Analysis of 21-Day Word Grid Learning Method

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Abstract. As a matter of fact, mastering the learning methods in a field can greatly increase the speed and efficiency of learning and improvement in the field. Non-native English speakers develop a foundation for the language by acquiring English words. With this in mind, this paper will explain how a non-native English speaker learns to memorize English words on a large scale, i.e., 21-Day Word Grid Learning Method, as well as explain how to use the "21-day word grid learning method" and how this learning method can help learn English words. This study will present a way to learn to use the "21-day word grid learning method" to help one plan the review time reasonably, so that one can memorize words more reasonably and planned, and greatly improve the efficiency of memorizing English words. Overall, these results shed light on guiding further exploration of learning approaches as well as memory enhancement.

Keywords: Word grid; learning method; memory method.

1. Introduction

English is one of the most widely spoken languages in the world. With the progress of human society, excellent English learning methods are constantly being created. For example, a large group of words is divided into multiple groups, and the recitation of a large group of words is achieved by cyclically learning and reviewing the words of each group [1]. Another example is using SRL (self-regulated learning) ability to promote word learning through self-monitoring and control, from pre-thinking to self-reflection [2]. Currently, more and more people are using English APPs to learn words. Statistics from the School of Information of Huaibei Normal University show that using APPs to learn words has gradually become a habit for most non-English major students [3]. It is even more useful to use games to attract people's interest to use the "game method" to learn, review and consolidate words, so that learners can learn words happily with a high degree of concentration [4]. In addition to these, there are also methods of painting to allow scholars to memorize words through association [5]; exaggerated sounds, images, words and expressions to give scholars a strong impact, leaving a deep impression on the words [6]; through "practical practice" "Life" allows scholars to enter a specific language environment to learn words [7]. One can also use the "primacy effect" to deepen your impression of words by being interested in things one sees for the first time [8]. It is also a very good way to improve English by using situations that require active communication [9].

English is a basic language, and words are the basis of English. It is impossible for us to review words regularly every day when one enters society. Actually, it relies on the irregular use of words to avoid forgetting the basics. This paper Will teach to use the 21-day word grid learning method to learn English words. Short-term memory usually lasts less than one minute, while long-term memory lasts for many years or even a lifetime. The 21-day word grid learning method is a memory method that achieves "long-term memory" through regular multiple "short-term memory" learning. The 21-day word grid learning method transforms unfamiliar words and English words that need constant review into English words that can be used irregularly in life and will not be forgotten, so that one does not need to review during a busy day. A sketch is shown in Fig. 1.

The 21-day word grid learning method is based on a "word card storage grid" with 21 rows and 4 columns of entities called "word grid" to provide reminders for review tasks. Each row of the word grid has a different numerical sequence, and each column has a different review period number. When reviewing, oneu can confirm the word group to be reviewed by looking for the corresponding sequence number and period.The following will describe some props and some new "terminology"

nouns that one needs to make before using the word grid, and then teach how to use the word grid to learn English words.

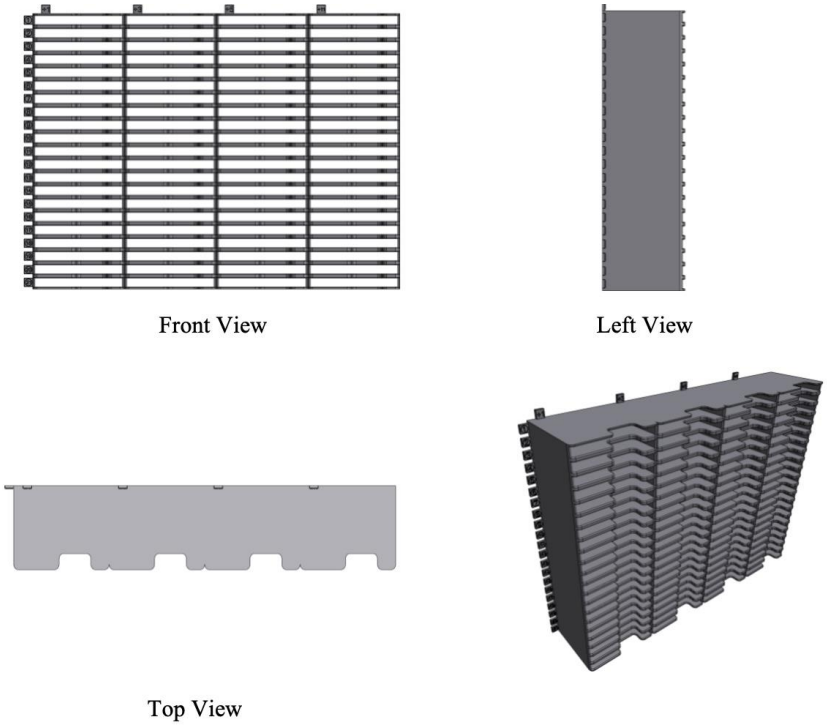


Fig. 1 A sketch of different views for cards.

2. Tools and Exaplanations of the Terms

Word cards is a small piece of paper. One needs to write the English word on the front and the translation on the back. The size can fit into the word grid. The paper should not be so thin that the other side can be seen through the paper. Thr word grid is a "storage box" with the coordinates of this mnemonic with 21 rows and 4 columns. Each row is labeled with a serial number (1 to 21), and each column is labeled "Periodic Math" ("+1", "+3", "+5", "+11" respectively). The size of each small word grid in the word grid is based on the size of the word group produced, as long as it can fit.

Some of the key terms are listed as following:

Memory learning loop. The memory time of instant memory is about one second. It is to conduct instant memory learning of English and its meaning for each word card in the prepared word group until it can be remembered "temporarily" without making any mistakes. This is to confirm that short-term memory is already available. The time for cyclic memory learning will decrease as the number of reviews increases.

Production words. The word groups in the "+11" cycle will undergo a final test. The words that pass the test do not need to be reviewed. One will not see them again. They will be regarded as the output of learning as words that have long-term memory. These words are called production words.

First word group. The first words group refers to the group of words with the longest learning date in a period. If one looks for it visually, it is the top group of words in the continuous word group. If one finds some discontinuous spaces in the middle during long-term use, the first group of words is the continuous word group below and the top word group

3. 21-Day Word Grid Learning Method

The 21-day word grid learning method requires three phase in daily learning, which are: learning phase, periodic review phase, and remove phase. One has to go through these three phases every day using the word grid to learn English words. The learning phase is when one learns the need and make new group of words every day. One writes the words wanted to learn on word cards every day, use

these word cards to form a new word group, and use "memory learning loop" to ensure that this group of words is "temporarily remembered", and then today's learning task It's finished. The period review phase refers to the phase where one needs to review previously learned words every day. One needs to use word grids for review. The following will introduce the use of word grids in detail. The remove phase refers to checking the words that have become long-term memory every day, and removing these words that no longer need daily review from the review plan (seen from Fig. 2).



Fig. 2 Flowchat of the learning process.

The learning phase only needs to learn words in methods of this paper, because there is no need to mention too much, so it will not be described below. The use of the periodic review phase and the remove period phase will be described below. The memory duration of short-term memory is less than one minute. One needs to use “memory learning loop” to memorize and learn the word groups until no word is forgotten in meaning or writing during the loop process. The completion time of a group of words will be about 30 minutes. This time will decrease as the number of reviews increases [10]. It is recommended to have about 30 words, at least 25 words, because if the number of words is too small, it will be difficult for us to memorize a group of words for about 1 minute. If the time to memorize a group of words is too short, it will be difficult for us to memorize them. Determine whether it is short-term memory, because if a group of words is learned in a few seconds, then this group of words is likely to be only instantaneous memory. Instantaneous memory will not leave too deep traces in the brain, but it will not help memory. So the number of words cannot be less than 25.

It is recommended to use about 40-50 words for the best effect, and because the number of words is not large but not too many, after using this memory method for about two months, the vocabulary will increase to about 2700 words, and in daily reading and communication one will often encounter some words one has learned during the course, and one will have a clear sense of short-term benefits, and not be too tired during the learning process. It is a very good number of words to memorize every day. No more than 60 words. For people with strong abilities, it is a very good number, which can make great gains in the shortest time. However, due to the large number of words, it is difficult to control the memory learning loop time of a group of words within a few minutes, which violates. The original intention of using word grids to memorize multiple times of short-term memory to achieve long-term memory will only achieve half the result with half the effort and reduce efficiency. Moreover, this memory method requires long-term and uninterrupted continuous schedule learning. It is a protracted battle. Persistence is the best policy, so it is not recommended. There are too many words in a group. The upper limit cannot exceed 60 words.

4. The Use of Word Grid

The horizontal ordinate of the word grid in the word grid learning method is the review period date, which are "+1", "+3", "+5", and "+11" respectively. "+1" means review tomorrow, that is, review the next day. For example, today is February 2nd, and one has learned a group of new words today, then put this group of words into the "+1" column, which means review the next day, hat is, review is required on February 3. "+3" means review in 3 days, which refers to 3 days after the review date of the word in the word grid that needs to be reviewed that day, that is, 3 days after February 3, which is February 6. "+5" means review after the 5 days, such as review on February 11th. "+11" means review after the 11 days, such as review on February 22th.

Reviewing the next day means studying the same group of words for two consecutive days. Learning the same group of words for two consecutive days can lay a good foundation for short-term memory and pave the way for gradually approaching long-term memory. According to the "Ebbinghaus Forgetting Curve", it is shown that reviewing every other day is very helpful for

memorizing words. Reviewing after three days means that a group of words has not seen each other for 2 days. It can also be said to be the review of a group of words on the 5th day. According to the results of the "Ebbinghaus Forgetting Curve", 77% of the content will be forgotten after one week. The knowledge forgotten in 5 days is less than that in 7 days. That is, nearly half of the words are forgotten during review on the 5th day. In this way, one can not only feel the sense of accomplishment brought by the memorized words, but also be able to find which words are easy to forget and review them, which is close to long-term memory. Review after 5 days, which is 4 days apart from the last review. Since the last review will be close to long-term memory and fewer words will be forgotten, the purpose of this review is to check for omissions and fill in the gaps, and to strengthen the memory of those words that are still easy to forget at this stage. When this stage of review is over, one will have reached the threshold of long-term memory for this set of words.

After the 11th day, one will test the words at this phase. One will not perform "memory learning loop". One will directly write English words based on the translation of the words, and find out the words that are still wrong at this phase, and Put these words into the "+1" column word grid of this word sequence number and let it go through another periods until it is memorized at the end of another phase. At this phase one will also determine which words have not been forgotten after entering the period. One call these words "production words". "Production words" will remove the word grid. One can choose to throw it away or save it, because These words have become long-term memories, and there is no need to learn words and recite words to remember them. These "production words" can be used from time to time in life so that they are not forgotten. According to "New Psycho-Cybernetics", through a 21-day cycle of review, one will become accustomed and natural to the same group of words [10].

The word grid coordinates are composed of serial numbers and periods. The serial number is the ordinate, and the period is the abscissa. The ordinate is composed of serial numbers from 1 to 21, and the abscissa is composed of four periods of "+1", "+3", "+5", and "+11". In this word grid coordinate ("serial number", "period"), "serial number" is the ordinate serial number 1 to 21, and "period" is the abscissa period "+1", "+3", "+5", " +11". For example, the coordinates of the word group in the picture are (8, +5), which can be read as "eight plus five". Make new word groups every day (making word groups includes learning and reciting these words, using "memory learning loop" to learn and recite), and then put them into the word grid "coordinates" corresponding to the review date (the coordinates of the word grid will be prompts one when to review words in the word grid). After making the new word group, review the "first word group" in each cycle, and put it into the new cycle after completing the review. When the word group learning period reaches 21 days, one have successfully mastered a group of words. These words need to be moved out of the word grid and no longer need to be reviewed every day.

The new words learned every day are put into the next free sequence number grid of the "+1" period, and the old words reviewed every day are moved to the next period with the corresponding sequence number of this word group, and this operation is repeated every day. When the word grid is about to be filled with word groups, the previous word groups will make vacant room for the new word groups due to the 21-day learning period, and the word grid can be recycled.

The standard reminder method can only be used on the 20th day of use of the word grid to remind one to review the content every day (the standard reminder method refers to reviewing the "first words group" in each periods every day, and each periods in the first 19 days The "first words group" in does not correspond to the real review date), so a special method needs to be used to mark the review date in the first 19 days. When one first uses the word grid, there are no stored words in the word grid. There is no way to use the prototype to simply find the word corresponding to the review date. Therefore, one need to use the calendar to record the review date of the word in the first 19 days of using the word grid,until a prototype is established. After one study or review words every day, one will put the word group into the word grid corresponding to the next review date. The period of the word grid indicates how many days to review. One only need to know today's date, and then add the corresponding coordinates of review periods number backwards, just mark the coordinates on this

date. In this way, when one look at the date on this day, one will know which words to review today. For example, today is February 2nd, Today, one reviewed the word group with coordinates (13, +3). After the review is completed, it will be placed in the word grid with coordinates (13, +5). Then one will plus 5 days for February 2nd (the date is February 7th), and then one write the coordinate (13, +5) on the calendar on February 7th place to indicate that the word group with the coordinate (13, +5) will be reviewed on February 7th. The prototype of the word grid is shown in the Fig. 3.

	+1	+3	+5	+11
1				Words
2				Words
3				Words
4				Words
5				Words
6				Words
7				Words
8				Words
9				Words
10				Words
11				Words
12			Words	
13			Words	
14			Words	
15			Words	
16			Words	
17		Words		
18		Words		
19		Words		
20	Words			
21				

Fig. 3 The prototype of the word grid.

Actually, if one finds it more convenient to use a calendar to record review dates during the learning process, then one can always use the calendar to record. In this way, one can ignore the concept of "first words group" to find the review date after building the prototype. However, for long-term users, finding the "first words group" could be time saving and may be more convenient and efficient. In this stage (after 19 days), the word grid has taken the prototype. When reviewing, one only need to review the “first words group” in each period, and then put the completed word groups into the next period. One only needs to follow the principle of "learn new words every day and review the 'first words group' in each column" to simply find the review target.,then calendar records are no longer needed. The detailed steps are explained. For five dayys, one needs to make new word group (including learning and memorizing). After the "memory learning loop" of the new word group is completed, it is placed in the word grid with coordinates (1, +1) (indicating that this group of words needs to be reviewed the next day). The word grid should look like the picture below at the end of the first day.

Then 2 days, one needs to make new word group (including learning and memorizing). After the "memory learning loop" of the new word group is completed, it is placed into the next vacant word grid in the "+1" period (the coordinates are (2, +1), indicating that this group of words needs to be reviewed the next day). Review the word group that needs to be reviewed today (coordinates are (1, +1)). After the review is completed, move to the next period of this sequence number (the word grid with coordinates (1, +3), indicating review in three days). The word grid should look like the picture below at the end of the second day.Third day, one need to make new word group (including learning and memorizing). After the "memory learning loop" of the new word group is completed, it is placed into the next vacant word grid in the "+1" period (the coordinates are (3, +1), indicating that this group of words needs to be reviewed the next day). Review the word group that needs to be reviewed today (coordinates are (2, +1)). After the review is completed, move to the next period of this sequence number (the word grid with coordinates (2, +3), indicating review in three days). The word grid should look like the picture below at the end of the third day. Fourth day, one needs to make new word group (including learning and memorizing). After the "memory learning loop" of the new word

group is completed, it is placed into the next vacant word grid in the "+1" period (the coordinates are (4, +1), indicating that this group of words needs to be reviewed the next day). Review the word group that needs to be reviewed today (coordinates are (3, +1)). After the review is completed, move to the next period of this sequence number (the word grid with coordinates (3, +3), indicating review in three days). The word grid should look like the picture below at the end of the fourth day. The fifth day, one needs to make new word group (including learning and memorizing). After the "memory learning loop" of the new word group is completed, it is placed into the next vacant word grid in the "+1" period (the coordinates are (5, +1), indicating that this group of words needs to be reviewed the next day). Review the word group that needs to be reviewed today (coordinates are (4, +1) and (1,+3)). After the review is completed, move to the next period of this sequence number (the word grid with coordinates (4, +3) and (1,+5), respectively means review after three days and review after five days). The word grid should look like the picture below at the end of the fifth day.

Day six to Day nine, one can repeat the above method from the sixth to the ninth day, making a new group of words and reviewing two group of old words every day. The Ninth day, one needs to make new word group (including learning and memorizing). After the "memory learning loop" of the new word group is completed, it is placed into the next vacant word grid in the "+1" period (the coordinates are (9, +1), indicating that this group of words needs to be reviewed the next day). Review the word group that needs to be reviewed today (coordinates are (8, +1) and (5,+3). After the review is completed, move to the next period of this sequence number (the word grid with coordinates (8, +3) and (5,+5), respectively means review after three days and review after five days). The word grid should look like the picture below at the end of the ninth day. The Tenth day, one needs to make new word group (including learning and memorizing). After the "memory learning loop" of the new word group is completed, it is placed into the next vacant word grid in the "+1" period (the coordinates are (10, +1), indicating that this group of words needs to be reviewed the next day). Review the word group that needs to be reviewed today (coordinates are (9, +1), (6,+3) and (1,+5). After the review is completed, move to the next period of this sequence number (the word grid with coordinates (9, +3), (6,+5) and (1,+11), respectively means review after three days, review after five days and test after eleven days). The word grid should look like the picture below at the end of the tenth day. Day eleven to Day twenty, one needs to repeat the above method from the eleventh to the twentieth day, making a new group of words and reviewing three group of old words every day. The Twentieth day, one needs to make new word group (including learning and memorizing). After the "memory learning loop" of the new word group is completed, it is placed into the next vacant word grid in the "+1" period (the coordinates are (20, +1), indicating that this group of words needs to be reviewed the next day). Review the word group that needs to be reviewed today (coordinates are (19, +1), (16,+3) and (11,+5)). After the review is completed, move to the next period of this sequence number (the word grid with coordinates (19, +3), (16,+5) and(11,+11), respectively means review after three days, review after five days and test after eleven days). The word grid should look like the picture below at the end of the twentieth day. At the end of the twentieth day, the prototype of the word grid has been established. After that, one only need to learn new words every day and then put them into the "+1" period free word grid, and review the "first words group " in each column and then move just get to the new period. The 21st day, one needs to make new word group (including learning and memorizing). After the "memory learning loop" of the new word group is completed, it is placed into the next vacant word grid in the "+1" period (the coordinates are (21, +1), indicating that this group of words needs to be reviewed the next day). Review the word group that needs to be reviewed today (review the "first word group" for each period,coordinates are (20, +1), (17,+3) and (12,+5). After the review is completed, move to the next period of this sequence number (the word grid with coordinates (20, +3), (17,+5) and (12,+11), respectively means review after three days, review after five days and test after eleven days). Test the word group that needs to be test today (check the "first word group" of the "+11" period, the coordinates are (1, +11)). After the test is completed, the words that still have errors are moved back to the word grid of the "+1" period (coordinates are (1, +1)), and the words that pass the test are moved out of the word grid. The word grid should look like the picture

below at the end of the 21st day. Never use "memory learning loop" to test words. The word test follows the "one pass" principle. Write the words according to the translated meaning. After writing all the words, compare the word groups to check the answers, and then distinguish the "passed" and "failed" words. The word grid occupied by words that need to be relearned due to errors during the test are still regarded as "vacant word grid". These words will be put together with the new word groups made the next day to start a new review period. From the 21st, in addition to making new word groups every day, one also need to test the word groups of the "+11" period every day, and then put the “failed” words into the first period of this sequence number learn again, and the “passed” words are moved out of the word grid as "production words".

22st day, one needs to make new word group (including learning and memorizing). After the "memory learning loop" of the new word group is completed, it is placed into the next vacant word grid in the "+1" period (The newly created word group is merged with the “failed” words during yesterday's test and placed into this word grid., the coordinates are (21, +1), indicating that this group of words needs to be reviewed the next day). Review the word group that needs to be reviewed today (review the "first word group" for each period,coordinates are (21, +1) 、(18,+3)and(13,+5)). After the review is completed, move to the next period of this sequence number (the word grid with coordinates (21, +3),(18,+5) and (13,+11), respectively means review after three days, review after five days and test after eleven days). Test the word group that needs to be test today (check the "first word group" of the "+11" period, the coordinates are (2, +11)). After the test is completed, the words that still have errors are moved back to the word grid of the "+1" period (coordinates are (2, +1)), and the words that pass the test are moved out of the word grid. The word grid should look like the picture below at the end of the 22st day. Repeat the above method in the future, recycling this word grid, making a new group of words each day and reviewing three group of old words, and then testing one group of words.

This learning method has the added benefit, one only needs to learn one group of new words on the first day and no review is required. Starting from the second day, while learning new words every day, one needs to review one group of words every day. Starting from the 5th day, one needs to learn one group of new words plus two group of review words per day. Starting from the 10th day, one needs to learn a group of new words plus 3 group of review words every day. Starting from the 21st day, one needs to learn one group of new words plus 4 group of review words every day. The learning time can be controlled to about 3 hours, and the learning amount will only be controlled to one group of new words plus four group of review words. The time and amount of learning increase slowly and appropriately step by step, and the amount has maximum value. One will not get tired as one learns, which is very practical.

5. Remove Period and Comments

Groups of words that pass the final stage of the word grid are considered to have long-term memory. These words will no longer need to be learned, but will be removed from the word grid as words that have been mastered. These words can be thrown away or saved because these words It has become a long-term memory, and there is no need to learn words and recite words to remember them. These "production words" can be used from time to time in life so that they are not forgotten. In the future life, some of the words one has memorized may feel forgotten because they have not been used for a long time, but don’t worry, because these words were long-term memory words and have left a deep memory in the depths of your mind. They are not forgotten, they are just unskilled, so they can be restored to the long-term memory state by just remembering them momentarily again.

Advantage and Disadvantage are listed as following:

Advantage

One can easily and clearly know what one need to review every day.

The learning progress can be seen intuitively with the naked eye.

The number of words slowly increases, and learning words becomes easier.

Greatly reduce the anxiety caused by not knowing what to review during review.

Gradually increase your confidence in learning words.

Disadvantage

If the use of word grid is interrupted due to some things, the review period will be disrupted, resulting in a significant reduction in learning efficiency.

The coordinates of putting the word group into the word grid cannot be wrong. Once there is an error, the review date of the word group will be confused, which will seriously affect the later word review.

The word grid is large and inconvenient to carry.

6. Conclusion

Based on the "21-day word grid learning method" one needs to learn new words and review old words every day. The criterion for completing word learning and review is whether one has short-term memory, which is acquired through memory learning loop. After the study and review are completed, put the word group into the word grid for the next review. Use the word grid to easily remind us of what one reviews every day. Until a group of words has long-term memory, one no longers need to study it. Using this learning method, one will no longer be anxious about not knowing which words to review, and it will greatly reduce our anxiety about the fear of forgetting words, gradually enhance your confidence in learning words, and make one like learning words process. However, the biggest limitation is that the word grid is large and inconvenient to carry around, which may be a huge annoyance for users who are on business trips and often busy. In future research, one needs to improve the word grid and reduce its size to make it easier to carry.

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