Supplemental Materials

# Processing Instruction Training

## Explicit Instruction (Adapted from VanPatten et al., 2013)

Italicized text was only seen by the PI+P group. Lines show the division of EI over different slides for presentation purposes.

In German, the nominative and accusative cases designate “who does what to whom.” That is, case tells us which noun in the sentence is the “verb-er” and which is the “verb-ed.”

Take the following sentence for example: “The woman calls the man.”

In this case, the woman is the caller (verb-er) and the man is called (verb-ed). The woman is the subject of the verb and the man is the direct object.

In German, one way to tell what is the subject and what is the direct object is by looking at the definite article (the small word meaning “the”) before the noun.

This is especially true for masculine nouns. When a masculine noun is the subject, the definite article is **der**. When it is the direct object, the article is **den.**

Example: ***Der***Mann geht nach Hause “The man goes home“

BUT Die Frau sieht ***den*** Mann. “The woman sees the man”

Feminine and Neuter nouns’ articles do not change between nominative and accusative. That is, they stay **die (fem)** or **das (neut) in both nominative and accusative**.

Inverted Word Order in German

Word order in German is more flexible than English. Whereas English is always subject-verb-object, German can be both subject-verb-object and sometimes object-verb-subject. Compare the two examples. Both mean “The woman sees the man.”

Die Frau sieht den Mann.

Den Mann sieht die Frau.

Inverted word order like the sentences above is often used in certain conversational situations. Most often, inverted word order is used when a speaker wants to emphasize the object of the sentence.

Now, listen to what these sentences sound like.

*As you may have just heard, it is also natural in German to place an accent on the first noun in the sentence, when it is the direct object. In other words, the first noun will often be louder and higher in pitch than the other words in the sentence.*

Case markings on articles become important so that you don’t misinterpret who does what to whom. Learners of German often rely on word order to determine who did what to whom, thinking the first noun is always the subject. But it may not be!

If you see or hear **den** in front of a noun, that noun is not the “verb-er” and thus not the subject of the sentence. ‘’

## Structured Input Activities

## Referential Activity: Structured Input Sentences (From VanPatten et al., 2013)

(note: translations provided here but they were not included in the original materials used with the students.)

|  |  |  |
| --- | --- | --- |
| 1. Den Hund hört die Katze | OVS | ‘The cat hears the dog.’ |
| 2. Den Studenten sieht die Lehrerin. | OVS | ‘The teacher sees the student’ |
| 3. Den Jungen umarmt das Mädchen. | OVS | ‘The girl hugs the boy’ |
| 4. Der Affe schüttelt den Jungen. | SVO | ‘The monkey shakes the boy’ |
| 5. Die Katze beißt der Hund | OVS | ‘The dog bites the cat.’ |
| 6. Den Mann zieht der Esel. | OVS | ‘The donkey pulls the man.’ |
| 7. Das Kind findet der Vater. | OVS | ‘The father finds the child.’ |
| 8. Der Mann tötet den Löwen. | SVO | ‘The man kills the lion.’ |
| 9. Den Sohn ruft der Vater. | OVS | ‘The father calls the son.’ |
| 10. Den Jungen liebt das Mädchen. | OVS | ‘The girl loves the boy.’ |
| 11. Den Mann hört der Löwe nicht. | OVS | ‘The lion doesn’t hear the man.’ |
| 12. Die Lehrerin sieht den Studenten. | SVO | ‘The teacher sees the student.’ |
| 13. Den jungen Mann ruft das Mädchen. | OVS | ‘The girl calls the boy.’ |
| 14. Den Präidenten sieht der Vizepräsident. | OVS | ‘The vice-president sees the president.’ |
| 15. Den Sohn küsst die Mutter. | OVS | ‘The mother kisses the son.’ |
| 16. Der Vater hasst die Mutter. | SVO | ‘The father hates the mother.’ |
| 17. Den Arzt ersticht der Patient. | OVS | ‘The patient stabs the doctor.’ |
| 18. Den Hund stoppt der Affe. | OVS | ‘The monkey stops the dog.’ |
| 19. Den Vater liebt der Sohn. | OVS | ‘The son loves the father. ’ |
| 20. Der Vogel sucht die Katze. | SVO | ‘The bird looks for the cat.’ |
| 21. Den Löwen jagt der Tiger. | OVS | ‘The tiger hunts the lion.’ |
| 22. Die Oma hört der Opa. | OVS | ‘The grandpa hears the grandma.’ |
| 23. Das Mädchen umarmt der Junge. | OVS | ‘The boy hugs the girl.’ |
| 24. Der Junge schüttelt den Affen. | SVO | ‘The boy shakes the monkey.’ |
| 25. Den Löwen tötet der Mann | OVS | ‘The man kills the lion.’ |
| 26. Den Ehemann versteht die Ehefrau nicht. | OVS | ‘The wife doesn’t understand the husband.’ |
| 27. Den Sohn liebt der Vater. | OVS | ‘The father loves son.’ |
| 28. Die Oma hört den Opa. | SVO | ‘The grandma hears the grandpa.’ |
| 29. Die Katze hört der Hund. | OVS | ‘The dog hears the cat.’ |
| 30. Den Affen beißt der Hund. | OVS | ‘The dog bites the monkey.’ |
| 31. Den Esel zieht der Mann. | OVS | ‘The man pulls the donkey.’ |
| 32. Der Präsident sieht den Vizepräsidenten. | SVO | ‘The president sees the vice-president.’ |
| 33. Die Mutter hasst der Vater. | OVS | ‘The father hates the mother.’ |
| 34. Den Jungen schüttelt der Affe. | OVS | ‘The monkey shakes the boy.’ |
| 35. Den Hund hört die Katze. | OVS | ‘The cat hears the dog.’ |
| 36. Der Löwe jagt den Tiger. | SVO | ‘The lion hunts the tiger.’ |
| 37. Die Lehrerin führt der Student. | OVS | ‘The student leads the teacher.’ |
| 38. Den Mann schiebt der Esel. | OVS | ‘The donkey shoves the man.’ |
| 39. Den Affen stoppt der Hund. | OVS | ‘The dog stops the monkey.’ |
| 40. Der Vater liebt den Sohn. | SVO | ‘The father loves the son.’ |
| 41. Die Ehefrau versteht der Ehemann nicht. | OVS | ‘The husband doesn’t understand the wife.’ |
| 42. Den Mann zieht der Esel. | OVS | ‘The donkey pulls the man.’ |
| 43. Den Löwen hört der Mann nicht. | OVS | ‘The man doesn’t hear the lion.’ |
| 44. Der Patient ersticht den Arzt. | SVO | ‘The patient stabs the doctor.’ |
| 45. Das Auto schiebt der Lieferwagen. | OVS | ‘The truck pushes the car.’ |
| 46. Den Löwen jagt der Tiger. | OVS | ‘The tiger hunts the lion.’ |
| 47. Den Studenten führt die Lehrerin. | OVS | ‘The teacher leads the student.’ |
| 48. Der Mann schiebt den Esel. | SVO | ‘The man shoves the donkey.’ |
| 49. Den Hund beißt der Affe. | OVS | ‘The monkey bites the dog.’ |
| 50. Das Mädchen hört der Junge. | OVS | ‘The boy hears the girl.’ |

## Phonetic Analyses of Audio Files used in PI and PI+P Trainings

Training stimuli were analyzed phonetically using PRAAT (Boersma & Weenink, 2014). These analyses focused on peak F0 (the highest pitch during the accented syllable, and pitch excursion (the difference between the minimum and maximum pitch at the beginning or end of a rise or fall). See (Henry, Jackson & DiMidio, 2017) for a full description of methods and statistical analyses on these two measures.

Table A1

Acoustic Properties of Training Stimuli (Measured in Hz; Standard Deviations in Parentheses)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | NP1 | | NP2 | |
| Peak F0 | SVO | OVS | SVO | OVS |
| Focused Prosody | 247.30 (28.74) | 329.52 (18.63) | 197.28 (29.18) | 178.30 (10.33) |
| Monotone Prosody | 236.85 (17.16) | 230.02 (13.30) | 197.71 (27.48) | 200.11 (17.34) |
|  |  |  |  |  |
| Pitch Excursiona | SVO | OVS | SVO | OVS |
| Focused Prosody | 61.05 (29.28) | 119.30 (32.34) | −42.08 (32.24) | −16.32 (9.83) |
| Monotone Prosody | 31.72 (26.41) | 31.24 (18.60) | −22.63 (10.46) | −26.80 (20.36) |
| aValues for pitch excursion are presented such that positive values represent a rise in pitch; negative values represent a fall in pitch. | | | | |

## Affective Activity 1 (Adapted from Farley, 2004)

(note: translations provided here but they were not included in the original materials used with the students.)

**Step 1:** Think about your best male friend. Then indicate whether or not each statement about your best friend applies to you.

Der Freund heißt \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

‘The friend is named’

|  |  |  |
| --- | --- | --- |
|  | Ja, das stimmt für mich | Nein, das stimmt für mich nicht. |
|  | ‘Yes, that’s true for me’ | ‘No, that’s not true for me.’ |
| 1. Den Freund rufe ich oft an.   ‘I call the friend often.’ | \_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. Den Freund verstehe ich gut.   ‘I understand the friend well.’ | \_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. Den Freund sehe ich oft.   ‘I see the friend often.’ | \_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. Den Freund umarme ich, wenn wir uns sehen.   ‘I hug the friend when we see each other.’ | \_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. Den Freund frage ich um Rat (*advice*).   ‘I ask the friend for advice.’ | \_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. Den Freund respektiere ich viel.   ‘I respect the friend a lot.’ | \_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_ |

**Step 2:** Now think about a close male family member (der Verwandte). Indicate whether the same statements apply for him.

Der Verwandte heißt \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

‘The relative is named’

|  |  |  |
| --- | --- | --- |
|  | Ja, das stimmt für mich | Nein, das stimmt für mich nicht. |
|  | ‘Yes, that’s true for me’ | ‘No, that’s not true for me.’ |
| 1. Den Freund rufe ich oft an.   ‘I call the relative often.’ | \_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. Den Freund verstehe ich gut.   ‘I understand the relative well.’ | \_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. Den Freund sehe ich oft.   ‘I see the relative often.’ | \_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. Den Freund umarme ich, wenn wir uns sehen.   ‘I hug the relative when we see each other.’ | \_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. Den Freund frage ich um Rat (*advice*).   ‘I ask the relative for advice.’ | \_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. Den Freund respektiere ich viel.   ‘I respect the relative a lot.’ | \_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_ |

**Step 3.** Look at your answers from steps 1 and 2. Did you answer any question in Step 2 differently from the same question in Step 1? How many did you answer differently?

**Step 4.** How would you describe your relationship with these two people: (a) very similar, (b) somewhat different, or (c) very different? Write 2 sentences in English to explain what you decided and explain why.

## Affective Activity 2 (Adapted from Farley, 2004)

Andre Agassi and Steffi Graf are professional tennis players, marriage partners, and parents. Steffi is a particularly good wife and she supports her husband (*den Mann*) in many ways.

**Step 1:** Look at the list of her actions as a wife, and decide which of her caring actions are absolute essentials for a good marriage. Rank them from most important (1) to least important (7) Feel free to give more than one item the same ranking if you truly believe that they are equally important.

|  |  |
| --- | --- |
| Ranking | Action |
|  |  |
| \_\_\_\_\_\_\_ | Den Mann liebt sie sehr.  ‘She loves her husband a lot.’ |
| \_\_\_\_\_\_\_ | Den Mann kritisiert sie nicht.  ‘She doesn’t criticize her husbund.’ |
| \_\_\_\_\_\_\_ | Den Mann versteht sie gut.  ‘She understands her husband.’ |
| \_\_\_\_\_\_\_ | Den Mann umarmt sie viel.  ‘She hugs her husband a lot.’ |
| \_\_\_\_\_\_\_ | Den Mann unterstützt sie in schlechten Zeiten.  ‘She supports her husband in bad times.’ |
| \_\_\_\_\_\_\_ | Den Mann respektiert sie.  ‘She respects her husband.’ |
| \_\_\_\_\_\_\_ | Den Mann ärgert sie nicht oft.  ‘She doesn’t annoy her husband often.’ |

**Step 2:** Your instructor has also ranked the nice things a wife might do for her husband in order of importance. Look at his/her rankings below:

1. Den Mann liebt sie sehr.
2. Den Mann respektiert sie.
3. Den Mann versteht sie gut.
4. Den Mann unterstützt sie in schlechten

Zeiten.

1. Den Mann umarmt sie viel.
2. Den Mann ärgert sie nicht oft.
3. Den Mann kritisiert sie nicht.

Did you tend to agree about the most essential qualities in a good spouse? Were your answers: (a) very similar, (b) somewhat different, or (c) very different? Write 2 sentences in English to explain what you decided and explain why.

# Vocabulary Training

## Words used in Vocabulary Training

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Der Kellner | Die Tochter | Die Frau | Der Student | küsst | grüßt |
| Der Junge | Die Agentin | Die Mutter | Der Prinz | ärgert | verfolgt |
| Der Jogger | Die Ehefrau | Die Trainerin | Der Coach | stört | überrascht |
| Der Lehrer | Die Kusine | Die Klasse | Der Opa | umarmt | fotografiert |
| Der Dichter | Die Sängerin | Die Autorin | Der Teenager | verliert | bewundert |
| Der Kaufmann | Die Stewardess | Die Sekretärin | Der Onkel | rettet | kennt |
| Die Köchin | Der Vater | Die Professorin | Der Tierarzt | vermisst | ruft |
| Das Lamm | Der Soldat | Die Königin | Der Wolf | riecht | trifft |
| Die Familie | Der Ehemann | Die Athletin | Der Sohn | trägt | sieht |
| Die Assistentin | Der Vetter | Die Oma | Der Manager | bittet um | weckt |
| Die Ministerin | Der Gitarrist | Die Schwester | Der Diplomat | kritisiert | schiebt |
| Die Polizistin | Der Pilot | Die Nichte | Der Räuber | besucht | verletzt |

## Instructions for Vocabulary Training

In this activity you will learn some vocabulary words in German. Some of the words may be familiar to you already, and some may be new.

The activity will consist of three training phases, each of which is followed by a test phase.

Please press the SPACEBAR to continue with the instructions

In the training phases, you will see an English word for one second. Then you will see a German word and its gender. At the same time, you will also hear the German words spoken aloud. Look at and listen to the word carefully. Remember to pay attention to the word’s gender as well, since this is an important part of vocabulary in German.

Once you have heard the word, you should repeat it (and its gender) aloud before the next word appears automatically.

Please press the SPACEBAR to continue with the instructions.

In each training phase, you will see 24 words three times each. After you are done with the training, we will test you on what you learned. During the test phase, you will see an English word. All you have to do is say the German translation for that word. After translating each of the items, you will repeat any that you got incorrect until you have successfully translated each item correctly.

When you are ready to being the first training, please press the SPACEBAR to continue.