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'WONDER WORDS': LEVERAGING ADVANCED LEARNERS' EXTRAMURAL ENGLISH ENGAGEMENT FOR VOCABULARY LEARNING

Abstract

The role of English has changed dramatically over the last few decades. It is now the most common global lingua franca, and alternative approaches may therefore be needed in English language teaching which take this new status into consideration. This paper reports on the integration of an element of 'wonder pedagogy' into an L2 English language class for advanced learners by means of a specially designed task sequence. A small-scale mixed-methods study was carried out to determine the effectiveness of this innovation. The results indicate that while the wonder pedagogy tasks had a positive impact on learners' engagement with English outside the classroom, learners will need more support and opportunities to practice in order to achieve sustainable learning gains.

Key words: Wonder pedagogy; Extramural English (EE); advanced learners of English; independent vocabulary work

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1. Introduction

The way English is used today is different from the past. As the most common lingua franca, it is used in many different domains and channels, from social media to international travel and business. In addition, we cannot overlook the widespread adoption of generative AI tools that are English-based in many cases. These developments particularly affect younger generations:

> Today's lifeworlds of young people integrate an online, typically English-speaking, element. This revolves heavily around watching series and videos in the English original, as well as gaming with other users, frequently employing English as a lingua franca. […] Overall [this] challenges the role of English as a purely foreign language for school learners. English increasingly takes on the status of a second language, present in the young learners' digital lifeworlds. (Schurz et al. 2022: 13)

Being constantly surrounded by the target language in this way may seem ideal for L2 English learners' language development, but perhaps counter-intuitively, this situation has actually been found to present challenges as well as the expected opportunities for English Language Teaching (ELT). One reason for this is that learners who are habitual and successful users of English outside the classroom may feel sufficiently competent as users of English and therefore not be motivated to work on their language skills further in class. This can be assumed to be particularly true of very advanced learners of English. As there are high levels of L2 English all across Europe, this can be expected to be a growing group of learners.

Even now, we can already see that confident learners are posing new challenges for language teachers as they show limited motivation to work on their language skills in a school setting. Research from the Nordic countries indicates, for example, that "[s]tudents do not believe that they can learn more English in school than they do playing English-language video games or watching American television series" (Peterson & Beers Fägersten 2024), and teachers in such contexts have reported struggling with this challenge (Haukås et al. 2022).

Current ELT methodologies which put emphasis on communicative competence are not helpful in this situation. Relatedly, Marr and English (2019) point out that because of the global importance of English in

educational and professional settings, there has long been a tendency to position English as "a product for consumption, widely marketed as bringing benefits and advantages" (Marr & English 2019). This utilitarian view of English does not inspire learners to continue working on their language skills once they deem their communicative competence sufficient for their goals. Thus, classic 'communicative' methodologies may be out of step with the way the learners of today use English, and new approaches may be needed.

This paper reports on one such new approach, namely, the integration of an element of 'wonder pedagogy' into an L2 English language class for advanced learners of English by means of a specially designed task sequence. A small-scale mixed-methods study was carried out to determine whether this wonder pedagogy task sequence had a positive impact on how the advanced learners were able to leverage their out-of-class English activities for vocabulary learning.

1.1. Extramural English (EE) and ELT

As language educators strive to ensure the relevance of their classes for their learners, interest in 'extramural English' (EE) has grown. EE is defined as the English which "the learner comes in contact with or is involved in [...] outside the walls of the English classroom" (Sundqvist & Sylvén 2016: 6), both offline and online. Research has found that the informal input learners receive during EE activities by now far exceeds the input they receive in their English lessons in school (Smit & Schwarz 2020). For example, in Austria, a recent study shows that 15/16-year-old teenagers spend more than four hours per day engaging with English (e.g., gaming, posting on social media) on average (Schwarz 2020).

Numerous studies now seem to indicate that learners benefit from EE engagement in different areas of language competence (in the Austrian context see, e.g, Ghamarian-Krenn 2023 and Ghamarian-Krenn & Schwarz 2024 for academic vocabulary development; for a more comprehensive overview, see Schurz et al. 2022 and Hannibal Jensen & Lauridsen 2023). Not surprisingly, this has led to suggestions that teachers should aim to close the gap between EE and their classroom (Sundqvist & Olin-Scheller 2013) to enhance the relevance of their teaching for their learners' lives and strengthen their motivation. However, as a recent study of Norwegian learners in vocational education found, learners may resist teacher

initiatives that bring EE into the classroom, "with many rejecting the idea of incorporating EE, particularly social media, into classroom instruction", instead preferring "leveraging EE engagement in support of formal English instruction at school" (Rød & Calafato 2025: 6).

In line with these arguments, the teaching sequence presented in this paper does not aim to bring EE into the classroom. Rather, it is designed to guide advanced learners' engagement with EE and equip them with the skills they need to benefit as much as possible from their EE engagement for their independent language development during their time in formal education and beyond. To this end, an element of 'wonder pedagogy' is introduced in one of their language classes.

1.2. 'Wonder pedagogy' and its potential for ELT

It may not be not immediately obvious why 'wonder pedagogy' might be a good fit for teaching English to advanced learners at university level. In the popular imagination, the experience of wonder is often associated with young children, as Schinkel (2021, n.p.) writes: "Search the internet for images supposed to capture the experience [of wonder] and you will come away with the impression that wonder is a fluttery feeling proper to young children chasing butterflies through fields of gold, otherwise indulged in only by hopeless romantics."

In terms of learning sparked by wonder, the idea is probably most familiar to many adults today from the US educational children's programme *Mr Rogers' Neighborhood* which ran on NET/PBS from 1968 to 2001. The creator and host, Fred Rogers, based the programme on insights from learning science. He believed in the value of curiosity and wonder for learning, and one of his songs sums up this philosophy for his young viewers, telling them that "[w]hen you wonder, you're learning" (Behr & Rydzewski 2021: 16).

In formal learning settings, wonder pedagogy has enjoyed some popularity for young learners, particularly in science teaching, although even there, a recent systematic literature review found a lack of a clear understanding of what defines the term wonder and how it can be fostered in education (Bjerknes et al. 2023). An explanation and concrete examples of wonder pedagogy are provided in a report by the Open University on innovations educators should be aware of. In the report's section on 'learning through wonder', the focus is once again on younger learners:

> A wondrous event, such as seeing a brilliant rainbow or a majestic mountain waterfall, creates an experience that provokes interest and curiosity. By questioning and investigating encounters in the everyday world, a child's desire to understand leads to learning. A nature walk can reveal patterns, such as spirals, fractals, waves, bubbles, and cracks that are at once beautiful and open to mathematical modelling. Visual illusions and magic tricks with familiar objects can provoke questions of causality, action at a distance, and free will. Such wondrous encounters motivate learners to see a phenomenon from many different perspectives. Teachers can include wonder in learning activities […]. (Ferguson et al. 2019: 4)

Schinkel stresses that this association of wonder exclusively with the learning of children is problematic: "The problem with [the] common perception of wonder is that it grossly underestimates the importance of wonder for adolescents and adults, and therefore also its potential importance in higher education (HE)." (Schinkel 2021: n.p.).

If the popular understanding of wonder is replaced with a more general definition, the suitability of wonder pedagogy for adult learners in higher education becomes clearer. In a pedagogical sense, "the state of wonder can be understood as an emotionally laden, rewarding mental state of pondering upon [one's] discoveries with astonishment and excitement about embarking on further deeper enquiry"; it can never be satisfied fully in that a learner's discoveries always generate new questions to wonder about (Bazhydai & Westermann 2020: 151). In that sense, wonder pedagogy can actually be said to be very appropriate for higher education which demands deep engagement with the material studied and independent thinking. In a similar vein, Copper et al. (2021) also point out how well wonder fits in with Bloom's higher-order thinking skills such as reflecting, discovering, exploring and creating. McFall's (2014) description of the phases of wonder tasks point in a similar direction:

- **Anticipation**: a sense that something is going to happen and a desire to know more.
- **Encounter**: the moment of experiencing the wondrous.
- **Investigation**: pursuit of the wondrous, to understand it better or to continue the experience.

- **Discovery**: coming to understand, or realise how much more there is to know.
- **Propagation**: continued working with this wonder, to share and celebrate.
(cited in Ferguson et al. 2019: 22).

These stages also focus on how the experience of wonder leads to a desire to engage more deeply with the phenomenon that sparked wonder and a realization of the limits of one's knowledge.

Another relevant aspect of wonder in a pedagogical sense is that "[e]verything can become a source of wonder" (Hadzigeorgiou 2020: 191). This includes even "the ordinary everyday phenomena that are rarely contemplated" (Gilbert 2020: 214). Together with its emphasis on the open-endedness of learning, this makes wonder pedagogy a good fit for learners of English today who are so steeped in English that they may no longer pay as much attention to it as language teachers would like them to:

> [I]t would seem that a curriculum chosen to bring out the sense of wonder will likely incline us to select content that exemplifies the extremes of human achievement and natural phenomena. But it can also direct us to bring out the wonder of the everyday world around students. Much of the world is so taken for granted that it is hardly noticed. (Egan 2014: 157)

Thus, introducing wonder pedagogy to advanced learners of English can potentially help to combat the lack of a deeper interest in English discussed in the introduction, particularly if it can be linked to learners' EE engagement.

1.3. Wonder words task sequence

The potential of wonder pedagogy for language learning has not yet been widely explored, but Plutino's (2021) report on a language and cultural studies project is a notable exception. The sequence described in this paper is loosely based on Plutino's (2021) approach. The aim of the task is to leverage advanced learners' EE engagement for vocabulary learning by encouraging them to wonder about English words and phrases they encounter and to stimulate independent language learning in this way. The task sequence comprises the following steps:

(1) English language diary

The learners record their EE activities, i.e., their encounters with English in their free time, for a specific period of time (e.g., two days). Encounters with English in formal educational settings (university classes, tutoring, etc.) are explicitly excluded. The learners write a short narrative account of all the activities they use English for every day, including a brief discussion of their thoughts and emotions when using English.

(2) Wonder words list

While they are writing their English language diary, the learners also keep a log of any new or interesting English words and expressions they encounter. 'New' words are words they have never encountered before; 'interesting' words are words they know, but that spark their curiosity, e.g., if they find themselves wondering about their pronunciation or etymology. They are instructed to note down these 'wonder questions' (e.g., "I wonder if this is a very common word?" or "I wonder what the origin of the word is?") and their answers. In class, they then share their wonder questions and answers. Questions they were not able to answer independently are resolved with the help of the instructor.

(3) Word portraits

Learners now focus on one word from their list of wonder words in more detail. This can be done by exploring definitions or usage; however, learners can also decide to analyse connotations or etymology. It entirely depends on the learners' interests which pieces of information they want to find out for a particular word or phrase. They then produce word portraits of their favourite wonder words and share them in class or on a learning platform. These portraits can take the form of simple text or a more creative presentation.

(4) Posters

Finally, the learners choose an example of any type of English text or other media which contains language elements that make them wonder (e.g., a song or an episode from a TV series). They create posters that contain wonder questions to share and answer with the group in class.

The different steps map neatly onto McFall's (2014) phases, with anticipation created by a group discussion about learners' personal English use before the start of the task sequence proper. The language diary represents the 'encounter' stage, the wonder word list corresponds to the 'investigation' stage, the word portraits to the 'discovery' stage and the posters are about 'propagation'. Each step in the task sequence has a different learning goal:

- working on the language diaries raises learners' awareness of extramural English
- compiling lists of wonder words allows learners to explore different categories of language analysis (e.g., etymology, connotations etc.)
- creating word portraits gives them the opportunity to develop strategies for deepening their understanding of their chosen words (e.g., working with dictionaries or corpora)
- designing posters requires them to apply the categories and strategies from the previous steps to a piece of language they have chosen themselves

For this study, this task sequence was trialed with advanced learners who are all students in the ELT Master's programme at an Austrian university.

2. Methods of data collection and analysis

At the time of the study, the learners were attending an English language course (CEFR level C1+) with a focus on Teacher Language Awareness taught by the author of this paper as instructor/researcher. The wonder words task sequence described in the previous section was part of the learners' coursework, but the instructor/researcher ensured that the students understood that their participation would have no bearing on their grade in the course. In addition, all written assignments were not submitted directly to the instructor/researcher, but to two student assistants who anonymised them in preparation for analysis. The participants all gave informed consent in writing for their anonymised work to be shared in accordance with the university's guidelines.

Work on the wonder words task sequence spanned 8 weeks. The learners filled in a questionnaire before and after completing the task sequence. In total, there were 39 responses for the pre-task questionnaire and 35

responses for the post-task questionnaire. The responses from learners who did not complete the post-task questionnaire were eliminated, as were the responses of three learners who were L1 speakers of English (all the other respondents were studying English as an L2). This left 32 responses for both the pre- and the post-task questionnaire. To determine whether there were significant differences between the learners' pre- and post-task responses, a Mann-Whitney-U rank test for two independent samples was applied to the two groups 'pre-task' and 'post-task'. A result was said to be significant if the *p*-value was smaller than 0.05 (5% significance level).

Six students additionally volunteered to take part in a semi-structured interview with the instructor/researcher after the end of the course. The interviews were conducted in German, the instructor/researcher's and respondents' shared L1, to minimise barriers to communication. The interviews lasted between 24.29 and 32.56 minutes (168.97 minutes of audio in total). The interviews were then transcribed and translated into English. This yielded a corpus of 28,233 words.

For coding and data analysis, a hybrid approach to Thematic Analysis was adopted: "[C]odes were driven by both data per se and theories. Therefore, each unit of analysis allowed the participants to express themselves but also explicitly drew upon theoretical frameworks which strongly articulated that part of the data and best facilitated a close-up analysis of the phenomenon." (Xu & Zammit 2020: 8). The first codes were generated by identifying and labelling significant information in the data. In this first round, the instructor/researcher and two student assistants coded independently to identify emerging themes and topics. These initial codes were then sorted into categories and subcategories in a second round of coding when the coders compared individual codings to check intercoder agreement. Problematic cases were resolved in this way. The next step was searching for themes: overarching themes, namely *Discovery, Evaluation* and *Plans,* were developed from the categories jointly by the instructor/researcher and the two student assistants. The themes were reviewed and consolidated in a final round of coding by the instructor/researcher (see appendix for an overview of codes and themes).

3. Results

The results show some significant differences in the questionnaire responses pre- and post-task which raise points that are also reflected in the interview data. For the sake of clarity, the questionnaire data will be presented first in this section, followed by the interview data.

3.1. Results of the questionnaires

First of all, the responses to the post-task questionnaire show that the learners reacted very positively to the wonder task sequence. 93.8% of respondents (30 learners out of 32) state that they believe that their English language skills have benefitted from the tasks and that the tasks will have an impact on how they engage with English in their environment in the future.

Comparing the pre-task and the post-task responses, a number of interesting points emerge from the data. The first point concerns respondents' reported reactions to encountering a 'new' or 'interesting' word. 'New' words were defined as words that they did not understand, and 'interesting' words were defined as words that they understood, but that made them want to find out more about them (e.g., their pronunciation or etymology). This terminology was explained to the respondents before they completed the questionnaire. They were presented with a list of possible reactions and had to indicate how likely they were to take these actions upon encountering a new or interesting word (Likert scale, 1 = extremely unlikely; 6 = extremely likely). While the results for some possible reactions ('I Google it', 'I guess from contextual clues') were essentially the same pre- and post-task, some changes can be observed in the case of the following questions:

How likely are you to do the following things when you encounter a new English word or phrase? – "Nothing, I just skip over it"

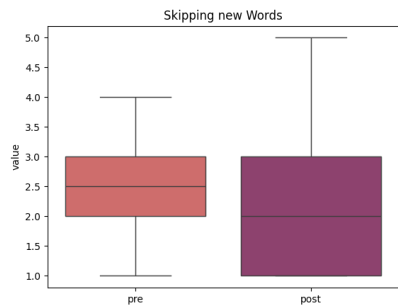|	Extremely unlikely	Very unlikely	Unlikely	Likely	Very likely	Extremely likely
PRE-TASK	7	9	12	4	0	0
POST-TASK	13	10	7	1	1	0

Table 1: Results 'skip new words'

126

Figure 1: Boxplot 'skip new words'

Skipping over a new word is "extremely unlikely" for more respondents after having completed the wonder tasks (13 post-task vs 7 pre-task). The boxplot illustrates this shift in likelihood, showing that the learners' reactions post-task overall are significantly more towards the 'unlikely' end of the spectrum ($p = 0.0291$).

How likely are you to do the following things when you encounter a new English word or phrase? – "I use ChatGPT or a similar AI tool to find out its meaning"

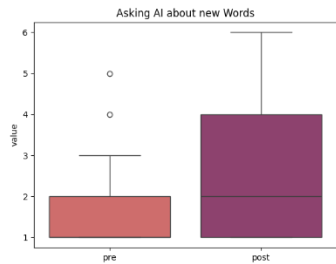|	Extremely unlikely	Very unlikely	Unlikely	Likely	Very likely	Extremely likely
PRE-TASK	19	8	3	1	1	0
POST-TASK	10	8	5	6	1	2

Table 2: Results 'ask AI'

Figure 2: Boxplot 'ask AI'

Using ChatGPT became less unlikely after task completion: only 10 respondents still said they were 'extremely unlikely' to use the tool, compared to 19 pre-task. Here, the difference is significant with a *p*-value of 0.00377, showing that the reactions post-task are significantly more towards the 'likely' end of the spectrum.

There are also some significant changes to be observed regarding 'interesting' words:

How likely are you to do the following things when you encounter an interesting English word or phrase? – "Nothing, I just skip over it"

	Extremely unlikely	Very unlikely	Unlikely	Likely	Very likely	Extremely likely
PRE-TASK	6	9	7	8	1	1
POST-TASK	13	7	11	1	0	0

Table 3: Results 'skip interesting words'

How likely are you to do the following things when you encounter an interesting English word or phrase? – "I use an appropriate source to find out more about it"

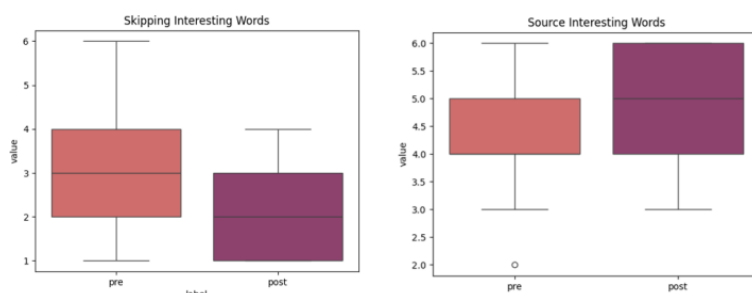|	Extremely unlikely	Very unlikely	Unlikely	Likely	Very likely	Extremely likely
PRE-TASK	7	9	12	4	0	0
POST-TASK	13	10	7	1	1	0

Table 4: Results 'source interesting words'

Figure 3: Boxplots 'skip interesting words' vs 'source interesting words'

The boxplots clearly show that skipping the 'interesting' word is significantly less likely post-task ($p=0.0092$); consulting sources is significantly more likely post-task ($p=0.0198$):

There generally seems to be a slightly increased interest in information about words and phrases post-task. With the exception of 'spelling', more respondents indicate that each of the suggested categories is of interest to them post-task, although the difference is generally small, with the exception of etymology (+9 respondents post-task):
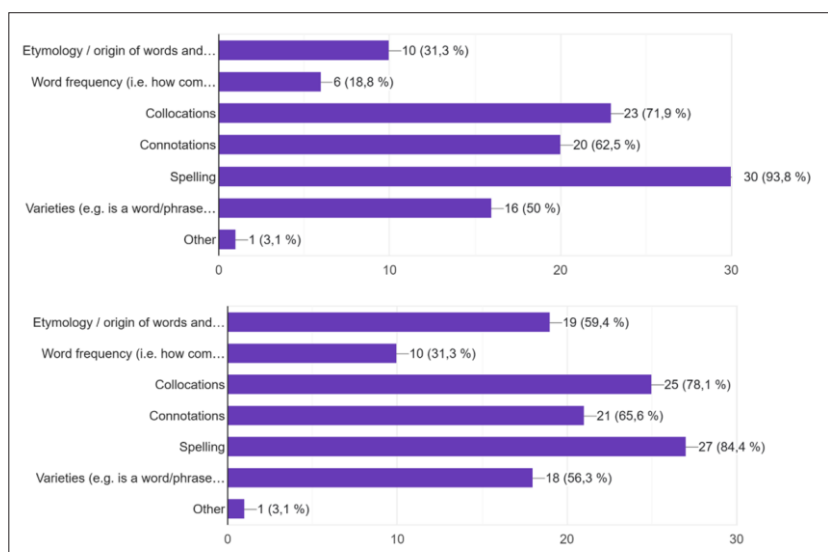

Figure 4: areas of interest pre-task vs post-task

The results also show an increase in learners' willingness to record 'new' or 'interesting' language items:

"How likely are you to record a new language item you encounter or additional information about an interesting word or phrase in a vocabulary notebook or file?"

	Extremely unlikely	Very unlikely	Unlikely	Likely	Very likely	Extremely likely
PRE-TASK	6	11	6	8	1	0
POST-TASK	3	6	9	8	5	1

Table 5: Results 'record new or interesting words'

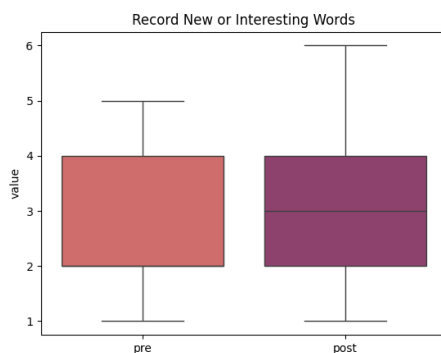Figure 5:Boxplot 'record new or interesting words'

Again, the shift is statistically significant ($p=0.0187$). Post-task, the average likelihood that a learner records a new or interesting word increases from 2.6 pre-task to 3.3 on a six-point scale.

3.2. Results of the interviews

The results of the interviews will be presented here according to the three overarching themes identified in the coding process, namely, *Discovery, Evaluation* and *Plans*. When extracts from the interviews are quoted, they are tagged according to which interview they are from and a line number is given (i.e., INT5, 3–4 refers to lines 3 to 4 in the transcript of Interview 5).

3.2.1. Discovery

The theme 'discovery' encompasses all the coded segments that indicate that the interviewees reported new insights in areas such as contexts of language use and language awareness as a consequence of participating in the wonder task sequence. It is notable that all interviewees commented on how the tasks made them more aware of the amount of English in their lives. To some extent, this validated what they already knew about the functions of English, but the extent to which English is present everywhere also surprised them, as this extract shows:

> Yes, I already knew that English was very present, I was aware of that on some level, but I was surprised that it was so firmly anchored in society, especially in advertising and the media. I would say that I wasn't aware of that. [And I also noticed] that I always think in English when I think about a book I've read in English […] it's easier for me to reflect on it in English than in German. […] So perhaps it has made me realise how much English I actually have around me. (INT5, 116–123)

In addition to general comments such as the one quoted above, some interviewees mentioned specific contexts of English use. While they did mention various EE activities in their private lives, it was primarily the amount of English in the urban environment that seemed to surprise them. This was mentioned several times, such as in the following example:

> But you might not even realise it anymore. And by writing this [language] learner diary, I actually noticed that [English] is actually so central to my life, and because of [the tasks I had to do for] the course I then also looked around outside in the street [to see] what you actually find there – so many terms! – and then I actually realised again that [English] is actually already so embedded, perhaps also in the German language, that we no longer notice it at all. (INT6, 112–117)

When asked, the interviewees reported picking up new vocabulary thanks to the wonder task sequence, but only 3 out of 6 respondents were actually able to remember a specific word or a specific new fact about a familiar word they had learned, for example: "Something to do with shoes, what was it again? Pumps? I think it was 'pumps', why they are called that, I

mean why shoes with heels are called that." (INT4, 202–203). However, comments from the interviews seem to indicate that the interviewees were motivated to think about words they were confronted with while completing their tasks, even if they have trouble recalling specific words they encountered, such as in this answer to an interviewer question about integrating new words into one's active vocabulary: "Perhaps some of them. I don't recall which vocabulary items those were exactly, but there were definitely some that got me thinking." (INT1, 28–33). In line with this comment, the interviewees mentioned several areas of language which they started to think about while completing the wonder tasks:

> I thought it was great to just look it up, to really think about it, is it similar to German, what are the components of the word? Where does it come from? What is the root? What questions do I have about it? I found that very exciting. [...] Yes, so above all, I always think it's cool [to ask yourself], what's the origin of the phrase? I always find [the question] where it comes from really exciting. Because there's always a story behind it. (INT2, 208–210; 215–216)

Generally, there are several comments in the interviews that point towards a deeper engagement with the language during the wonder task sequence than the interviewees would normally show, as in this example:

> I would have looked up words before [the wonder tasks] that I didn't know, but then somehow it became even more of a focus that you really actively look for a meaningful definition and not just look it up on Google Translate – okay, what does it mean, and then yes, it's roughly this and that – but really look for an exact definition, or at least that's how I did it. I looked up exact definitions in several dictionaries and then derived the translation from that and not just from Google or Linguee or whatever. (INT3, 113–120)

Another interviewee linked knowledge about etymology and "links to other languages" to a deeper understanding of language in general: "a deeper understanding and grasping the small differences in meaning [...] with my [wonder] words it was just like that." (INT4, 238–242). Another interviewee also mentioned an increased interest in not only English, but also other languages:

And I think it made me realise once again [...] how beautiful language can actually be. And it sharpened my awareness of how beautiful language is and how nice it is that you can hear it everywhere and that you can speak a language well. And that generally raised my awareness of language again. Not just English, I noticed other languages more as well and that sharpened my sense of language. (INT2, 160–165)

This comment indicates an increased aesthetic appreciation for the English language and for languages in general.

3.2.2. Evaluation

The theme of 'evaluation' is about learners' reactions to the wonder words task sequence and its impact on their language development. The task sequence was perceived as contributing to active learning: "Well, I think wonder pedagogy is something very cool. For me, it's always like this – I just have the feeling that if I ask myself a question, why, why is it like this, it's ten times more likely to stick than if I'm just told by someone that this is the way it is." (INT1, 157–159).

Interviewees also remarked that the task sequence allowed them to focus on their own interests, without a direct utilitarian goal related to education:

I think that wonder pedagogy is a great approach in that you choose something for yourself again. [The question is] not what do I need for my lessons, or what do I need for something that is formal, so to speak. But I can really say what I find exciting, and [ask] where does that [word] come from, or what does that sound like – it's simply that you still have a bit of that for yourself. (INT2, 268–272)

However, similarly to interviewees' difficulty recalling specific words they learned doing the wonder task sequence, there was some doubt as to how sustainable the learning gains from the wonder task sequence will be: "Yes, I have to be honest, I found it great to research it all, but I don't think that much has stuck. But I really have to listen to everything five times and interact with it five times before [it sticks], so just looking it up and writing it down and then having a quick look at it doesn't help me that much, unfortunately." (INT2, 173–176).

3.2.3. Plans

'Plans' refers to comments by the interviewees about continuing with activities that were inspired by the wonder task sequence. Interviewees mentioned wanting to stay curious and attentive: "Suddenly there was so much English that you were exposed to that you had never really noticed before. Well, I definitely noticed that [when I was doing the tasks]. I will definitely take that with me." (INT1, 16–18). They reported an increased motivation to keep learning:

> Especially in this phase [as an advanced learner], you often tend to just stop and say, I can already do it pretty well anyway, I can express myself well. And that's where I think it's good to take a closer look at how [a word] can be used, what it means exactly – and that you perhaps simply remain curious about new words, that you don't say, I can already express this in some way, but that you still look for new idioms or different meanings or different uses. I find that very exciting, especially at this level, because you have a very large vocabulary, but you could always expand it; and you realise that you don't have such a large vocabulary after all, compared to what is possible. (INT4, 307–316)

Interviewees also gave specific examples of actions they plan to take to improve their language skills by engaging with EE in a spirit of wonder, for example, "you can benefit if you write things down – I think if I write things down I'll remember them better than if I just read them." (INT5, 241–242).

4. Discussion

This paper set out to answer the question whether a specially designed wonder pedagogy task sequence had a positive impact on how the advanced learners who participated in the study were able to leverage their EE activities for vocabulary learning.

The results seem to indicate that the wonder words task sequence did not contribute much to increasing the size of learners' active vocabulary by adding new vocabulary items to it. When asked about this in the interviews, the interviewees struggled to remember individual words they had picked up.

However, the task sequence seems to have had a positive impact on the quality and depth of learners' engagement with new and interesting words during their EE activities. The importance of quality of EE engagement was also highlighted by Lee (2019) who claims that it is the quality, rather than just the frequency or quantity, of EE activities which is related to vocabulary knowledge. It is a very encouraging finding, then, that according to the questionnaire data, learners were significantly more likely to look up information on words they encountered post-task and that they consulted a broader range of sources, including AI tools, which they showed significantly more interest in post-task.

This tendency is also reflected in the interviews, where interviewees talk about experiencing a deeper interest in words they encounter post-task. This could indicate a positive impact of the targeted task sequence on EE engagement, which is in line with Zhang et al. (2024: 8), whose review of EE studies found that "formal language instruction may increase people's engagement in and efficiency of ELL [extramural language learning]".

The respondents also report engaging with language for its own sake, not just to fulfil a task or achieve a required grade, which is important for advanced learners' motivation once their English is good enough to cope with most communicative challenges they encounter. Already in 2006, Dörnyei et al. (2006) claimed that students' motivation was decreasing due to the fact that English was becoming "a self-evident part of education" (Dörnyei et al. 2006: 144, as cited in Henry et al. 2018: 251), and with the prevalence of English today, this is even more of a concern. It is therefore a good sign that in the interviews, learners also state that they intend to remain curious about words as independent learners beyond university, which indicates that the learning gains from the wonder words sequence could be sustainable over time.

The respondents also showed a stronger intention to record vocabulary they consider relevant post-task, which could contribute to the lasting effects of the wonder task sequence as notetaking during EE activities has been shown to correlate positively with vocabulary gains (Calafato & Clausen 2024).

However, in the interview data, there are also hints that some learners might need help to benefit fully from the task sequence. There are comments that seem to show that while some respondents enjoyed the task while they were engaging in it, they feel that they would need more practice to actually add vocabulary items they encounter to their active linguistic repertoire.

5. Conclusion

Overall, the study seems to show that wonder pedagogy might be a promising addition to the repertoire of ELT, but for learners to benefit fully from it, it needs to be implemented in a thoughtful manner. However, some limitations of the study should also be acknowledged here. The sample size was small, and in addition, the respondents were university students of English and future teachers of English. Even among advanced learners, they might therefore not be representative.

In future research projects, it might therefore be interesting to explore "whether students in language degree programs exhibit different motivational patterns compared to those in other disciplines [which] could reveal variations in English learning motivation trajectories across academic settings." (Leone & Paone 2024: 129). This could be done by implementing the task sequence with groups of learners in non-language degree programmes.

As for the task sequence, a version which offers learners more opportunities to practice and more support in recording vocabulary effectively would be an interesting direction to explore. In its present form, the steps of the task sequence gradually become more open and more demanding for the learners in a linear progression. If learners were encouraged to revisit previous steps to consolidate what they have learned (Fürstenberg et al. 2025), this would result in a cyclical task design which would better reflect the open-endedness of wonder-based inquiry.
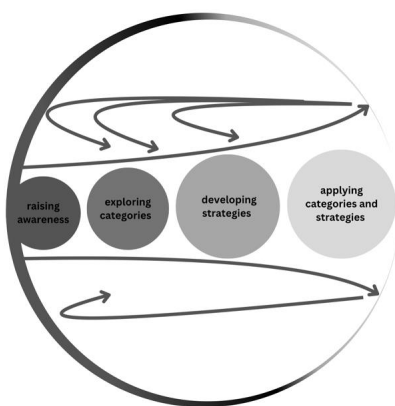

Figure 6: The cycle of wonder: a visualisation of the
cyclical character of the wonder task sequence

Considering the limitations of the study, overgeneralisations should be avoided. However, it seems that wonder pedagogy is worth pursuing and researching further with advanced learners of English. With improved tasks, it is to be hoped that the integration of wonder into English language teaching can indeed contribute to turning advanced learners into "agents of their own learning" and "eventually […] lifelong linguist[s]" (Plutino 2021: 35).
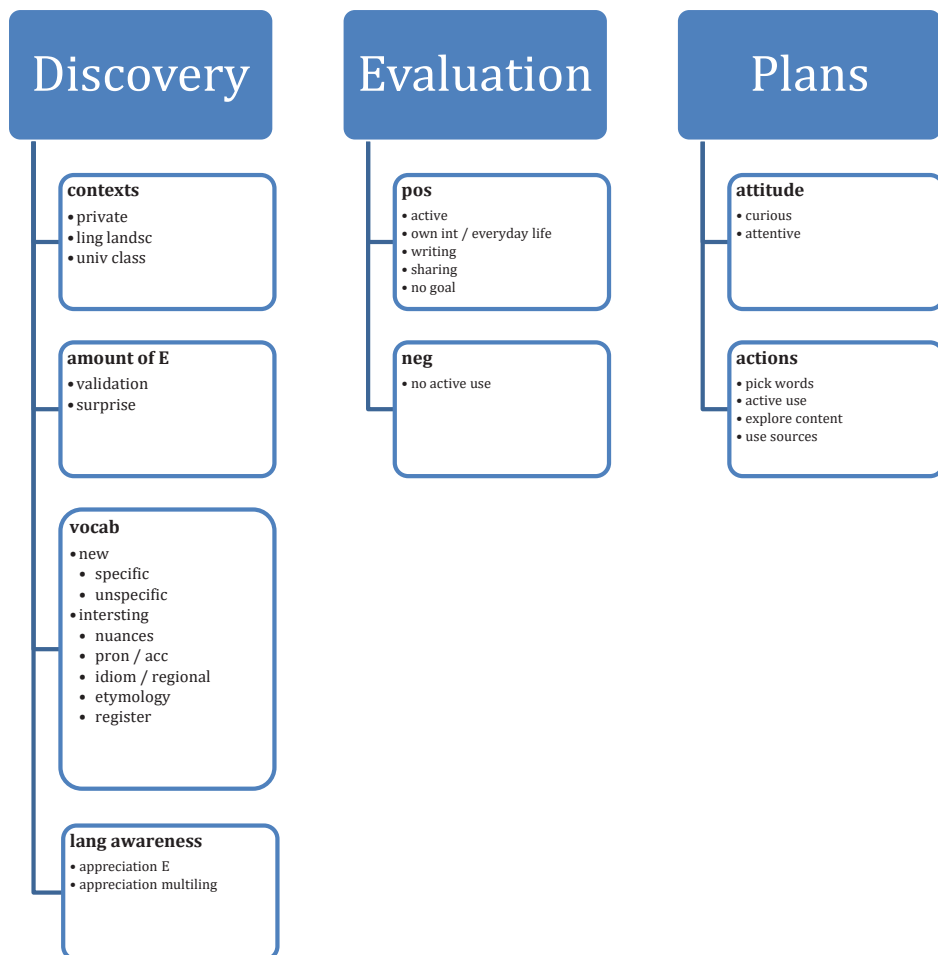
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Appendix: Overview of codes

Discovery

contexts
- private
- ling landsc
- univ class

amount of E
- validation
- surprise

vocab
- new
  - specific
  - unspecific
- intersting
  - nuances
  - pron / acc
  - idiom / regional
  - etymology
  - register

lang awareness
- appreciation E
- appreciation multiling

Evaluation

pos
- active
- own int / everyday life
- writing
- sharing
- no goal

neg
- no active use

Plans

attitude
- curious
- attentive

actions
- pick words
- active use
- explore content
- use sources