to understanding complicated grammar structures explained in the language familiar to the student.

Gamification promotes the students are fully plunged into the educational process, eases the way foreign language is taught to a wide range of students, enlarges their scope and all in all, increases the programme's competitiveness. LCMS technology makes foreign language studies available to the audience, regardless of their age, social status, or background knowledge. Low costs make it even more advantageous. Thus, the authors claim LCMS-technologies add to the future of educational computer studies.

The first chatbot proving efficient prompted the authors to design other courses on the BINO platform corresponding to the next level of Hebrew studies.

## **Conclusion**

To conclude we are to emphasize the hypothesis was verified and the educational computer technologies increase the efficiency of education and make Hebrew studies more accessible to a wide range of students.

Unfortunately, research findings show there is no other app that offers content in Hebrew for Russians. We suppose it is because studying Hebrew today has become quite an issue. The majority of foreign languages are studied either for the practical reasons (business, tourism, education, etc.), or to get to know the culture of people inhabiting a country. If to name the first reason as practical, than English will take the leading role dominating the world community. Hobby languages are spoken by a quite small group of people, still, studying them is popular if not to say flashy – Portuguese, Japanese, Korean, etc. Hebrew is rather specific, thus it does not belong to “practical” languages. There are very few business people who need Hebrew for work since the most Israelis are bilingual. Leading Israeli universities hold lectures in English, there are scientific and references resources in English as well. It is the Jews who study Hebrew for self-awareness. Most of them are already repatriates or those who are considering repatriation; there are also those who study Hebrew for the better understanding of the Tanakh, (Hebrew Bible). Hebrew is also studied in Christian religious institutions and by pilgrims..

The abovementioned prompted the authors to design an app to study Hebrew in concordance with the up-to-date educational computer technologies. It is free from geographical, social and educational hurdles.

The empirical study proves relevant due to it resulting in the teaching and resource kit “Pardes” aimed at teaching Hebrew relying on LCMS-technologies in the Telegram-bot. There was an experiment to verify the methodological recommendations on the use of various educational computer programmes being the ways of enhancing the cognitive abilities of students learning Hebrew as a foreign language. The app is

also beneficial for teachers encouraging their students' performance as it expands their understanding of the possibilities of using LMS and LCMS in the process of teaching foreign languages.

The teaching and resource kit "Pardes" received positive reviews both from students and educators. It was also welcomed by Jewish communities, Israeli Ministry of foreign affairs, State Department of Education, Heftziba Department due to its novelty and usefulness. The authors were awarded the title of Teacher of the year-2020.

## References

Azhel' Yu.P. (2016) Ispol'zovanie tekhnologij v prepodavanii inostrannikh yazikov [Technologies in foreign languages teaching]. *Vestnik Tomskogo gosudarstvennogo pedagogicheskogo universiteta*: 1, 396-371.

Volkov D. (2018). Chat-boti v obuchenii: konec zhivogo obshchenia [Chatbots in education: real communication on end]. *EduTech*. 6 (18), 3.

Evdokimova M.G. (2007). Sistema obucheniya inostannim yazikam na osnove informacionno-kommunikacionnoj tekhnologii: tehicheskij vuz, anglijskij yazik [Foreign languages training system relying on information-communication technology: technical university, English language]. Doctoral Dissertation. Moscow.

Ivanova P.O. (2014). Preimuschestva LMS Moodle v sravnenii s drugimi sistemami obucheniya e-learning [Benefits of LMS Moodle in comparison with other e-learning educational systems]. *Voprosy metodiki prepodavaniya v vuze*, 219.

Kodzhasirova G.M. (2014). Tehicheskie sredstva obucheniya i metodika ih ispol'zovaniya: ucheb. posobie dlia stud. vyshch. ped. ucheb. zavedenij [Technical educational tools and the ways to use them: training manuals for higher teachers training institutions]. Moscow: Izdatel'skij centr «Akademia».

Konobeev A.V. (Eds.) (2020) Sozdanie i ispol'zovanie obrazovatel'nogo kontenta: uroki dlya onlajn obucheniya [Creating and employing educational content: online lessons]. Moscow: HSE, Institute of Education.

Khabibrakhimov A. Issledovanie: do konca obucheniya dohodiat ucheniki tol'ko 20% onlajn-shkol [Research: students of 20% online schools only finish their courses] (2019 09. 27) Retrieved from <https://vc.ru/learn/84942-issledovanie-do-konca-obucheniya-dohodyat-ucheniki-tolko-20-onlajn-shkol>

Dokukina I. & Gumanova J. (2020) The rise of chatbots – new personal assistants in foreign language learning. *Procedia Computer Science*. 169, 542-546.

Fryer L.K., Coniam D., Carpenter R., & Lăpuşneanu D. (2020). Bots for language learning now: Current and future directions. *Language Learning & Technology*. 24 (2), 8–22. doi: 10125/44719

Fryer L.K., Nakaob K. & Thompsonc A. (2019) Chatbot learning partners: Connecting learning experiences, interest and competence. *Computers in Human Behavior*. 93, April, 279-289.

Haristiani N. (2019) Artificial Intelligence (AI) Chatbot as Language Learning Medium: An inquiry. *Journal of Physics: Conference Series. International Conference on Education, Science and Technology*. 1387, March, 13–16.

Newton C. Can AI fix education? We asked Bill Gates (2016, 04.25) Retrieved from <https://www.theverge.com/2016/4/25/11492102/bill-gates-interview-education-software-artificial-intelligence>

Petrović J. & Jovanović M. (2020). Conversational Agents for Learning Foreign Languages a Survey. International Scientific Conference on Information Technology and Data Related Research. doi:10.15308/Sinteza-2020-14-22

Pham X.L., Pham Th., Nguyen Q.M. & Nguyen Th.H. (2018) Chatbot as an Intelligent Personal Assistant for Mobile Language Learning. Proceedings of the 2018 2nd International Conference on Education and E-Learning. November. 16–21. doi: 10.1145/3291078.3291115

Ruan S., Willis A, Qian Yao X., Davis G. M., Jiang L., Brunskill E. & Landay J.A. (2019) BookBuddy: Turning Digital Materials Into Interactive Foreign Language Lessons Through a Voice Chatbot. Proceedings of the Sixth (2019) ACM Conference on Learning. 30, 1–4. doi:10.1145/3330430.3333643

Tran T.N., Tran H.P. & Nguyen T.T. (2019) Applying Ai Chatbot For Teaching A Foreign Language: An Empirical Research. *International journal of scientific & technology research*. 8, 12.

Wilson A., Fuhrman O. & Turner K. (2019) Digital tools will never take the place of a good teacher: understanding teacher's resistance to using technology through Glasser's Choice Theory. 42 Int. J. Learning Technology, 14, 1. doi:10.1504/IJLT.2019.10022290