Sleeping Beauty: Vocabulary learning strategies

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This study provides

- a brief description of the development of research on vocabulary learning strategies
- the results of a small-scale study on EFL learners' preferences of vocabulary learning strategies
- a newly combined taxonomy of vocabulary learning strategies with explanations

1. Rationale

Vocabulary learning strategies (VLS) used to be a vivid and fruitful research field back in the 1990s (Griffith, 2008). Recently, however, the research area has been undergoing a conceptual shift, since new concepts, such as learner self-regulation capacity, have become more prominent. However, vocabulary learning strategies are still deeply rooted in pedagogical discourse (Tseng et al., 2006). Consequently, the concept seems to have taken on the role of sleeping beauty in pedagogical research (Tseng et al., 2006), slumbering unseen behind many didactic actions in vocabulary teaching. Therefore, it appears to be of relevance to recapitulate the development of VLS. Moreover, the article will present the results of a small n-study on VLS preferences of advanced EFL learners.

2. Development of research on VLS

The following chapter will introduce a theoretical baseline of different attempts to categorize VLS, which is crucial for a thorough understanding of the study presented. An early attempt at a categorization of different learning strategies was made by Oxford (1990), who is one of the key researchers in the field. She distinguishes between direct and indirect strategies, which can be further diversified to memory strategies, social strategies, affective strategies, metacognitive strategies, compensation strategies and cognitive strategies as can be seen in Diagram 1.

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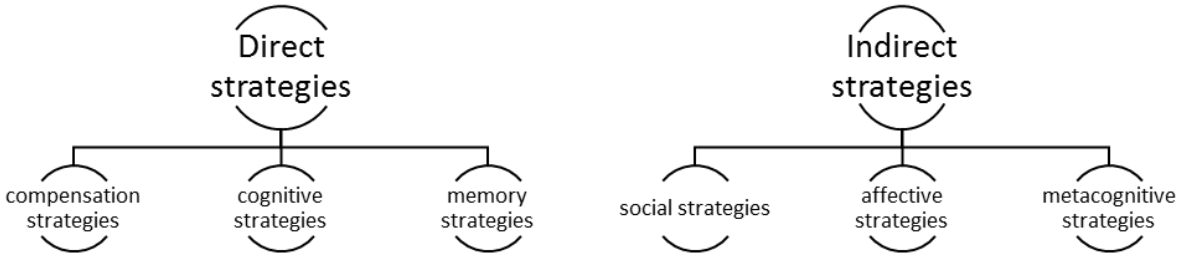
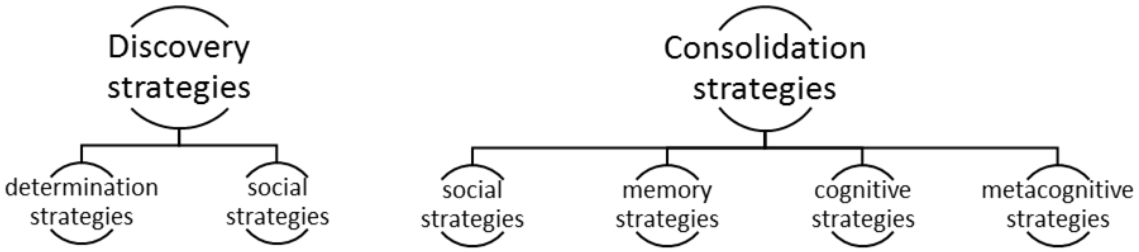
Diagram 1: Oxford's (1990, p. 15) strategy taxonomy



Schmitt (1997; 2011) builds on Oxford's work in his taxonomy of VLS, which has become widely known and cited. He distinguishes between VLS to discover new words of a language, named discovery strategies, and consolidation strategies, which are used to remember the newly introduced items, as can be seen in Diagram 2.

Diagram 2: Schmitt's (2011, p. 204-206) strategy taxonomy



These two groups comprise different strategies adopted from Oxford (1990), namely social, memory, cognitive and metacognitive strategies. Schmitt argues that to discover the meaning of a new word students can either use social strategies, which involve social interaction or they can use so-called determination strategies, which are approaches to new words where "learners must use their knowledge of the language, contextual clues, or reference materials to figure out the new meaning" (Schmitt, 2011, p. 206). To consolidate this newly acquired knowledge, students can again use social strategies, memory strategies, which involve generation of associations, links to prior knowledge and visualization, or cognitive strategies, which are concerned with repetition. Additionally, Schmitt (1997) applies Oxford's (1990) notion of metacognitive strategies in his VLS taxonomy, which are strategies that are related to general learning, such as "planning, monitoring or evaluating the best way to study" (p. 206). Based on this taxonomy Schmitt (1997) compiles a list of 58 VLS.

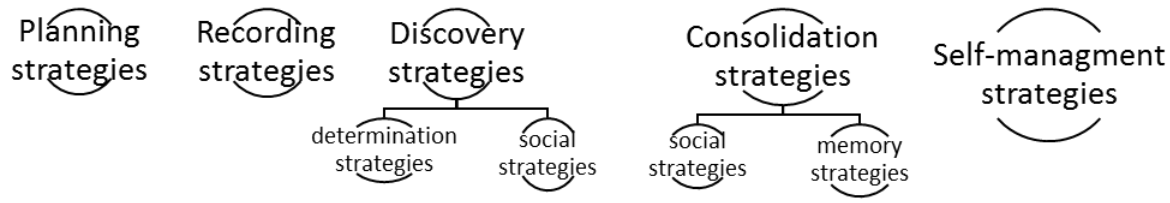
While this taxonomy of vocabulary strategies appears to be quite elaborate overall, one component, namely metacognitive strategies, can be further diversified. As stated above Schmitt (1997) subsumes all processes related to planning, monitoring or evaluating learning under metacognitive strategies. Nation and Gu (2007) and Nation (2013) diversify this category by splitting metacognitive strategies into planning strategies and self-management strategies. While planning strategies involve steps from choosing a word to planning time and type of repetition, self-management strategies are concerned with students' self-reflection and control of their learning processes (Nation & Gu, 2007). In particular they differentiate between five different self-management strategies, namely commitment control, metacognitive control, satiation control, environment control and emotion control strategies (Nation & Gu, 2007).

Commitment control strategies are supposed to keep the student focused on the learning task. Similarly, metacognitive control strategies are used to enhance concentration and learning motivation. Satiation control strategies are used to adapt learning tasks to make them more exciting. Additionally, learners can optimize their learning environment to enhance learning success, which would count as environment control strategies (Nation & Gu, 2007). The last category, emotion control strategies, can be equated to affective control strategies, as used by Hong-Nam and Leavell (2006) and Oxford (1990), which involve strategies to elicit positive emotions.

These five concepts also form the basis of Tseng et al.'s (2006) approach to develop a measurement tool of learners' self-regulation capacity. As already stated briefly in the introduction, research on strategic vocabulary learning has moved away from focusing on the product, namely the actual choice of VLS, to the examination of "learners' innate self-regulation capacity that fuels their efforts to [use] personalized strategic learning mechanisms" (Tseng et al., 2006, p. 79), such as VLS. Hence, instead of investigating the what, research has moved on to the question why learners choose particular strategies. However, although the research field might have moved on to take a wide-angle picture of strategic vocabulary learning, pedagogical discourse still incorporates close-ups of the phenomenon, when aiming to equip learners with VLS to enhance their learning success.

In addition to the incorporation of self-management strategies into a potential taxonomy of VLS, one fundamental part of vocabulary learning still seems to be missing, namely recording strategies. Students might differ in the way they record new words, such as verbal or written recording of all sorts. By subsuming all these thoughts and approaches the following process-oriented taxonomy of vocabulary learning strategies was developed.

Diagramm 3: Vocabulary learning strategy taxonomy(Ghamarian, 2016)



Regarding the sequence of these VLS categories in the learning process of new words one needs to say that the order how the VLS are applied does not have to be linear from left to right. Using the example of recording strategies one can see that their placement is ambiguous, since students might use recording strategies after the discovery of the meaning of a word but it is also possible that students select a specific recording strategy out of habit, convenience or on purpose before even investigating the new word more closely. Hence, the recording strategy chosen could have a guiding or possibly also a limiting effect on what aspects of word knowledge a student is aiming to discover about a new word in a next step.

3. Empirical study

Based on this taxonomy of VLS a small-scale study on advanced EFL learners' preferences of VLS was conducted. In particular, the following research questions were investigated:

RQ1

How frequently do advanced EFL learners report using the five categories of VLS mentioned in the taxonomy?

RQ2

Which VLS are reported to be used very frequently in each of the five categories?

RQ3

Do participants' preferences vary dependent on their sex?

4. Methodology

To answer these research questions, 27 female and 10 male English major students at the University of Vienna were asked to complete an online questionnaire on their use of VLS. While most participants had attended a secondary school, 9 students had received their school leaving qualification at a vocational school. The questionnaire comprised multi-item scales on 64 different VLS, which could all be assigned to one of the five VLS categories of the taxonomy. All VLS considered can be found in the application box at the end. Participants were asked to indicate how frequently they use a particular VLS on a six-point Likert scale ranging from I always use this strategy when learning vocabulary to I never use this strategy when learning vocabulary. A reliability analysis of the questionnaire revealed that the categories could be considered to be consistent with a Cronbach alpha (α) above 0.5, as can be seen in Table 1.

Table 1: Reliability analysis of questionnaire

Planning strategies	Recording strategies	Discovery strategies	Consolidation strategies	Self-management strategies
.56*	.68*	.65*	.88*	.90*

5. Results

Regarding RQ1 on students' use of the five different VLS categories, participants on average reported to use discovery strategies the most (*M 3.0, S 1.26*) followed by planning strategies (*M 3.25, S 1.26*), consolidation strategies (*M 4.31, S 1.41*), recording strategies (*M 4.5, S 1.05*) and lastly self-management strategies (*M 5.19, S. .53*). For interpreting the means and standard deviations in brackets, it is important to consider that *I always use this VLS* was coded with 1 and *I never use this VLS* with 6. Hence, the higher the mean is the less frequently the category was used.

Considering preferences of VLS within each of the five categories, participants reported to *almost always consider the aspects of a word which are most useful for them* (*Mdn 2*) when planning vocabulary learning. Additionally, participants stated that they often *choose the words they want to learn consciously* (*Mdn 3*) and that *they know how to choose, adapt and combine their vocabulary strategies* (*Mdn 3*).

When recording words students often *did not collect a word in an organized from but repeated it by writing it down* (*Mdn 3*). Only sometimes students *kept an organized word list* (*Mdn 4*) but as often they did not even write new words down but claimed to *repeat them orally* (*Mdn 4*).

When asked about their preferences in relation to discovery strategies students almost always *guessed word meaning from context* (*Mdn 2*), tried to *recall a similar word in their L1 or other languages known* (*Mdn 2*), *used available illustrations* (*Mdn 2*), *asked a teacher* (*Mdn 2*) or *simply ignored or skipped the word* (*Mdn 2*). However, participants also stated that they *used reference sources* (*Mdn 3*) at least often.

Regarding consolidation strategies students indicated that they always *listened to English with the intention to remember newly encountered items* (*Mdn 1*). Moreover, they *learned the pronunciation of the new words by speaking them out loud* (*Mdn 2*) and they *intentionally used extensive reading* (*Mdn 2*) or *watched English movies to increase their vocabulary knowledge* (*Mdn 2*).

Self-management strategies were used relatively infrequently overall but the most frequently used strategy of this category was that students *regularly reminded themselves of the value of achieving success in vocabulary learning* (*Mdn 4.5*).

On basis of the descriptive tendencies found it was additionally interesting that significant differences dependent on participants' sex regarding VLS preferences could be found. An independent t-tests (Field, 2018, p.453), revealed that female students used not only significantly more strategies overall but also displayed a clear preference of planning ($t(37) = -2.804$, $p = .012$), recording ($t(37) = -2.434$, $p = .020$) and self-management strategies ($t(37) = -2.669$, $p = .011$) in comparison to their male counterparts. All assumptions (Field, 2018, p.453) of the statistical tests were given. These findings are similar to the ones in Gu (2002).

For all three significant results effect size was calculated, showing a reasonably high effect size, with a Cohen's d of 1.026, 1.019 and 1.145. According to Field (2018) Cohen's d is small from 0-0.49, medium from 0.5-0.79 and large from 0.8 onwards (p. 114). Hence, the gender difference in all three vocabulary strategies shows a large effect size.

6. Discussion

Analyzing the results presented above suggests that advanced EFL learners of English do not use a large amount of recording strategies anymore when studying vocabulary but do seem to perceive working on their vocabulary as a means to acquire better language skills and understanding in general. At a first glance using discovery strategies the most might contradict this conclusion but looking at the most frequently used discovery strategies reveals that students choose the VLS that might require the least amount of time first and only if this does not work and they see the necessity to use a reference source. Similarly, consolidation strategies used all point towards a more implicit approach towards vocabulary learning. Hence, one could argue that advanced EFL learners tend not to study vocabulary explicitly anymore but adapt their VLS to their need to complete other language tasks. However, further research needs to be conducted on the role of explicit and implicit vocabulary learning of advanced EFL learners to confirm these suggestions.

Application Box

Planning strategies:

1. Consciously choose a word
   Ex. Students do not choose a word randomly to complete a task but do choose to learn a specific word on purpose.
2. Consciously choose aspects of word knowledge
   Ex. Students have the goal to improve their writing skills and consciously decide to focus on various concepts and referents of a word.
3. Consciously choose strategies.
   Ex. Students adapt strategy use to the goal at hand.
4. Plan repetition
   Ex. Students plan to revise newly learned words strategically.

Recording strategies:

1. Verbal repetition
   Ex. Students do not record new words but repeat them orally.
2. Written repetition
   Ex. Students write down new words but not in an organised manner.
3. Word lists
4. Flash cards
5. Stick sheets on objects
   Ex. To learn nouns students stick post-its on objects.
6. Keep a notebook/issue log

Discovery

• Determination strategies (DET):

1. Analyse grammar of part of speech
   Ex. Students analyse to which word class a new word belongs to restrict possible meaning.
2. Analyse word parts
   Ex. Students divide a word into its individual parts to make inferences about its meaning.
3. Check for L1 cognate or another language
   Ex. Students search for a suitable word in their L1 or LX.

Consolidation:

- Social strategies (SOC):
  1. Study in a group
  2. Study with a native speaker
  3. Act out role plays
     Ex. Students might act out role plays incorporating newly learned words.
  4. Prepare talks with the vocabulary
     Ex. Students might prepare short talks incorporating newly learned words for each other.
  5. Interact with a native speaker
  6. Interact with a friend in English
  7. Translations
     Ex. Students might attempt to translate a text to remember new words.

- Memory strategies (MEM):
  8. Study words with pictorial representation
     Ex. A student studies the word sun and draws a sun next to it.
  9. Visualise a word meaning
     Ex. For more complex words, a student might try to visualise a word's meaning.
  10. Connect word to a personal experience
  11. Use semantic maps
      Ex. Students might link semantically related words in a semantic map.
  12. Associate words with coordinates
  13. Connect word to synonyms and antonyms
  14. Use scales for gradable adjectives
      Ex. Students fill in grids for gradable adjectives.
  15. PEG Method
      Ex. Students memorize a rhyme.
  16. Keyword Method
      Ex. Students try to find a similarly sounding or looking

4. Analyse available pictures
   Ex. Students make use of graphical representations attached to a text to make inferences about word meaning.
5. Guessing
   Ex. Students are guessing a words meaning from context.
6. Consult a reference source
7. Skip the word
8. Check for defining words or phrases in the text.

- Social strategies (SOC):

1. Ask the lecturer or an external teacher
2. Ask classmates or friends
3. Ask a native speaker

Self-management strategies

1. Commitment control strategies
   Ex. Students regularly remind themselves of their learning goals.
2. Metacognitive control strategies
   Ex. Students try to monitor concentration
3. Satiation control strategies
   Ex. Students use relaxation techniques when learning
4. Affection control strategies
   Ex. Students try to generate positive emotional reactions when learning.
5. Environment control strategies
   Ex. Students adapt their learning environment.

word in their L1, which functions as keyword.

17. Group words spatially
    Ex. Students order words spatially according to shared or divergent features.
18. Use new word in a sentence
19. Group words within a storyline
20. Study spelling
21. Study sound
22. Imagine the word form
    Ex. Students try to remember the visual form of a word.
23. Underline initial letter
    Ex. Students underline the initial letter of words to remember them.
24. Remember the context in which the word was encountered
25. Remember word parts
26. Use cognates for studying
    Ex. Students use cognates of their L1 or Lx to remember similarities or differences of a word's use in different languages.
27. Learn idioms and collocations for a word
28. Use physical action to remember
29. Use sematic feature grids
30. Use pre-existing practice material
    Ex. Students use sentence competition activities.
31. Use paraphrasing
32. Use look and recall strategy
    Ex. Students look at words very shortly and try to recall as many as possible.
33. Extensive Reading
34. Glossing
35. Listen to music
36. Watch movies
37. Write private correspondences

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